Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

FINAL Environmental Impact Statement

KITTITAS and YAKIMA COUNTIES, WASHINGTON

Estimated Total Cost Associated with Developing and Producing this Final EIS is approximately $3,500,000.
Comments and Responses from the Supplemental Draft Environmental Impact Statement Released in April 2018

(see Volume II for an introduction to the Comments and Responses, which include common issues and their responses.)
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>1</td>
<td>Section revised per comment.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>2</td>
<td>Section revised per comment.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>3</td>
<td>Section revised per comment.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>4</td>
<td>Yes, these are equivalent terms. A single term has been used to avoid confusion.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>5</td>
<td>This is not consistent with the Section 106 regulations. However, no action will be taken that has a potential to effect a resource until eligibility is determined.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>6</td>
<td>“Resources of Tribal Concern” is not a term used in this FEIS.</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>7</td>
<td>Section has been revised per comment in FEIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>203</td>
<td>Confederated Tribes of the Colville Reservation</td>
<td>8</td>
<td>Thank you for your comment. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources. This will be done in collaboration with the consulting parties.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>1</td>
<td>Thank you for your comment. None of the alternatives impact the Yakama Nation's treaty rights.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>2</td>
<td>Impacts to fish in the Yakima River are described in section 4.6 in terms of changes in habitat suitability in different seasons resulting from changes in instream flow under each alternative. Where relevant, impacts to Chinook, sockeye, coho salmon are specified for given species. Otherwise, impacts to fish are referenced generally based on the assumption the larger the deviation from normative flows the larger the impact for native fishes of any species.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>4</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>5</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>6</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>7</td>
<td>Thank you for your comment. None of the alternatives impact the Yakama Nation's treaty rights.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>8</td>
<td>Reclamation recognizes the project area is within the Yakama ceded lands and that the Wenatshapam band is covered under the Treaty of 1855. However, members of the Wenatshapam (also known as the Wenatchi) band are also found in the Colville Confederated Tribes. Therefore both federally recognized tribes have a cultural connection to the project area. For this reason this section is not re-edited.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>9</td>
<td>This information is updated in this FEIS (see Section 1.8.1).</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>10</td>
<td>This information is updated in this FEIS (see Section 1.8.1).</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>11</td>
<td>No lands in Yakima County are potentially affected and no permits are anticipated from Yakima County. Table 1-2 has been updated in this FEIS to reflect this.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>12</td>
<td>Thank you for this comment about obtaining a share of the newly available water. The water rights section has been edited and expanded to address this comment.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>13</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>14</td>
<td>Since it is under construction, the Cle Elum Pool Raise project is discussed in Section 2.1; however it is not included in Section 2.2.1 as it is not an ongoing project affecting annual operations.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>15</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>16</td>
<td>Recommended edits were considered and incorporated into this FEIS.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>17</td>
<td>Franklin County was discussed in Table 2-9 because it was identified in Section 3.22.2.1 as having a potential environmental justice population because the Hispanic/Latino population was greater than 50 percent. None of the other counties assessed had Hispanic/Latino populations greater than 50 percent.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>18</td>
<td>Thank you for this factual correction. Section 3.3.1.3 of this FEIS has been edited in response.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>19</td>
<td>Thank you for this comment reminding Reclamation and Ecology of the Nation’s rights. We acknowledge the comment and it will be included in the record of this EIS. We did not find it necessary to make a change in this FEIS in response.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>20</td>
<td>A comparative analysis of flows under different alternatives up to the Wapato Reach (Parker) is provided in section 4.3, Surface Water. As explained in section 4.3, the drought-year changes in flow downstream of Roza Dam would remain within current operating flows experienced in most years. Downstream from Roza Dam to the Parker gage, the relative change in streamflow would be less than in upstream reaches because some or most of the additional water supplied by KDRPP would be diverted. Any remaining increased supply could be diverted by WIP at Wapato Dam. The small change in streamflow downstream from Parker gage on the Yakima River would occur as Kachess Reservoir refills after a drought. The change would occur in winter and spring. As summarized in Tables 4-32 and 4-33 (Alternatives 2, 3, and 4), winter and spring flows at Parker are reduced by up to 1.2 percent. During refill years, high exceedance flows are reduced by 2.9 percent. As summarized in Tables 4-69 and 4-70 (Alternatives 5A, 5B, and 5C) winter and spring flows are reduced by up to 1.6 percent. During refill years, high exceedance flows are reduced by 4.6 percent.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>21</td>
<td>Comment noted. Returning anadromous fish undoubtedly brought beneficial marine-derived nutrients to these lakes prior to dam installation. However Lake Kachess is likely oligotrophic (nutrient poor), like many mountain lakes, because the reservoir has steep side slopes with little shoal area and is cold, clear, and relatively deep (310 feet) (WSDF, 1967).</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>22</td>
<td>Comment noted. Existing summer flows are only described from the Keechelus Dam downstream to Granger (RM 88 to RM 83) in order to provide a baseline for comparisons to the changes in flows with the proposed alternatives, which would affect the Yakima River mainly upstream of Granger.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>23</td>
<td>Thank you for the suggested revisions. The title of the subsection indicates the section of Kachess River being described is downstream of the dam: 3.6.4 Yakima River and Kachess River Downstream of Keechelus and Kachess Dams</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>24</td>
<td>Thank you for your comment. Table 3-1 provided detailed reach descriptions. This was added to the notes in Table 3-18.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>25</td>
<td>Suggested revisions will be made. Given uncertainty in the range in the number of sockeye passed over Roza Dam reported by DART, these data will be revised in the FEIS with data from resources other than DART.</td>
</tr>
<tr>
<td>204</td>
<td>Yakama Nation DNR</td>
<td>26</td>
<td>Reclamation recognizes the project area is within the Yakama ceded lands and that the Wenatchapam band is covered under the Treaty of 1855. However, members of the Wenatchapam (also known as the Wenatchi) band are also found in the Colville Confederated Tribes. Therefore both federally recognized tribes have a cultural connection to the project area. For this reason this section is not re-edited.</td>
</tr>
<tr>
<td>205</td>
<td>Columbia-Snake River Irrigators Association</td>
<td>1</td>
<td>Thank you for your comment supporting the proposed action. It has been noted and will be included in the record for this EIS. The section regarding acre-feet of water available for diversion at the Roza Irrigation District head works has been clarified in the Final EIS. The additional (instream) water supply available during drought years, up to 200,000 acre-ft from Kachess Reservoir, would be distributed among the Participating Entities of the Proposed Action, therefore the water supply could be available for diversion at KRD, Roza, WIP, or KID.</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>1</td>
<td>Please see the response to Common Issue 13. Additionally, Reclamation and Ecology share your concern with bull trout and supporting the YBIP. We are committed to working with the Washington Department of Fish and Wildlife and all MOU partners to implement BTE projects. A change was not made to this FEIS in response to this comment.</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>2</td>
<td>See Section 1.5 and Appendix A of this FEIS. Reclamation and Ecology are committed to working with all MOU partners to implement BTE projects through the Federal and State regulatory processes.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>3</td>
<td>Avoidance, minimization and mitigation measure for direct impacts are identified in this FEIS. See response to Common Issue 7.</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>4</td>
<td>The comment raises several issues that are addressed in this response: 1. Upstream fish passage to Kachess River and Box Canyon Creek from Little Kachess. The passage for bull trout at the mouth of Box Canyon Creek and the Kachess River (where they enter into Little Kachess Lake) exists independent of any assessment of scour potential in the Narrows. These major tributaries to Little Kachess continually deliver bedload sediments into Little Kachess at their mouths and form ever changing deltas through with each tributary must flow. When the water surface elevation in Little Kachess is low, the upstream passage challenge is exacerbated, particularly when coupled with low flows in each tributary. Regardless of any potential effect on water surface elevation in Little Kachess that might be attributable to channel degradation in the Narrows, any fish passage improvements at the mouths of these two tributaries should be designed to accommodate a wide range of water surface elevations in Little Kachess and should be designed and constructed so that the continuing delivery of bedload sediments by both tributaries into Little Kachess will not adversely affect the performance of any such fish passage improvements. An adaptive management approach in conjunction with the above design criteria is an appropriate and prudent measure to include in the design of any fish passage improvements at these two locations. 2. Scour potential in the Narrows under KDRPP operations. The soils that comprise the Narrows channel were not deposited over the most recent 100 years. Rather, the Narrows is a glacial moraine that has existed since at least the most recent ice age, some 12,000 to 15,000 years ago. There are two major tributaries to Little Kachess: the Kachess River that enters Little Kachess at its North end, and Box Canyon Creek that enters Little Kachess on the West shore of Little Kachess, just upstream of the Narrows. Both of these tributaries deposit their bedload sediments in deltas that occur at their terminus where they enter Little Kachess. Because Little Kachess is a quiescent body of water having little to no velocity in it, Little Kachess is not capable of transporting bedload sediments to the Narrows from either of these tributaries for deposition in the Narrows. There is however, a recent deposition of very fine sediments at the upper end of the Narrows. These fine sediments have deposited over the past 100 years. The depth of these sediments has not yet been established but could be established relatively easily. It is likely that this very fine sediment deposit will be mobilized in the future when KDRPP goes into operation. Once mobilized, the sediments comprising the Narrows Channel that existed prior to the construction of Kachess Dam will again be exposed. It is not known at this time if the Narrows Channel sediments that lie beneath these fine sediment deposits will be susceptible to scour. This separate and distinct question is addressed in the following text.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>4(continued)</td>
<td>3. Susceptibility of the Narrows channel glacial moraine sediment to scour. The waters in Little Kachess flow into Big Kachess by passing through the Narrows channel when the Kachess Reservoir water surface elevation is at or below approximate elevation 2,223. At these lower elevations, the flows in the Narrows Channel flowing from Little Kachess to Big Kachess could be referred to as the Kachess River. At water surface elevations above 2,223, water passes from Little Kachess to Big Kachess above the Narrows, as the Narrows inundates beginning at water surface elevations higher than 2223. Above elevation 2,223, the two bodies of water begin to become a single large body of water that we refer to as Kachess Reservoir. Regardless of the origin of the soils comprising the Narrows, as stated in the comment, a flow restriction caused by the soils comprising the Narrows controls the upstream water surface elevation in Little Kachess whenever the water surface elevation in Big Kachess is below approximately 2,223. The majority of the time when high flows are moving from Little Kachess into Big Kachess (under present Reservoir operations) the Narrows is inundated and water velocities are very low or virtually non-existent over and through the Narrows; and no scouring of the Narrows channel is possible under these hydraulic conditions. In the future however, under drought relief pumping conditions, when Big Kachess has been drawn down below the water surface elevation present in Little Kachess, high flows will need to pass through the Narrows in the incised channel that exists in the Narrows now. It is under these conditions that the Narrows channel will experience high flows and their associated higher velocities that may or may not be capable of scouring these sediments. Prior to the construction of Kachess Dam, these high flows and attendant higher velocities had to pass through the glacial moraine we refer to as the Narrows, as well as pass through the incised channel that existed in the terminal glacial moraine that is the site of Kachess Dam at this time. These two glacial moraines, the Narrows and the Kachess Dam site, had achieved a state of equilibrium in terms of scouring. The state of equilibrium achieved is attested to by the huge remnant Cedar stumps that lined the banks of the Kachess River at both of these locations. The soils comprising these two glacial moraines are extremely dense and hard packed and are not easily eroded.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>4(continued)</td>
<td>The amount of time that the water surface elevation in Big Kachess will be lower than the water surface elevation is Little Kachess will however be more frequent and be of longer durations with the implementation of KDRPP. We believe the question being asked by WDFW is more correctly posed as follows: Will the glacial moraine soils that comprise the present day Narrows be susceptible to scour when Big Kachess is lowered for drought relief pumping purposes and the water surface elevation in Big Kachess is lower than the water surface elevation in Little Kachess more frequently and for longer durations? With the exception of the very fine sediments that exist at the upstream end of the Narrows, the glacial moraine sediments that exist in the Narrows are not likely to be easily scoured when Kachess Reservoir is drawn down by the proposed future operation of KDRPP. A small amount of scour may be possible in the Narrows channel, but the possibility of the Narrows channel scouring down 16 feet as suggested in the comment, is improbable. Therefore, to answer this question more precisely, a geotechnical exploration program will be undertaken to identify and categorize the soils comprising the existing channel in the Narrows in support of design of volitional fish passage. Then, with this information in hand, a hydraulic analysis of the scour potential of these soils should be performed to analyze their susceptibility to scour when they are exposed to the more frequent and longer durations of higher flows and the associated higher velocities that will occur within the Narrows channel under future KDRPP operations. 4. Hyporheic Flows in the Narrows. The potential for hyporheic flows within the Narrows is very small. The reason being, there is very little thickness of sediments between the water flowing in the Narrows channel and the underlying glacial moraine soils which are virtually impervious.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>5</td>
<td>The comment raises several issues that are addressed in this response: 1. Upstream fish passage to Kachess River and Box Canyon Creek from Little Kachess. The passage for bull trout at the mouth of Box Canyon Creek and the Kachess River (where they enter into Little Kachess Lake) exists independent of any assessment of scour potential in the Narrows. These major tributaries to Little Kachess continually deliver bedload sediments into Little Kachess at their mouths and form ever changing deltas through with each tributary must flow. When the water surface elevation in Little Kachess is low, the upstream passage challenge is exacerbated, particularly when coupled with low flows in each tributary. Regardless of any potential effect on water surface elevation in Little Kachess that might be attributable to channel degradation in the Narrows, any fish passage improvements at the mouths of these two tributaries should be designed to accommodate a wide range of water surface elevations in Little Kachess and should be designed and constructed so that the continuing delivery of bedload sediments by both tributaries into Little Kachess will not adversely affect the performance of any such fish passage improvements. An adaptive management approach in conjunction with the above design criteria is an appropriate and prudent measure to include in the design of any fish passage improvements at these two locations. 2. Scour potential in the Narrows under KDRPP operations. The soils that comprise the Narrows channel were not deposited over the most recent 100 years. Rather, the Narrows is a glacial moraine that has existed since the at least the most recent ice age, some 12,000 to 15,000 years ago. There are two major tributaries to Little Kachess: the Kachess River that enters Little Kachess at its North end, and Box Canyon Creek that enters Little Kachess on the West shore of Little Kachess, just upstream of the Narrows. Both of these tributaries deposit their bedload sediments in deltas that occur at their terminus where they enter Little Kachess. Because Little Kachess is a quiescent body of water having little to no velocity in it, Little Kachess is not capable of transporting bedload sediments to the Narrows from either of these tributaries for deposition in the Narrows. There is however, a recent deposition of very fine sediments at the upper end of the Narrows. These fine sediments have deposited over the past 100 years. The depth of these sediments has not yet been established but could be established relatively easily. It is likely that this very fine sediment deposit will be mobilized in the future when KDRPP goes into operation. Once mobilized, the sediments comprising the Narrows Channel that existed prior to the construction of Kachess Dam will again be exposed. It is not known at this time if the Narrows Channel sediments that lie beneath these fine sediment deposits will be susceptible to scour. This separate and distinct question is addressed in the following text.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>5(continued)</td>
<td>3. Susceptibility of the Narrows channel glacial moraine sediment to scour. The waters in Little Kachess flow into Big Kachess by passing through the Narrows channel when the Kachess Reservoir water surface elevation is at or below approximate elevation 2,223. At these lower elevations, the flows in the Narrows Channel flowing from Little Kachess to Big Kachess could be referred to as the Kachess River. At water surface elevations above 2,223, water passes from Little Kachess to Big Kachess above the Narrows, as the Narrows inundates beginning at water surface elevations higher than 2223. Above elevation 2,223, the two bodies of water begin to become a single large body of water that we refer to as Kachess Reservoir. Regardless of the origin of the soils comprising the Narrows, as stated in the comment, a flow restriction caused by the soils comprising the Narrows controls the upstream water surface elevation in Little Kachess whenever the water surface elevation in Big Kachess is below approximately 2,223. The majority of the time when high flows are moving from Little Kachess into Big Kachess (under present Reservoir operations) the Narrows is inundated and water velocities are very low or virtually non-existent over and through the Narrows; and no scouring of the Narrows channel is possible under these hydraulic conditions. In the future however, under drought relief pumping conditions, when Big Kachess has been drawn down below the water surface elevation present in Little Kachess, high flows will need to pass through the Narrows in the incised channel that exists in the Narrows now. It is under these conditions that the Narrows channel will experience high flows and their associated higher velocities that may or may not be capable of scouring these sediments. Prior to the construction of Kachess Dam, these high flows and attendant higher velocities had to pass through the glacial moraine we refer to as the Narrows, as well as pass through the incised channel that existed in the terminal glacial moraine that is the site of Kachess Dam at this time. These two glacial moraines, the Narrows and the Kachess Dam site, had achieved a state of equilibrium in terms of scouring. The state of equilibrium achieved is attested to by the huge remnant Cedar stumps that lined the banks of the Kachess River at both of these locations. The soils comprising these two glacial moraines are extremely dense and hard packed and are not easily eroded.</td>
</tr>
</tbody>
</table>
The amount of time that the water surface elevation in Big Kachess will be lower than the water surface elevation is Little Kachess will however be more frequent and be of longer durations with the implementation of KDRPP. We believe the question being asked by WDFW is more correctly posed as follows: Will the glacial moraine soils that comprise the present day Narrows be susceptible to scour when Big Kachess is lowered for drought relief pumping purposes and the water surface elevation in Big Kachess is lower than the water surface elevation in Little Kachess more frequently and for longer durations?

With the exception of the very fine sediments that exist at the upstream end of the Narrows, the glacial moraine sediments that exist in the Narrows are not likely to be easily scoured when Kachess Reservoir is drawn down by the proposed future operation of KDRPP. A small amount of scour may be possible in the Narrows channel, but the possibility of the Narrows channel scouring down 16 feet as suggested in the comment, is improbable.

Therefore, to answer this question more precisely, a geotechnical exploration program will be undertaken to identify and categorize the soils comprising the existing channel in the Narrows in support of design of volitional fish passage. Then, with this information in hand, a hydraulic analysis of the scour potential of these soils should be performed to analyze their susceptibility to scour when they are exposed to the more frequent and longer durations of higher flows and the associated higher velocities that will occur within the Narrows channel under future KDRPP operations.

4. Hyporheic Flows in the Narrows. The potential for hyporheic flows within the Narrows is very small. The reason being, there is very little thickness of sediments between the water flowing in the Narrows channel and the underlying glacial moraine soils which are virtually impervious.

---

<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>206</td>
<td>WDFW</td>
<td>5(continued)</td>
<td>The amount of time that the water surface elevation in Big Kachess will be lower than the water surface elevation is Little Kachess will however be more frequent and be of longer durations with the implementation of KDRPP. We believe the question being asked by WDFW is more correctly posed as follows: Will the glacial moraine soils that comprise the present day Narrows be susceptible to scour when Big Kachess is lowered for drought relief pumping purposes and the water surface elevation in Big Kachess is lower than the water surface elevation in Little Kachess more frequently and for longer durations? With the exception of the very fine sediments that exist at the upstream end of the Narrows, the glacial moraine sediments that exist in the Narrows are not likely to be easily scoured when Kachess Reservoir is drawn down by the proposed future operation of KDRPP. A small amount of scour may be possible in the Narrows channel, but the possibility of the Narrows channel scouring down 16 feet as suggested in the comment, is improbable. Therefore, to answer this question more precisely, a geotechnical exploration program will be undertaken to identify and categorize the soils comprising the existing channel in the Narrows in support of design of volitional fish passage. Then, with this information in hand, a hydraulic analysis of the scour potential of these soils should be performed to analyze their susceptibility to scour when they are exposed to the more frequent and longer durations of higher flows and the associated higher velocities that will occur within the Narrows channel under future KDRPP operations.</td>
</tr>
<tr>
<td>206</td>
<td>WDFW</td>
<td>6</td>
<td>Water temperature in the Volitional Bull Trout Passage channel and effects of water temperature on fish have been addressed in section 4.6.4 in the FEIS. Generally, surface water temperatures are predicted to decrease slightly in Lake Kachess with the proposed alternatives except for during late September.</td>
</tr>
<tr>
<td>207</td>
<td>Yakima Basin Fish and Wildlife Recovery Board</td>
<td>1</td>
<td>Thank you for this comment. It has been noted and will be included in the administrative record for this EIS. A change was not made to this FEIS in response to this comment.</td>
</tr>
<tr>
<td>207</td>
<td>Yakima Basin Fish and Wildlife Recovery Board</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>207</td>
<td>Yakima Basin Fish and Wildlife Recovery Board</td>
<td>3</td>
<td>Please see the response to Common Issue 13. Reclamation and Ecology share your concern with potential impacts to bull trout. We are committed to working with the Yakima Basin Fish and Wildlife Recovery Board and all MOU partners to implement BTE projects. A change was not made to this FEIS in response to this comment.</td>
</tr>
<tr>
<td>207</td>
<td>Yakima Basin Fish and Wildlife Recovery Board</td>
<td>4</td>
<td>Thank you for the offer to discuss priority actions or convene the Working Group. We look forward to working collaboratively with you and others as we implement the alternative that will be selected in the ROD and future actions that would assist in the recovery of bull trout. A change was not made to this FEIS in response to this comment, because no response was required.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>1</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>2</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>3</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>4</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>5</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>6</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>7</td>
<td>The analysis allowed for assessment of impacts of the KKC element sufficient for the purposes of NEPA. Construction would affect wildlife, but the KKC North Tunnel Alignment would not permanently impact wildlife connectivity.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>8</td>
<td>Inconsistencies have been addressed in this FEIS, however the key point remains that fish passage will be provided by a roughened to channel.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>9</td>
<td>The volitional bull trout passage improvements specifically address fish passage between Big and Little Kachess during drought relief pumping. See Section 2.3.5 of this FEIS.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>10</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW. Additional details are provided in the Biological Assessment.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>11</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW. Additional details are provided in the Biological Assessment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>13</td>
<td>Tables 2-9 and 4-4 have been reconciled in this FEIS.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>14</td>
<td>Table 2-9 is intended to illustrate the differences between alternatives in terms of time when passage at the Narrows is imbedded. The table has been revised to indicate the period of the modeling.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>15</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>16</td>
<td>revised preceding paragraph - no change to table to keep consistent with other sections</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>17</td>
<td>Thank you for the correction, the section on listed species and critical habitat was changed accordingly.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>18</td>
<td>When Keechelus Reservoir level falls below elevation 2,466, bull trout access to its tributaries is adversely affected. This impact is summarized in Table 4-4 of the SDEIS. For all alternatives, Keechelus Reservoir typically falls below elevation 2,466 from August to November. Under Alternatives 5A, 5B, and 5C, Keechelus Reservoir levels would fall below elevation 2,466 in 11 fewer years than under Alternative 1 (from 80 years for Alternative 1 to 69 years for Alternatives 5A, 5B, and 5C) but for an additional 5 days per year in years Keechelus Reservoir levels fall below elevation 2,466.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>19</td>
<td>A change was not made to this FEIS in response to this comment because Reclamation only partially agrees, and partially disagrees. The disagreement lies with the stated adverse effects of existing operations on bull trout and critical habitat. Please note that Reclamation remains fully committed to its Section 7(a)(2) responsibilities of avoiding actions that would jeopardize the continued existence of listed species or adversely modifying designated critical habitat. As such, Reclamation has prepared a biological assessment evaluating the effects of its preferred alternative on bull trout and their designated critical habitat. Reclamation looks forward to collaboration with the Services on this consultation and working with the Services to ensure that it will avoid adverse modification of critical habitat, including adverse effects on the PCEs. The part of the comment that Reclamation agrees with is the Service’s recommendation to implement Section 7(a)(1) conservation measures aimed at benefiting or promoting recovery of the species, and of improving PCEs of critical habitat. Overall in response, the water quality section of this FEIS was not changed in response to this comment, but a biological assessment is appended to this FEIS and it will be used in Section 7 consultation and coordination with the Services.</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>20</td>
<td>Bull trout passage problems (access to Lake Kachess tributaries) are addressed in the noted section describing the No Action alternative. Benefits of providing passage between Big Kachess and Little Kachess to bull trout (or other fish) are described in the sections pertaining to Volitional Bull Trout Passage. When Kechelus Reservoir level falls below elevation 2,466, bull trout access to its tributaries is adversely affected. This impact is summarized in Table 4-4 of the SDEIS. For all alternatives, Kechelus Reservoir typically falls below elevation 2,466 from August to November. Under Alternatives 5A, 5B, and 5C, Kechelus Reservoir levels would fall below elevation 2,466 in 11 fewer years than under Alternative 1 (from 80 years for Alternative 1 to 69 years for Alternatives 5A, 5B, and 5C) but for an additional 5 days per year in years Kechelus Reservoir levels fall below elevation 2,466. In addition, please see the response to Common Issue 19. Reclamation is planning to collaborate with the Services on Box Canyon passage improvements or other conservation measures that might be within the agency’s discretionary authorities.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>21</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>22</td>
<td>As noted, impacts on the food web (zooplankton) of pumping from the epiliminion as proposed under the alternatives are described in the SDEIS using updated modeled scenarios published in 2017 (Hansen et al. 2017 and PSU 2017). The food-base (zooplankton abundance) is expected to be sufficient to support increased prey consumption rates</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>23</td>
<td>Noise impacts described from previous sections for Alternatives 2 and 3. Statement about potential to cause individuals to be disrupted and leave area and pre construction surveys added</td>
</tr>
<tr>
<td>208</td>
<td>USFWS</td>
<td>24</td>
<td>Reclamation does not agree with the part of the comment about current operations adversely impacting bull trout or critical habitat, so in response to that part of the comment, no change was made to this FEIS. However, now that a preferred alternative has been identified, Reclamation is providing a biological assessment to the Services assessing effects of the preferred alternative compared to the baseline. Also, Reclamation and Ecology agree that there will be subsequent NEPA and ESA compliance on BTE actions, but these future actions and analyses will be site-specific and at a different times than the action analyzed in this FEIS or in the biological assessment.</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>1</td>
<td>Thank you for the identification of Roza’s willingness to “…fully fund, construct, operation, and maintain the proposed Action, Alternative 4—Floating Pumping Plant. We have changed multiple sections in this FEIS to reflect this.</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>2</td>
<td>The analysis was based on the most recent comprehensive data and supports a comparative analysis to meet the requirements of NEPA.</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>3</td>
<td>This study area has been used as the regional study area for the economic analyses completed for the Integrated Plan, and has been subject to peer review. From the perspective of evaluating impacts related to the region's economy, it continues to be the appropriate study area, for the reason the comment or identified: the economies of these counties are tied together.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>4</td>
<td>The agricultural data for the economic analysis conducted for this EIS were supplied by the irrigation districts and Washington Department of Agriculture’s geographic information system database of agricultural land use. The data from the districts relied on data and interviews with the districts from 2006 to 2010. I assume that interview process would need to be repeated at considerable effort to update those data. The Four Accounts Analysis for the Integrated Plan, which was used for the economic analysis in this EIS, utilized Agricultural Census data to determine the share of product from Yakima vs. elsewhere in Washington and the US to provide context and assess the likelihood of price effects from changes in Yakima production. These Agricultural Census data are from 2007, and more current data (from 2012) do exist. However, Reclamation and Ecology’s economic analysts believe it is unlikely 2012 data would yield a different conclusion than was derived from an analysis using the 2007 data. Changes in crop patterns within irrigation district areas would be unlikely change the conclusions in the socioeconomic analysis -- notably that effects of the project would have positive impacts on the regional economy by providing additional water to farmers during droughts.</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>5</td>
<td>This FEIS includes a more detailed description of the impacts of the 2015 drought, based on the Washington State Department of Agriculture 2015 report.</td>
</tr>
<tr>
<td>209</td>
<td>Roza</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>210</td>
<td>Port of Benton</td>
<td>1</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>210</td>
<td>Port of Benton</td>
<td>2</td>
<td>The analysis was based on the most recent comprehensive data and supports a comparative analysis to meet the requirements of NEPA.</td>
</tr>
<tr>
<td>210</td>
<td>Port of Benton</td>
<td>3</td>
<td>This study area has been used as the regional study area for the economic analyses completed for the Integrated Plan, and has been subject to peer review. From the perspective of evaluating impacts related to the region's economy, it continues to be the appropriate study area, for the reason the comment or identified: the economies of these counties are tied together.</td>
</tr>
</tbody>
</table>
The agricultural data for the economic analysis conducted for this EIS were supplied by the irrigation districts and Washington Department of Agriculture’s geographic information system database of agricultural land use. The data from the districts relied on data and interviews with the districts from 2006 to 2010. I assume that the interview process would need to be repeated at considerable effort to update those data. The Four Accounts Analysis for the Integrated Plan, which was used for the economic analysis in this EIS, utilized Agricultural Census data to determine the share of product from Yakima vs. elsewhere in Washington and the US to provide context and assess the likelihood of price effects from changes in Yakima production. These Agricultural Census data are from 2007, and more current data (from 2012) do exist. However, Reclamation and Ecology’s economic analysts believe it is unlikely 2012 data would yield a different conclusion than was derived from an analysis using the 2007 data. Changes in crop patterns within irrigation district areas would be unlikely change the conclusions in the socioeconomic analysis -- notably that effects of the project would have positive impacts on the regional economy by providing additional water to farmers during droughts.

This FEIS includes a more detailed description of the impacts of the 2015 drought, based on the Washington State Department of Agriculture 2015 report.

The analysis was based on the most recent comprehensive data and supports a comparative analysis to meet the requirements of NEPA.

This study area has been used as the regional study area for the economic analyses completed for the Integrated Plan, and has been subject to peer review. From the perspective of evaluating impacts related to the region's economy, it continues to be the appropriate study area, for the reason the comment or identified: the economies of these counties are tied together.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>211</td>
<td>Kittitas County Reclamation District</td>
<td>4</td>
<td>The agricultural data for the economic analysis conducted for this EIS were supplied by the irrigation districts and Washington Department of Agriculture’s geographic information system database of agricultural land use. The data from the districts relied on data and interviews with the districts from 2006 to 2010. I assume that interview process would need to be repeated at considerable effort to update those data. The Four Accounts Analysis for the Integrated Plan, which was used for the economic analysis in this EIS, utilized Agricultural Census data to determine the share of product from Yakima vs. elsewhere in Washington and the US to provide context and assess the likelihood of price effects from changes in Yakima production. These Agricultural Census data are from 2007, and more current data (from 2012) do exist. However, Reclamation and Ecology’s economic analysts believe it is unlikely 2012 data would yield a different conclusion than was derived from an analysis using the 2007 data. Changes in crop patterns within irrigation district areas would be unlikely change the conclusions in the socioeconomic analysis -- notably that effects of the project would have positive impacts on the regional economy by providing additional water to farmers during droughts.</td>
</tr>
<tr>
<td>211</td>
<td>Kittitas County Reclamation District</td>
<td>5</td>
<td>This FEIS includes a more detailed description of the impacts of the 2015 drought, based on the Washington State Department of Agriculture 2015 report.</td>
</tr>
<tr>
<td>211</td>
<td>Kittitas County Reclamation District</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>212</td>
<td>Benton County Commissioners</td>
<td>1</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>212</td>
<td>Benton County Commissioners</td>
<td>2</td>
<td>This study area has been used as the regional study area for the economic analyses completed for the Integrated Plan, and has been subject to peer review. From the perspective of evaluating impacts related to the region's economy, it continues to be the appropriate study area, for the reason the comment or identified: the economies of these counties are tied together.</td>
</tr>
<tr>
<td>212</td>
<td>Benton County Commissioners</td>
<td>3</td>
<td>This FEIS includes a more detailed description of the impacts of the 2015 drought, based on the Washington State Department of Agriculture 2015 report.</td>
</tr>
<tr>
<td>212</td>
<td>Benton County Commissioners</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>1</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>2</td>
<td>The analysis was based on the most recent comprehensive data and supports a comparative analysis to meet the requirements of NEPA.</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>3</td>
<td>This study area has been used as the regional study area for the economic analyses completed for the Integrated Plan, and has been subject to peer review. From the perspective of evaluating impacts related to the region's economy, it continues to be the appropriate study area, for the reason the comment or identified: the economies of these counties are tied together.</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>4</td>
<td>The agricultural data for the economic analysis conducted for this EIS were supplied by the irrigation districts and Washington Department of Agriculture’s geographic information system database of agricultural land use. The data from the districts relied on data and interviews with the districts from 2006 to 2010. I assume that interview process would need to be repeated at considerable effort to update those data. The Four Accounts Analysis for the Integrated Plan, which was used for the economic analysis in this EIS, utilized Agricultural Census data to determine the share of product from Yakima vs. elsewhere in Washington and the US to provide context and assess the likelihood of price effects from changes in Yakima production. These Agricultural Census data are from 2007, and more current data (from 2012) do exist. However, Reclamation and Ecology’s economic analysts believe it is unlikely 2012 data would yield a different conclusion than was derived from an analysis using the 2007 data. Changes in crop patterns within irrigation district areas would be unlikely change the conclusions in the socioeconomic analysis -- notably that effects of the project would have positive impacts on the regional economy by providing additional water to farmers during droughts.</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>5</td>
<td>This FEIS incudes a more detailed description of the impacts of the 2015 drought, based on the Washington State Department of Agriculture 2015 report.</td>
</tr>
<tr>
<td>213</td>
<td>Port of Grandview</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>214</td>
<td>NMFS</td>
<td>1</td>
<td>Reclamation will coordinate with NMFS to establish operating criteria to apply during KDRPP operations as part of ESA compliance and ongoing Yakima Project operations.</td>
</tr>
<tr>
<td>214</td>
<td>NMFS</td>
<td>2</td>
<td>Reclamation is committed to working with the Services to protect salmon, steelhead and bull trout during refill and other operations. See Sections 4.3 and 4.6 of this FEIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>214</td>
<td>NMFS</td>
<td>4</td>
<td>Reclamation anticipates ongoing annual communications with fish and wildlife agencies regarding provision of sufficient flows for ecological purposes in the spring and other seasons.</td>
</tr>
<tr>
<td>214</td>
<td>NMFS</td>
<td>5</td>
<td>Reclamation is committed to working with the Services to protect salmon, steelhead and bull trout during refill and other operations. See Sections 4.3 and 4.6 of this FEIS</td>
</tr>
<tr>
<td>215</td>
<td>City of Yakima</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>216</td>
<td>Washington Department of Ag</td>
<td>1</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>1</td>
<td>Thank you for your comment. These comments were addressed as part of the development of the Final EIS.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>2</td>
<td>When refill operations commence, refills into Kachess Reservoir will be dependent on hydrologic conditions. The quantity of refill may be more or less than 239,000 acre-feet in any given year. See Section 4.3 and Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>3</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>4</td>
<td>See Appendix F of the Final EIS for information on responsibilities for pumping during refill operations.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>5</td>
<td>Under the proposed action, KDRPP would not be pumped in years when prorationing is above 70 percent except when pumping is needed to fill senior and non-proratable water rights in years following drawdown.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>6</td>
<td>KDRPP will not change TWSA and or other ongoing operations. FEIS has been expanded to address this topic. Reclamation anticipates entering into an agreement with Roza and/or the other Participating Entities that will include assurances that pumping will be performed in refill years so Reclamation can meet its obligations for water supply and stream flows.</td>
</tr>
</tbody>
</table>
Under Alternative 4, Roza Irrigation District and any other participating entities would pay all power costs for operating the pumping plant. Power requirements for the East Shore and South Pumping Plants (Alternatives 2 and 3) were estimated during the feasibility study of KDRPP performed in 2014. They account for years when pumping is not required; years when drought-relief pumping is performed; and years when refill operations are under way. The power cost reported in Table 2-5 of the SDEIS shows results for those two alternatives. For Alternative 2 (East Shore), estimated costs for power were: $48,000 in all years; plus $502,500 in years when KDRPP is actively pumping; plus 29,100 in years when KDRPP is not actively pumping. For the Alternative 3 (South) the power costs were estimated to be lower than Alternative 2. The power cost for Alternative 4 (floating pumping plant) was judged to be lower than Alternative 3. The cost listed in Table 2-5 of the SDEIS is a rough estimate based on changes in the pumping units and physical configuration of Alternative 4 in comparison with Alternative 3.

Section 2.3.7 describes power substation and transmission line proposal. Reclamation and Roza have coordinated directly with both Puget Sound Energy (PSE) and the Bonneville Power Administration (BPA) regarding the power supply needs of the KDRPP project and where the KDRPP project would interconnect to the existing high voltage electrical utility grid. PSE is the local supplier of power to the Easton and surrounding areas of Kittitas County and as such will supply power to KDRPP. PSE and BPA supply far more power to the region than the KDRPP project will require and they have assured Reclamation that they have sufficient generating capacity for the KDRPP project along with the other power needs of the region.

See response to Common Issue 1. For the Preferred Alternative, Roza proposes to fund, design, construct, operate, and maintain the floating pumping plant at Kachess Reservoir. Roza would coordinate participation by other proratable entities.

Volumes would be determined annually, depending on hydrological conditions and subject to operating agreements. Volumes available to participating proratable entities would be limited to amounts needed to raise prorationed supplies to a maximum of 70%.

There would be no change to the calculation of TWSA with KDRPP. As a condition for the operation of the preferred alternative Roza will be required to ensure that the Kachess contribution to TWSA in subsequent years is not changed based upon the operation of KDRPP. Additional information is available in the Interim Comprehensive Basin Operating Plan for the Yakima Project.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>12</td>
<td>The Preferred Alternative is designed to improve prorationing up to 70% in drought years for participating proratable entities. It is possible that other proratable entities could benefit as an incidental effect of operations.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>13</td>
<td>Reclamation is open to discussion with non-participating, proratable users regarding the small diminishment of prorated supply that may occur during some refill years. Specific solutions would need to be negotiated consistent with Reclamation law and the Yakima Basin adjudication to maintain the TWSA status quo.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>14</td>
<td>Reclamation is open to discussion with non-participating, proratable users regarding the small diminishment of prorated supply that may occur during some refill years. Specific solutions would need to be negotiated consistent with Reclamation law and the Yakima Basin adjudication.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>15</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>16</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>17</td>
<td>Pumping will be provided to supply instream flows and other obligations as required when Kachess Reservoir is below the gravity outlet elevation. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations, which causes lower minimum elevations in Keechelus Reservoir during refill years. See Appendix F for additional details.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>18</td>
<td>Rimrock Reservoir minimum pool elevations would be up to 11 feet lower in prorated years and up to 23 feet lower in refill years.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>19</td>
<td>Seasonal flow changes at Parker are within 1.3 percent of the No Action Alternative, which are relatively small. Therefore, no mitigation is required.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>20</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>21</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>22</td>
<td>In addition to the storage transfer portion of the KKC, the KKC would also reduce summer flows in the Keechelus Reach of the Yakima River to improve flow conditions. Pumping will be provided to supply instream flows and other obligations as required when Kachess Reservoir is below the gravity outlet elevation. Keechelus Reservoir flows would increase to help refill Kachess Reservoir during refill years.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>23</td>
<td>Seasonal flow decreases at Parker are within 1.3 percent of the No Action Alternative, which are relatively small. Therefore, no mitigation is required.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>24</td>
<td>Reclamation has an obligation to meet entitlements therefore no mitigation should be required. The scenario difference is only 0.2 percent increase and is therefore not a notable change. This may be modeling nuance for the TWSA calculation, that because TWSA is higher, therefore the target flows are higher over Parker. Also, flows over Parker could be higher because Storage Control Period was extended in prorated years due to the Kachess inactive volume.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>25</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>26</td>
<td>See Appendix F of the Final EIS, which provides information with KID’s participation, consistent with the comment.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>27</td>
<td>The request to provide daily flow data cannot be addressed in this FEIS because the modelling was performed at seasonal and annual time steps. An appendix was added to this FEIS clarifying the modelling that was performed to analyze effects of the alternatives on flows in the study area, but modelling was not performed using daily data.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>28</td>
<td>Reclamation and Ecology reviewed ASARCO, all 3 BARRIE cases, and LESCHI to understand this comment. We disagree with the commenter that there are deficiencies in the disclosure of potentially significant adverse environmental impacts. We carefully reviewed the court rulings provided in this comment and conclude from ASARCO that we have given full consideration to environmental values, new information, and comments received on the DEIS, as well as SDEIS. In compliance with SEPA, Ecology's officials will be using this FEIS and the project record as the basis upon which a balancing judgment can be weighed between the benefits to be gained by the proposed action and its impact upon the environment. With respect to LESCHI, we reviewed all Environmental Consequences and Section 4.26 on the relationship between short-term uses of the environment and maintenance of long-term productivity; and Section 4.27 on irreversible and irretrievable commitment of resources. We did not find a specific change that needed to be made to these sections in this FEIS based on the case or comment. BARRIE II revolved around the need for an amended or new draft of an EIS based on substantial changes to a proposal or new information concerning anticipated environmental impacts. Please note that the SDEIS was issued for that reason: to ensure the public and decision-makers consider all reasonable alternatives to meet the purpose and need for action and to update the analysis of effects to the quality of the human environment that might arise from implementation of the alternatives. We believe that issuance of the SDEIS, and now this FEIS, is responsive to the concerns raised by the BARRIE cases. In summary, after reviewing the court findings, we believe the SDEIS and now this FEIS fully disclose the effects the alternatives would have on the quality of the human environment. No changes were made to this FEIS in response to this comment.</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>29</td>
<td>A wetland delineation and jurisdictional determination is not needed for making a choice among the alternatives. With the selection of an alternative to be implemented, the project proponents would complete a wetland delineation/jurisdictional determination to support permitting (see Section 4.7.10).</td>
</tr>
<tr>
<td>217</td>
<td>Kennewick Irrigation District</td>
<td>30</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>2</td>
<td>The intake and outlet for Alternative 4 are described and illustrated in Section 2.5.1 of this FEIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>3</td>
<td>As stated in Section 1.4 of this FEIS Roza would fund, design, construct, operate, and maintain a pumping plant at Kachess Reservoir. Other Proratable Entities could participate. Adverse and beneficial impacts of the project including regional economic are described in Chapter 4.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>4</td>
<td>Reclamation and Ecology are committed to implementing the Integrated Plan and will conduct specific environmental impact analyses for additional work in the future.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>5</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>6</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>7</td>
<td>As noted in Section 4.17.10 of the SDEIS, if any road deterioration merits repair, Reclamation and Ecology would coordinate with local jurisdictions, WSDOT or others as needed.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>8</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>9</td>
<td>See Appendix F of the Final EIS for information on when pumping would begin. In any given year, proratoning (curtailment) begins at the time Reclamation initiates storage control in the spring.</td>
</tr>
<tr>
<td>218</td>
<td>Kittitas County Board of County Commissioners</td>
<td>10</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>219</td>
<td>Columbia Irrigation District</td>
<td>1</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>219</td>
<td>Columbia Irrigation District</td>
<td>2</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>220</td>
<td>WSDOT</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>221</td>
<td>EPA</td>
<td>1</td>
<td>Thank you for this comment about the Floating Pumping Plant alternative, we agree. This alternative has been identified as the Preferred Alternative in the Final EIS.</td>
</tr>
<tr>
<td>221</td>
<td>EPA</td>
<td>2</td>
<td>Thank you for your comments on the SDEIS and DEIS. In response, we identified the Floating Pumping Plant as the agency’s preferred Alternative in the Final EIS.</td>
</tr>
<tr>
<td>221</td>
<td>EPA</td>
<td>3</td>
<td>Thank you for the LO score on the SDEIS. Your letter and the score will be included in the administrative record for this EIS. No change was made to this FEIS in response.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>4</td>
<td>The commenter questioned why this EIS does not include all the components of the broader, programmatic IP. This project is tiered from the IP, but it is an individual, site-specific action not intended to encompass all components or elements of the broader, programmatic IP. Instead, as the commenter mentions, based on the purpose and need for action, this EIS is to analyze an individual, site-specific action.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>5</td>
<td>The KDRPP project is a component of the Integrated Plan selected alternative, which is a comprehensive program to balance water needs and restore ecosystems in the Yakima River basin.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>6</td>
<td>The proposed action provides more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin as specific action identified in the Integrated Plan. The EIS evaluates KDRPP and KKC in a site-specific analysis tiered to the Integrated Plan FPEIS and ROD. See Section 1.3 of this FEIS and response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>7</td>
<td>The proposed action provides more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin as specific action identified in the Integrated Plan. The EIS evaluates KDRPP and KKC in a site-specific analysis tiered to the Integrated Plan FPEIS and ROD. See Section 1.3 of this FEIS and response to Common Issue 4. In response to the question about drying wells, please see the response to Common Issue 8.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>8</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>9</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>10</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>13</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>14</td>
<td>Per the purpose of the Integrated Plan, this site-specific action improves availability of water supply.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>15</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>16</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>17</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>19</td>
<td>See Section 1.5.4 of this FEIS.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>20</td>
<td>The analysis contained in this FEIS enables a comparison between the Alternatives 4 and 5. Alternative 4 is the floating pumping plant, and Alternative 5 includes the floating pumping plant plus KKC. Alternative 5 would enable faster refill of Kachess Reservoir inactive pool but this FEIS demonstrates that KKC is not essential to meeting the purpose and need for the project. None of the model runs for Alternative 4 indicates return to maximum pool levels would require 20 years.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>21</td>
<td>The DEIS and SDEIS both state in Section 4.3.2 that Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. The mention of a 20-year cycle in the DEIS (and SDEIS) is the replacement time of pumps and associated equipment.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>22</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>23</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>24</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>25</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>26</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>27</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>28</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>29</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>30</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>31</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>33</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>35</td>
<td>The Bureau of Reclamation’s Dam Safety Program is in place to confirm that dams are operated and maintained in a safe manner. The proposed project does not involve modifications to the Kachess or Keechelus dams; operational changes in Kachess Reservoir proposed under the action alternatives would not impact the stability of Kachess Dam, which has been subject to fluctuations in reservoir levels throughout its history.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>36</td>
<td>Figure 4-2 in this FEIS illustrates the surfaces below current low pool elevation.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>37</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>38</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>39</td>
<td>Section 4.2 of the SDEIS describes risks and related effects of landslides and seismic events.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>40</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>41</td>
<td>Reclamation and Ecology reviewed the economic analysis and especially the analysis of effects on property values, the fire department, and recreational opportunities. For fire, see Common Issue 10; for recreation see Common Issue 16. No new economic data are available that would change the analysis presented in the SDEIS, so the comment will be included in the record for this EIS, but no change was made to this FEIS in response.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>42</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>44</td>
<td>Reclamation and Ecology acknowledge the statement from the Hyak Property Owner’s Association, but this FEIS was not altered in response. We point the commenter to the agencies’ missions and legal authorizations; in particular, to the 1902 Reclamation Act which authorized the Department of the Interior to construct irrigation projects and operate them in conformity with state water laws and water rights. The operation of a particular Reclamation project, including the Yakima Project, is governed largely by the 1902 Act, the statute authorizing the project, and by the contracts under which the project delivers water for authorized and designated uses. Please note in response to this comment that the Record of Decision will be issued after weighing economic, social, and technical considerations, as well as the potentially significant environmental effects described in this FEIS, and after reviewing comments and concerns of the public, agencies, tribes, and private individuals and organizations, including this commenter’s.</td>
</tr>
<tr>
<td>222</td>
<td>Hyak Home Owners Association</td>
<td>45</td>
<td>Reclamation and Ecology have jointly prepared the DEIS, SDEIS, and Final EIS, including responses to comments.</td>
</tr>
<tr>
<td>223</td>
<td>PNW Four Wheel Drive Association</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>6</td>
<td>Reclamation was not required to respond to comments received on the DEIS as part of preparation of the SDEIS (40 C.F.R. § 1503.4[a]). All comments on the DEIS and SDEIS have been reviewed, considered, and responded to by Reclamation and Ecology. They are included in this FEIS.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>7</td>
<td>The purpose and need meets Reclamation’s requirements under NEPA and Ecology and Roza's requirements under SEPA. See responses to Common Issues 3, 4 and 12. As a condition of the Preferred Alternative, Roza would be required to fund, design, construct, operate and maintain the project, which would result in no direct federal funding on the project.</td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-35
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>224</td>
<td>KCA</td>
<td>8</td>
<td>See response to Common Issue 4. The use of &quot;Proposed Action&quot; in the purpose and need section was a typographical error that has been corrected in this Final EIS. As a condition of the Preferred Alternative, Roza would be required to fund, design, construct, operate and maintain the project, which would result in no direct federal funding on the project. Further, the analysis considers the potential impacts of the proposed project regardless of who is funding the project.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>9</td>
<td>See response to Common Issue 3. Under the Yakima Project Authorization Reclamation has Congressional Authority for ongoing project maintenance and operation. Operation of KDRPP falls within this authorization. As a condition of the Preferred Alternative, Roza would be required to fund, design, construct, operate and maintain the project, which would result in no direct federal funding on the project.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>10</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>13</td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>14</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>15</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>16</td>
<td>The US Forest Service served as a cooperating agency for the purpose of preparing this EIS. As such, they provided information, comments, and technical expertise to Reclamation and Ecology regarding the campground and other issues for which they have both legal jurisdiction and special expertise.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>17</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>224</td>
<td>KCA</td>
<td>18</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>225</td>
<td>Ellensburg Water Company, Sunnyside Valley ID, Yakima-Tieton ID, Selah-Moxee ID, Naches-Selah ID, and West Side Irrigating Company</td>
<td>1</td>
<td>Thank you for your comment. In addition, Reclamation and Ecology will ensure that the Irrigation Providers are on mailing lists regarding future operational plans or other information disseminated by the agencies.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>226</td>
<td>Xerces Society</td>
<td>1</td>
<td>WDFW’s Priority Habitat and Species database has been reviewed by Reclamation to assess the presence of any freshwater mussels in Kachess Reservoir. As a result, no documentation was found. Neither of these species are recognized by the USFS and BLM as species of conservation and population viability concern. As the project is implemented project proponents will work with Federal and state agencies to consider potential impacts to mussels.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>4</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>8</td>
<td>KDRPP will not change TWSA and or other ongoing operations. FEIS has been expanded to address this topic. See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>10</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5). Please see the response to Common Issue 13. Depending on the Services’ opinions and the conclusion of the Section 7 consultation process, Reclamation will be working collaboratively to develop reasonable and prudent alternatives, should this be necessary. Depending upon timing, this may be included in the ROD as an environmental commitment or it might be after the ROD.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>11</td>
<td>See Section 1.5 and Appendix A. Reclamation and Ecology are committed to working with all MOU partners to implement BTE projects through the Federal and State regulatory processes.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>12</td>
<td>The roughened channel design will comply with NMFS (with USFWS approval) design criteria. For the Preferred Alternative, Roza may choose to contract with WDFW for maintenance and operations of this facility, including monitoring fish passage performance.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>13</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>14</td>
<td>Project proponents will coordinate with WDFW and USFWS to identify measures to provide fish passage during construction of volitional fish passage at the Narrows, in accordance with requirements of the Service's biological opinion.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>15</td>
<td>During refill operations flow in the Kachess River will be maintained to meet required minimum flow level.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>16</td>
<td>A comparison of July-September Title XII target flow impacts has been added to Section 4.3.4.2 and 4.3.7.2 of the Final EIS. The winter and spring target flows will be maintained at level they would have been under existing conditions without refill at Kachess.</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>17</td>
<td>Construction impacts to fish (including the habitat elements that support fish such of riparian and shoreline vegetation) are addressed for each Alternative in section 4.6 and this impact is broadly characterized as a &quot;loss of habitat complexity&quot;. Construction impacts on fish of the floating pumping plant facility (Alternative 4) would be similar to those described for Alternative 2. Currently text states that &quot;Permanent reductions in shoreline vegetation would occur.&quot; This FEIS has been expanded to indicate that benthic habitat will be permanently altered by construction of mooring structures with alternatives 4 and 5C, reducing benthic habitat complexity, vegetation, and invertebrate productivity, affecting benthic oriented fish species like mountain whitefish, peamouth, largescale sucker, and threespine stickleback.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>19</td>
<td>statement added about shoreline habitat and more detailed info on reservoir food web etc. is already provided in section 4.6</td>
</tr>
<tr>
<td>227</td>
<td>American Rivers - Trout Unlimited - Wilderness Society</td>
<td>22</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>2</td>
<td>Section 1.2 describes Reclamation and Ecology's commitment to the Integrated Plan</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>3</td>
<td>The KDRPP project is a component of the Integrated Plan selected alternative, which is a comprehensive program to balance water needs and restore ecosystems in the Yakima River basin.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>4</td>
<td>The proposed action provides more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin as specific action identified in the Integrated Plan. The EIS evaluates KDRPP and KKC in a site-specific analysis tiered to the Integrated Plan FPEIS and ROD. See Section 1.3 of this FEIS and response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>5</td>
<td>The proposed action provides more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin as specific action identified in the Integrated Plan. The EIS evaluates KDRPP and KKC in a site-specific analysis tiered to the Integrated Plan FPEIS and ROD. See Section 1.3 of this FEIS and response to Common Issue 4.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>6</td>
<td>This FEIS presents the how the proposed action addresses the purpose and need, and provides Responses to public comments on the DEIS and SDEIS.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>7</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>8</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>9</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>10</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>11</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>12</td>
<td>Per the purpose of the Integrated Plan, this site-specific action improves availability of water supply.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>13</td>
<td>See Appendix F of the Final EIS for information on these points.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>14</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>15</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>16</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>17</td>
<td>See section 1.5.5 of this FEIS.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>18</td>
<td>The analysis contained in this FEIS enables a comparison between the Alternatives 4 and 5. Alternative 4 is the floating pumping plant, and Alternative 5 includes the floating pumping plant plus KKC. Alternative 5 would enable faster refill of Kachess Reservoir inactive pool but this FEIS demonstrates that KKC is not essential to meeting the purpose and need for the project. None of the model runs for Alternative 4 indicates return to maximum pool levels would require 20 years.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>19</td>
<td>The DEIS and SDEIS both state in Section 4.3.2 that Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. The mention of a 20-year cycle in the DEIS (and SDEIS) is the replacement time of pumps and associated equipment.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>20</td>
<td>An appendix has been added to this FEIS explaining in more detail the hydrologic modelling used to project effects to eater resources and other resources in this FEIS. Please note that modelling does not provide a “prediction” but rather, a projection of reasonably likely water resource responses to the alternatives.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>21</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>22</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>23</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>24</td>
<td>To promote public understanding of action, summary costs are provided in the EIS. Details are presented in supported documents referenced in the EIS. The Preferred Alternative would not be funded by taxpayers.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>25</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>26</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>27</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>28</td>
<td>Mitigation measures for ESA Threatened and Endangered fish species (bull trout) related to changes in Kachess Reservoir water levels, including monitoring of the Volitional Bull Trout Passage Improvements, if warranted, will be determined in consultation with the Service and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>29</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>30</td>
<td>See response to Common Issue 14.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>31</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>33</td>
<td>The Bureau of Reclamation’s Dam Safety Program is in place to confirm that dams are operated and maintained in a safe manner. The proposed project does not involve modifications to the Kachess or Keechelus dams; operational changes in Kachess Reservoir proposed under the action alternatives would not impact the stability of Kachess Dam, which has been subject to fluctuations in reservoir levels throughout its history.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>34</td>
<td>Figure 4-2 in this FEIS illustrates the surfaces below current low pool elevation.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>35</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>36</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>37</td>
<td>Section 4.2 of the SDEIS describes risks and related effects of landslides and seismic events.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>38</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>40</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>41</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>42</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>228</td>
<td>Hyak Home Owners Association</td>
<td>43</td>
<td>Reclamation and Ecology have jointly prepared the DEIS, SDEIS, and Final EIS, including responses to comments.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>4</td>
<td>BPA is listed as a cooperating agency as they would potentially oversee any power requirements for the constructed facility.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>5</td>
<td>The SDEIS has been updated regarding the applicability of the Shoreline Management Act. See Section 3.15.2.3.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>6</td>
<td>The volitional fish passage channel will convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess today as they have for thousands of years. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel. The upstream passage of fish into Box Creek Canyon is an existing, separate and independent issue from the volitional fish passage channel at the Narrows.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>7</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>8</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>9</td>
<td>BTE was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this action because BTE project designs were not sufficiently advanced. In the future, BTE projects undertaken by Reclamation or Ecology would require separate NEPA or SEPA compliance prior to implementation. This includes Endangered Species Act (ESA) consultation on BTE projects remaining as part of the Integrated Plan. Reclamation and Ecology are committed to working with all MOU partners to implement BTE projects through the Federal and State regulatory processes</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>10</td>
<td>Workgroup formation and membership is described in Section 1.9.3 of the Integrated Plan Final PEIS, and is incorporated here by reference.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>12</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>13</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>14</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>15</td>
<td>Cost for the Integrated Plan are presented in the Integrated Plan FPEIS. Cost for the proposed action are presented in Section 2.7 of the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>16</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>17</td>
<td>The volitional fish passage channel would convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>18</td>
<td>Reclamation and Ecology are committed to working with all MOU partners to implement BTE projects through the Federal and State regulatory processes, as demonstrated in the Bull Trout Enhancement Memorandum of Understanding. See Section 1.5.5 and Appendix A of this FEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>19</td>
<td>The KKC project was not presented in this SDEIS as a stand-alone (KKC only) alternative as described in the DEIS; instead, it was advanced as a component of a KDRPP alternative. Reclamation and Ecology will continue to analyze KKC for other benefits, consistent with the Integrated Plan.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>20</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>22</td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>23</td>
<td>KDRRP would not create new or additional agricultural activities as water supplied by KDRPP would not be used to serve new irrigated agricultural lands. Greenhouse gas impacts anticipated from KDRPP are described in Section 4.12 of this FEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>24</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>25</td>
<td>Section 4.25 of the SDEIS includes the Integrated Plan as part of the present and reasonably foreseeable future actions.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>26</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>27</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>28</td>
<td>The effects of the proposed project, including beneficial and adverse impacts, are described in Section 4.21 and summarized in the Executive Summary.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>29</td>
<td>Reclamation determined that a public hearing in western Washington was not necessary. Following the Notice of Availability and the publication of the SDEIS, Reclamation and Ecology held two public meetings (with a court reporter to record public testimony) in the area where environmental impacts would occur. See Section 5.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>30</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>31</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>) The US Forest Service is a cooperating agency for this EIS, and is a preparer of the document. The location of the proposed action with respect to Okanogan-Wenatchee National Forest and the potential impacts are acknowledged in the EIS along with the US Forest Service's roles and responsibilities with respect to the EIS and the proposed action.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>32</td>
<td>Water rights are described in sufficient detail to analyze the impacts of the proposed action and alternatives.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>33</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>34</td>
<td>Workgroup formation and membership is described in Section 1.9.3 of the Integrated Plan Final PEIS, and is incorporated here by reference.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>37</td>
<td>RCW 90.38.110 directed WSU to do a cost-benefit analysis of individual storage projects, prior to the Legislature appropriating funds exceeding $100M for water storage projects listed in Integrated Plan.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>38</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>39</td>
<td>See Section 2.3.5 of this FEIS describes volitional fish passage. See Figure 4-3 which displays pool levels under different scenarios under No Action and the Preferred Alternative.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>40</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>41</td>
<td>Section 1.8.1 of the SDEIS describes the authorization of YRBWEP in sufficient detail.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>42</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>43</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>44</td>
<td>Most of the information requested in this comment is out of scope for this FEIS, however the table 3-7 on page 3-20 of the FPEIS contains the Yakima Project Irrigation District Water Rights in acre-feet per year.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>45</td>
<td>Section 1.4 of SDEIS describes the USFS role in the EIS process.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>46</td>
<td>This level of detail about YRBWEP Phase II is not required to analyze the impacts of the proposed action and alternatives.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>47</td>
<td>This is outside the scope of the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>48</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>50</td>
<td>Section 2.2.1 of the SDEIS clarifies that target flow levels at Keechelus Reservoir have not been an issue since 1996.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>51</td>
<td>Specific crop irrigation requirements are beyond the scope of the EIS. In the RiverWare modeling period, Kachess Reservoir has not been drawn down below 2197.75 feet in 88 of the 91 years for the No Action Alternative. In all years, the No Action Alternative remains within existing operating levels.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>52</td>
<td>Environmental analysis of 70% threshold was completed in the Integrated Plan FPEIS. The reference to &quot;catastrophic loss&quot; is based upon input provided by farm producers during development of the Integrated Plan. Reclamation has no authority to reduce deliveries to senior water rights holders.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>53</td>
<td>The volitional fish passage channel will convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess today as they have for thousands of years. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>54</td>
<td>See response to Common Issue 5.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>55</td>
<td>Wind data used to assess the moorage requirements and stability of the Floating Pumping Plant Barge were taken from the nearby Easton Airport. The nylon net proposed for use in precluding fish from gaining entry into the pump intakes is the same material as used for constructing net pens for raising salmon or other fish species in a salt water marine environment. The project proponents would inspect the net annually and repair or replace the net upon seeing deterioration of the net, as appropriate.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>56</td>
<td>Rigid pipe bridges are commonly used throughout the world. The flexible pipe bridge concept is used on marine applications; and most notably seen in association with dredging operations where the dredge discharge line needs to accommodate tides, wind, waves and the constant need to move the dredge itself to locations that need to be dredged. Cardanic joints of the type to be used on the floating pumping plant will have a normal design life of between 25 and 50 years (dependent upon the actual service conditions experienced) under continuous operating conditions. The cardanic joints for this installation will experience only limited periodic operation and minimal frequency of flexure. Thus, in the envisioned operating conditions, these cardanic joints should have a life expectancy that will likely exceed the normal design life expectancy.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>57</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>58</td>
<td>Construction impacts to fish (including the habitat elements that support fish such of riparian and shoreline vegetation) are addressed for each Alternative in section 4.6 and this impact is broadly characterized as a &quot;loss of habitat complexity&quot;. Construction impacts on fish of the floating pumping plant facility (Alternative 4) would be similar to those described for Alternative 2. Currently text states that &quot;Permanent reductions in shoreline vegetation would occur.&quot; This FEIS has been expanded to indicate that benthic habitat will be permanently altered by construction of mooring structures with alternatives 4 and 5C, reducing benthic habitat complexity, vegetation, and invertebrate productivity, affecting benthic oriented fish species like mountain whitefish, peamouth, largescale sucker, and threespine stickleback.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>59</td>
<td>Approximately 60,000 cubic yards of materials would be dredged. The dredged material will be side cast onto the floor of the reservoir within a silt curtained area. Far less handling of the dredge spoils if simply side cast onto the floor of the Reservoir. Additional storage volume not needed that would be added by employing an upland disposal site.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>60</td>
<td>The design appraisal report for Alternative 4, which was used for the environmental analysis, was posted on Reclamation’s website concurrently with publication of the SDEIS. It provides design details in addition to those presented in the SDEIS. It can be found at <a href="https://www.usbr.gov/pn/programs/eis/kkc/fppaappraisal.pdf">https://www.usbr.gov/pn/programs/eis/kkc/fppaappraisal.pdf</a>.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>61</td>
<td>The design appraisal report for Alternative 4, which was used for the environmental analysis, was posted on Reclamation’s website concurrently with publication of the SDEIS. It provides design details in addition to those presented in the SDEIS. It can be found at <a href="https://www.usbr.gov/pn/programs/eis/kkc/fppaappraisal.pdf">https://www.usbr.gov/pn/programs/eis/kkc/fppaappraisal.pdf</a>.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>62</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>63</td>
<td>Disposal areas have yet to be identified; for this SDEIS analysis, Reclamation assumed the offsite location would be within 10 miles of the Keechelus Reservoir. An existing quarry near Keechelus Dam may be available for disposing of the crushed material excavated from the tunnel. Depending on construction timing, WSDOT could potentially use the material as fill for the I-90 improvement project. Reclamation would ensure that all required permits and clearances are obtained for use of any material disposal area(s).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>64</td>
<td>Operations impacts were analyzed based on drought relief pumping of up to 200,000 acre-feet. Operational characteristics of Alternative 4 that are distinct from other pumping plant alternative are described in this FEIS. Project proponents and authorizations are described in Sections 1.3 and 1.8 of this FEIS, respectively, and in response to Common Issue 3.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>65</td>
<td>Reclamation will meet obligations to non-proratable irrigation districts. Pumping would continue while Kachess Lake is below the existing outlet works. In the period of record analyzed, pumping could last up to 33 months in Alternative 4.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>66</td>
<td>Thank you for your comment. The cross reference has been updated in this FEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>67</td>
<td>Mitigation measures for ESA Threatened and Endangered fish species, including monitoring of fish impacts downstream of Kachess Dam, if warranted, will be determined in consultation with the Service and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>68</td>
<td>To promote public understanding of action, summary costs are provided in the EIS. Details are presented in the EIS supported documents referenced in the EIS (feasibility-level design reports and appraisal report).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>69</td>
<td>See response to Common Issue 2. To promote public understanding of action, summary costs are provided in the EIS. Details are presented in supported documents referenced in the EIS, and include volitional bull trout passage. The Preferred Alternative is substantially lower in cost than $500M and would not be funded by taxpayers. The upstream passage of fish into Box Creek Canyon is an existing, separate and independent issue from the volitional fish passage channel at the Narrows.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>70</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>71</td>
<td>The Bureau of Reclamation's Dam Safety Program is in place to confirm that dams are operated and maintained in a safe manner. The proposed project does not involve modifications to the Kachess or Keechelus dams; operational changes in Kachess Reservoir proposed under the action alternatives would not impact the stability of Kachess Dam, which has been subject to fluctuations in reservoir levels throughout its history. Project effects on slope stability and seismic factors are described in Section 4.2.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>72</td>
<td>Figure 3-3 illustrates flows under current conditions, which are the basis of the affected environment.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>73</td>
<td>These questions are beyond the scope of the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>74</td>
<td>The purpose of this table is to present target flows established in the Yakima River; these target flows are an element of the operational requirements that determine how much water needs to be released from Keechelus and Kachess (and other) Reservoirs.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>75</td>
<td>The RiverWare modeling covered the period from 1926 to 2015 - in this period, the modeled prorationing of less than 70 percent occurred 15 years. Other questions are beyond the scope of the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>76</td>
<td>The Keechelus Reservoir drainage area has a much higher average precipitation than the Kachess Reservoir drainage area. Mean annual precipitation quantities have been added to Tables 3-5 and 3-7 in the Final EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>77</td>
<td>As described in Section 4.3.2 of the SDEIS, Alternatives 2, 3, and 4 would improve Keechelus Reach July flow conditions by 68 days compared to the No Action Alternative, and Alternatives 5A, 5B, and 5C would improve Keechelus Reach July flow conditions by 2,635 days compared to the No Action Alternative (out of the period of record modeled).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>78</td>
<td>Section 3.6.4.3 of the EIS has been updated to include mention of a recently implemented plan to rear coho salmon at the Sampson Hatchery for reintroduction to the upper Yakima Basin.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>79</td>
<td>Figure 3-6 has been updated in the Final EIS to show existing minimum pool and lake separation elevations.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>80</td>
<td>Water quality is described in Section 3.4 of the SDEIS. Kachess and Kachess Reservoirs are the headwaters of the Yakima River so they are the initial source of Yakima River water quality. As noted in Section 3.4.7.1, Ecology rates the overall Yakima River water quality as meeting or exceeding expectations and is of lowest concern.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>81</td>
<td>Changes in water temperature with each alternative are addressed in section 4.4 Surface Water Quality of the SDEIS. Water temperatures in Lake Kachess would decrease under most alternative scenarios, except for a slight increase in late September, with the impacts to fish discussed in section 4.6. The Fish and Wildlife Coordination Act Report (BOR 2012) discusses predicted changes in temperature due to climate change relative to existing temperature problems in the Yakima Basin.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>82</td>
<td>This is outside the scope of the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>83</td>
<td>Temperature change due to the projects are summarized in Section 4.4.2 of the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>84</td>
<td>Fish passage at Keechelus is not proposed under the Proposed Action.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>85</td>
<td>Fish passage at Keechelus is not proposed under the Proposed Action.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>86</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>87</td>
<td>Please see updates to section 3.6 and 4.6 in the SDEIS which reference recent WDFW and University of Washington studies of Kachess and Keechelus reservoirs productivity and zooplankton abundance (Hansen et al. 2017, PSU 2017a). The comparison to sockeye-producing lakes in Alaska by Goodwin and Westley (1967) refers to Tikchik Lakes system which also supports Chinook, coho, chum, and pink salmon.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>88</td>
<td>Section 3.6.4.3 of the EIS has been updated to include mention of a recently implemented plan to rear coho salmon at the Sampson Hatchery for reintroduction to the upper Yakima Basin.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>89</td>
<td>Commenters have identified uncertainty in the range in the number of sockeye passed over Roza Dam reported by DART, these data have been revised in the FEIS with data from resources other than DART. Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>90</td>
<td>The listing of the Pacific lamprey as a threatened or endangered species is outside of the scope of this EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>91</td>
<td>Evaluation of wetlands at an inventory level to compare EIS alternatives is adequate. Wetlands that will be directly impacted by the project will be delineated as required for federal, state, and local permits.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>92</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>93</td>
<td>The listing of the Pacific lamprey as a threatened or endangered species is outside of the scope of this EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>94</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>95</td>
<td>As outlined in Section 4.9 of this FEIS, Water temperatures are expected to decrease by 1 to 2 degrees in Kachess Reservoir, which would be a benefit to bull trout. ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>96</td>
<td>Climate change effects on reservoir levels (which influence fish passage) and stream flows, and the effects of alternatives considering those climate change effects, are described in Section 4.12 of the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>97</td>
<td>Reclamation and Ecology developed more specific information as part of the Yakima River Basin Study (Reclamation 2011) that focused on the Yakima Basin and that was used as the basis for the Integrated Plan.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>98</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>99</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>100</td>
<td>The Supplemental EIS provides a description of environmental impacts of the project alternatives, including those impacts that would occur on National Forest lands (See Supplemental EIS Chapter 4).</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>101</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>102</td>
<td>The SDEIS has been updated regarding the applicability of the Shoreline Management Act. See Section 3.15.2.3.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
</tbody>
</table>
| 229                  | Wise Use Movement                  | 103            | See Sections 3.3 and 4.3 Surface Water Resources of the SDEIS and Section 1.3 of the Integrated Plan PEIS describes the 70 percent proration level determination. Section 1.3 of the Integrated Plan PEIS states: "A water supply of 70 percent of proratable water rights during a drought year would provide a minimally acceptable supply to prevent severe economic losses to farmers. This number was reached following extensive discussions with stakeholders regarding the lowest level of water supply that could be accommodated without catastrophic losses to crops, assuming aggressive water management techniques were employed. This 70 percent threshold is similar to the State of Washington’s definition of a drought condition contained in RCW 43.83B.400, which recognizes a drought when water supply for a significant portion of a geographic area falls below 75 percent of normal and is likely to cause undue hardship for various water uses and users."
<pre><code>                                                                                                                                                                                             |
</code></pre>
<p>| 229                  | Wise Use Movement                  | 104            | As stated in Section 4.4.1 of the SDEIS, these indicators are not addressed because the project is not expected to affect these parameters.                                                                                                                                                                                                                                                                                 |
| 229                  | Wise Use Movement                  | 105            | As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.    |
| 229                  | Wise Use Movement                  | 106            | Section 1.2.3 in the SDEIS notes that reservoir fish passage is one of the seven elements of the Integrated Plan’s comprehensive package address ecosystem restoration, water supply, and climate change flexibility issues in the basin. Fish passage at Kachess Dam, while included in the reservoir fish passage element, is not an objective of the KDRPP and KKC projects; however KDRPP would be designed to not preclude future fish passage improvements to Kachess Dam consistent with the Integrated Plan. |
| 229                  | Wise Use Movement                  | 107            | With the KKC (Alternatives 5A, 5B, and 5C) the addition of nutrients through the conveyance of water from Keechelus Reservoir to Kachess Reservoir would cause a small increase in the productivity of Kachess Reservoir. Generally, zooplankton and benthic invertebrate (fish prey) productivity is estimated to decrease with all pumping alternatives. |
| 229                  | Wise Use Movement                  | 108            | Please see section 4.6 of the SDEIS which describes adverse impacts to benthic invertebrate productivity (a fish food base) with increased drawdown under pumping alternatives.                                                                                                                                                                                                                                     |
| 229                  | Wise Use Movement                  | 109            | The Supplemental EIS provides a description of environmental impacts of the project alternatives, including those impacts that would occur on National Forest lands (See Supplemental EIS Chapter 4).                                                                                                                                                                                                                      |</p>
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>110</td>
<td>In the period of record analyzed, pumping could last up to 33 months.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>111</td>
<td>Reclamation's mission includes providing water for irrigated agriculture. The Federal Government does not make individual cropping decisions.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>112</td>
<td>Table 4-155 of the SDEIS summarizes the economic impacts under adverse climate change conditions associated with the change in agricultural production attributed to the additional water provided by this alternative compared with the amount of water provided by Alternative 1.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>113</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>114</td>
<td>Fish passage is an element of the Integrated Plan (and as such is discussed in Section 4.24); it is not part of the Purpose and Need for the KDRPP and KKC project.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>115</td>
<td>Section 4.25 of the SDEIS considers whether the impacts of KDRPP and KKC could have additive or iterative effects in combination with other past, present, or reasonably foreseeable projects in the area with the defined analysis area. Neither KDRPP nor KKC would have no effect on the recruitment of gravels, small cobbles, or large woody debris.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>116</td>
<td>The existing National Forest Management Plan was considered in describing the affected environment. Reclamation has coordinated with the Forest Service as a cooperating agency.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>117</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>118</td>
<td>The existing National Forest Management Plan was considered in describing the affected environment. Reclamation has coordinated with the Forest Service as a cooperating agency.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>119</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>120</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>121</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>122</td>
<td>This text has been removed from the SDEIS.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>123</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>124</td>
<td>Section 5.5 lists substantive environmental laws only. FACA is a procedural law and would be complied with as appropriate.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>125</td>
<td>Thank you for your comment. As noted in the Integrated Plan FPEIS (Section 1.9.3) In April 2009, Reclamation and Ecology initiated the YRBWEP Workgroup to help develop a proposal for an Integrated Water Resource Management Plan. Current membership includes environmental non-governmental organizations.</td>
</tr>
<tr>
<td>229</td>
<td>Wise Use Movement</td>
<td>126</td>
<td>Impacts from the artificial channel from Lake Kachess to Box Canyon Creek are outside the scope of this EIS.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann (KCA, East Kachess HOA, Kachess Ridge, Friends of Bumping Lake, North Cascades CC, CELP, Snoqualmie Pass Fire, Yakima Coalition)</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>2</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>4</td>
<td>Both the Yakama Nation and Colville Confederated Tribes are involved and are the two tribes identified as having a cultural connection to the project area. Both Tribes have been assisting Reclamation in identifying and addressing any cultural resource concerns that may arise as a part of the project. In response to the question about potential artifacts unearthed in the future, please note that this specific comment was not addressed in this FEIS due to NEPA’s no derogation clause at §104 which means that Reclamation retains responsibility to comply with the specific statutory obligations of NHPA, ARPA, or NAGPRA; however Section 4.18 of this FEIS clarifies that as part of NHPA § 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>5</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>7</td>
<td>See Section 3.3.1 of the SDEIS for a description of Yakima Project operations. The five reservoirs in the Yakima Project are operated in a coordinated manner to provide for surface water needs of the system as a whole; no single reservoir is designated to supply the needs of any particular area. Water rights senior to Reclamation’s water right will not be impacted.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>8</td>
<td>The results of the value analysis study concluded that a floating pumping plant would be feasible.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>9</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>10</td>
<td>NEPA allows refinement of the proposed action to get to a preferred alternative. Impacts were fully disclosed in the SDEIS and this FEIS, and mitigation measures will be stated in the Record of Decision.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>12</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>13</td>
<td>Thank you for this comment about the terms lake and reservoir. The comment has been noted and will be included in the record for this EIS; however, the requested change was not made to this FEIS due to the common, public understanding and historical uses of these terms. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a> )</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>14</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>15</td>
<td>The 2013 “Yakima River Basin Resource Management” law (2SSB 5367) set the vision for the forest and authorized the state Board of Natural Resources to enroll the property as the Teanaway Community Forest under the Community Forest Trust Program. The 2013 state authorizing legislation specifies that if the 214,000 acre feet of water is not developed by 2025, the TCF would be returned to the common school trust. See Section 1.8.2 of the SDEIS for additional details.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>16</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>17</td>
<td>See Figure 4 -2 in this FEIS for additional illustration of proposed drawdown.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>18</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>22</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>24</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process.</td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-61
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>27</td>
<td>Specific quantities and management of excavated and fill material for this feature would be further refined as part of final design, if KKC is included in the selected alternative.</td>
</tr>
<tr>
<td>230</td>
<td>Lewis, Ann, et al</td>
<td>28</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
</tr>
</tbody>
</table>
| 230                   | Lewis, Ann, et al       | 29             | No permanent habitat loss is predicted for listed fish species including bull trout.  
As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm. |
| 230                   | Lewis, Ann, et al       | 32             | The DEIS used the 2012 303(d) list, which was the most updated list at the time of the report. The SDEIS used the 2014 303(d) list, which was published between the releases of the DEIS and the SDEIS.  
As noted in Table 3-9 of the SDEIS, PCBs were listed due to being found in fish tissue and do not have a known source. PCBs were found in fish throughout the river and the reservoirs; downstream Yakima River fish were found to have higher levels of PCBs than upper Yakima River and reservoir fish. |
<p>| 230                   | Lewis, Ann, et al       | 33             | As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir. |
| 230                   | Lewis, Ann, et al       | 34             | Impacts from construction for each alternative and each resource are described in Chapter 4 of this FEIS.                                                                                                                                                                     |</p>
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>231</td>
<td>Chabal, Sharon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>232</td>
<td>Cooley, Hannah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>233</td>
<td>Dunkel, Sarah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>
| 234                   | Fountain, Tim/Jean      | 1              | Thank you for this comment about the terms lake and reservoir. The comment has been noted and will be included in the record for this EIS; however, the requested change was not made to this FEIS due to the common, public understanding and historical uses of these terms. "Reservoir" was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as "[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use." [Link]

234 Fountain, Tim/Jean  2  If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.

234 Fountain, Tim/Jean  3  See response to Common Issue 10.

234 Fountain, Tim/Jean  4  See response to Common Issue 4. Further, a pumping plant at Keechelus Reservoir is not feasible to provide the volume of water needed. Moreover, releases from Keechelus adversely impact fish habitat below Keechelus Dam to Lake Easton.

235 Lewis, Ann          1  The SDEIS is a standalone document that can be read on its own, but it was prepared to supplement the 2015 Draft EIS.

236 Morrison, Lisa      1  Thank you for your comment.

237 Hazard, Alyxandra   1  Thank you for your comment.

238 Hazard, Emily       1  Thank you for your comment.

239 Hazard, Kiefer      1  Thank you for your comment.

240 Hazard, Morgan      1  Thank you for your comment.

241 Hazard, Nick        1  Thank you for your comment.

242 Hendren, Alec       1  Thank you for your comment.

243 Johnson, Josie      1  Thank you for your comment.

244 Halpin, Maggie      1  Thank you for your comment.

<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>245</td>
<td>Owens, JP</td>
<td>2</td>
<td>See response to Common Issue 4. Roza and other potentially participating entities are currently improving canals to improve conservation.</td>
</tr>
<tr>
<td>245</td>
<td>Owens, JP</td>
<td>5</td>
<td>Groundwater storage is an element in the Integrated Plan selected alternative, and as such is part of the comprehensive strategy to address ecosystem restoration, water supply and climate change flexibility issues in the Yakima basin.</td>
</tr>
<tr>
<td>245</td>
<td>Owens, JP</td>
<td>10</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating prorateable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>246</td>
<td>Rostron, Kaylin</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>247</td>
<td>Johnson, Nancy and Joel</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>248</td>
<td>Upbliee, Jean</td>
<td>1</td>
<td>Wildlife would continue to have access to water under drought relief pumping.</td>
</tr>
<tr>
<td>249</td>
<td>Rowe, James</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>249</td>
<td>Rowe, James</td>
<td>2</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>249</td>
<td>Rowe, James</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>1</td>
<td>Modeling used for environmental analysis included multi-year drought (1992 through 1994). Surface water resource impacts for multiple drought years are included in Section 4.3 and are results were used in other applicable impact assessments.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>3</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>4</td>
<td>Operational impacts from the proposed project are addressed throughout Chapter 4 of the SDEIS.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>5</td>
<td>The construction and operational impacts of the proposed project on wildlife are addressed in Section 4.8 and on groundwater in Section 4.5 of the EIS.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>6</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>7</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>8</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>9</td>
<td>Habitat connectivity and migration routes discussed in Section 3.8.2 and impacts to migration in Section 4.8</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>10</td>
<td>Restoration scenarios referenced in Section 4.6 of the SDEIS are Big Kachess tributary connections to Lake Kachess (Gale, Thetis, and Lodge creeks). Information on potential restoration actions can be found in Reclamation 2005, Phase I Assessment Report Storage Dam Fish Passage Study Yakima Project, Washington, Technical Series No. PN-YDFP-001. U.S. Department of the Interior Bureau of Reclamation Pacific Northwest Region, Boise, Idaho, Chapter 5: Tributary Habitat Conditions. Future restoration actions could include removal of man-made barriers such as culverts and restoration of riparian and stream channel conditions that do not meet USFS Forest Plan standards.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>11</td>
<td>The adverse effects to the zooplankton could adversely affect bull trout, an ESA-listed species. Mitigation measures for ESA Threatened and Endangered fish species related to changes in Kachess Reservoir water levels (and zooplankton), if warranted, will be determined in consultation with the Service and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>12</td>
<td>Actions would require review and approval of Ecology under the Clean Water Act.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>13</td>
<td>In a typical year, the proposed alternatives for pumping and drawdown would typically begin around August, but depending on drought duration and severity could begin as early as June and may continue to pump while the reservoir is below the outlet works to meeting flow obligations ending in late September or early October. Most species spawn early enough in the year that larval stages would not be present in the lake in June, with the exception of Northern pike minnow that spawn in summer.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>14</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>15</td>
<td>Both Kachess Reservoir and Keechelus Reservoir were both identified as containing PCBs in both the Draft EIS and the SDEIS.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>16</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>17</td>
<td>It is unclear what the exact comment was that you heard during a particular public meeting, but we would like to respond that the statement about not increasing the amount of irrigated land is correct; consequently, no change was made to this FEIS. By way of explanation, if additional irrigated land or acres are proposed for addition to an existing Reclamation project area, that action is called an inclusion. An inclusion is viewed as a discretionary action undertaken by Reclamation and as such, it would require its own NEPA and other environmental reviews. No inclusion is proposed for this action.</td>
</tr>
<tr>
<td>250</td>
<td>Wilson, Larry</td>
<td>18</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>251</td>
<td>Aguilar, Bonnie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>252</td>
<td>Aigner, Rob</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>253</td>
<td>Canan, Mike</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>254</td>
<td>Kitchell, Sarah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>254</td>
<td>Kitchell, Sarah</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>254</td>
<td>Kitchell, Sarah</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>255</td>
<td>Clark, Dennis</td>
<td>2</td>
<td>Thank you for the comment. Although Alternative 4 from the DEIS is no longer under consideration in the SDEIS, Alternatives 5A, 5B and 5C evaluate construction and operation of both KDRPP and the KKC North Tunnel alignment.</td>
</tr>
<tr>
<td>255</td>
<td>Clark, Dennis</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>256</td>
<td>Klebanoff, Mark</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>257</td>
<td>Berline, Michael</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>258</td>
<td>Fox, Lucia</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>259</td>
<td>Grinius-Hill, Sue</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>260</td>
<td>Halvorson, Henry</td>
<td>1</td>
<td>The purpose and need for the proposed action are described in the EIS Executive Summary and in Section 1.3.</td>
</tr>
<tr>
<td>261</td>
<td>Mulqueeny, Kara/Shawn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>262</td>
<td>Poulin, Baraka</td>
<td>1</td>
<td>Power requirements for the East Shore and South Pumping Plants (Alternatives 2 and 3) were estimated during the feasibility study of KDRPP performed in 2014. They account for years when pumping is not required; years when drought-relief pumping is performed; and years when refill operations are under way. The power cost reported in Table 2-5 of the SDEIS shows results for those two alternatives. The power cost for the floating pumping plant (Alternative 4) was a rough estimate using engineering judgment. It is based on changes in the pumping units and physical configuration of Alternative 4 in comparison with Alternatives 2 and 3. All values are discounted over the 100 year period analyzed. The $5M power cost shown for Alternative 4 is equivalent to approximately $17.5M over the 100 year period without discounting.</td>
</tr>
<tr>
<td>262</td>
<td>Poulin, Baraka</td>
<td>2</td>
<td>Thank you for your comment. Executive Order 13783 (March 28, 2017) withdrew documents regarding social cost of carbon as no longer consistent with government policy. GHG and climate change assessment was retained in the SDEIS and FEIS based on public scoping and at the request of Ecology, but did not include using social cost of carbon as an assessment tool.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>262</td>
<td>Poulin, Baraka</td>
<td>3</td>
<td>To promote public understanding of action, summary costs are provided in the EIS. Details are presented in supported documents referenced in the EIS. The Preferred Alternative is substantially lower in cost than $450M and would not be funded by taxpayers.</td>
</tr>
<tr>
<td>262</td>
<td>Poulin, Baraka</td>
<td>4</td>
<td>Specific cost were not developed for this EIS, however slope stability will be monitored and erosion control will be implemented, as needed. See response to Issue 12 (Slope Stability)</td>
</tr>
<tr>
<td>263</td>
<td>Shirley, Amy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>264</td>
<td>Brill, Gary</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>265</td>
<td>Cook, Paul</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>266</td>
<td>Villa, Steve</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>267</td>
<td>Wolcott, Kevin</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>268</td>
<td>MacLeod, Malcolm</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>269</td>
<td>Batson, Maggie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>2</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>3</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>4</td>
<td>The DEIS evaluates the socioeconomic impacts of the alternatives. It is not intended to serve, nor is it required to serve as a benefit-cost analysis of the project (40 CFR 1502.23). Other documents prepared by Reclamation and Ecology serve this function, and are cited in the EIS.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>5</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>6</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>7</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>8</td>
<td>Runoff water coming into lower Kittitas County during the spring supplies irrigation demands and supplements downstream Yakima River instream flows.</td>
</tr>
</tbody>
</table>

March 2019
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>9</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>270</td>
<td>Day, Phil</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>271</td>
<td>Giaudrone, Edward</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>271</td>
<td>Giaudrone, Edward</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>272</td>
<td>Gorski, Adam</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>273</td>
<td>Morrison, Lisa</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>274</td>
<td>Mulqueeny, Kara/Shawn</td>
<td>1</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. Section 5 of the Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>274</td>
<td>Mulqueeny, Kara/Shawn</td>
<td>2</td>
<td>A water supply of 70 percent of proratable water rights during a drought year would provide a minimally acceptable supply to prevent severe economic losses to farmers. This number was reached following extensive discussions with stakeholders regarding the lowest level of water supply that could be accommodated without catastrophic losses to crops, assuming aggressive water management techniques were employed. This 70 percent threshold is similar to the State of Washington’s definition of a drought condition contained in RCW 43.83B.400, which recognizes a drought when water supply for a significant portion of a geographic area falls below 75 percent of normal and is likely to cause undue hardship for various water uses and users.</td>
</tr>
<tr>
<td>275</td>
<td>North, Rick</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>275</td>
<td>North, Rick</td>
<td>2</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>275</td>
<td>North, Rick</td>
<td>3</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>275</td>
<td>North, Rick</td>
<td>4</td>
<td>Runoff water coming into lower Kittitas County during the spring supplies irrigation demands and supplements downstream Yakima River instream flows.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>276</td>
<td>Owens, Cliff</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>276</td>
<td>Owens, Cliff</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>276</td>
<td>Owens, Cliff</td>
<td>3</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>276</td>
<td>Owens, Cliff</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>276</td>
<td>Owens, Cliff</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>277</td>
<td>Owens, CC</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>277</td>
<td>Owens, CC</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>277</td>
<td>Owens, CC</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>277</td>
<td>Owens, CC</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>277</td>
<td>Owens, CC</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>278</td>
<td>Owens, JP</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>278</td>
<td>Owens, JP</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>278</td>
<td>Owens, JP</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>278</td>
<td>Owens, JP</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>279</td>
<td>Owens, J</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>279</td>
<td>Owens, J</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>279</td>
<td>Owens, J</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>279</td>
<td>Owens, J</td>
<td>4</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>279</td>
<td>Owens, J</td>
<td>5</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>280</td>
<td>Owens, Jo</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>280</td>
<td>Owens, Jo</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>280</td>
<td>Owens, Jo</td>
<td>3</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>280</td>
<td>Owens, Jo</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>280</td>
<td>Owens, Jo</td>
<td>5</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>281</td>
<td>Owens, Rachel</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>281</td>
<td>Owens, Rachel</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>281</td>
<td>Owens, Rachel</td>
<td>3</td>
<td>As shown in Table 4-36 of the SDEIS, under Alternatives 5A, 5B or 5C an average annual volume of 81,170 acre-feet would be transferred from Keechelus Reservoir to Kachess Reservoir with a maximum annual volume transferred of 143,758 acre-feet.</td>
</tr>
<tr>
<td>281</td>
<td>Owens, Rachel</td>
<td>4</td>
<td>Snow removal activities along I-90 are outside of the scope of the Environmental Impact Statement.</td>
</tr>
<tr>
<td>281</td>
<td>Owens, Rachel</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>282</td>
<td>Owens, Stephanie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>282</td>
<td>Owens, Stephanie</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>282</td>
<td>Owens, Stephanie</td>
<td>3</td>
<td>This EIS is the environmental study of the proposed project.</td>
</tr>
<tr>
<td>282</td>
<td>Owens, Stephanie</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>282</td>
<td>Owens, Stephanie</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>1</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>2</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>3</td>
<td>The effects of climate change on fish is considered and described in Section 4.6 of the SDEIS.</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>4</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>5</td>
<td>See response to Common Issues 8 and 12.</td>
</tr>
<tr>
<td>283</td>
<td>Ryynanen, Dan</td>
<td>6</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project. How they fund the project is outside the scope of the EIS. However, Reclamation expects that any authorization will contain provisions that ensure financial responsibility for all mitigation.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>1</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>3</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>4</td>
<td>Whenever the reservoir falls below the existing gravity outlet, the water stored cannot be delivered to downstream users except by pumping. During the refill period, there will be times when this occurs, and pumping will be needed to satisfy contracts for water deliveries downstream.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>5</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>6</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>284</td>
<td>Ryynanen, Dan</td>
<td>7</td>
<td>As described in Section 2.5.1.1, the floating pumping plan intake will be 18 feet below the water surface. Impacts to Lake Kachess water temperature are discussed in Section 4.4.6.2 of the SDEIS. The effects of the change in water temperature on bull trout are discussed in Section 4.6.6.2 of the SDEIS. Pumping large volumes of warm water from near-surface depths would improve the general thermal conditions for growth for cold water salmonid species in Kachess Reservoir like bull trout, however Overall, the potential benefits of improved thermal conditions for growth are not expected to be significant because of the loss of zooplankton production that is also anticipated under Alternative 4.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>7</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>8</td>
<td>Operations during the project’s construction periods will need to be planned carefully to manage impacts to water users, the flip-flop operation and associated fisheries resources. Details of the temporary construction-related drawdown would be developed during a subsequent design stage, in consultation with Yakima Project users, state and federal fish and wildlife agencies and the Yakama Nation.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>9</td>
<td>Disposal areas have yet to be identified; for this SDEIS analysis, Reclamation assumed the offsite location would be within 10 miles of the Keechelus Reservoir. An existing quarry near Keechelus Dam may be available for disposing of the crushed material excavated from the tunnel. Depending on construction timing, WSDOT could potentially use the material as fill for the I-90 improvement project. Reclamation would ensure that all required permits and clearances are obtained for use of any material disposal area(s).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>10</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>11</td>
<td>No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>12</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>13</td>
<td>The SDEIS presents impacts based on preliminary designs to provide a reasonable comparison of alternatives. Specific areas and costs easements or other property acquisition would be confirmed as part of final design of a selected alternative.</td>
</tr>
<tr>
<td>284</td>
<td>Tsuneoka, Junichi</td>
<td>14</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>1</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>2</td>
<td></td>
<td>The long-term effects of the proposed project are outlined in Chapter 4 of the EIS.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>3</td>
<td></td>
<td>Many bull trout undertake spawning migrations as early as mid-July, when tributaries may still have adequate flow, then hold until spawning in September and October. Other bull trout may attempt to migrate upstream just before spawning and if prevented from access to high quality spawning areas may attempt to spawn in lower quality habitat near their natal tributary, or may stray into other tributaries.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>4</td>
<td></td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>5</td>
<td></td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>6</td>
<td></td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>7</td>
<td></td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>8</td>
<td></td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>9</td>
<td></td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>10</td>
<td></td>
<td>Water will remain in Kachess Reservoir under all foreseeable conditions. See Appendix F of the Final EIS for additional detail.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>11</td>
<td></td>
<td>The alternatives under consideration are outlined in Chapter 2 of the SDEIS.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>12</td>
<td></td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>13</td>
<td></td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>285 Ferguson, Don and Carol</td>
<td>14</td>
<td></td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>285</td>
<td>Tsuneoka, Junichi</td>
<td>15</td>
<td>It is Reclamation policy to avoid impacts and leave cultural materials in place. If that is not feasible cultural materials will be recovered scientifically in advance of construction. Recovered materials will be curated at a museum which meets federal standards. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>15</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>16</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>17</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>18</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>19</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>20</td>
<td>Currently no anadromous salmon exist in Lake Kachess. Reintroduction of anadromous salmon into upper Yakima Basin reservoirs is occurring first in Cle Elum Reservoir. At this time, a plan to reintroduce anadromous salmon to Lake Kachess has not been developed. Effects to resident salmonids like bull trout, kokanee, rainbow trout and cutthroat trout are discussed in the SDEIS, section 4.6.</td>
</tr>
<tr>
<td>285</td>
<td>Ferguson, Don and Carol</td>
<td>21</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>286</td>
<td>Thompson, Raylan</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>287</td>
<td>Bernhardt, Kathryn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>287</td>
<td>Bernhardt, Kathryn</td>
<td>2</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>288</td>
<td>Fountain, Nikki</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>289</td>
<td>Jelovich, Joslynn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>290</td>
<td>Leavitt, Loralee</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>291</td>
<td>Owens, JR</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>291</td>
<td>Owens, JR</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>291</td>
<td>Owens, JR</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>291</td>
<td>Owens, JR</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>292</td>
<td>Owens, RB</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>292</td>
<td>Owens, RB</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>292</td>
<td>Owens, RB</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>4</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>293</td>
<td>Owens, CC</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>294</td>
<td>Owens, Cliff</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>294</td>
<td>Owens, Cliff</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>
| 294                   | Owens, Cliff     | 3              | Comment noted. "Reservoir" was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as "[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use."
(https://www.usbr.gov/projects/glossary.php#R) |
<p>| 294                   | Owens, Cliff     | 4              | Thank you for your comment.                                                                                                                           |
| 294                   | Owens, Cliff     | 5              | Thank you for your comment.                                                                                                                           |
| 294                   | Owens, Cliff     | 7              | Thank you for your comment.                                                                                                                           |
| 295                   | Owens, JR        | 1              | Thank you for your comment.                                                                                                                           |
| 295                   | Owens, JR        | 2              | Thank you for your comment.                                                                                                                           |
| 295                   | Owens, JR        | 3              | If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project. |
| 296                   | Owens, JR        | 1              | Thank you for your comment.                                                                                                                           |
| 296                   | Owens, JR        | 2              | Thank you for your comment.                                                                                                                           |</p>
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>296</td>
<td>Owens, JR</td>
<td>3</td>
<td>As shown in Table 4-36 of the SDEIS, under Alternatives 5A, 5B or 5C an average annual volume of 81,170 acre-feet would be transferred from Keechelus Reservoir to Kachess Reservoir with a maximum annual volume transferred of 143,758 acre-feet.</td>
<td></td>
</tr>
<tr>
<td>296</td>
<td>Owens, JR</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>297</td>
<td>Anderson, Meghan</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>297</td>
<td>Anderson, Meghan</td>
<td>2</td>
<td>Climate change is specifically considered with respect to water. Sections 3.12 and 4.12 of the SDEIS provide descriptions of the effects of climate change. With respect to your comment on No Solar on our Farm Lands, this part of your comment is beyond to scope of the action analyzed in this EIS, but your comment has been noted and will be included in the record for this EIS.</td>
<td></td>
</tr>
<tr>
<td>298</td>
<td>Bickford, Alice</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>3</td>
<td>See response to Common Issue 3.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>4</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>5</td>
<td>Following the Draft EIS, Ecology conducted a review of groundwater elevations around Kachess Lake, downstream of the reservoir, Lake Easton will continue to serve as a recharge boundary and maintain groundwater levels near the lake.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>6</td>
<td>Estimation of the number of bull trout that could potentially be encountered and/or killed in construction and operation of the preferred alternative will be calculated in consultation with USFWS under the Endangered Species Act. Consultation with The USFWS and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>7</td>
<td>See response to Common Issue 11.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>8</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>9</td>
<td>See response to Common Issue 17.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>10</td>
<td>See response to Common Issue 3.</td>
<td></td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>11</td>
<td>Disposal areas have yet to be identified; for this SDEIS analysis, Reclamation assumed the offsite location would be within 10 miles of the Keechelus Reservoir. An existing quarry near Keechelus Dam may be available for disposing of the crushed material excavated from the tunnel. Depending on construction timing, WSDOT could potentially use the material as fill for the I-90 improvement project. Reclamation would ensure that all required permits and clearances are obtained for use of any material disposal area(s).</td>
<td></td>
</tr>
</tbody>
</table>
As stated in section 4.6, "Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013)." State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.

No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.

Acquisition of real property interests based on design concepts for the alternatives are summarized in Section 4.15 of the SDEIS. Reclamation would comply with Federal property acquisition policies. Reclamation would survey properties before construction to determine whether acquisition is required. Reclamation would follow the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601) and the procedures described in the 2003 Reclamation Manual Directives and Standards LND 06-01 for any property or easement acquisition.

The DEIS used the 2012 303(d) list, which was the most updated list at the time of the report. The SDEIS used the 2014 303(d) list, which was published between the releases of the DEIS and the SDEIS. As noted in Table 3-9 of the SDEIS, PCBs were listed due to being found in fish tissue and do not have a known source. PCBs were found in fish throughout the river and the reservoirs; downstream Yakima River fish were found to have higher levels of PCBs than upper Yakima River and reservoir fish.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>17</td>
<td>It is Reclamation policy to avoid impacts and leave cultural materials in place. If that is not feasible cultural materials will be recovered scientifically in advance of construction. Recovered materials will be curated at a museum which meets federal standards. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>18</td>
<td>Normal reservoir operations would continue during construction, and Kachess Reservoir would not be drawn down for construction purposes below the current operations drawdown.</td>
</tr>
<tr>
<td>299</td>
<td>Brandt, Gordon</td>
<td>19</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>300</td>
<td>Carmody, Tom</td>
<td>1</td>
<td>Thank you for this comment about the terms lake and reservoir. The comment has been noted and will be included in the record for this EIS; however, the requested change was not made to this FEIS due to the common, public understanding and historical uses of these terms. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>301</td>
<td>Curd, Kevin</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>302</td>
<td>Fountain, Jean</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>302</td>
<td>Fountain, Jean</td>
<td>2</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project. Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>302</td>
<td>Fountain, Jean</td>
<td>3</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>303</td>
<td>Gorchels, Chris</td>
<td>1</td>
<td>Thank you for this comment about the terms lake and reservoir. The comment has been noted and will be included in the record for this EIS; however, the requested change was not made to this FEIS due to the common, public understanding and historical uses of these terms. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a> )</td>
</tr>
<tr>
<td>304</td>
<td>Gorchels, Kay</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>304</td>
<td>Gorchels, Kay</td>
<td>2</td>
<td>Throughout Section 4.3 of the SDEIS, details were added that describe impacts to streamflow and water levels during refill periods.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>305</td>
<td>Gorchels, Kay</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>5</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>305</td>
<td>Owens, CC</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>306</td>
<td>Owens, Jaxon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>306</td>
<td>Owens, Jaxon</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>306</td>
<td>Owens, Jaxon</td>
<td>3</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>306</td>
<td>Owens, Jaxon</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>307</td>
<td>Owens, JP</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>307</td>
<td>Owens, JP</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>307</td>
<td>Owens, JP</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>5</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>308</td>
<td>Owens, JR</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>309</td>
<td>Owens, Stephanie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>309</td>
<td>Owens, Stephanie</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>309</td>
<td>Owens, Stephanie</td>
<td>3</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>309</td>
<td>Owens, Stephanie</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>310</td>
<td>Reeves, Tina</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>310</td>
<td>Reeves, Tina</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>310</td>
<td>Reeves, Tina</td>
<td>3</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>310</td>
<td>Reeves, Tina</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>311</td>
<td>Aresu, Avery M.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>311</td>
<td>Aresu, Avery M.</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>311</td>
<td>Aresu, Avery M.</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>312</td>
<td>Baker, Chris</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>313</td>
<td>Buri, Sarah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>313</td>
<td>Buri, Sarah</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>314</td>
<td>Dill, Joseph</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>315</td>
<td>Fountain, Jean</td>
<td>1</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>315</td>
<td>Fountain, Jean</td>
<td>2</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>315</td>
<td>Fountain, Jean</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>316</td>
<td>Fountain, Jean</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>316</td>
<td>Fountain, Jean</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>3</td>
<td>Following the Draft EIS, Ecology conducted a review of groundwater elevations around Kachess Lake, downstream of the reservoir, Lake Easton will continue to serve as a recharge boundary and maintain groundwater levels near the lake.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>4</td>
<td>Thank you for your comment. This FEIS has been updated to include more specific information on private property and homes in the project area.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>6</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>7</td>
<td>See responses to Common Issues 4 and 5.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>8</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>9</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>10</td>
<td>See response to Common Issue 11.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>11</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>12</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>13</td>
<td>Individual farmers make independent decisions about which crops they plant and the benefits or costs of those plantings. Such decisions are beyond the scope of this EIS.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>14</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>317</td>
<td>Gienger, Lonnie</td>
<td>15</td>
<td>As co-lead agencies, Reclamation and Ecology jointly prepared these responses to comments. And you will receive this FEIS and ROD when they are released.</td>
</tr>
<tr>
<td>318</td>
<td>Hamilton, Laura Lottman</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>319</td>
<td>Harris, Kirk</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>319</td>
<td>Harris, Kirk</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>319</td>
<td>Harris, Kirk</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>320</td>
<td>Hoover, Mark</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>321</td>
<td>Lavrentyev, Larisa</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>322</td>
<td>Lavrentyev, Max</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>323</td>
<td>Lavrentyev, Sergey</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>324</td>
<td>Lawton, Nancy</td>
<td>1</td>
<td>Thank you for the comment, as well as the attached photos of turf lawn. The comment and photos will be included in the record for this EIS. Please note that Reclamation project water is delivered to contractors primarily for agricultural purposes, although municipalities may also receive project water.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>2</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>4</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>5</td>
<td>See response to Common Issue 14.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>6</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>7</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>8</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>9</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>10</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>11</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>12</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>13</td>
<td>As described in Section 4.3.4.2 of the SDEIS, Kachess Reservoir could be below the existing outlet level for multiple years in a row during a multi-year drought.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>14</td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>325</td>
<td>Lewis, Katie</td>
<td>15</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>326</td>
<td>Owens, Cliff</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>327</td>
<td>Owens, Cliff</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>327</td>
<td>Owens, Cliff</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>328</td>
<td>Phillips, Patricia</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>329</td>
<td>Richter, Jenna</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>330</td>
<td>Owens, Jaxon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>330</td>
<td>Owens, Jaxon</td>
<td>2</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>330</td>
<td>Owens, Jaxon</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>2</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>3</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>4</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>5</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>331</td>
<td>Owens, Joann</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>332</td>
<td>Owens, J.P.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>332</td>
<td>Owens, J.P.</td>
<td>3</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>333</td>
<td>Owens, J.R.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>334</td>
<td>Owens, Rachel</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>334</td>
<td>Owens, Rachel</td>
<td>2</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>334</td>
<td>Owens, Rachel</td>
<td>3</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>--------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>334</td>
<td>Owens, Rachel</td>
<td>4</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>335</td>
<td>Owens, R.L.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>336</td>
<td>Owens, R.L.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>3</td>
<td>Kittitas Reclamation District has embarked on a program to increase canal efficiencies. In addition, the Integrated Plan contains a comprehensive package of strategies to address ecosystem restoration, water supply, and climate change flexibility issues in the Yakima River Basin. It includes seven elements, including surface water storage and groundwater storage, and enhanced water conservation (see Section 1.2.3). As such, the Integrated Plan evaluated, in accordance with the National Environmental Policy Act, a range of alternative strategies to address identified needs, including conservation, storage, water marketing, and other methods. The Integrated Plan Final Programmatic EIS (March 2012) assessed impacts from all seven elements. In July 2013, Reclamation published the Record of Decision (2013 Integrated Plan ROD) to implement the Integrated Plan in cooperation with Ecology and other Federal, State, local, and Tribal partners. The selected alternative presented in the 2013 Integrated Plan ROD implements the Integrated Plan, and identifies specific actions for further analysis in tiered NEPA reviews. The project-level Draft EIS and SDEIS on KKC and KDRPP address impacts of these projects, and as such do not evaluate other elements identified in the Integrated Plan’s selected alternative. However the interrelationships are described in Section 2.1 of the SDEIS.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>6</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>7</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>8</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>10</td>
<td>Cle Elum will be raised by approximately 3 feet, which is not part of this proposed action.</td>
</tr>
<tr>
<td>337</td>
<td>Owens, Stephanie</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>338</td>
<td>Owens, S.L.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>339</td>
<td>Phillips, John</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>340</td>
<td>Smith, Rachel</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>340</td>
<td>Smith, Rachel</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>340</td>
<td>Smith, Rachel</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>341</td>
<td>Aguilar, Bonnie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>342</td>
<td>Aiken, Michael</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>2</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>3</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>5</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>6</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>7</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td></td>
<td>Aiken, Michael</td>
<td>8</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>342</td>
<td>Aiken, Michael</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>342</td>
<td>Aiken, Michael</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>343</td>
<td>Albuilet, Michelle</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>344</td>
<td>Aresu, Diana E.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>345</td>
<td>Aresu, Tony</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>346</td>
<td>Avdeyev, Inna</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>3</td>
<td>Throughout Section 4.3 of the DEIS, details were added that describe impacts to streamflow and water levels during refill periods.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>4</td>
<td>The effects of lowered water elevations on connections between Lake Kachess and tributary streams have been quantified in terms of days in which water elevation falls below critical elevations, summarized in section 4.3 and table 4-4 of the SDEIS. An increase in drawdown with the proposed alternatives is likely to have an adverse impact on connectivity between the lake and tributaries and associated adverse impact on fish, including bull trout. When Keechelus Reservoir level falls below elevation 2,466, bull trout access to its tributaries is adversely affected. This impact is summarized in Table 4-4. For all alternatives, Keechelus Reservoir typically falls below elevation 2,466 from August to November. Under Alternatives 5A, 5B, and 5C, Keechelus Reservoir levels would fall below elevation 2,466 in 11 fewer years than under Alternative 1 (from 80 years for Alternative 1 to 69 years for Alternatives 5A, 5B, and 5C) but for an additional 5 days per year in years Keechelus Reservoir levels fall below elevation 2,466.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>5</td>
<td>The effects of lowered water elevations on connections between Lake Kachess and tributary streams have been quantified in terms of days in which water elevation falls below critical elevations, summarized in section 4.3 and table 4-4 of the SDEIS. An increase in drawdown with the proposed alternatives is likely to have an adverse impact on connectivity between the lake and tributaries and associated adverse impact on fish, including bull trout. When Keechelus Reservoir level falls below elevation 2,466, bull trout access to its tributaries is adversely affected. This impact is summarized in Table 4-4. For all alternatives, Keechelus Reservoir typically falls below elevation 2,466 from August to November. Under Alternatives 5A, 5B, and 5C, Keechelus Reservoir levels would fall below elevation 2,466 in 11 fewer years than under Alternative 1 (from 80 years for Alternative 1 to 69 years for Alternatives 5A, 5B, and 5C) but for an additional 5 days per year in years Keechelus Reservoir levels fall below elevation 2,466.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>6</td>
<td>The groundwater elevation around Kachess is approximately 60 feet below the ground surface. The effects of drawdown under KDRPP on groundwater would not impact the forest surrounding Kachess Reservoir.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>7</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>347</td>
<td>Baldi, Gloria and Jeb</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>348</td>
<td>Beaty, Rebecca M.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>5</td>
<td>See responses to Common Issue 8 and 12</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>7</td>
<td>This EIS serves as the assessment of the environmental impacts.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>8</td>
<td>Mitigation measures for ESA Threatened and Endangered fish species, including for bull trout habitat fragmentation, if warranted, will be determined in consultation with the Service and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>9</td>
<td>Reclamation is working with the Yakama Nation and the Colville Confederated Tribes in regards to potential impacts to resources of tribal concern, and they are consulted with on a continual basis. It is Reclamation policy to avoid impacts and leave cultural materials in place, if at all possible. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>10</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>349</td>
<td>Benediktsson, Lynn</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>5</td>
<td>Sections 3.12 and 4.12 describe the implication of climate change on reservoir operations, including refill for action alternatives.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>6</td>
<td>Yes, pumping will draw the reservoir pool down below the pool level of the original lake. See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>7</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>8</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>9</td>
<td>Drought relief pumping would expose areas and make them susceptible to erosion. As noted in Section 4.2: Under all alternatives, drawdown associated with the operation of KDRPP would result in exposure of up to about 628 acres of shoreline at Kachess Reservoir. If reservoir rim stability or erosion are identified following drawdown, Reclamation would implement erosion control measures to minimize the impacts.</td>
</tr>
<tr>
<td>350</td>
<td>Benediktsson, Tom</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>351</td>
<td>Bondarenko, Raya</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>352</td>
<td>Brewer, Lynn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>352</td>
<td>Brewer, Lynn</td>
<td>3</td>
<td>Thank you for attaching the geological assessment of your well. We have reviewed it and it will be included in the project record for this EIS.</td>
</tr>
<tr>
<td>352</td>
<td>Brewer, Lynn</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>352</td>
<td>Brewer, Lynn</td>
<td>5</td>
<td>Risks of contamination to groundwater from project-related activities are very low. Such risks and proposed measures to avoid and minimize risks are described in Section 4.5 of this FEIS.</td>
</tr>
<tr>
<td>353</td>
<td>de la Chapelle, Charlie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>353</td>
<td>de la Chapelle, Charlie</td>
<td>2</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
</tbody>
</table>
Section 4.12 describes how climate change would affect the project’s performance.

A comparative analysis of flows under different alternatives up to the Wapato Reach (Parker) is provided in section 4.3 Surface Water. As explained in section 4.3, the drought-year changes in flow downstream of Roza Dam would remain within current operating flows experienced in most years. Downstream from Roza Dam to the Parker gage, the relative change in streamflow would be less than in upstream reaches because some or most of the additional water supplied by KDRPP would be diverted. Any remaining increased supply could be diverted by WIP at Wapato Dam. The small change in streamflow downstream from Parker gage on the Yakima River would occur as Kachess Reservoir refills after a drought. The change would occur in winter and spring. As summarized in Tables 4-32 and 4-33 (Alternatives 2, 3, and 4), winter and spring flows at Parker are reduced by up to 1.2 percent. During refill years, high exceedance flows are reduced by 2.9 percent. As summarized in Tables 4-69 and 4-70 (Alternatives 5A, 5B, and 5C) winter and spring flows are reduced by up to 1.6 percent. During refill years, high exceedance flows are reduced by 4.6 percent. In the SDEIS, recent analyses were used to update the foodweb and productivity relationships in Kachess Reservoir (See Hansen et al. 2017) and recent counts of salmon (including sockeye salmon) at Roza Dam (section 3.6).

Thank you for your comment.

If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project. How they fund the project is outside the scope of the EIS. However, Reclamation expects that any authorization will contain provisions that ensure financial responsibility for all mitigation.

The SDEIS comment period was 90 days, which is substantially longer than 45-day comment period required.

If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.

See response to Common Issue 16.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>354</td>
<td>Duncanson, Harold</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>355</td>
<td>Elder, James and Barbara</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>356</td>
<td>Erickson, Brandon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>357</td>
<td>Fountain, AP</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>357</td>
<td>Fountain, AP</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>358</td>
<td>Fountain, Tim</td>
<td>1</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>358</td>
<td>Fountain, Tim</td>
<td>2</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>358</td>
<td>Fountain, Tim</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>359</td>
<td>Garrison, Neil and Tom</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>359</td>
<td>Garrison, Neil and Tom</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>359</td>
<td>Garrison, Neil and Tom</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>359</td>
<td>Garrison, Neil and Tom</td>
<td>4</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>359</td>
<td>Garrison, Neil and Tom</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>360</td>
<td>Gienger, Shelley</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>360</td>
<td>Gienger, Shelley</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>360</td>
<td>Gienger, Shelley</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>360</td>
<td>Gienger, Shelley</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>6</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>7</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>8</td>
<td>WDFW’s Priority Habitat and Species database has been reviewed by Reclamation to assess the presence of any freshwater mussels in Kachess Reservoir. As a result, no documentation was found. Neither of these species are recognized by the USFS and BLM as species of conservation and population viability concern. As the project is implemented project proponents will work with Federal and state agencies to consider potential impacts to mussels.</td>
</tr>
<tr>
<td>361</td>
<td>Gold, Raelene</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>7</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>8</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>9</td>
<td>The DEIS and SDEIS both state in Section 4.3.2 that Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. The mention of a 20-year cycle in the DEIS (and SDEIS) is the replacement time of pumps and associated equipment.</td>
</tr>
<tr>
<td>362</td>
<td>Gratama, Candace</td>
<td>10</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>363</td>
<td>Greben, Oleg</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>364</td>
<td>Greben, Paul and Galina</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>364</td>
<td>Greben, Paul and Galina</td>
<td>2</td>
<td>Thank you (as well as commenters 412, 453) for attaching a photograph of what appears to be organic matter—not solid waste. While we cannot comment on whether this particular substance would be classified as a pollutant under the legal definition at 33 USC §1362(6), please be assured that the WDFW maintains the fish passage at Box Canyon Creek in compliance with all applicable sections of the Clean Water Act and all applicable state and local laws.</td>
</tr>
<tr>
<td>364</td>
<td>Greben, Paul and Galina</td>
<td>3</td>
<td>Impacts from the artificial channel from Lake Kachess to Box Canyon Creek are outside the scope of this EIS.</td>
</tr>
<tr>
<td>365</td>
<td>Guilfoyle, Josh</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>365</td>
<td>Guilfoyle, Josh</td>
<td>2</td>
<td>As stated in Section 4.3.2, under KDRPP, Kachess Reservoir water levels would be below the existing low level outlet in portions of 32 to 34 years (out of 91 years modeled). This assumes the full 200,000 acre-feet, which is a maximum pumping scenario. See Appendix F for additional information on frequency and magnitude of operational scenarios.</td>
</tr>
<tr>
<td>365</td>
<td>Guilfoyle, Josh</td>
<td>3</td>
<td>Reclamation and Ecology determined that, at this time, the benefits of KKC in terms of enhancing water supply did not merit its consideration as a standalone project. However, the contribution to refill of Kachess Reservoir when KDRPP would operate warranted consideration as a component of KDRPP. See Section 1.5.4.</td>
</tr>
<tr>
<td>365</td>
<td>Guilfoyle, Josh</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>3</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>6</td>
<td>Impacts to wildlife habitat is described in Section 4.8 of the SDEIS.</td>
</tr>
<tr>
<td>366</td>
<td>Halwachs, Carrera</td>
<td>7</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>367</td>
<td>Hamilton, Alistair</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>368</td>
<td>Hamilton, Grace</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>369</td>
<td>Harris, Sophie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>370</td>
<td>Haugen, Geraldine</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>370</td>
<td>Haugen, Geraldine</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>1</td>
<td>Thank you for your comment. It has been noted and will be included in the record for this EIS. No change was made to this FEIS in response.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>2</td>
<td>Responses to the DEIS comments are also included in this comment response appendix.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>9</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>10</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>12</td>
<td>Design studies for KDRPP and KKC are referenced in the SDEIS and FEIS and are located on the Reclamation website: <a href="https://www.usbr.gov/pn/programs/eis/kdrpp/">https://www.usbr.gov/pn/programs/eis/kdrpp/</a> and <a href="https://www.usbr.gov/pn/programs/eis/kkc/">https://www.usbr.gov/pn/programs/eis/kkc/</a></td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>13</td>
<td>Staging areas for construction have been identified in the DEIS, SDEIS and FEIS. Disposal of materials (like excavated soils) has been estimated and management of those materials has been characterized in a manner sufficient to allow a reasonable disclosure and comparison of alternatives. Quantities and specific management like transportation will be further defined as part of final design of a selected alternative. Materials will be managed in accordance with applicable laws and regulations.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>14</td>
<td>Suitability of material and specific management like transportation will be further defined as part of final design of a selected alternative.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>15</td>
<td>The alignment corridor for the KKC North Tunnel is described in this FEIS. The specific location within the corridor would be defined as part of final design, if included in the selected alternative.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>17</td>
<td>The DEIS and SDEIS document positive economic impacts of the projects in terms of increased jobs and income from construction and crop production that likely otherwise would not occur in the region. A separate document, &quot;Economic Analyses of the Proposed Kachess Drought Relief Pumping Plant&quot; (ECONorthwest 2015) documents the direct economic benefits of the project, in terms of increased value of agricultural production.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>18</td>
<td>As noted in Section 1.5.4 of the SDEIS, KKC is not presented as a stand-alone alternative and is a component of a KDRPP alternative. The Preferred Alternative in this FEIS does not include construction of KKC.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>19</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating prortable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>20</td>
<td>Kachess Dam currently does not have facilities for upstream fish passage, and the proposed action will not change this condition. The design of the proposed action does not preclude future installation of fish passage facilities at Kachess Dam.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>21</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>371</td>
<td>Henderson, Edward</td>
<td>22</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>372</td>
<td>Hendricks, Brooke</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>373</td>
<td>Howland, Jon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>373</td>
<td>Howland, Jon</td>
<td>2</td>
<td>The SDEIS comment period was 90 days, which is substantially longer than 45-day comment period required.</td>
</tr>
<tr>
<td>374</td>
<td>Susan, Irinel</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>5</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>6</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>7</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>8</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>9</td>
<td>The DEIS and SDEIS both state in Section 4.3.2 that Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. The mention of a 20-year cycle in the DEIS (and SDEIS) is the replacement time of pumps and associated equipment.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>12</td>
<td>As described in Section 2.3, drought years are defined by the State of Washington when water supply for a significant portion of a geographic area fall below 75 percent of normal and is likely to cause undue hardship for various water uses and users. Reclamation would manage Kachess Reservoir pumping in addition to the Yakima Project reservoirs as a system to increase prorationing up to 70 percent.</td>
</tr>
<tr>
<td>375</td>
<td>Jonas, Brad</td>
<td>13</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>376</td>
<td>Kast, Jessica</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>377</td>
<td>Keilholz, Natalie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>378</td>
<td>Kirkham, Randy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>379</td>
<td>Kirkham, Randy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>379</td>
<td>Kirkham, Randy</td>
<td>2</td>
<td>Reclamation and Ecology had project engineer’s review your proposal or possible draft alternative, but they did not find it viable at this time and for this place or sufficiently different from those studied in this FEIS. That said, please note that Reclamation engineers are investigating similar ideas called floatovoltaics or floating solar photovoltaic arrays for the Southwest. These would not work in the Pacific Northwest, but innovative ideas like yours are and will continue to be investigated. Your comment will be included in the project record. We hope you keep “...wearing your scientist hat.”</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>379</td>
<td>Kirkham, Randy</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>380</td>
<td>Kitchell, Sarah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>380</td>
<td>Kitchell, Sarah</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>380</td>
<td>Kitchell, Sarah</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>381</td>
<td>Knauf, Sandy</td>
<td>1</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>382</td>
<td>Lawson, Billy Z</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>383</td>
<td>Lewis, Leanne</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>384</td>
<td>Loftus, Jeff and Stacie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>384</td>
<td>Loftus, Jeff and Stacie</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>385</td>
<td>Loftus, Stacie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>386</td>
<td>Magnuson, Andrew Craig</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>386</td>
<td>Magnuson, Andrew Craig</td>
<td>2</td>
<td>This comment is outside the scope of the Proposed Action.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>3</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>5</td>
<td>Reclamation has identified the Yakama Nation and the Colville Confederated Tribes as Tribes with a cultural connection with the project area. Reclamation continues to work with these Tribes in addressing potential impacts to resources of tribal concern.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>6</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>7</td>
<td>The results of the value analysis study concluded that a floating pumping plant would be feasible.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>8</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>9</td>
<td>You questioned why a preferred alternative was not identified and whether there was a change in scope from the IP. There is a difference in scope between the programmatic IP (from which this site-specific action is tiered) and the action analyzed here. This action is not intended to encompass all components or elements of the broader, programmatic IP. As to the identification of the agency’s preferred alternative, the agencies had no preference for one alternative over another at the SDEIS stage. The intent was to receive and review comments on the alternatives and impacts, and after careful weighing of comments, the agencies would select a preferred alternative that would be identified in the Final EIS. Please note that this is in compliance with the CEQ regulations at §1502.14(e) which states that if the responsible official has no preference at the draft stage, a preferred alternative need not be identified at that time, but by the time the Final EIS is filed, §1502.14(e) requires the selection of a preferred alternative. The identification of the Floating Pumping Plant as the preferred alternative in this FEIS is based on a review of comments and concerns, and based on the missions of the two agencies. Reclamation and Ecology believe this would fulfill both agencies’ statutory missions and responsibilities, while considering the economic, environmental, technical and other factors.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>10</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>11</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>12</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>13</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>14</td>
<td>The 2013 “Yakima River Basin Resource Management” law (2SSB 5367) set the vision for the forest and authorized the state Board of Natural Resources to enroll the property as the Teanaway Community Forest under the Community Forest Trust Program. The 2013 state authorizing legislation specifies that if the 214,000 acre feet of water is not developed by 2025, the TCF would be returned to the common school trust. See Section 1.8.2 of the SDEIS for additional details.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>15</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>16</td>
<td>See Figure 4 -2 in this FEIS for additional illustration of proposed drawdown.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>17</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>18</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>19</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>20</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>21</td>
<td>See response to Common Issue 11.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>22</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>24</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>25</td>
<td>Specific quantities and management of excavated and fill material for this feature would be further refined as part of final design, if KKC is included in the selected alternative.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>26</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>27</td>
<td>No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>28</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>29</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>30</td>
<td>The DEIS used the 2012 303(d) list, which was the most updated list at the time of the report. The SDEIS used the 2014 303(d) list, which was published between the releases of the DEIS and the SDEIS. As noted in Table 3-9 of the SDEIS, PCBs were listed due to being found in fish tissue and do not have a known source. PCBs were found in fish throughout the river and the reservoirs; downstream Yakima River fish were found to have higher levels of PCBs than upper Yakima River and reservoir fish.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>31</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>32</td>
<td>During construction Kachess reservoir would release flows early in the season to meet demands in the System. The goal would be to release Kachess water but not “waste” any water. This would accelerate Kachess usage so that construction could begin as early as possible in the late summer or early fall. Kachess flow would then likely be low in the fall. This would impact mini-flip-flop so that the Keechelus reach would not be open for spawning during construction.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>33</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>34</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>35</td>
<td>Pumps would be used when water levels are below the existing gravity outlet to provide flow to the Kachess River.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>36</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>37</td>
<td>Keechelus Reservoir water levels will be managed such that transfers to Kachess Reservoir would occur when there is sufficient water available.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>38</td>
<td>None of the alternatives affect river flows in such a way that will impact tribal hatcheries.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>39</td>
<td>Lake Easton will continue to have water in drought years.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>40</td>
<td>The proposed project would not impact Lake Easton reservoir levels.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>41</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>42</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>43</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>44</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>45</td>
<td>These effects are not reasonably foreseeable, and are outside the scope of this review.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>46</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>47</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>48</td>
<td>As shown in Section 2.3, backup diesel generators are proposed to be located away from Kachess Reservoir. As discussed in Section 4.4.10, appropriate spill response plans will be developed to prevent spills from entering receiving waters.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>49</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>387</td>
<td>Mallory, Joe</td>
<td>50</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>2</td>
<td>The potential locations of the pumping plant are described in Chapter 2 of the EIS.</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>3</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>5</td>
<td>Pumped water would go to participating proratable entities.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>388</td>
<td>Mankus, Ashley</td>
<td>6</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>389</td>
<td>McShane, Cathie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>389</td>
<td>McShane, Cathie</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>390</td>
<td>Misocky, William</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>391</td>
<td>Moldoveanu, Anca</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>392</td>
<td>Murphy, Brian</td>
<td>1</td>
<td>See responses to Common Issue 8 and 9.</td>
</tr>
<tr>
<td>393</td>
<td>Stevenson-Ness, Amy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>394</td>
<td>Ness, Steven</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>2</td>
<td>The Integrated Plan selected alternative includes and enhanced water conservation element that is part of the comprehensive strategy presented in the Integrated Plan Final PEIS. The KDRPP and KKC projects are also part of that integrated plan. The KDRPP and KKC EIS addresses those specific projects, and is tiered off of the Integrated Plan Final PEIS.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>3</td>
<td>The cost of drip irrigation is outside the scope of this EIS. For additional details about alternatives considered, see response to Common Issue 4.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>4</td>
<td>Section 4.11 describes operational effects on air quality, including dust generated by additional exposed shoreline area with KDRPP alternatives. The additional exposed shoreline could increase the amount of windblown dust, but shoreline materials are mostly stable. Therefore, particulate emissions due to drawdown is not expected to cause air quality or human health impacts.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>7</td>
<td>Reclamation is not aware of this resource; however, is committed to compliance with Paleontological Resources Preservation Act.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>8</td>
<td>Contaminated soils, if any, encountered in the project, will be handled and disposed of in accordance with applicable laws and regulations.</td>
</tr>
<tr>
<td>395</td>
<td>Newman, Katherine</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>396</td>
<td>Nye, Wes and Debbie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>4</td>
<td>Reclamation has been working with, and continues to work with the Yakama Nation to resolve potential impacts to resources of tribal concern.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>5</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>6</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>7</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>Comment Number</td>
<td>Commenter</td>
<td>Comment</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------</td>
<td>-------------------</td>
<td>---------</td>
<td>------------------</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>8</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>397</td>
<td>Opel, Kurt</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>398</td>
<td>Owens-Fountain, J.J.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>2</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>3</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>4</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>5</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>6</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>7</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>399</td>
<td>Pizzo, Kathryn</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>400</td>
<td>Plouse, Dan</td>
<td>1</td>
<td>Thank you for providing this proposal. Project engineers considered whether this could be superior to those alternatives in this FEIS. Their response is that if the lake bed were excavated and no other changes were made, the additional water stored could not flow to the Kachess River and downstream because it would lie below the existing gravity outlet. A pump station would still be needed to access water below elevation of the existing outlet. Thus, we did not find this proposal to be a feasible, additional alternative, although it will be included in the project record.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>3</td>
<td>Power requirements for the East Shore and South Pumping Plants (Alternatives 2 and 3) were estimated during the feasibility study of KDRPP performed in 2014. They account for years when pumping is not required; years when drought-relief pumping is performed; and years when refill operations are under way. The power cost reported in Table 2-5 of the SDEIS shows results for those two alternatives. The power cost for the floating pumping plant (Alternative 4) was a rough estimate using engineering judgment. It is based on changes in the pumping units and physical configuration of Alternative 4 in comparison with Alternatives 2 and 3. All values are discounted over the 100 year period analyzed. The $5M power cost shown for Alternative 4 is equivalent to approximately $17.5M over the 100 year period without discounting.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>4</td>
<td>Thank you for your comment. Executive Order 13783 (March 28, 2017) withdrew documents regarding social cost of carbon as no longer consistent with government policy. GHG and climate change assessment was retained in the SDEIS and FEIS based on public scoping and at the request of Ecology, but did not include using social cost of carbon as an assessment tool.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>6</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>401</td>
<td>Poulin, Baraka</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>402</td>
<td>Quinn, Stewart and Kitchell, Sarah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>402</td>
<td>Quinn, Stewart and Kitchell, Sarah</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>402</td>
<td>Quinn, Stewart and Kitchell, Sarah</td>
<td>3</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>402</td>
<td>Quinn, Stewart and Kitchell, Sarah</td>
<td>4</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>402</td>
<td>Quinn, Stewart and Kitchell, Sarah</td>
<td>5</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>403</td>
<td>Huynh, Heidi</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>6</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>7</td>
<td>No acquisition of private property is anticipated for the Preferred Alternative. If private property acquisition is required, procedures for acquisition are described in Section 4.15.10 of this FEIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>11</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>12</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>13</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>14</td>
<td>The Yakama Nation is a cooperator on the project. Reclamation has been working with, and continues to work with the Yakama Nation to resolve potential impacts to resources of tribal concern.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>15</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>16</td>
<td>Environmental effects were analyzed based on design and operations information sufficient for making reasonable assessment of the impacts of the proposed action and alternatives for the purposes of NEPA and SEPA.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>17</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>18</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>19</td>
<td>See response to Common Issue 11.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>20</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>21</td>
<td>The Final Programmatic EIS on the Integrated Plan documented establishment of the 70 percent prorationing target for water supply. The amount of water that KDRPP would provide contributes toward achieving this target.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>22</td>
<td>See response to Common Issue 11.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>23</td>
<td>In drought years where pumping occurs, Roza alone were using the facility, the maximum quantity likely to be needed in the worst historic drought year would have been approximately 70,000 acre-feet.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>24</td>
<td>Additional figures to illustrate visual impacts have been added to Section 4.10 of this FEIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>25</td>
<td>Figures in this FEIS have been added and updated for consistency.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>25</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>26</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>27</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>28</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>29</td>
<td>The operation effects of KKC are not anticipated to adversely affect groundwater. See Section 4.5.7. The scope of the environmental justice analysis is appropriate for this environmental review.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>30</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>31</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>32</td>
<td>No surveys have been done in Lake Kachess to identify the species of freshwater shellfish that exist in the lake and therefore impacts to freshwater invertebrates (reduced survival and productivity) are described in general terms in the SDEIS. The California floater (<em>Anodonta californiensis</em>) is a freshwater mussel that is recently listed as a State of Washington candidate priority species, however no specific knowledge of this species exists in Lake Kachess.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>33</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>34</td>
<td>Additional figures to illustrate visual impacts have been added to Section 4.10 of this FEIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>35</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>36</td>
<td>Reclamation will require best management practices for construction and operational activities (like fuel delivery) to minimize impacts like fugitive dust emissions from such activities. Carbon emissions were considered for anticipated construction activities consistent, see Section 4.12 of the SDEIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>37</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>38</td>
<td>The proposed roughened channel would be constructed out of rock that would not be impacted by being submerged under water; therefore, no long-term erosion issues from the channel are anticipated. Final design of the roughened channel will consider soil and geological conditions and the channel will be designed to minimize erosion potential.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>39</td>
<td>Construction traffic impacts were estimated based on proposed activities and are documented in Section 4.17 of the SDEIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>40</td>
<td>Reclamation has identified the Yakama Nation and the Colville Confederated Tribes as Tribes with a cultural connection with the project area and they are consulted with on a continual basis. Reclamation continues to work with these Tribes in addressing potential impacts to resources of tribal concern.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>41</td>
<td>The image in question has not been modified to deceive. Please see Figure 4-2 of the SDEIS for the latest version.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>42</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>43</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>44</td>
<td>The comment is outside of the scope of the proposed action. These questions should be directed to the USFS or Washington State Parks.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>45</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>46</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>47</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>404</td>
<td>Reeves, John</td>
<td>48</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>405</td>
<td>Rodstrom, Angelina</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>406</td>
<td>Roshchuk, Inna</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>407</td>
<td>Ryan, Delaney</td>
<td>1</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
</tr>
<tr>
<td>407</td>
<td>Ryan, Delaney</td>
<td>2</td>
<td>Impacts from the artificial channel from Lake Kachess to Box Canyon Creek are outside the scope of this EIS.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>4</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>5</td>
<td>Reclamation has identified the Yakama Nation and the Colville Confederated Tribes as Tribes with a cultural connection with the project area and they are consulted with on a continual basis. Reclamation continues to work with these Tribes in addressing potential impacts to resources of tribal concern.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>6</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>8</td>
<td>See Section 3.3.1 of the SDEIS for a description of Yakima Project operations. The five reservoirs in the Yakima Project are operated in a coordinated manner to provide for surface water needs of the system as a whole; no single reservoir is designated to supply the needs of any particular area. Water rights senior to Reclamation’s water right will not be impacted.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>9</td>
<td>The results of the value analysis study concluded that a floating pumping plant would be feasible.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>10</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>11</td>
<td>NEPA allows refinement of the proposed action to get to a preferred alternative. Impacts were fully disclosed in the SDEIS and FEIS, and mitigation measures will be stated in the Record of Decision.</td>
</tr>
</tbody>
</table>
The SDEIS was updated with additional information about the potential for the proposal to cause impacts on wells. The Washington Department of Ecology (Ecology) is monitoring six wells around Kachess Reservoir to better understand the potential impact of KDRPP operation. The results of that monitoring have been incorporated into the SDEIS and indicate that about 15 of the 107 wells in the primary study area may be impacted by reservoir operations. Project proponents will continue to monitor a select number of wells near Kachess Reservoir to determine whether groundwater levels are lowered by additional reservoir drawdown attributable to the action alternatives and would coordinate with affected parties. If well water levels are adversely affected to the point that well yields are decreased and therefore compromise property use, some of the potential options may include but are not limited to: changing the intake elevation of a pump, deepening the well, or drilling a new well. Site specific information would be required to select a mitigation method.

Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment.

The Final EIS presents a description of outreach conducted.

Comment noted. "Reservoir" was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as "[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use." (https://www.usbr.gov/projects/glossary.php#R)

If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>16</td>
<td>The 2013 “Yakima River Basin Resource Management” law (2SSB 5367) set the vision for the forest and authorized the state Board of Natural Resources to enroll the property as the Teanaway Community Forest under the Community Forest Trust Program. The 2013 state authorizing legislation specifies that if the 214,000 acre feet of water is not developed by 2025, the TCF would be returned to the common school trust. See Section 1.8.2 of the SDEIS for additional details.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>17</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>18</td>
<td>Figure 4-2 in this FEIS illustrates the shoreline area under 200,000 acre feet drawdown scenario.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>19</td>
<td>See response to Common Issue 6.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>21</td>
<td>Reducing reservoir levels would not cause the surrounding landscape to dry out and become more susceptible to fire risk (Ecology 2015).</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>22</td>
<td>See response to Common Issue 9.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>23</td>
<td>See responses to Common Issues 8 and 12.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>24</td>
<td>See response to Common Issue 11.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>25</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>26</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>27</td>
<td>Section 4.13 provides discussion of the expected noise impacts from operation of the project.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>28</td>
<td>Disposal areas have yet to be identified; for this SDEIS analysis, Reclamation assumed the offsite location would be within 10 miles of the Keechelus Reservoir. An existing quarry near Keechelus Dam may be available for disposing of the crushed material excavated from the tunnel. Depending on construction timing, WSDOT could potentially use the material as fill for the I-90 improvement project. Reclamation would ensure that all required permits and clearances are obtained for use of any material disposal area(s).</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>29</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>30</td>
<td>No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>31</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>32</td>
<td>See response to Common Issue 2.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>33</td>
<td>The DEIS used the 2012 303(d) list, which was the most updated list at the time of the report. The SDEIS used the 2014 303(d) list, which was published between the releases of the DEIS and the SDEIS. As noted in Table 3-9 of the SDEIS, PCBs were listed due to being found in fish tissue and do not have a known source. PCBs were found in fish throughout the river and the reservoirs; downstream Yakima River fish were found to have higher levels of PCBs than upper Yakima River and reservoir fish.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>34</td>
<td>As discussed in Section 4.4 of the SDEIS, both Kachekelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Kachekelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Kachekelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>35</td>
<td>Impacts from construction for each alternative and each resource are described in Chapter 4 of this FEIS.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>408</td>
<td>Johnson, Christine</td>
<td>36</td>
<td>Reclamation and Ecology have jointly prepared the DEIS, SDEIS, and Final EIS, including responses to comments.</td>
<td></td>
</tr>
<tr>
<td>409</td>
<td>Sequin, Kaitlyn</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>5</td>
<td>The purpose and need for the proposed action are described in the Supplemental EIS Executive Summary and in Section 1.3</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>7</td>
<td>Reclamation has identified the Yakama Nation and the Colville Confederated Tribes as Tribes with a cultural connection with the project area and they are consulted with on a continual basis on cultural resources issues. The Yakama Nation and the Umatilla Tribes have potential Indian Trust Assets (ITAs)(water rights). Reclamation continues to work with these Tribes in addressing potential impacts to resources of tribal concern. The Snoqualmie Tribe has not been identified as having a cultural connection to the project area, and do have any ITAs, and have not requested to be consulted.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>8</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>9</td>
<td>The results of the value analysis study concluded that a floating pumping plant would be feasible.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>10</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project. The public has had the opportunity to comment on the potential costs during the DEIS and SDEIS comment periods.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>11</td>
<td>NEPA allow refinement of the proposed action to get to a preferred alternative. Impacts were fully disclosed in the SDEIS and FEIS, and mitigation measures will be stated in the Record of Decision.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>12</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>13</td>
<td>See response to Common Issue 3.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>14</td>
<td>Following the Draft EIS, Ecology conducted a review of groundwater elevations around Kachess Lake, downstream of the reservoir, Lake Easton will continue to serve as a recharge boundary and maintain groundwater levels near the lake.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>15</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>16</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>17</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>18</td>
<td>The 2013 “Yakima River Basin Resource Management” law (2SSB 5367) set the vision for the forest and authorized the state Board of Natural Resources to enroll the property as the Teanaway Community Forest under the Community Forest Trust Program. The 2013 state authorizing legislation specifies that if the 214,000 acre feet of water is not developed by 2025, the TCF would be returned to the common school trust. See Section 1.8.2 of the SDEIS for additional details.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>19</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>410</td>
<td>Sequin, Kaitlyn</td>
<td>20</td>
<td>See Figure 4 -2 in this FEIS for additional illustration of proposed drawdown.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>5</td>
<td>Several others commented about the use of the term “lake” or “reservoir.” Your comment is the only one citing the U.S. Board on Geographic Names, and yes, you are correct that federal agencies usually apply whatever name is officially designated by the Board and used in the Geographic Names Information System. However, Reclamation is sensitive to those members of the public who object to the use of the term “lake” for any artificial impoundment of water managed by the agency. Therefore, &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as “[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.” (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>6</td>
<td>Construction best management practices would minimize environmental effects of the boat ramp construction. Project proponents will coordinate with USFS regarding management of roads for access to the boat ramp.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>7</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>8</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>9</td>
<td>See Section 1.5 in SDEIS about considerations that led to the addition of the floating pumping plant alternative. Chapter 4 of this FEIS discloses adverse effects and mitigation measures.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>11</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>12</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>14</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity criteria of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>15</td>
<td>See response to Common Issue 7.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>16</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>411</td>
<td>Sheldon, Jeanne</td>
<td>17</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>412</td>
<td>Siegel, Jessica</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>412</td>
<td>Siegel, Jessica</td>
<td>2</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
<td></td>
</tr>
<tr>
<td>412</td>
<td>Siegel, Jessica</td>
<td>3</td>
<td>Please see the response to comment 364.3, who attached the same photograph of what appears to be organic matter—not solid waste. While we cannot comment on whether this particular substance would be classified as a pollutant under the legal definition at 33 USC §1362(6), please be assured that the WDFW maintains the fish passage at Box Canyon Creek in compliance with all applicable sections of the Clean Water Act and all applicable state and local laws. Also, please note that this FEIS has been updated regarding the applicability of the Shoreline Management Act. See Section 3.15.2.3.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>3</td>
<td>The Integrated Plan includes improvements to water supply and ecosystem functions. Both of these are fully consistent with the missions of Reclamation and Ecology. The proposed action is being undertaken in conformance with the Integrated Plan and these missions.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>5</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>6</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>7</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>8</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>9</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>10</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>11</td>
<td>The SDEIS has been updated regarding the applicability of the Shoreline Management Act. See Section 3.15.2.3.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>12</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>13</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>14</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>15</td>
<td>The purpose and need for the proposed action are described in the SDEIS Executive Summary and in Section 1.3.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>16</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>17</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>18</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>19</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>20</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>21</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>22</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>23</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>24</td>
<td>Evaluation of wetlands at an inventory level to compare EIS alternatives is adequate. Wetlands that will be directly impacted by the project will be delineated as required for federal, state, and local permits.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>25</td>
<td>As described in Section 4.4 of the SDEIS, Keechelus Reservoir would provide cool water to Kachess Reservoir, so the impacts to water temperature would be less than Alternatives without KKC. If temperature modeling of Keechelus Reservoir were completed, temperatures would likely be cooler than those described in Alternatives 2, 3, and 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>26</td>
<td>As described in Section 4.4 of the SDEIS, Keechelus Reservoir would provide cool water to Kachess Reservoir, so the impacts to water temperature would be less than Alternatives without KKC. If temperature modeling of Keechelus Reservoir were completed, temperatures would likely be cooler than those described in Alternatives 2, 3, and 4.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>27</td>
<td>Please note that recent hydrodynamic modeling was performed to more accurately estimate the change in zooplankton abundance with different pumping scenarios from different lake strata (see section 4.6.6.2 and PSU 2017b). The modeling supports the assessment of impacts of Alternative 4 and provides a comparison with the aquatic system impacts of the other KDRPP alternatives for the purposes of NEPA. As noted in this FEIS, additional hydrodynamic and bioenergetics modeling would be needed to determine precise responses for individual species, but that is not necessary for this EIS.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>28</td>
<td>Renderings of action alternatives are presented in Chapter 2 of this FEIS. Additional detailed engineering drawings are presented in the reports supporting this FEIS and available on Reclamation's website at</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>29</td>
<td>The &quot;No Action&quot; Alternative does not involve any spending that could be modeled using IMPLAN. The IMPLAN results related to agricultural output represent net gains for each alternative as measured against the &quot;No Action&quot; alternative.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>30</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>31</td>
<td>Generally a decrease in lake temperature would benefit cold-water associated species like salmonids. As described in section 4.4, if a severe long-term drought occurs where water supply conditions are expected to be 75 percent or less of the normal supply for multiple years, water levels in the reservoirs could substantially drop. As the Kachess Reservoir’s water levels drop the amount of nearshore shallow water subject to heating would be reduced and the reservoir would be expected to be cooler than in non-drought years.</td>
<td></td>
</tr>
</tbody>
</table>
“Reservoir balancing” is a term used to refer to a process where releases are made to meet instream flow and water delivery requirements so that the remaining usable storage in each of the five Yakima River basin reservoirs is relatively consistent. Remaining usable storage is not kept equal, because each reservoir’s capacity, usability, and refill characteristics are different. Yakima River basin operations are performed by human decision-makers, on a real time basis, using the best available measurements of current and projected future conditions of water availability and need. The operator also incorporates qualitative input concerning reservoir releases that may be available from resource agencies and water users. At times, these operational decision may also be tested by using specialized model runs and other software.

The YAKRW planning model used to support this EIS makes a given decision on how much water to release from each reservoir based upon rules coded into model logic that are controlled by similar, but more limited, water availability and need data (including a fixed set of projected future conditions). The model logic is designed to approximately duplicate the human decision-maker’s operational decisions, and it generally does. But the model does not have all of the same information available to it, and it is not able to make subjective adjustments, to use intuition, or to incorporate certain unquantifiable inputs and information.

The model is not deficient nor does it use inaccurate assumptions. The model does not have available to it all of the intangible inputs that real-time operations include, but it is still an appropriate tool to support analysis of alternatives in this EIS and support operational decision-making. Additionally, with respect to the specific case of reservoir balancing under conditions when KDRPP has been constructed, model logic is an estimate of operational procedures that have not yet been developed, because the project has not been constructed.

Climate change effects on reservoir levels and stream flows, and the effects of alternatives considering those climate change effects, are described in Section 4.12 of the SDEIS.

Refill period would be 2 to 5 years. This FEIS has been revised for consistency.

There is not a “target pool elevation” for refill, but rather refill goals while still meeting delivery and instream flow targets, and that KKC would accelerate refill.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>36</td>
<td>The volitional fish passage channel will convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess today as they have for thousands of years. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel. The upstream passage of fish into Box Creek Canyon is an existing, separate and independent issue from the volitional fish passage channel at the Narrows.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>37</td>
<td>See Section 1.5 of this FEIS. In 2016, Roza Irrigation District (a proratable entity) utilized the value analysis and proposed to construct and operate a “drought emergency” temporary floating pumping plant, referred to as the Kachess Emergency Temporary Floating Pumping Plant (KETFPP). Roza determined that the KETFPP would allow access to an additional 50,000 acre-feet of water below the existing reservoir outlet for the upcoming 2016 irrigation season, if the 2015 drought continued. With new information accumulated during Roza’s emergency efforts, Reclamation and Ecology collaborated with Roza to consider the substantial change in engineering knowledge accumulated, which indicated that a larger-scale floating pumping plant could be feasible in achieving the KDRPP purposes. Reclamation and Ecology determined an SDEIS would be required to consider a new floating pumping plant alternative that would withdraw an additional 200,000 acre-feet of water (below the existing gravity outlet works) from Kachess Reservoir. This additional alternative intends to provide the same benefits to the Yakima River basin as the South and East Shore KDRPP project alternatives described in the DEIS.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>38</td>
<td>The results of the value analysis study concluded that a floating pumping plant would be feasible.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>39</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>40</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>41</td>
<td>NEPA allow refinement of the proposed action to get to a preferred alternative. Impacts were fully disclosed in the SDEIS and FEIS, and mitigation measures will be stated in the Record of Decision.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>42</td>
<td>Comment is outside the scope of an EIS.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>43</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>44</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>45</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>46</td>
<td>See response to Common Issue 17.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>47</td>
<td>The proposed action would not, of itself, induce farming or other land use changes. It would operate only during drought years when less than 70 percent water supply is available.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>48</td>
<td>The proposed action would not, of itself, induce farming or other land use changes. It would operate only during drought years when less than 70 percent water supply is available.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>49</td>
<td>As described in the SDEIS, the Volitional Bull Trout Passage Improvements would produce economic impacts in the same manner as the other construction spending for the project. Detailed data sufficient to quantify these impacts, including construction cost estimates, were not available at the time of preparation. Because the impacts are expected to be positive and less than the construction costs for the main actions of the alternatives, quantification of these impacts is non-essential to the decision-making process.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>50</td>
<td>See response to Common Issue 10.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>51</td>
<td>Figure 4-2 in this FEIS illustrates the shoreline area under 200,000 acre feet drawdown scenario.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>52</td>
<td>See response to Common Issue 15.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>53</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>54</td>
<td>Water quality was considered in the assessment of impacts to fish was considered in the EIS. See Section 4.6.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>55</td>
<td>Operations would not have noise impacts. Pumps are electric and noise would not impact residences or campgrounds.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>56</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>57</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>58</td>
<td>See response to Common Issue 15.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>59</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>60</td>
<td>See response to Common Issue 3.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>61</td>
<td>See response to Common Issue 10.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>62</td>
<td>See response to Common Issue 10.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>63</td>
<td>Following the Draft EIS, Ecology conducted a review of groundwater elevations around Kachess Lake, downstream of the reservoir, Lake Easton will continue to serve as a recharge boundary and maintain groundwater levels near the lake.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>64</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>65</td>
<td>The environmental impacts of drawdown are addressed in Chapter 4 of the EIS.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>66</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>67</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>68</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>69</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>70</td>
<td>Species that would be affected by changes in instream flow in the upper Yakima River include anadromous salmonid species (Chinook, coho, and sockeye salmon and steelhead) that do not have access to Lake Kachess, and are therefore a different suite of species than those affected in Lake Kachess. Note that while Alternatives 2, 3, and 4 cause increases in annual instream flow that decrease habitat suitability in summer in the upper Yakima River reaches in drought years, Alternatives 5A, 5B, and 5C reduce summer flow in the Keechelus Reach and Easton Reach, providing a large benefit to summer-rearing salmonids.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>71</td>
<td>Effects of KDRPP on the food web were studied, including studies that were completed following the DEIS and used in updates presented in the SDEIS (Berger and Wells 2017, Hanson 2015, Hanson 2017), in Sections 3.6 and 4.6.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>72</td>
<td>Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>73</td>
<td>Estimated cost of volitional bull trout passage is included in Section 2.7.2 of the SDEIS. It was not included in the cost comparison of action alternatives because would be included in, and the same for, all alternatives.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>74</td>
<td>The volitional fish passage channel will convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess today as they have for thousands of years. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel. The upstream passage of fish into Box Creek Canyon is an existing, separate and independent issue from the volitional fish passage channel at the Narrows.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>75</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>76</td>
<td>The RiverWare modeling used in analyzing KDRPP includes the entire Reclamation system of storage reservoirs. Pumping through KDRPP can be readily accommodated in the system. See Appendix F for additional details.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>77</td>
<td>See Appendix F of the Final EIS for details of refill operations and effect on TWSA.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>78</td>
<td>See response to Common Issue 4. Roza and other potentially participating entities are currently improving canals to improve conservation.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>79</td>
<td>See response to Common Issue 5.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>80</td>
<td>Development of the Integrated Plan included consideration of prior studies of multiple surface-water storage sites in the Yakima River Basin. The surface-water sites identified were considered to be the most practical and would have the least impact on natural resources. Three storage sites are identified in the Integrated Plan Wymer Dam and Reservoir, Bumping Reservoir Enlargement, and use of inactive pool storage at Kachess Reservoir via KDRPP. The Integrated Plan also includes use of subsurface storage in to capture high winter flows.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>81</td>
<td>Thank you (and commenter 448) for the response about future climate change and hydrologic effects to Lake Kachess being “most certainly a cumulative impact.” We would like to clarify the difference between the cumulative effects analysis in Section 4.25 of this FEIS and the projection of hydrological effects of the alternatives in Section 4.3. A multi-year drought or reservoir drawdown that you describe is a statistically probable future condition that was modeled and incorporated into the Environmental Consequences assessment. A cumulative impact analysis on water resources is performed by identifying current and reasonably foreseeable actions or projects within the regional study area that are expected to occur regardless of the alternative selected. The effect of these actions or projects are then added to those in the Environmental Consequences resource-specific sections. We hope this clarifies the difference in analyses and explains why no change to this FEIS was made in response to your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>82</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>83</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>413</td>
<td>Simmons, Stephen</td>
<td>84</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>4</td>
<td>Acquisition of real property interests based on design concepts for the alternatives are summarized in Section 4.15 of the SDEIS. Reclamation would comply with Federal property acquisition policies. Reclamation would survey properties before construction to determine whether acquisition is required. Reclamation would follow the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601) and the procedures described in the 2003 Reclamation Manual Directives and Standards LND 06-01 for any property or easement acquisition.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>9</td>
<td>Section 4.2.10 of this FEIS describes mitigation measures to address potential erosion impacts.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>10</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>414</td>
<td>Snow, Kelly</td>
<td>13</td>
<td>Reclamation and Ecology have jointly prepared the DEIS, SDEIS, and Final EIS, including responses to comments.</td>
<td></td>
</tr>
<tr>
<td>415</td>
<td>Stemley, Craig</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>416</td>
<td>Stroup, Ashley</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>417</td>
<td>Tavenner, Starr</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>418</td>
<td>Thomas, Joel</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>419</td>
<td>Tidball, Emily</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>419</td>
<td>Tidball, Emily</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>2</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project and therefore provide direction on how farmers would be charged. The participating proratable irrigation districts will rely upon existing funding mechanisms to fund the project.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>4</td>
<td>Alternatives 5A, 5B, and 5C analyses take into account water availability in Keechelus Reservoir for transfer to Kachess Reservoir during droughts. As discussed in Section 4.3.2, the time to refill Kachess Reservoir to normal operating levels is 2 to 5 years following a drought.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>---------------</td>
<td>------------------</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>5</td>
<td>A comparative analysis of flows under different alternatives up to the Wapato Reach (Parker) is provided in section 4.3, Surface Water. As explained in section 4.3, the drought-year changes in flow downstream of Roza Dam would remain within current operating flows experienced in most years. Downstream from Roza Dam to the Parker gage, the relative change in streamflow would be less than in upstream reaches because some or most of the additional water supplied by KDRPP would be diverted. Any remaining increased supply could be diverted by WIP at Wapato Dam. The small change in streamflow downstream from Parker gage on the Yakima River would occur as Kachess Reservoir refills after a drought. The change would occur in winter and spring. The change would occur in winter and spring. As summarized in Tables 4-32 and 4-33 (Alternatives 2, 3, and 4), winter and spring flows at Parker are reduced by up to 1.2 percent. During refill years, high exceedance flows are reduced by 2.9 percent. As summarized In Tables 4-69 and 4-70 (Alternatives 5A, 5B, and 5C) winter and spring flows are reduced by up to 1.6 percent. During refill years, high exceedance flows are reduced by 4.6 percent.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>6</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
<td></td>
</tr>
<tr>
<td>420</td>
<td>de la Chapelle, Charlie</td>
<td>7</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>421</td>
<td>Walker, Scott</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>2</td>
<td>Much of the water used during the irrigation season comes from melting snow. Therefore increases in snow could increase irrigation-season water supply. Increase in rainfall however, does not improve supply, because the increase would come primarily during the non-irrigation season. Additional rain at that time of year would drain through the Yakima River and Columbia River system to the Pacific Ocean, and would not remain in the basin to be used during the irrigation season. In other words, Reclamation lacks storage capacity to store additional rainfall during this time of year.</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>4</td>
<td>See response to Common Issue 4. Study of the Columbia River Pump Exchange is identified in the Surface Water Storage Element of the Integrated Plan Final Programmatic EIS Preferred Alternative. It was not considered as an alternative because this was a project-specific EIS for the KDRPP and KKC projects identified in the Integrated Plan.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>5</td>
<td>See response to Common Issue 4. Multiple new storage projects (though not a Gold Creek Reservoir, were considered but not carried forward as part of the Integrated Plan development (see Integrated Plan FPEIS Section 2.5.2).</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>6</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>422</td>
<td>Aiken, Michael</td>
<td>7</td>
<td>Throughout Section 4.3 of the SDEIS, details were added that describe impacts to streamflow and water levels during refill periods.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>3</td>
<td>See response to Common Issues 8 and 12.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>4</td>
<td>As discussed in Section 4.4 of the SDEIS, both Kechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Kechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Kechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>5</td>
<td>Impacts to fish at the population level have not been modeled or estimated, rather the change in fish productivity is inferred from a change in available habitat during key times of the year with changes in instream flow downstream of the reservoirs. Estimation of the number of ESA-listed species that will be encountered and/or killed in construction and operation of the preferred alternative as well as implementation of measured to prevent losses will be calculated in consultation with USFWS under the Endangered Species Act. Consultation with The USFWS and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
<td></td>
</tr>
<tr>
<td>423</td>
<td>Benediktsson, Mike</td>
<td>6</td>
<td>There are no plans to improve the road.</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>1</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>2</td>
<td>See response to Common Issue 9.</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>424</td>
<td>Black, Christopher</td>
<td>6</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>425</td>
<td>Bocek, S</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>3</td>
<td>See response to Common Issue 16.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>5</td>
<td>See response to Common Issues 8 and 12.</td>
<td></td>
</tr>
<tr>
<td>426</td>
<td>Bocek, Thomas</td>
<td>7</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>3</td>
<td>As noted in Section 3.3.1 of the SDEIS, hydrologic modeling was used instead of historic information to compare existing conditions to future conditions with the project alternatives. Hydrologic modeling reflects recent operations of the Yakima Project versus historical information, which has changed throughout the historic operation of the Yakima Project.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>4</td>
<td>See response to Common Issue 8.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>5</td>
<td>See response to Common Issue 9.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>6</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>427</td>
<td>Burke, Austin</td>
<td>7</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>428</td>
<td>Cadwalader, Wende</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>429</td>
<td>Campbell, Karen</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>429</td>
<td>Campbell, Karen</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>429</td>
<td>Campbell, Karen</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>429</td>
<td>Campbell, Karen</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>430</td>
<td>Cernick, Debbie</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>5</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>431</td>
<td>Coan, Michael</td>
<td>6</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>432</td>
<td>Daly, Greg</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>433</td>
<td>Davidson, Doug</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>434</td>
<td>Donovan, Tracey</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>3</td>
<td>See response to Common Issue 9.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>4</td>
<td>See response to Common Issue 15.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>5</td>
<td>Endangered fish species are addressed in Sections 3.9 and 4.9 of this FEIS. WDFW’s Priority Habitat and Species database has been reviewed by Reclamation to assess the presence of any freshwater mussels in Kachess Reservoir. As a result, no documentation was found. Neither of these species are recognized by the USFS and BLM as species of conservation and population viability concern. As the project is implemented project proponents will work with Federal and state agencies to consider potential impacts to mussels.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>6</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>7</td>
<td>The project will be operated during drought years as described in Section 2.3.3. Roza could actually use on the order of 70,000 acre-feet during the worst drought years. Some droughts last more than one year and the capacity of the pumping plant is sized to allow resilience against multiple-year droughts. Additional proratable entities besides Roza may also receive water from the project. The 200,000 acre-feet capacity provides flexibility to meet these needs.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>8</td>
<td>See Appendix F of the Final EIS for information on the timing and conditions of pumping operations, including both drought-relief and refill operations.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>9</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>10</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>435</td>
<td>Dressler, Aaron</td>
<td>11</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Dulin, Andy</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Dulin, Andy</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Dulin, Andy</td>
<td>3</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Dulin, Andy</td>
<td>4</td>
<td>See response to Common Issue 4. In addition, Roza and other Proratable Entities are implementing conservation measures related to canals and ditches.</td>
<td></td>
</tr>
<tr>
<td>436</td>
<td>Dulin, Andy</td>
<td>5</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>437</td>
<td>Elder, Barbara</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>438</td>
<td>Engberg, Greg</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>438</td>
<td>Engberg, Greg</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>438</td>
<td>Engberg, Greg</td>
<td>3</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
<td></td>
</tr>
<tr>
<td>438</td>
<td>Engberg, Greg</td>
<td>4</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>439</td>
<td>Fitzpatrick, Camille</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>440</td>
<td>Golding, Gerald/Norma</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>440</td>
<td>Golding, Gerald/Norma</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>440</td>
<td>Golding, Gerald/Norma</td>
<td>3</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>441</td>
<td>Gulifoyle, Carol</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>3</td>
<td>See response to Common Issue 3.</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>4</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>5</td>
<td>Design details developed to are sufficient for NEPA analysis. Addition design details on elements like excavation would be developed as part of final design of a selected alternative.</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>442</td>
<td>Hallisey, Judy</td>
<td>6</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>443</td>
<td>Hamilton, Alistair</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>444</td>
<td>Hendricks, Lorelle</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>445</td>
<td>Hubble, Joel</td>
<td>1</td>
<td>Thank you for the suggested technical revisions, these have been incorporated into the FEIS. Rimrock prorated year changes are likely due to reservoir balancing done in the RiverWare model. According to the RiverWare modeling results, there are 8 instances in the modeling period of record where it takes 2-5 years to refill.</td>
<td></td>
</tr>
<tr>
<td>446</td>
<td>Hughart, Jenny</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>447</td>
<td>Jahn, Brandy</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>1</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>2</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>3</td>
<td>The Integrated Plan includes improvements to water supply and ecosystem functions. Both of these are fully consistent with the missions of Reclamation and Ecology. The proposed action is being undertaken in conformance with the Integrated Plan and these missions.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>5</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>6</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
<td></td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>7</td>
<td>An appendix has been included in this FEIS that provides documentation of the modeling assumptions and other inputs. 40 CFR 1502.22 provides that if there is incomplete or missing information, Reclamation can determine whether is essential for making a reasoned choice among alternatives. Reclamation has determined that information available is adequate for identifying a Preferred Alternative.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>8</td>
<td>Evaluation of wetlands at an inventory level to compare EIS alternatives is considered adequate for NEPA and SEPA environmental review. Wetlands that will be directly impacted by the project will be delineated as required for federal, state, and local permits.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>9</td>
<td>The proposed changes to Keechelus would fall within the existing operating conditions and therefore did not need to be modeled.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>10</td>
<td>Temperature impacts of KKC were not modeled, but modeling was not necessary for the water quality analysis to support this EIS. Existing data on water temperature was sufficient to conduct the analysis.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>11</td>
<td>Modeling and estimates were sufficient to assess and disclose the likely impacts of the alternatives.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>12</td>
<td>Renderings of action alternatives are presented in Chapter 2 of this FEIS. Additional detailed engineering drawings are presented in the reports supporting this FEIS and available on Reclamation's website at</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>13</td>
<td>No Action Alternative economic conditions were assessed and provide the basis for comparison of the action alternatives. See Section 4.21.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>14</td>
<td>Section 4.21 of this FEIS includes updates providing additional information on economic effects of the proposed action on recreation and the recreational economic activity.</td>
<td></td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>15</td>
<td>Thank you for your comment.</td>
<td></td>
</tr>
</tbody>
</table>
“Reservoir balancing” is a term used to refer to a process where releases are made to meet instream flow and water delivery requirements so that the remaining usable storage in each of the five Yakima River basin reservoirs is relatively consistent. Remaining usable storage is not kept equal, because each reservoir’s capacity, usability, and refill characteristics are different. Yakima River basin operations are performed by human decision-makers, on a real time basis, using the best available measurements of current and projected future conditions of water availability and need. The operator also incorporates qualitative input concerning reservoir releases that may be available from resource agencies and water users. At times, these operational decision may also be tested by using specialized model runs and other software.

The YAKRW planning model used to support this EIS makes a given decision on how much water to release from each reservoir based upon rules coded into model logic that are controlled by similar, but more limited, water availability and need data (including a fixed set of projected future conditions). The model logic is designed to approximately duplicate the human decision-maker’s operational decisions, and it generally does. But the model does not have all of the same information available to it, and it is not able to make subjective adjustments, to use intuition, or to incorporate certain unquantifiable inputs and information. The model is not deficient nor does it use inaccurate assumptions. The model does not have available to it all of the intangible inputs that real-time operations include, but it is still an appropriate tool to support analysis of alternatives in this EIS and support operational decision-making. Additionally, with respect to the specific case of reservoir balancing under conditions when KDRPP has been constructed, model logic is an estimate of operational procedures that have not yet been developed, because the project has not been constructed.

The uncertainty is acknowledged in the analysis and disclosed in this FEIS.

Refill period would be 2 to 5 years. This FEIS has been revised for consistency.

There is not a “target pool elevation” for refill, but rather refill goals while still meeting delivery and instream flow targets. KKC would accelerate refill.

See response to Common Issue 6.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>21</td>
<td>See Section 1.5 of this FEIS. In 2016, Roza Irrigation District (a proratable entity) utilized the value analysis and proposed to construct and operate a “drought emergency” temporary floating pumping plant, referred to as the Kachess Emergency Temporary Floating Pumping Plant (KETFPP). Roza determined that the KETFPP would allow access to an additional 50,000 acre-feet of water below the existing reservoir outlet for the upcoming 2016 irrigation season, if the 2015 drought continued. With new information accumulated during Roza’s emergency efforts, Reclamation and Ecology collaborated with Roza to consider the substantial change in engineering knowledge accumulated, which indicated that a larger-scale floating pumping plant could be feasible in achieving the KDRPP purposes. Reclamation and Ecology determined an SDEIS would be required to consider a new floating pumping plant alternative that would withdraw an additional 200,000 acre-feet of water (below the existing gravity outlet works) from Kachess Reservoir. This additional alternative intends to provide the same benefits to the Yakima River basin as the South and East Shore KDRPP project alternatives described in the DEIS.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>22</td>
<td>Under Reclamation's guidance and direction, a task force of Reclamation, Roza and consultant experts conducted a value analysis study in the summer of 2015. At the time of this study, Eastern Washington was under an Emergency Drought Declaration by the Governor. Subsequent to this Study, Roza embarked on the design of an emergency, temporary floating pumping plant. When the drought was declared over in December of 2015, Roza discontinued advancing the temporary emergency floating pumping plant project, and the work through the additional design and analysis performed in late 2015, the feasibility of a floating pumping plant was verified resulting a decision was made to add this alternative into the EIS documentation. See Section 2.8.1.3 of this FEIS</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>23</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>24</td>
<td>The SDEIS summarizes environmental impacts of the KDRPP alternatives, providing new information applicable to the environmental effects of KDRPP and explaining the removal of KKC as a stand-alone alternative.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>25</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>26</td>
<td>See response to Common Issue 17.</td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-135
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>27</td>
<td>The proposed action would not, of itself, induce farming or other land use changes. It would operate only during drought years when less than 70 percent water supply is available.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>28</td>
<td>As described in the SDEIS, the Volitional Bull Trout Passage Improvements would produce economic impacts in the same manner as the other construction spending for the project. Detailed data sufficient to quantify these impacts, including construction cost estimates, were not available at the time of preparation. Because the impacts are expected to be positive and less than the construction costs for the main actions of the alternatives, quantification of these impacts is largely immaterial to the decision-making process.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>30</td>
<td>See Figure 4 -2 in this FEIS for additional illustration of proposed drawdown.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>31</td>
<td>See response to Common Issue 15.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>33</td>
<td>Adverse impacts of changes in water temperatures are addressed in detail in section 4.6 of the SDEIS.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>34</td>
<td>Operations would not have noise impacts. Pumps are electric and noise would not impact residences or campgrounds.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>38</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>39</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>41</td>
<td>Following the Draft EIS, Ecology conducted a review of groundwater elevations around Kachess Lake, downstream of the reservoir, Lake Easton will continue to serve as a recharge boundary and maintain groundwater levels near the lake.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>42</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>43</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>44</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>45</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>46</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>47</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>48</td>
<td>While Alternatives 2, 3, and 4 cause increases in annual instream flow that decrease habitat suitability in summer in the upper Yakima River reaches in drought years, Alternatives 5A, 5B, and 5C reduce summer flow in the Keechelus Reach and Easton Reach, providing a large benefit to summer-rearing salmonids. Note that the number of years in which instream flow targets are attained in the Upper Yakima River reaches would improve with all proposed alternatives compared to Alternative 1, No Action except for a 1.5% reduction in attainment in spring in the Keechelus Reach with Alternatives 5A, 5B, and 5C and a 6% reduction in attainment in summer in the Easton Reach with all alternatives (Please see Tables 4-80 and 4-81)</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>49</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>50</td>
<td>When Keechelus Reservoir level falls below elevation 2,466, bull trout access to its tributaries is adversely affected. This impact is summarized in Table 4-4. For all alternatives, Keechelus Reservoir typically falls below elevation 2,466 from August to November. Under Alternatives 5A, 5B, and 5C, Keechelus Reservoir levels would fall below elevation 2,466 in 11 fewer years than under Alternative 1 (from 80 years for Alternative 1 to 69 years for Alternatives 5A, 5B, and 5C) but for an additional 5 days per year in years Keechelus Reservoir levels fall below elevation 2,466. Mitigation measures for ESA Threatened and Endangered fish species, including monitoring of habitat disconnection to tributary streams, if warranted, will be determined in consultation with the Service and NMFS which is ongoing, as explained in section 4.9.10 of the SDEIS.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>51</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>52</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>53</td>
<td>Section 1.2 describes Reclamation and Ecology's commitment to the Integrated Plan.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>54</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>56</td>
<td>See response to Common Issue 5.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>58</td>
<td>Thank you for the response about future climate change and hydrologic effects to Lake Kachess being &quot;most certainly a cumulative impact.&quot; This comment has been noted but no change was made to this FEIS. See 4.13.8 for the explanation.</td>
</tr>
<tr>
<td>448</td>
<td>Jonas, Jayme</td>
<td>59</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>2</td>
<td>The cost of drip irrigation is outside the scope of this EIS. For additional details about alternatives considered, see response to Common Issue 4.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>3</td>
<td>Section 4.11 describes operational effects on air quality, including dust generated by additional exposed shoreline area with KDRPP alternatives. The additional exposed shoreline could increase the amount of windblown dust, but shoreline materials are mostly stable. Therefore, particulate emissions due to drawdown is not expected to cause air quality or human health impacts.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>4</td>
<td>The proposed action would not enable junior water rights to take priority over senior water rights. See response to Common Issue 3.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>5</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>6</td>
<td>Reclamation is not aware of this resource; however, is committed to compliance with Paleontological Resources Preservation Act.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>449</td>
<td>Kelley, Elizabeth</td>
<td>7</td>
<td>Contaminated soils, if any, encountered in the project, will be handled and disposed of in accordance with applicable laws and regulations.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>1</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>2</td>
<td>The migration of fish between Big and Little Kachess would be addressed by the volitional bull trout passage improvements included as an element in all action alternatives. Measures to mitigate impacts to wildlife are described in Section 4.8.10.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>7</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>10</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>450</td>
<td>Kitchell, Carolyn/Robert</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>451</td>
<td>Landen, Dick</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>451</td>
<td>Landen, Dick</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>451</td>
<td>Landen, Dick</td>
<td>4</td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>451</td>
<td>Landen, Dick</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>452</td>
<td>Lee, Tom</td>
<td>1</td>
<td>Please see the FEIS for expanded descriptions of impacts on Yakima River flows by reach and by season. Section 4.3 Surface Water Resources for predicted changes in Yakima River flow by reach for each Alternative downstream from Keechelus Dam to Sunnyside Diversion Dam. Effects of predicted changes in Yakima River flow (either adverse or beneficial) each reach to Sunnyside Diversion Dam are described in section 4.6 Fish with reference to whether rearing habitat would increase or decrease in each reach in specific seasons.</td>
</tr>
<tr>
<td>452</td>
<td>Lee, Tom</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>452</td>
<td>Lee, Tom</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>453</td>
<td>Lewis, Ann</td>
<td>1</td>
<td>Reclamation has an existing agreement with WDFW to address fish passage and monitoring at Box Canyon Creek to provide fish passage at low flows during droughts. Withdrawing additional water will not affect fish passage at Box Canyon Creek and other upstream tributaries flowing into Little Kachess, because water levels in Little Kachess will not fall below historic levels. Reclamation and Ecology are committed to implementing BTE projects, including Box Canyon Creek. See Appendix C for additional details.</td>
</tr>
<tr>
<td>453</td>
<td>Lewis, Ann</td>
<td>2</td>
<td>Impacts from the artificial channel from Lake Kachess to Box Canyon Creek are outside the scope of this EIS.</td>
</tr>
<tr>
<td>454</td>
<td>Modery, Elizabeth</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>454</td>
<td>Modery, Elizabeth</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>454</td>
<td>Modery, Elizabeth</td>
<td>3</td>
<td>With respect to the part of your comment about fire response, please see Common Issue 10. With respect to water quality, please see Section 4.4 in this FEIS. With respect to recreation see Section 4.14 in this FEIS and for wells, see the Groundwater Section 4.5 in this FEIS.</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>1</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the FEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>2</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>3</td>
<td>Section 1.9.2 of this FEIS describes how Proratable Entities would receive water under the proposed action.</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>4</td>
<td>This FEIS clarifies that Roza and potentially other participating proratable irrigation districts would fund implementation of the Preferred Alternative. With respect to the part of your comment on sitting on this for 30 years, please note that Reclamation and Ecology follow the guidance of CEQ: 40 Questions Number 32, that if a proposal has not yet been implemented, EISs that are more than 5 years old are generally supplemented so that the agency has the best possible information regarding the proposal.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>455</td>
<td>Mundy, Lee</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>1</td>
<td>Thank you for your comment, it will be included in the record for the EIS, but please note that the proposal is consistent with the IP and tiered from it. Also, please note that a purpose for action is to continue to deliver project water for authorized purposes—the action alternatives are consistent with those purposes. Please see Common Issue 12.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>2</td>
<td>The Integrated Plan includes improvements to water supply and ecosystem functions. Both of these are fully consistent with the missions of Reclamation and Ecology. The proposed action is being undertaken in conformance with the Integrated Plan and these missions.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>3</td>
<td>An appendix has been included in this FEIS that provides documentation of the modeling assumptions and other inputs. 40 CFR 1502.22 provides that if there is incomplete or missing information, Reclamation can determine whether is essential for making a reasoned choice among alternatives. Reclamation has determined that information available is adequate for identifying a Preferred Alternative.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>4</td>
<td>Evaluation of wetlands at an inventory level to compare EIS alternatives is considered adequate for NEPA and SEPA environmental review. Wetlands that will be directly impacted by the project will be delineated as required for federal, state, and local permits.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>6</td>
<td>Temperature impacts of KKC were not modeled, but modeling was not necessary for the water quality analysis to support this EIS. Existing data on water temperature was sufficient to conduct the analysis.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>7</td>
<td>Modeling and estimates were sufficient to assess and disclose the likely impacts of the alternatives.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>8</td>
<td>Renderings of action alternatives are presented in Chapter 2 of this FEIS. Additional detailed engineering drawings are presented in the reports supporting this FEIS and available on Reclamation's website at <a href="http://www.usbr.gov">http://www.usbr.gov</a>.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>9</td>
<td>No Action Alternative economic conditions were assessed and provide the basis for comparison of the action alternatives. See Section 4.21.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>10</td>
<td>Section 4.21 of this FEIS includes updates providing additional information on economic effects of the proposed action on recreation and the recreational economic activity.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>
“Reservoir balancing” is a term used to refer to a process where releases are made to meet instream flow and water delivery requirements so that the remaining usable storage in each of the five Yakima River basin reservoirs is relatively consistent. Remaining usable storage is not kept equal, because each reservoir’s capacity, usability, and refill characteristics are different.

Yakima River basin operations are performed by human decision-makers, on a real time basis, using the best available measurements of current and projected future conditions of water availability and need. The operator also incorporates qualitative input concerning reservoir releases that may be available from resource agencies and water users. At times, these operational decision may also be tested by using specialized model runs and other software.

The YAKRW planning model used to support this EIS makes a given decision on how much water to release from each reservoir based upon rules coded into model logic that are controlled by similar, but more limited, water availability and need data (including a fixed set of projected future conditions). The model logic is designed to approximately duplicate the human decision-maker’s operational decisions, and it generally does. But the model does not have all of the same information available to it, and it is not able to make subjective adjustments, to use intuition, or to incorporate certain unquantifiable inputs and information.

The model is not deficient nor does it use inaccurate assumptions. The model does not have available to it all of the intangible inputs that real-time operations include, but it is still an appropriate tool to support analysis of alternatives in this EIS and support operational decision-making. Additionally, with respect to the specific case of reservoir balancing under conditions when KDRPP has been constructed, model logic is an estimate of operational procedures that have not yet been developed, because the project has not been constructed.

The uncertainty is acknowledged in the analysis and disclosed in this FEIS.

Refill period would be 2 to 5 years. This FEIS has been revised for consistency.

There is not a “target pool elevation” for refill, but rather refill goals while still meeting delivery and instream flow targets. KKC would accelerate refill.

See response to Common Issue 6.
<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>17</td>
<td>See Section 1.5 of this FEIS. In 2016, Roza Irrigation District (a proratable entity) utilized the value analysis and proposed to construct and operate a “drought emergency” temporary floating pumping plant, referred to as the Kachess Emergency Temporary Floating Pumping Plant (KETFPP). Roza determined that the KETFPP would allow access to an additional 50,000 acre-feet of water below the existing reservoir outlet for the upcoming 2016 irrigation season, if the 2015 drought continued. With new information accumulated during Roza’s emergency efforts, Reclamation and Ecology collaborated with Roza to consider the substantial change in engineering knowledge accumulated, which indicated that a larger-scale floating pumping plant could be feasible in achieving the KDRPP purposes. Reclamation and Ecology determined an SDEIS would be required to consider a new floating pumping plant alternative that would withdraw an additional 200,000 acre-feet of water (below the existing gravity outlet works) from Kachess Reservoir. This additional alternative intends to provide the same benefits to the Yakima River basin as the South and East Shore KDRPP project alternatives described in the DEIS.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>18</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>19</td>
<td>The proposed action would not, of itself, induce farming or other land use changes. It would operate only during drought years when less than 70 percent water supply is available.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>20</td>
<td>As described in the SDEIS, the Volitional Bull Trout Passage Improvements would produce economic impacts in the same manner as the other construction spending for the project. Detailed data sufficient to quantify these impacts, including construction cost estimates, were not available at the time of preparation. Because the impacts are expected to be positive and less than the construction costs for the main actions of the alternatives, quantification of these impacts is largely immaterial to the decision-making process.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>24</td>
<td>Adverse impacts of changes in water temperatures are addressed in detail in section 4.6 of the SDEIS.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>25</td>
<td>Operations would not have noise impacts. Pumps are electric and noise would not impact residences or campgrounds.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>26</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>29</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>31</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>32</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>33</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>34</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>35</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>36</td>
<td>While Alternatives 2, 3, and 4 cause increases in annual instream flow that decrease habitat suitability in summer in the upper Yakima River reaches in drought years, Alternatives 5A, 5B, and 5C reduce summer flow in the Keechelus Reach and Easton Reach, providing a large benefit to summer-rearing salmonids. Note that the number of years in which instream flow targets are attained in the Upper Yakima River reaches would improve with all proposed alternatives compared to Alternative 1, No Action except for a 1.5% reduction in attainment in spring in the Keechelus Reach with Alternatives 5A, 5B, and 5C and a 6% reduction in attainment in summer in the Easton Reach with all alternatives (Please see Tables 4-80 and 4-81)</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>37</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>38</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>39</td>
<td>Section 1.2 describes Reclamation and Ecology's commitment to the Integrated Plan</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>41</td>
<td>See response to Common Issue 5.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>43</td>
<td>YRBWEP Phases II and III are considered reasonably foreseeable future actions, and therefore for a basis for the cumulative effects assessment documented in the SDEIS. An updated status of project implementation is provided in the Yakima River Basin Integrated Water Resource Management Plan Implementation Status Report (Department of Ecology 2018OCR, 2017)</td>
</tr>
<tr>
<td>456</td>
<td>Nelson, Alyse</td>
<td>44</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>3</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>4</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>5</td>
<td>As discussed in Section 4.4 of the SDEIS, both Kechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Kechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Kechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>6</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>7</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>457</td>
<td>Newman, Peter</td>
<td>8</td>
<td>There are no plans to improve the road.</td>
</tr>
<tr>
<td>458</td>
<td>Oh, Shenton</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>458</td>
<td>Oh, Shenton</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>458</td>
<td>Oh, Shenton</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>459</td>
<td>Owens, C.C.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>459</td>
<td>Owens, C.C.</td>
<td>2</td>
<td>Thank you for your comment. It has been noted and will be included in the record for the EIS. Please see Common Issue 10 regarding fire response. With respect to the comment about taxpayer money, please note this FEIS clarifies that Roza and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>460</td>
<td>Owens, Joann</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>460</td>
<td>Owens, Joann</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>461</td>
<td>Owens, JP</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>461</td>
<td>Owens, JP</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>461</td>
<td>Owens, JP</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>461</td>
<td>Owens, JP</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>2</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>4</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>5</td>
<td>The potential impacts to fish are described in Section 4.6 of the EIS.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>6</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>9</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>10</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>462</td>
<td>Parry, Jeff</td>
<td>12</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>5</td>
<td>No acquisition of private property is anticipated for the Preferred Alternative. If private property acquisition is required, procedures for acquisition are described in Section 4.15.10 of this FEIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>6</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>8</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; <a href="https://www.usbr.gov/projects/glossary.php#R">link</a></td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>9</td>
<td>See response to Common Issue 7.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>11</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>12</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>13</td>
<td>Reclamation and Ecology would execute agreements with Roza Irrigation District prior to construction that will address roles and responsibilities, including financial commitments.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>14</td>
<td>Estimated operations costs are presented Section 2.7.2 of the SDEIS. If the Preferred Alternative is selected, Roza will assess operating costs during its decision making process on whether and how to proceed.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>15</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>16</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>17</td>
<td>See response to Common Issue 14.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>18</td>
<td>Lake Kachess is periodically stocked with kokanee and cutthroat fry by WDFW.</td>
</tr>
<tr>
<td>463</td>
<td>Reeves, Harold</td>
<td>19</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>464</td>
<td>Ryan, Paige and Scott</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>3</td>
<td>Reclamation has met and engaged with the commenter on multiple occasions from 2015 to 2018 and has shared data and model outputs related to system operations, reservoir pool levels, stream flows, and related aspects of the Yakima Project. See Section 5 of this FEIS regarding stakeholder engagement. Reclamation has reviewed the information and opinions that this commenter has provided. However, for purposes of NEPA, Reclamation relies on meeting the Information Quality Act and the Office of Management of Budget’s authorities overseeing the quality of agency information, analyses, and actions. As such, Reclamation relies on use of RiverWare (TM) and the YakRW Model. This model and its applications have gone through years of validation by professional hydrologist and operators. For purposes of this environmental review, this meets information quality requirements and provides a sound basis for decision-making.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>6</td>
<td>As noted in Section 3.3.1 of the SDEIS, hydrologic modeling was used instead of historic information to compare existing conditions to future conditions with the project alternatives. Hydrologic modeling reflects recent operations of the Yakima Project versus historical information, which has changed throughout the historic operation of the Yakima Project. Additional details of modeling results are further detailed in the Hydrologic Modeling Report.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>7</td>
<td>The five reservoirs in the Yakima Project are operated in a coordinated manner to provide for surface water needs of the system as a whole; no single reservoir is designated to supply the needs of any particular area. Therefore a change in total water supply available or in proration would impact more than Kachess Reservoir; these flow and reservoir impacts are described in Section 4.3 of the SDEIS.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>8</td>
<td>As noted in Section 4.3.1, it is assumed that KRD, Roza, and WIP agree to participate in KDRPP.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>9</td>
<td>As noted in Section 4.3.1, it is assumed that KRD, Roza, and WIP agree to participate in KDRPP. KRD diversions are different than KRD deliveries. According to RiverWare modeling results, Roza deliveries are higher than KRD deliveries (by 41 kAF) for the drought years mentioned in Alternative 2.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>10</td>
<td>Please see section 2.3.5 of the SDEIS which describes Volitional Bull Trout Passage Improvements to improve the connections between Big Kachess and Little Kachess when water levels fall below an elevation of 2,226 feet. Please see section 4.3 of the SDEIS which shows the estimated days that Lake Kachess would fall below critical elevations under each alternative scenario, summarized in table 4.4.</td>
</tr>
<tr>
<td>465</td>
<td>Schwartz, Jay</td>
<td>11</td>
<td>See response to Common Issue 2. As noted therein, as a condition of the Preferred Alternative, Roza would be required to fund, design, construct, operate and maintain the project, which would result in no direct federal funding on the project and therefore, there is no need for Reclamation to prepare a principles and guidelines economic analysis to submit to OMB.</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>4</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>5</td>
<td>See Appendix F of the Final EIS for information on pumping during refill operations.</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>6</td>
<td>Please note that there is a difference in scope between the programmatic IP—which identified multiple components for future analysis and action, and the site-specific action analyzed here. This action is not intended to encompass all components or elements of the broader, programmatic IP.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>7</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process for KDRPP.</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>8</td>
<td>The DEIS used the 2012 303(d) list, which was the most updated list at the time of the report. The SDEIS used the 2014 303(d) list, which was published between the releases of the DEIS and the SDEIS. As noted in Table 3-9 of the SDEIS, PCBs were listed due to being found in fish tissue and do not have a known source. PCBs were found in fish throughout the river and the reservoirs; downstream Yakima River fish were found to have higher levels of PCBs than upper Yakima River and reservoir fish.</td>
</tr>
<tr>
<td>466</td>
<td>Newman, Livia</td>
<td>9</td>
<td>It is Reclamation policy to avoid impacts and leave cultural materials in place. If that is not feasible cultural materials will be recovered scientifically in advance of construction. Recovered materials will be curated at a museum which meets federal standards. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>467</td>
<td>Smith, Doug</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>468</td>
<td>Staberow, Katherine</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>469</td>
<td>Starcevich, John P.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>470</td>
<td>Thomas, Lynn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>470</td>
<td>Thomas, Lynn</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>471</td>
<td>Vaughn, William F.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>471</td>
<td>Vaughn, William F.</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>471</td>
<td>Vaughn, William F.</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>471</td>
<td>Vaughn, William F.</td>
<td>5</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted. With respect to your question about recreational opportunities and the campground, please see Section 4.14 of this FEIS.</td>
</tr>
<tr>
<td>472</td>
<td>Wenstrup, John</td>
<td>1</td>
<td>Section 4.2 of the EIS addresses seismic risks associated with the project. The proposed action is predicated on the presence of a dam; therefore, a scenario involving the dam having been removed for safety reasons was not considered.</td>
</tr>
<tr>
<td>472</td>
<td>Wenstrup, John</td>
<td>2</td>
<td>In response to your question about the applicability of the 2018 State of Washington v U.S. case, we have read the decision, but have not extrapolated from the specifics of that case to the Yakima Project. Please note that Reclamation remains committed to carrying out Yakima Project operations (and all activities) in a manner that protects Indian trust assets—including tribal fishing rights, and avoiding adverse impacts to these assets when possible. With respect to the action being analyzed in this FEIS, our finding is that no Indian Trust Assets are adversely impacted and no mitigation is required. Consultation with potentially affected and concerned Indian tribes is ongoing/</td>
</tr>
<tr>
<td>472</td>
<td>Wenstrup, John</td>
<td>3</td>
<td>Section 4.11 describes operational effects on air quality, including dust generated by additional exposed shoreline area with KDRPP alternatives. The additional exposed shoreline could increase the amount of windblown dust, but shoreline materials are mostly stable. Therefore, particulate emissions due to drawdown is not expected to cause air quality or human health impacts.</td>
</tr>
<tr>
<td>472</td>
<td>Wenstrup, John</td>
<td>4</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>472</td>
<td>Wenstrup, John</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>473</td>
<td>Whitney, Dan</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>3</td>
<td>KDRPP has been sized to improve supplies to a subset of proratable users of Yakima Project water consistent with the Integrated Plan. See Appendix F of the Final EIS for additional detail.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>4</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>5</td>
<td>KDRPP is sized to meet the need of other proratable entities in addition to Roza, see Section 1.3 of the Final EIS.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>6</td>
<td>Sections 1.2 and 1.9 of this FEIS describe the Integrated Plan and proposed action in terms of proratable users and water rights. Under the Preferred Alternative, Roza and other participating Proratable Entities would fund the implementation and operations of KDRPP.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>7</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>474</td>
<td>Williams, Jerald</td>
<td>8</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>1</td>
<td>See response to 456.1.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>2</td>
<td>The Integrated Plan includes improvements to water supply and ecosystem functions. Both of these are fully consistent with the missions of Reclamation and Ecology. The proposed action is being undertaken in conformance with the Integrated Plan and these missions.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>3</td>
<td>An appendix has been included in this FEIS that provides documentation of the modeling assumptions and other inputs. 40 CFR 1502.22 provides that if there is incomplete or missing information, Reclamation can determine whether is essential for making a reasoned choice among alternatives. Reclamation has determined that information available is adequate for identifying a Preferred Alternative.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>4</td>
<td>Evaluation of wetlands at an inventory level to compare EIS alternatives is considered adequate for NEPA and SEPA environmental review. Wetlands that will be directly impacted by the project will be delineated as required for federal, state, and local permits.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>5</td>
<td>Modeling was used to determine temperature effects of KDRPP on Kachess Reservoir and downstream of Kachess Dam.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>6</td>
<td>Temperature impacts of KKC were not modeled, but modeling was not necessary for the water quality analysis to support this EIS. Existing data on water temperature was sufficient to conduct the analysis.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>7</td>
<td>Modeling and estimates were sufficient to assess and disclose the likely impacts of the alternatives.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>8</td>
<td>Renderings of action alternatives are presented in Chapter 2 of this FEIS. Additional detailed engineering drawings are presented in the reports supporting this FEIS and available on Reclamation's website at</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>9</td>
<td>No Action Alternative economic conditions were assessed and provide the basis for comparison of the action alternatives. See Section 4.21.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>10</td>
<td>Section 4.21 of this FEIS includes updates providing additional information on economic effects of the proposed action on recreation and the recreational economic activity.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>11</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>
“Reservoir balancing” is a term used to refer to a process where releases are made to meet instream flow and water delivery requirements so that the remaining usable storage in each of the five Yakima River basin reservoirs is relatively consistent. Remaining usable storage is not kept equal, because each reservoir’s capacity, usability, and refill characteristics are different. Yakima River basin operations are performed by human decision-makers, on a real time basis, using the best available measurements of current and projected future conditions of water availability and need. The operator also incorporates qualitative input concerning reservoir releases that may be available from resource agencies and water users. At times, these operational decision may also be tested by using specialized model runs and other software. The YAKRW planning model used to support this EIS makes a given decision on how much water to release from each reservoir based upon rules coded into model logic that are controlled by similar, but more limited, water availability and need data (including a fixed set of projected future conditions). The model logic is designed to approximately duplicate the human decision-maker’s operational decisions, and it generally does. But the model does not have all of the same information available to it, and it is not able to make subjective adjustments, to use intuition, or to incorporate certain unquantifiable inputs and information. The model is not deficient nor does it use inaccurate assumptions. The model does not have available to it all of the intangible inputs that real-time operations include, but it is still an appropriate tool to support analysis of alternatives in this EIS and support operational decision-making. Additionally, with respect to the specific case of reservoir balancing under conditions when KDRPP has been constructed, model logic is an estimate of operational procedures that have not yet been developed, because the project has not been constructed.

<table>
<thead>
<tr>
<th>Comment Letter Number</th>
<th>Commenter</th>
<th>Comment Number</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>12</td>
<td>“Reservoir balancing” is a term used to refer to a process where releases are made to meet instream flow and water delivery requirements so that the remaining usable storage in each of the five Yakima River basin reservoirs is relatively consistent. Remaining usable storage is not kept equal, because each reservoir’s capacity, usability, and refill characteristics are different. Yakima River basin operations are performed by human decision-makers, on a real time basis, using the best available measurements of current and projected future conditions of water availability and need. The operator also incorporates qualitative input concerning reservoir releases that may be available from resource agencies and water users. At times, these operational decision may also be tested by using specialized model runs and other software. The YAKRW planning model used to support this EIS makes a given decision on how much water to release from each reservoir based upon rules coded into model logic that are controlled by similar, but more limited, water availability and need data (including a fixed set of projected future conditions). The model logic is designed to approximately duplicate the human decision-maker’s operational decisions, and it generally does. But the model does not have all of the same information available to it, and it is not able to make subjective adjustments, to use intuition, or to incorporate certain unquantifiable inputs and information. The model is not deficient nor does it use inaccurate assumptions. The model does not have available to it all of the intangible inputs that real-time operations include, but it is still an appropriate tool to support analysis of alternatives in this EIS and support operational decision-making. Additionally, with respect to the specific case of reservoir balancing under conditions when KDRPP has been constructed, model logic is an estimate of operational procedures that have not yet been developed, because the project has not been constructed.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>13</td>
<td>The uncertainty is acknowledged in the analysis and disclosed in this FEIS.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>14</td>
<td>Refill period would be 2 to 5 years. This FEIS has been revised for consistency.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>15</td>
<td>There is not a “target pool elevation” for refill, but rather refill goals while still meeting delivery and instream flow targets. KKC would accelerate refill.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>17</td>
<td>See Section 1.5 of this FEIS. In 2016, Roza Irrigation District (a proratable entity) utilized the value analysis and proposed to construct and operate a “drought emergency” temporary floating pumping plant, referred to as the Kachess Emergency Temporary Floating Pumping Plant (KETFPP). Roza determined that the KETFPP would allow access to an additional 50,000 acre-feet of water below the existing reservoir outlet for the upcoming 2016 irrigation season, if the 2015 drought continued. With new information accumulated during Roza’s emergency efforts, Reclamation and Ecology collaborated with Roza to consider the substantial change in engineering knowledge accumulated, which indicated that a larger-scale floating pumping plant could be feasible in achieving the KDRPP purposes. Reclamation and Ecology determined an SDEIS would be required to consider a new floating pumping plant alternative that would withdraw an additional 200,000 acre-feet of water (below the existing gravity outlet works) from Kachess Reservoir. This additional alternative intends to provide the same benefits to the Yakima River basin as the South and East Shore KDRPP project alternatives described in the DEIS.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>19</td>
<td>The proposed action would not, of itself, induce farming or other land use changes. It would operate only during drought years when less than 70 percent water supply is available.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>20</td>
<td>As described in the SDEIS, the Volitional Bull Trout Passage Improvements would produce economic impacts in the same manner as the other construction spending for the project. Detailed data sufficient to quantify these impacts, including construction cost estimates, were not available at the time of preparation. Because the impacts are expected to be positive and less than the construction costs for the main actions of the alternatives, quantification of these impacts is largely immaterial to the decision-making process.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>24</td>
<td>Adverse impacts of changes in water temperatures are addressed in detail in section 4.6 of the SDEIS.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>25</td>
<td>Operations would not have noise impacts. Pumps are electric and noise would not impact residences or campgrounds.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>31</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>32</td>
<td>Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>35</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>36</td>
<td>Note that while Alternatives 2, 3, and 4 cause increases in annual instream flow that decrease habitat suitability in summer in the upper Yakima River reaches in drought years, Alternatives 5A, 5B, and 5C reduce summer flow in the Keechelus Reach and Easton Reach, providing a large benefit to summer-rearing salmonids. Note that the number of years in which instream flow targets are attained in the Upper Yakima River reaches would improve with all proposed alternatives compared to Alternative 1, No Action except for a 1.5% reduction in attainment in spring in the Keechelus Reach with Alternatives 5A, 5B, and 5C and a 6% reduction in attainment in summer in the Easton Reach with all alternatives (Please see Tables 4-80 and 4-81)</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>37</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>38</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>475</td>
<td>Worcester, Karen</td>
<td>44</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>3</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>6</td>
<td>Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>8</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>9</td>
<td>As outlined in the SDEIS, the proposed pumping plant would only be operational in drought years and as the reservoir is refilled following a drought.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>476</td>
<td>Freeborn, Phelps</td>
<td>11</td>
<td>Thank you for providing the citations and information about crop coefficients. Please note that the choice of crops is left to individual farmers, despite the different water requirements of the crops. Your information has been noted and will be included in the record for the EIS.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>3</td>
<td>The project is within the ceded lands of the Yakama Nation per the Treaty of 1855. Both the Yakama Nation and the Colville Confederated Tribes have a demonstrated cultural connection to the project area. They have requested, and are involved, with the cultural evaluation of the project. We are unaware of a cultural connection held by the Snoqualmie Tribe, and they have made no similar request. It is Reclamation policy to avoid impacts and leave cultural materials in place. If that is not feasible cultural materials will be recovered scientifically in advance of construction. Recovered materials will be curated at a museum which meets federal standards. As part of Section 110 responsibilities, Reclamation is planning to implement a Cultural Resources Management Plan (CRMP) to address ongoing and future operational and land management implications to cultural resources.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>4</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>5</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>6</td>
<td>KKC is not being carried forward as a stand-alone project at this time; however, KKC is a component of the action alternatives (Alternative 5).</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>7</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>8</td>
<td>Acquisition of real property interests based on design concepts for the alternatives are summarized in Section 4.15 of the SDEIS. Reclamation would comply with Federal property acquisition policies. Reclamation would survey properties before construction to determine whether acquisition is required. Reclamation would follow the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601) and the procedures described in the 2003 Reclamation Manual Directives and Standards LND 06-01 for any property or easement acquisition.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>9</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>10</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>13</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>14</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>15</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>16</td>
<td>This FEIS includes additional information on the home sites around Kachess Reservoir.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>17</td>
<td>See response to Common Issue 9. The study referenced in the comment supports the conclusion that there are multiple factors affecting the value of properties surrounding Kachess Reservoir that are unrelated to the action alternatives evaluated in this SDEIS. The proposed changes in temporary fluctuations in water levels do not necessarily have a causal relationship to property values or market perceptions.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>20</td>
<td>Senior water right holders will continue to get their allocated water as identified in current water service contracts. See FEIS, Section 2.3.3.1 Drought Relief Operations.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>21</td>
<td>See response to Common Issue 8. As noted, Ecology will conduct an analysis of water availability, potential impairment of existing water rights, beneficial use, and potential detriment to the public interest as part of the water right permitting process</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>22</td>
<td>Disposal areas have yet to be identified; for this SDEIS analysis, Reclamation assumed the offsite location would be within 10 miles of the Keechelus Reservoir. An existing quarry near Keechelus Dam may be available for disposing of the crushed material excavated from the tunnel. Depending on construction timing, WSDOT could potentially use the material as fill for the I-90 improvement project. Reclamation would ensure that all required permits and clearances are obtained for use of any material disposal area(s).</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>23</td>
<td>KKC is not included in the Preferred Alternative.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>24</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>477</td>
<td>Fury, C. Steven</td>
<td>25</td>
<td>Operations during the project’s construction periods will need to be planned carefully to manage impacts to water users, the flip-flop operation and associated fisheries resources. Details of the temporary construction-related drawdown would be developed during a subsequent design stage, in consultation with Yakima Project users, state and federal fish and wildlife agencies and the Yakama Nation.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>------------</td>
<td>----------------</td>
<td>---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>1</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>2</td>
<td>Impacts to anadromous salmon, including Chinook and steelhead, are addressed in sections 3.6 and 4.6 of the SDEIS, specifically in sections describing fish populations and changes in habitat suitability below the dams where these species still have access.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>3</td>
<td>Section 1.2.3 in the SDEIS notes that reservoir fish passage is one of the seven elements of the Integrated Plan’s comprehensive package address ecosystem restoration, water supply, and climate change flexibility issues in the basin. Fish passage at Kachess Dam, while included in the reservoir fish passage element, is not an objective of the KDRPP and KKC projects; however KDRPP would be designed to not preclude future fish passage improvements to Kachess Dam consistent with the Integrated Plan.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>4</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>5</td>
<td>Prorationing of Yakima Project water was necessary in 2001 (37%), 2005 (42%) and 2015 (47%). See Section 3.3.1.5 of this FEIS. See Table 4-4 of this FEIS for projected improvements in prorationing percentages.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>6</td>
<td>To promote public understanding of action, summary costs are provided in the EIS. Details are presented in supported documents referenced in the EIS. The Preferred Alternative would not be funded by taxpayers.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>7</td>
<td>The question is not within the scope of the environmental review.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>8</td>
<td>The proposed action would not include pumping to improve prorationing above a level of 70%.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>9</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>10</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>12</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>13</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>478</td>
<td>Kirlin, Alan</td>
<td>14</td>
<td>Section 1.2.3 in the SDEIS notes that reservoir fish passage is one of the seven elements of the Integrated Plan’s comprehensive package address ecosystem restoration, water supply, and climate change flexibility issues in the basin. Fish passage at Kachess Dam, while included in the reservoir fish passage element, is not an objective of the KDRPP and KKC projects; however KDRPP would be designed to not preclude future fish passage improvements to Kachess Dam consistent with the Integrated Plan.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>479</td>
<td>Steele, Larry and Stasia</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>480</td>
<td>Vanbeek, Jeremy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>481</td>
<td>Campbell, William</td>
<td>1</td>
<td>Thank you for your comment. See responses to Comment Letter 465.</td>
</tr>
<tr>
<td>481</td>
<td>Campbell, William</td>
<td>2</td>
<td>Thank you for your comment. See responses to Kachess Community Association comment letter.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>1</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>2</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>3</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>4</td>
<td>The selected alternative documented in the Integrated Plan Record of Decision identified restoring fish passage at Cle Elum, Kachess and Keechelus dams a Reservoir Fish Passage elements. While fish passage at Kachess or Keechelus dams are not part of this site-specific EIS, the alternatives evaluated in this EIS would not preclude future fish passage improvements at those dams.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>5</td>
<td>Impacts to anadromous salmon, including Chinook and steelhead, are addressed in sections 3.6 and 4.6 of the SDEIS, specifically in sections describing fish populations and changes in habitat suitability below the dams where these species still have access.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>----------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>6</td>
<td>Impacts to anadromous salmon, including Chinook and steelhead, are addressed in sections 3.6 and 4.6 of the SDEIS, specifically in sections describing fish populations and changes in habitat suitability below the dams where these species still have access.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>7</td>
<td>Section 1.2.3 in the SDEIS notes that reservoir fish passage is one of the seven elements of the Integrated Plan’s comprehensive package address ecosystem restoration, water supply, and climate change flexibility issues in the basin. Fish passage at Kachess Dam, while included in the reservoir fish passage element, is not an objective of the KDRPP and KKC projects; however KDRPP would be designed to not preclude future fish passage improvements to Kachess Dam consistent with the Integrated Plan.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>8</td>
<td>Section 1.2.3 in the SDEIS notes that reservoir fish passage is one of the seven elements of the Integrated Plan's comprehensive package address ecosystem restoration, water supply, and climate change flexibility issues in the basin. Fish passage at Kachess Dam, while included in the reservoir fish passage element, is not an objective of the KDRPP and KKC projects; however KDRPP would be designed to not preclude future fish passage improvements to Kachess Dam consistent with the Integrated Plan.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>9</td>
<td>A drought emergency was declared in 2015.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>10</td>
<td>As noted in Section 1.3, pumping plant on Kachess Reservoir would be operated in order to recover up to 200,000 acre-feet of inactive water storage from Kachess Reservoir during drought years when prorationing is less than 70 percent supply. Sections 3.3 and 4.3 provide details on the 70 percent proration level determination.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>11</td>
<td>To promote public understanding of action, summary costs are provided in the EIS. Details are presented in supported documents referenced in the EIS. The Preferred Alternative would not be funded by taxpayers.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>12</td>
<td>The question is not within the scope of the environmental review.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>13</td>
<td>Providing drought relief pumping above 70 percent proration is not proposed in the alternatives.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>14</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>15</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>16</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>17</td>
<td>This question is outside the scope of the environmental analysis in the EIS.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>18</td>
<td>As noted in Section 4.17.10 of the SDEIS, if any road deterioration merits repair, Reclamation and Ecology would coordinate with local jurisdictions, WSDOT or others as needed.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>19</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>20</td>
<td>This question is out of the scope of review for this EIS.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>------------------</td>
<td>----------------</td>
<td>-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>21</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>482</td>
<td>Kirlin, Alan</td>
<td>22</td>
<td>Reintroduction of anadromous salmon species to the Upper Yakima Basin reservoirs is a goal of the Yakima Basin Integrated Plan. After considering scenarios to add fish passage to each of the Upper Yakima Basin Dam, Cle Elum Dam and Reservoir was chosen as the first project to implement, and implementation is occurring (see BOR 2005 Phase 1 Fish Passage Study and BOR 2011 Cle Elum Dam Fish Passage Facilities and Fish Reintroduction Project). Extirpation of anadromous fish including sockeye salmon due to installation of dams without fish passage structures is described in the introductory paragraphs of section 3.6.</td>
</tr>
<tr>
<td>483</td>
<td>Botkin, Linnet</td>
<td>1</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a> )</td>
</tr>
<tr>
<td>484</td>
<td>Burke, Mark</td>
<td>1</td>
<td>In response to your question regarding email addresses and the Privacy Act law and policies, please note that there is no conflict with the law or policies. If a commenter wishes the action agency to withhold their name or other personally identifiable information, they must state this prominently at the beginning of their comment. Otherwise, any personally identifiable information, such as names, addresses, and email addresses included in a comment may automatically be made available to the public. We don’t redact such information unless requested.</td>
</tr>
<tr>
<td>485</td>
<td>Burke, Mark</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>486</td>
<td>Chan, William</td>
<td>1</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>487</td>
<td>Jarvis, Lyndsey</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>----------------</td>
<td>------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>2</td>
<td>You raised a number of questions about the differences in wages of documented versus undocumented farm workers, including wages per hour for each type of crop. These questions are out-of-scope of the EIS because cropping decisions are made by individual farmer and not Reclamation or Ecology, but also because labor statistics such as used in the Socioeconomic section 4-21 are not relevant to the projected effects of the alternatives. Nonetheless, your comment will be included in the record for the EIS.</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>3</td>
<td>You raised a number of questions about the differences in wages of documented versus undocumented farm workers, including wages per hour for each type of crop. These questions are out-of-scope of the EIS because cropping decisions are made by individual farmer and not Reclamation or Ecology, but also because labor statistics such as used in the Socioeconomic section 4-21 are not relevant to the projected effects of the alternatives. Nonetheless, your comment will be included in the record for the EIS.</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>4</td>
<td>You raised a number of questions about the differences in wages of documented versus undocumented farm workers, including wages per hour for each type of crop. These questions are out-of-scope of the EIS because cropping decisions are made by individual farmer and not Reclamation or Ecology, but also because labor statistics such as used in the Socioeconomic section 4-21 are not relevant to the projected effects of the alternatives. Nonetheless, your comment will be included in the record for the EIS.</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>5</td>
<td>You raised a number of questions about the differences in wages of documented versus undocumented farm workers, including wages per hour for each type of crop. These questions are out-of-scope of the EIS because cropping decisions are made by individual farmer and not Reclamation or Ecology, but also because labor statistics such as used in the Socioeconomic section 4-21 are not relevant to the projected effects of the alternatives. Nonetheless, your comment will be included in the record for the EIS.</td>
</tr>
<tr>
<td>488</td>
<td>Marchand, Ann</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>489</td>
<td>McDermott, Anna</td>
<td>1</td>
<td>Based on their participation, Proratable Entities would receive water during drought years when less than 70 percent water supply is available.</td>
</tr>
<tr>
<td>490</td>
<td>Stalter, Carolyn</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>491</td>
<td>Wenstrup, Alexis</td>
<td>1</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>491</td>
<td>Wenstrup, Alexis</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>491</td>
<td>Wenstrup, Alexis</td>
<td>3</td>
<td>See response to Common Issue 4. We appreciate your inclusion of information about sustainable agriculture and ways to conserve and use water more efficiently. Your information has been included in the record for this EIS although no change was made to this FEIS in response.</td>
</tr>
<tr>
<td>492</td>
<td>Snow, Kolea</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>492</td>
<td>Snow, Kolea</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>492</td>
<td>Snow, Kolea</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>492</td>
<td>Snow, Kolea</td>
<td>4</td>
<td>Acquisition of real property interests based on design concepts for the alternatives are summarized in Section 4.15 of the SDEIS. Reclamation would comply with Federal property acquisition policies. Reclamation would survey properties before construction to determine whether acquisition is required. Reclamation would follow the requirements of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601) and the procedures described in the 2003 Reclamation Manual Directives and Standards LND 06-01 for any property or easement acquisition.</td>
</tr>
<tr>
<td>492</td>
<td>Snow, Kolea</td>
<td>13</td>
<td>Reclamation and Ecology have jointly prepared the DEIS, SDEIS, and Final EIS, including responses to comments.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>2</td>
<td>Pumping quantity varies during the refill period, but pumping will be provided to supply instream flows and other obligations as required. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>3</td>
<td>Alternative 4 is identified as the Preferred Alternative in this FEIS. Alternative 5, which includes KKC, is not being pursued at this time.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>4</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>5</td>
<td>See Appendix F of the Final EIS for information on financial responsibilities for maintenance in all years.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>7</td>
<td>See Section 1.9 of this FEIS.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>8</td>
<td>The location of the route of the KKC North Tunnel alignment, if included in the selected alternative, would be revised during final design, at which time required permits and approvals from USFS would be obtained.</td>
</tr>
<tr>
<td>493</td>
<td>Klarich, Chuck</td>
<td>9</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>494</td>
<td>Link, Laura</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>495</td>
<td>Honeyford, Jim</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>496</td>
<td>Martin, Joel</td>
<td>1</td>
<td>See response to Common Issue 6.</td>
</tr>
<tr>
<td>497</td>
<td>Ryynanen, Dan</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>498</td>
<td>Busby Felix, Brianna</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>499</td>
<td>Windsor-Newman, Judith</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>499</td>
<td>Windsor-Newman, Judith</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>500</td>
<td>Possani, Laila Zaida</td>
<td>1</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>501</td>
<td>Aliment, Randy</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>502</td>
<td>Burns, Mike</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>503</td>
<td>Daugherty, John</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>503</td>
<td>Daugherty, John</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>503</td>
<td>Daugherty, John</td>
<td>3</td>
<td>See Appendix F of the Final EIS.</td>
</tr>
<tr>
<td>503</td>
<td>Daugherty, John</td>
<td>4</td>
<td>Sections 3.12 and 4.12 describe the implication of climate change, based on current regional projections, on reservoir operations, including refill for action alternatives.</td>
</tr>
<tr>
<td>504</td>
<td>Anonymous</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>505</td>
<td>Busby, Marci Dawn Whitham</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>506</td>
<td>Reed, H. Colwell</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>506</td>
<td>Reed, H. Colwell</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>506</td>
<td>Reed, H. Colwell</td>
<td>3</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>507</td>
<td>Knauft, Sandy and Greg</td>
<td>1</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>507</td>
<td>Knauft, Sandy and Greg</td>
<td>2</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>507</td>
<td>Knauft, Sandy and Greg</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>508</td>
<td>Aiken, Michael and Madeline</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>508</td>
<td>Aiken, Michael and Madeline</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>509</td>
<td>Poulin, Bruce</td>
<td>1</td>
<td>As described in Section 4.3.1, the historic record of 1926 to 2015 was modeled using the RiverWare hydrologic model. The modeled years include several multiyear droughts and single year droughts. Additionally, as described in Section 4.12.1.2, the RiverWare model was used to evaluate impacts of climate change on all alternatives.</td>
</tr>
<tr>
<td>510</td>
<td>Albulet, Licretia</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>510</td>
<td>Albulet, Licretia</td>
<td>2</td>
<td>Water will remain in Kachess Reservoir under all foreseeable conditions. See Appendix F of the Final EIS for additional detail.</td>
</tr>
<tr>
<td>511</td>
<td>Learned, Grant Sr.</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>4</td>
<td>WDFW’s Priority Habitat and Species database has been reviewed by Reclamation to assess the presence of any freshwater mussels in Kachess Reservoir. As a result, no documentation was found. Neither of these species are recognized by the USFS and BLM as species of conservation and population viability concern. As the project is implemented project proponents will work with Federal and state agencies to consider potential impacts to mussels.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>512</td>
<td>Nicholson, Scott, and Prest, Gretchen</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>513</td>
<td>Franklin, Beverly</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>513</td>
<td>Franklin, Beverly</td>
<td>2</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>514</td>
<td>Hanan, Morris</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>515</td>
<td>Klarich, Charles</td>
<td>1</td>
<td>Reclamation and Ecology would execute agreements with Roza Irrigation District prior to construction that will address roles and responsibilities, including financial commitments.</td>
</tr>
<tr>
<td>515</td>
<td>Klarich, Charles</td>
<td>2</td>
<td>A Record of Decision will be issued following the issuance of this Final EIS.</td>
</tr>
<tr>
<td>516</td>
<td>Johnson, Brian</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>517</td>
<td>Aigner, Rob</td>
<td>1</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>517</td>
<td>Aigner, Rob</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>2</td>
<td>Transportation impacts are described in Section 4.17 of the EIS.</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>3</td>
<td>ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&amp;E fish species to prevent adverse impacts to T&amp;E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>4</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>5</td>
<td>See Section 3.3.1 of the SDEIS for a description of Yakima Project operations. The five reservoirs in the Yakima Project are operated in a coordinated manner to provide for surface water needs of the system as a whole; no single reservoir is designated to supply the needs of any particular area. Also See Appendix F of the Final EIS regarding maintaining supply to Yakima Project users.</td>
</tr>
<tr>
<td>518</td>
<td>Lewis, Ann</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>519</td>
<td>O'Connell, Auren</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>520</td>
<td>Gienger, Kylon and Teliah</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>520</td>
<td>Gienger, Kylon and Teliah</td>
<td>2</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>520</td>
<td>Gienger, Kylon and Teliah</td>
<td>3</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>520</td>
<td>Gienger, Kylon and Teliah</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>520</td>
<td>Gienger, Kylon and Teliah</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>----------------------------</td>
<td>----------------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>521</td>
<td>Windsor-Newman, Judith</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>521</td>
<td>Windsor-Newman, Judith</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>521</td>
<td>Windsor-Newman, Judith</td>
<td>4</td>
<td>Comment noted. &quot;Reservoir&quot; was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as &quot;[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use.&quot; (<a href="https://www.usbr.gov/projects/glossary.php#R">https://www.usbr.gov/projects/glossary.php#R</a>)</td>
</tr>
<tr>
<td>521</td>
<td>Windsor-Newman, Judith</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>521</td>
<td>Windsor-Newman, Judith</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>2</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>4</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>5</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>6</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>522</td>
<td>Misocky, Jill</td>
<td>7</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>523</td>
<td>Reed, Colwell</td>
<td>6</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>524</td>
<td>Wanechek, Connie</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>1</td>
<td>See response to Common Issue 3.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-----------</td>
<td>----------------</td>
<td>------------------</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>6</td>
<td>Project-related impacts to wildlife have been evaluated consistent with NEPA and SEPA and are documented in Section 4.8 of this FEIS.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>7</td>
<td>As noted in Section 4.17.10 of the SDEIS, if any road deterioration merits repair, Reclamation and Ecology would coordinate with local jurisdictions, WSDOT or others as needed.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>8</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>9</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>525</td>
<td>Judith A. Mallon</td>
<td>10</td>
<td>As described in Section 4.3.2 of the SDEIS, Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. This assumes the full 200,000 acre-feet, which is a maximum pumping scenario. Reclamation would manage the operation of all Yakima Project reservoirs to refill Kachess Reservoir after a drought while meeting Project obligations. See Appendix F of the Final EIS for further information.</td>
</tr>
<tr>
<td>526</td>
<td>Lynn Ahlers</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>527</td>
<td>Taylor Hazard</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>528</td>
<td>Jeff Parry</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>529</td>
<td>Paul and Koleen Cook</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>530</td>
<td>Maria Burke</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>531</td>
<td>Andrew Burke</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>2</td>
<td>The anticipated impacts to environmental resources are described in Chapter 4 of this FEIS.</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>3</td>
<td>Droughts in the Yakima Basin vary in length, with some droughts lasting a single year and others lasting multiple years. Reclamation would consult with the participating districts in the first year of a drought to determine whether additional supply should be fully used in that year, or some of the water should be held back for a possible subsequent drought year. Once the water from KDRPP is fully used, a return to normal or wet conditions will be needed in order to refill the inactive pool.</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>4</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>----------------</td>
<td>-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>6</td>
<td>The volitional fish passage channel would convey all flow leaving Little Kachess up to 100 cfs into Big Kachess. The waters in the volitional fish passage channel will remain the same native headwaters that flow through the Narrows and into Big Kachess. The entrance to the volitional fish passage channel will be comprised of the same alluvium that the Narrows Channel is comprised of now. The entrance to the volitional fish passage channel will be anywhere from 100 feet away to 2,600 feet away from the existing entrance to the Narrows channel, depending on the water surface elevation in Big Kachess when KDRPP and the volitional fish passage channel is in operation. Therefore, there are no known concerns associated with fish being able to find and enter the volitional fish passage channel. The upstream passage of fish into Box Creek Canyon is an existing, separate and independent issue from the volitional fish passage channel at the Narrows.</td>
</tr>
<tr>
<td>532</td>
<td>Charles Jung</td>
<td>7</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>533</td>
<td>Lance Newman</td>
<td>1</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>533</td>
<td>Lance Newman</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>534</td>
<td>Billie Marquiss</td>
<td>1</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>534</td>
<td>Billie Marquiss</td>
<td>2</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>534</td>
<td>Billie Marquiss</td>
<td>3</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>535</td>
<td>Shawn McQuiston</td>
<td>1</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>536</td>
<td>James Mallon</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>536</td>
<td>James Mallon</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>536</td>
<td>James Mallon</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>536</td>
<td>James Mallon</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>536</td>
<td>James Mallon</td>
<td>5</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>537</td>
<td>Jeff Parry</td>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>537</td>
<td>Jeff Parry</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>537</td>
<td>Jeff Parry</td>
<td>3</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>537</td>
<td>Jeff Parry</td>
<td>4</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>538</td>
<td>Judith Windsor-Newman</td>
<td>1</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>Comment Letter Number</td>
<td>Commenter</td>
<td>Comment Number</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------</td>
<td>----------------</td>
<td>-----------------------------------</td>
</tr>
<tr>
<td>538</td>
<td>Judith Windsor-Newman</td>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>

**SDEIS Form Letter 1**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adams, Alexis</td>
<td>Gordon, Maurice</td>
<td>Oswald, Emma</td>
</tr>
<tr>
<td>Agnew, Theresa</td>
<td>Graham, Emily</td>
<td>Owens, Cliff</td>
</tr>
<tr>
<td>Ahlers, Carl</td>
<td>Grande, Elizabeth</td>
<td>Owens, Jaxon</td>
</tr>
<tr>
<td>Ahlers, John</td>
<td>Grantham, Jesse</td>
<td>Owens, Joann</td>
</tr>
<tr>
<td>Ahlers, Lynn</td>
<td>Green, Lisa</td>
<td>Owens, JP</td>
</tr>
<tr>
<td>Aigner, Kimberly</td>
<td>Green, Sarah</td>
<td>Owens, Rachael</td>
</tr>
<tr>
<td>Aiken, Shannon</td>
<td>Grimes, Darren</td>
<td>Owens, Stephanie</td>
</tr>
<tr>
<td>Aikens, Michelle</td>
<td>Gruber, William</td>
<td>Padget, Joseph</td>
</tr>
<tr>
<td>AlAzzam, Ahmad</td>
<td>Gruits, Laura</td>
<td>Pagel, Maximilian</td>
</tr>
<tr>
<td>Albulet, Michelle</td>
<td>Guilfoyle, Josh</td>
<td>Palmer, Christine</td>
</tr>
<tr>
<td>Albulet, Mihai</td>
<td>Guzman, Terry</td>
<td>Palmer, Douglas</td>
</tr>
<tr>
<td>Alexander, Michael</td>
<td>Hagan, Frank</td>
<td>Palmer, Lewis</td>
</tr>
<tr>
<td>Aliment, Randy</td>
<td>Haistings, Rae Ann</td>
<td>Pappas, James</td>
</tr>
<tr>
<td>Allott, Sessi</td>
<td>Hajduk, Jonathan</td>
<td>Pappas, Tina</td>
</tr>
<tr>
<td>Anderson, Kasper</td>
<td>Hall, Bonnie</td>
<td>Paredes, Jessic</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Anderson, Phillip</td>
<td>Halvorson, Melissa</td>
<td>Parker, Elizabeth</td>
</tr>
<tr>
<td>Applin, Raini</td>
<td>Hamilton, Alistair</td>
<td>Parker, Jennifer</td>
</tr>
<tr>
<td>Archey, Chris</td>
<td>Hamilton, Sara</td>
<td>Parker, Kevin</td>
</tr>
<tr>
<td>Ardea, Brigitte</td>
<td>Hamm</td>
<td>Parrett, Mark</td>
</tr>
<tr>
<td>Aspinall, Emma</td>
<td>Hammond, Bryant</td>
<td>Pasin, Jim</td>
</tr>
<tr>
<td>Auckland, Caraline</td>
<td>Hammond, Melissa</td>
<td>Pass, Cynthia</td>
</tr>
<tr>
<td>Avey, Tricia</td>
<td>Hammond, Nancy</td>
<td>Patnode, Drew</td>
</tr>
<tr>
<td>Babunovic, Emile</td>
<td>Hangartner, Mikaela</td>
<td>Pawluskiewicz</td>
</tr>
<tr>
<td>Bahhage, Monir</td>
<td>Hansberry, Tina</td>
<td>Payne, Renee</td>
</tr>
<tr>
<td>Bailey, Hailly</td>
<td>Hanvoid, Chris</td>
<td>Penner, Jonathan</td>
</tr>
<tr>
<td>Baily, Alanda</td>
<td>Harlow, Devin</td>
<td>Perez, Amber</td>
</tr>
<tr>
<td>Baily-Sun, Erin</td>
<td>Harris, Kirk</td>
<td>Perrone, Nathaniel</td>
</tr>
<tr>
<td>Baker, Sam</td>
<td>Harrison, Trevor</td>
<td>Perry, Mikaela</td>
</tr>
<tr>
<td>Baldwin, Angel</td>
<td>Harvey, Kristen</td>
<td>Pessolano, Craig</td>
</tr>
<tr>
<td>Ballard, Kay</td>
<td>Haslund, Leif</td>
<td>Peterson, Jennifer</td>
</tr>
<tr>
<td>Banks, Morgan</td>
<td>Hayes, Shan</td>
<td>Pettit, Gerald</td>
</tr>
<tr>
<td>Baron, Trace</td>
<td>Hayne, Shelby</td>
<td>Petzoldt, Cameron</td>
</tr>
<tr>
<td>Barrett, Scott</td>
<td>Haysom, Jeremy</td>
<td>Pieser, Derek</td>
</tr>
<tr>
<td>Beach, Jason</td>
<td>Hazard, Dr. Keifer</td>
<td>Pistorese, Linda</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>---------------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Beardsley, John</td>
<td>Hazard, Emily</td>
<td>Poe, Cherri</td>
</tr>
<tr>
<td>Beaudoin, Paul</td>
<td>Hazard, Morgan</td>
<td>Possani, Laila Zaidi</td>
</tr>
<tr>
<td>Beck, Michelle</td>
<td>Hazard, Nicholas</td>
<td>Potter, Lauren</td>
</tr>
<tr>
<td>Beekley, Gina</td>
<td>Hazard, Taylor</td>
<td>Powell, Brad</td>
</tr>
<tr>
<td>Beers, Sarah</td>
<td>Heil, Jeralyn</td>
<td>Pruett, Brett</td>
</tr>
<tr>
<td>Bensen, Steven</td>
<td>Hellene, Sadera</td>
<td>Purcell, Samantha</td>
</tr>
<tr>
<td>Benward, Amber</td>
<td>Henderson, Rachel</td>
<td>Puryear, Alicia Marie</td>
</tr>
<tr>
<td>Berger, Richard</td>
<td>Hendry, Courtney</td>
<td>Rabideau, Chase</td>
</tr>
<tr>
<td>Berline, Michael</td>
<td>Henne, Erik</td>
<td>Randolf, Daniel</td>
</tr>
<tr>
<td>Bernhardt, Kathryn</td>
<td>Henrichsen, Tessa</td>
<td>Rao, Amy</td>
</tr>
<tr>
<td>Berry, Anna Lauren</td>
<td>Hernandez, Karla</td>
<td>Rat, Sorina</td>
</tr>
<tr>
<td>Berry, Jennifer</td>
<td>Hickman, Nicole</td>
<td>Rayfield, Patti</td>
</tr>
<tr>
<td>Bettcher, Cerara</td>
<td>Hilfer, Stephanie</td>
<td>Rayfield, Tom</td>
</tr>
<tr>
<td>Bickford, Alice</td>
<td>Hill, Francis</td>
<td>Rebman, Matthew</td>
</tr>
<tr>
<td>Billings, Darren</td>
<td>Hinton, Leonard</td>
<td>Record, Ben</td>
</tr>
<tr>
<td>Binder, Kurt</td>
<td>Hochstein, Rachel</td>
<td>Reddick, Miranda</td>
</tr>
<tr>
<td>Blair, Letizia</td>
<td>Hodorowski, Brenda</td>
<td>Reece, Conner</td>
</tr>
<tr>
<td>Bluestein, Benjamin</td>
<td>Holland, Susan</td>
<td>Reed, Paul</td>
</tr>
<tr>
<td>Bocchetti, Aaron</td>
<td>Home, Nancy</td>
<td>Reed, Paul</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Bold, Shawna</td>
<td>Hoots, David</td>
<td>Reeves, Christian</td>
</tr>
<tr>
<td>Bookter, Teresa</td>
<td>Howell, Abbey</td>
<td>Reeves, Emily</td>
</tr>
<tr>
<td>Boudreau, Lucinda</td>
<td>Huber, Stephanie</td>
<td>Reeves, Jeremy</td>
</tr>
<tr>
<td>Braaten, Aaron</td>
<td>Hummel, Kathleen</td>
<td>Reeves, Travis</td>
</tr>
<tr>
<td>Brasser, Justin</td>
<td>Hunter, Mary Ellen</td>
<td>Reil, Dawn</td>
</tr>
<tr>
<td>Brauworth, Jason</td>
<td>Hurley</td>
<td>Reinertsen, Conner</td>
</tr>
<tr>
<td>Brewer, Lynn</td>
<td>Hurley, Sonja</td>
<td>Repp-Faith</td>
</tr>
<tr>
<td>Broehl, Mitchell</td>
<td>Hutson, Jeannine</td>
<td>reurther, Geoffrey</td>
</tr>
<tr>
<td>Bronson, Andria</td>
<td>Huynh, Michelle</td>
<td>reurther, Geoffrey</td>
</tr>
<tr>
<td>Broussard, Paula</td>
<td>Illstrup, Sharon</td>
<td>Reynold, Kim</td>
</tr>
<tr>
<td>Brown, Kim</td>
<td>Jackson, Rachael</td>
<td>Reynolds, DeAnna</td>
</tr>
<tr>
<td>Brown, Travis</td>
<td>Jacobson, Lavelle</td>
<td>Rice, Nancy</td>
</tr>
<tr>
<td>Brummond, Carol</td>
<td>Janecke, Shannyn</td>
<td>Richards, Derek</td>
</tr>
<tr>
<td>Burke, Maria</td>
<td>Jarvis, James</td>
<td>Ripley, Brittanie</td>
</tr>
<tr>
<td>Burke, Mary</td>
<td>Jarvis, Kelsey</td>
<td>Rippe, Eric</td>
</tr>
<tr>
<td>Burman, Jay</td>
<td>Jensen, Erick</td>
<td>Risher, Ronda</td>
</tr>
<tr>
<td>Burns, Sean</td>
<td>Jensen, Gail</td>
<td>Rivas, Phillip</td>
</tr>
<tr>
<td>Butchart, Janet</td>
<td>Jensen, Kevin</td>
<td>Rivera, Michelle</td>
</tr>
<tr>
<td>Byrd, Rebecca</td>
<td>Jensen, Kristin</td>
<td>Rixon, Shelley</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-------------------</td>
<td>--------------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Cain, Kyler</td>
<td>Jensen, Linda</td>
<td>Roddewig, Craig</td>
</tr>
<tr>
<td>Callis, Abigail</td>
<td>Johnson, Dulce</td>
<td>Rogers, Treda</td>
</tr>
<tr>
<td>Callis, Elizabeth</td>
<td>Johnson, Kathy M.</td>
<td>Rohan, Mike</td>
</tr>
<tr>
<td>Campbell, Bill</td>
<td>Johnson, Martha</td>
<td>Rosen, Geoff</td>
</tr>
<tr>
<td>Campbell, Canny</td>
<td>Jones, Jackie</td>
<td>Rostron, Kaylin</td>
</tr>
<tr>
<td>Campbell, Craig</td>
<td>Jongeward, Emilee</td>
<td>Ryen, Lillian</td>
</tr>
<tr>
<td>Campbell, Karen</td>
<td>Jorgensen, Ursula</td>
<td>Ryynanen, Cindy</td>
</tr>
<tr>
<td>Campbell, Lyssa</td>
<td>Judge, Tom</td>
<td>Ryynanen, Dan</td>
</tr>
<tr>
<td>Campbell, Nick</td>
<td>Lunchmes, Molly</td>
<td>Sabo, Derek</td>
</tr>
<tr>
<td>Canas, Shawna</td>
<td>Karn, Todd</td>
<td>Sabo, Kristi</td>
</tr>
<tr>
<td>Cardone, Nancy</td>
<td>Kaufer, Jeff</td>
<td>Saday, Jihan</td>
</tr>
<tr>
<td>Carl, Jeffrey</td>
<td>Kauffman, Matthew</td>
<td>Salyer, Dana</td>
</tr>
<tr>
<td>Carl, Sarah</td>
<td>Kearny, Katherine</td>
<td>Salyer, Rachell</td>
</tr>
<tr>
<td>Carmichael, Deborah</td>
<td>Keller, Taryn</td>
<td>Sampalis, Nicholas</td>
</tr>
<tr>
<td>Carmody, Thomas</td>
<td>Kerslake, David</td>
<td>Sampson, Isabella</td>
</tr>
<tr>
<td>Carolan, Quinn</td>
<td>Kersten, Emily</td>
<td>Sanford, Kristain</td>
</tr>
<tr>
<td>Carter, Adam</td>
<td>Keser, Jason</td>
<td>Spios, Kathleen</td>
</tr>
<tr>
<td>Carter, Donna</td>
<td>Kiefer, Margaret</td>
<td>Sather, Tom</td>
</tr>
<tr>
<td>Castaneda, Kalani</td>
<td>Kismarton, Susan</td>
<td>Saunders, Brenda</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Castillo, Yoseline</td>
<td>Kitchell, Angus</td>
<td>Saunders, Stephanie</td>
</tr>
<tr>
<td>Cavanaugh, Jessica</td>
<td>Kitchell, Dr. Robert</td>
<td>Scappini, Jay</td>
</tr>
<tr>
<td>Cavelia, Jan</td>
<td>Kitchell, Ellie</td>
<td>Schaefbauer, Sammi</td>
</tr>
<tr>
<td>Cavenaugh, Jeanne</td>
<td>Kitchell, Fraser</td>
<td>Schauss, David</td>
</tr>
<tr>
<td>Chamberlain, Zack</td>
<td>Kitchell, Murphy</td>
<td>Schlentz, Holly</td>
</tr>
<tr>
<td>Charles, Clifford</td>
<td>Kitchell, Sarah</td>
<td>Schmedeke, Alesha</td>
</tr>
<tr>
<td>Chellew, Nikki</td>
<td>Klebanoff, Carolyn</td>
<td>Schmidt, Alicia</td>
</tr>
<tr>
<td>Childs, Krista</td>
<td>Klebanoff, Mark</td>
<td>Schorn, Payton</td>
</tr>
<tr>
<td>Christie, Betsy</td>
<td>Klein, Chad</td>
<td>Schuyleman, Christi</td>
</tr>
<tr>
<td>Christie, Kerri</td>
<td>Klein, Cinnamon</td>
<td>Schwandt, Dale</td>
</tr>
<tr>
<td>Christman, Tiffany</td>
<td>Knbalcom, Kent</td>
<td>Schwartz, Michael</td>
</tr>
<tr>
<td>Chu, Amy</td>
<td>Koehn, Trevor</td>
<td>Seguin, Kerry</td>
</tr>
<tr>
<td>Clark, Christi</td>
<td>Kolbrick, David</td>
<td>Seymour, Scott</td>
</tr>
<tr>
<td>Clark, Katy</td>
<td>Kolbrick, Paige</td>
<td>Shaw, Alison</td>
</tr>
<tr>
<td>Clark, Theresa</td>
<td>Kolbrick, Ryan</td>
<td>Shimeall, Nancy</td>
</tr>
<tr>
<td>Clarke, Ronald</td>
<td>Kolde, Judith</td>
<td>Shipley, Gwenda</td>
</tr>
<tr>
<td>Clemente, Lori</td>
<td>Komarnitsky, Michael</td>
<td>Shumaker, Laury</td>
</tr>
<tr>
<td>Clinger, Summer</td>
<td>Kraus, Chrissy</td>
<td>Simmons, Katherine</td>
</tr>
<tr>
<td>Cobb, Heather</td>
<td>Krause, Julianne</td>
<td>Smith, Angela</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Cole, Elena</td>
<td>Kretschman, Rita</td>
<td>Smith, Delaney</td>
</tr>
<tr>
<td>Cole, Max</td>
<td>Kujath, Karen</td>
<td>Smith, Walter</td>
</tr>
<tr>
<td>Conner, Eric</td>
<td>Kutschia, Klaus</td>
<td>Snow, Kelly</td>
</tr>
<tr>
<td>Conner, Sarah</td>
<td>Lafferty, Jeff</td>
<td>Snyder, Candi</td>
</tr>
<tr>
<td>Cook, Koleen</td>
<td>Laird, Matt</td>
<td>Snyder, Maggie</td>
</tr>
<tr>
<td>Cooke, Helen</td>
<td>Lake, Drew</td>
<td>Solomon, Shannon</td>
</tr>
<tr>
<td>Cooper, Jonathan</td>
<td>Lampshire, Kevin</td>
<td>Sosnowski, Corinne</td>
</tr>
<tr>
<td>Correa, Darci</td>
<td>Lancaster, Michael</td>
<td>Standley, James</td>
</tr>
<tr>
<td>Cotton, Michelle</td>
<td>Landen, RandB</td>
<td>Stark, Jaylene</td>
</tr>
<tr>
<td>Courage, Sean</td>
<td>Larson, Bill</td>
<td>Steffen, Sarah</td>
</tr>
<tr>
<td>Court, Danelle</td>
<td>Larson, Chris</td>
<td>Stephens, Duncan</td>
</tr>
<tr>
<td>Coy, Alexander</td>
<td>Larson, Jessica</td>
<td>Sternen, Darci</td>
</tr>
<tr>
<td>Crews, Kevin</td>
<td>Larson, Todd</td>
<td>Stevenson, Melyssa</td>
</tr>
<tr>
<td>Crilly, Jennifer</td>
<td>Le, Mrs. Tien</td>
<td>Stice, Jr., James</td>
</tr>
<tr>
<td>Crim, John</td>
<td>Lederman, Rachael</td>
<td>Stillings, Melanie</td>
</tr>
<tr>
<td>Cruth, Ryan</td>
<td>Lee, Katie</td>
<td>Storch, John</td>
</tr>
<tr>
<td>Cuddie, Gavin</td>
<td>Leeder, Farrington</td>
<td>Stout, Andi</td>
</tr>
<tr>
<td>Cunningham, Cassandra</td>
<td>Lees, Greg</td>
<td>Stubbs, Colleen</td>
</tr>
<tr>
<td>Curd, Kevin</td>
<td>Lehner, Tim</td>
<td>Suckow, Jessica-Ray</td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-179
<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cushman, Kelly</td>
<td>Lehrman, Kayla</td>
<td>Sukert, Brianna</td>
</tr>
<tr>
<td>Cutler, Courtney</td>
<td>Lehrman, Nancie</td>
<td>Sumi, Mason</td>
</tr>
<tr>
<td>Dallman, Amanda</td>
<td>Leptich, Lisa, M.</td>
<td>Sumi, Matthew</td>
</tr>
<tr>
<td>Damm, Joylynn</td>
<td>Lese, Natalya</td>
<td>Sutherland, Jennifer</td>
</tr>
<tr>
<td>Dang, Johnny</td>
<td>Lestelle, Cory</td>
<td>Sylvester, Jennifer</td>
</tr>
<tr>
<td>Daugherty, Nancy</td>
<td>Lewis, Kristi</td>
<td>Talbott, Mrs. Rudi</td>
</tr>
<tr>
<td>Davis, Blake</td>
<td>Lewis, Ruby</td>
<td>Tarasevich, Janice</td>
</tr>
<tr>
<td>Davis, Holly</td>
<td>Libby, Stephanie</td>
<td>Tarzaban, Cameron</td>
</tr>
<tr>
<td>Davis, Sherry</td>
<td>Littlefield, Katie</td>
<td>Taylor, Adam</td>
</tr>
<tr>
<td>Davis, Teresa</td>
<td>Lonchari, Erin</td>
<td>Tecca, Crystal</td>
</tr>
<tr>
<td>Davydenko, Valerity</td>
<td>Long, Ronald</td>
<td>Templin, Matt</td>
</tr>
<tr>
<td>Dawes, Alyssa</td>
<td>Lonnquist, Hayley</td>
<td>Terry, Kathrynn</td>
</tr>
<tr>
<td>Deaver, Chuck</td>
<td>Lovre, Christopher</td>
<td>Teske, Helen</td>
</tr>
<tr>
<td>Delachica, Amy</td>
<td>Lovre, Elaine</td>
<td>Thaxton, Stephen</td>
</tr>
<tr>
<td>DeLaHousaye, Paula</td>
<td>Lovre, Jeff</td>
<td>Thorman, Lisa</td>
</tr>
<tr>
<td>Delarosa, Nicole</td>
<td>Lowe, Heidi</td>
<td>Thorman, Trisha</td>
</tr>
<tr>
<td>DeWitt, Emily</td>
<td>Lowrey, Robert</td>
<td>Tillett, Amanda</td>
</tr>
<tr>
<td>Deyette, Kevin</td>
<td>Lurie, Gale, D</td>
<td>Todd, Maisie</td>
</tr>
<tr>
<td>Diaz de Leon, Michelle</td>
<td>Lusier, Sarah</td>
<td>Tolentino, Christopher</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Diaz, Doris</td>
<td>MacDonald, Stephanie</td>
<td>Torres, Lindsey</td>
</tr>
<tr>
<td>Dire, Heather</td>
<td>Machholz, Jeanette</td>
<td>Tracy, Sarah</td>
</tr>
<tr>
<td>Doland, Tara</td>
<td>Mackey, Willaim</td>
<td>Trantina, Steve</td>
</tr>
<tr>
<td>Doles, Diane</td>
<td>MacLeod, Malcolm</td>
<td>Trujillo, Leticia</td>
</tr>
<tr>
<td>Dornan, Kathleen</td>
<td>Maggs, Vance</td>
<td>Tsao, Aileen</td>
</tr>
<tr>
<td>Dornan, Madelyn</td>
<td>Mallard, Scott</td>
<td>Tsuneoka, Junichi</td>
</tr>
<tr>
<td>Dounis, Anthony</td>
<td>Mallory, Joseph</td>
<td>Turner, Henry</td>
</tr>
<tr>
<td>Draaisma, Maja</td>
<td>Mandelkorn, Laura</td>
<td>Tutino, Alexandria</td>
</tr>
<tr>
<td>Dressler, Aaron</td>
<td>Mankus, Joanne</td>
<td>Tweter, David</td>
</tr>
<tr>
<td>Driskell, Stephanie</td>
<td>Manolache, Bogdan</td>
<td>Ubil, Ashley</td>
</tr>
<tr>
<td>Duclos, Timothy</td>
<td>Marie-Vannatta, Sherann</td>
<td>Unruh, Dr. Janie</td>
</tr>
<tr>
<td>Duncanson, Henry</td>
<td>Martin, Justin</td>
<td>Upton Melissa</td>
</tr>
<tr>
<td>Duncanson, Kay</td>
<td>Matsuda, Rachel</td>
<td>Vaccaro, Regina</td>
</tr>
<tr>
<td>Duncanson, Maxine</td>
<td>Mayo, Therese</td>
<td>Vallee, Nicole</td>
</tr>
<tr>
<td>Dunkel, Sarah</td>
<td>McCallum, Valerie</td>
<td>Van Buskirk, Pamela</td>
</tr>
<tr>
<td>Eckert, Henry</td>
<td>McConnell, Dr. Iain</td>
<td>van der Hoeven, Karla</td>
</tr>
<tr>
<td>Effer, Keith</td>
<td>McDonald, Karidwyn</td>
<td>Van Winkle, Cody</td>
</tr>
<tr>
<td>Egger, Ashley</td>
<td>McElroy, Dona</td>
<td>VanBeek, Kathleen</td>
</tr>
<tr>
<td>Egger, Chad</td>
<td>McNallan, Joseph</td>
<td>VanGaver, Natalie</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Eggleston, David</td>
<td>McNally, Joseph</td>
<td>Vanmeter, Zack</td>
</tr>
<tr>
<td>Elkins, Colette</td>
<td>McNally, Shelby</td>
<td>Vaughn, Michael</td>
</tr>
<tr>
<td>Ellison, Cody</td>
<td>McNulty, Rachel</td>
<td>Veremchuck, Lidiya</td>
</tr>
<tr>
<td>Elsing, Chris</td>
<td>McPherson, Mary</td>
<td>Vernon, Allison</td>
</tr>
<tr>
<td>England, Alex</td>
<td>McQuiston</td>
<td>Vice, Ali</td>
</tr>
<tr>
<td>Erickson, Kama</td>
<td>Meas, Alexander</td>
<td>Vij, Vidur</td>
</tr>
<tr>
<td>Evanger, Brayden</td>
<td>Mele, Alexandra</td>
<td>von Flotow, Walter</td>
</tr>
<tr>
<td>Evans</td>
<td>Mellon, Laura L.</td>
<td>Von Wald, Kim</td>
</tr>
<tr>
<td>Fahey, Nicholas</td>
<td>Mendez, Gordy</td>
<td>Vroman, Kristi</td>
</tr>
<tr>
<td>Farquar, Leisa</td>
<td>Mendoza, Grace</td>
<td>Waas, Erich</td>
</tr>
<tr>
<td>Fehrenbach, Veronica</td>
<td>Mendoza, Jessica</td>
<td>Wallace, Elliott</td>
</tr>
<tr>
<td>Fevergeon, Matt</td>
<td>Mesick, Colby</td>
<td>Wallace, Megan</td>
</tr>
<tr>
<td>Finke, Dr. Janet</td>
<td>Meyers-Rall, Danielle</td>
<td>Waller, Heather</td>
</tr>
<tr>
<td>Fischer, Curtis</td>
<td>Miller, Clinton</td>
<td>Wantanabe, Shannon</td>
</tr>
<tr>
<td>Flamiatos, Lucinda</td>
<td>Miller, Ryan</td>
<td>Wass, Kim</td>
</tr>
<tr>
<td>Ford, Michelle</td>
<td>Millz, Kris</td>
<td>Waters, Timothy, Jr.</td>
</tr>
<tr>
<td>Fountain, J</td>
<td>Mitchell, Erin</td>
<td>Wattenbarger, Kevin</td>
</tr>
<tr>
<td>Fountain, Jean</td>
<td>Mitchell, Shanalee</td>
<td>Watts, Claire</td>
</tr>
<tr>
<td>Fountain, Jean &amp; Tim</td>
<td>Moldoveanu, Anca</td>
<td>Weber, Nora</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Fountain, Jeffrey</td>
<td>Monroe, Jake</td>
<td>Weber, Victoria</td>
</tr>
<tr>
<td>Fountain, Makyla</td>
<td>Moore, Andrew</td>
<td>Wegner, Genny</td>
</tr>
<tr>
<td>Fountain, Mrs. J.M.</td>
<td>Moore, Jennifer Sloop</td>
<td>Wehowski, Anna</td>
</tr>
<tr>
<td>Fountain, Nikki</td>
<td>Moore, Misty</td>
<td>Weirauch, Jason</td>
</tr>
<tr>
<td>Fountain, Tim</td>
<td>Moore, Monty</td>
<td>Wenstrup, Alexis</td>
</tr>
<tr>
<td>Franklin, Beverly</td>
<td>Moore, Vicki</td>
<td>Wenstrup, Paula</td>
</tr>
<tr>
<td>Freeberg, Jennifer</td>
<td>Morgan, Bill</td>
<td>Werner, Wendy</td>
</tr>
<tr>
<td>Freeman, Cassi</td>
<td>Morgan, Sue</td>
<td>West, Holly</td>
</tr>
<tr>
<td>Frye, Carll</td>
<td>Morris, Don</td>
<td>Wheeler, Christopher</td>
</tr>
<tr>
<td>Frye, Doug</td>
<td>Morris, Loree</td>
<td>Wheeler, Viktoria</td>
</tr>
<tr>
<td>Frye, Robyn</td>
<td>Morris, Sheila</td>
<td>Whitfield, Eileen</td>
</tr>
<tr>
<td>Fudge, Mary</td>
<td>Morrison, Dr. Lisa</td>
<td>Whittaker, Megan</td>
</tr>
<tr>
<td>Fudge, Michael</td>
<td>Moslo, Rebecca</td>
<td>Wicks, Jared</td>
</tr>
<tr>
<td>Gallagher, Jennifer</td>
<td>Motofi, Aaron</td>
<td>Wildinson, Parker</td>
</tr>
<tr>
<td>Galom, Jennifer</td>
<td>Moulton, Jadon</td>
<td>Wilkerson, David</td>
</tr>
<tr>
<td>Gehrmann, Braden</td>
<td>Mudwilder, Linda</td>
<td>Wilkinson, Kennedy</td>
</tr>
<tr>
<td>Geiger, Laurie</td>
<td>Muir, Robert</td>
<td>Wilkinson, Landon</td>
</tr>
<tr>
<td>Geiger, Todd</td>
<td>Murphy, Brian</td>
<td>Wilkinson, Richelle</td>
</tr>
<tr>
<td>Geiger, Vanessa</td>
<td>Murphy, John</td>
<td>William, Justin</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-------------------</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Gest, Erick</td>
<td>Murphy, Kerry</td>
<td>Williams, Tarek</td>
</tr>
<tr>
<td>Gest, Neil</td>
<td>Myers, Dr. Lafe</td>
<td>Williams, Tina</td>
</tr>
<tr>
<td>Giaudrone, Edward</td>
<td>Myers, Ryan</td>
<td>Willits, Aron</td>
</tr>
<tr>
<td>Giaudrone, James</td>
<td>Netzky, Arianna</td>
<td>Wilson, Sidney</td>
</tr>
<tr>
<td>Giaudrone, Suzanne</td>
<td>Neuswanger, Dr. Jason</td>
<td>Winston, Anastasia</td>
</tr>
<tr>
<td>Gienger, Chelann</td>
<td>Newton, Whitney</td>
<td>Woerner, Dr. Jeffry</td>
</tr>
<tr>
<td>Gienger, Kylon</td>
<td>Nguyen, Paige</td>
<td>Wolter, Thomas</td>
</tr>
<tr>
<td>Gienger, Lonnie</td>
<td>Nielsen, Rose</td>
<td>Woods, Vickie</td>
</tr>
<tr>
<td>Gienger, Teliah</td>
<td>Nieman, Danielle</td>
<td>Woodward, Frances</td>
</tr>
<tr>
<td>Giese, Petrina</td>
<td>Nolan, Patrick</td>
<td>Woodwell, Maura</td>
</tr>
<tr>
<td>Gilbert, Trevor</td>
<td>North, Rick</td>
<td>Worley, Nolan</td>
</tr>
<tr>
<td>Gile, Melissa</td>
<td>O'Connell, Cathleen</td>
<td>Wright, Kendall</td>
</tr>
<tr>
<td>Giovenale, Susan</td>
<td>O'Connell, Lachelle</td>
<td>Young, Heather</td>
</tr>
<tr>
<td>Gloyd, Caren</td>
<td>Odman, Faith</td>
<td>Zacharias, Matthew</td>
</tr>
<tr>
<td>Golden, Jim</td>
<td>Oh, Dr. Shenton</td>
<td>Zak, Justin</td>
</tr>
<tr>
<td>Gonzales, Josette</td>
<td>Olmon, Jennifer</td>
<td>Zink, Paul</td>
</tr>
<tr>
<td>Gorchels, Chris</td>
<td>Olmos, Aaron</td>
<td>Zolper, Alec</td>
</tr>
<tr>
<td>Gorder, Jonathan</td>
<td>Olson, Kense</td>
<td>Zyskowski, Kathryn</td>
</tr>
<tr>
<td>Gordon, Barbra</td>
<td>Oneal, Aaron</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>-----------------</td>
<td>-----------------</td>
</tr>
<tr>
<td>Gordon, Madeline</td>
<td>Orcutt, Christina</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>2</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>

**SDEIS Form Letter 2**

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Albulet, Mihai</td>
<td>Frye, Robyn</td>
<td>Ryynanen, Cindy</td>
</tr>
<tr>
<td>Burke, Austin</td>
<td>Johnson, Christine</td>
<td>Woodcock, Amanda</td>
</tr>
<tr>
<td>Delegans, Alexandra</td>
<td>Kitchell, Carolyn</td>
<td></td>
</tr>
<tr>
<td>Frye, Carll</td>
<td>McQuistion, Shawn</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>2</td>
<td>The purpose and need for the proposed action are described in the EIS Executive Summary and in Section 1.3.</td>
</tr>
<tr>
<td>3</td>
<td>The purpose and need for the proposed action are described in the EIS Executive Summary and in Section 1.3.</td>
</tr>
<tr>
<td>4</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>5</td>
<td>A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomics assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.</td>
</tr>
<tr>
<td>6</td>
<td>See response to Common Issue 2.</td>
</tr>
<tr>
<td>7</td>
<td>See response to Common Issue 9.</td>
</tr>
<tr>
<td>Comment #</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------</td>
<td>------------------</td>
</tr>
<tr>
<td>8</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>9</td>
<td>See response to Common Issue 16.</td>
</tr>
<tr>
<td>10</td>
<td>See response to Common Issue 10.</td>
</tr>
<tr>
<td>11</td>
<td>NEPA allows refinement of the proposed action to get to a preferred alternative. Impacts were fully disclosed in the SDEIS and FEIS, and mitigation measures will be stated in the Record of Decision.</td>
</tr>
<tr>
<td>12</td>
<td>The DEIS and SDEIS both state in Section 4.3.2 that Kachess Reservoir would refill to normal operating levels in 2 to 5 years after a drought. The mention of a 20-year cycle in the DEIS (and SDEIS) is the replacement time of pumps and associated equipment.</td>
</tr>
<tr>
<td>13</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>14</td>
<td>See Appendix F of the Final EIS for information on the timing and conditions of pumping operations, including both drought-relief and refill operations.</td>
</tr>
<tr>
<td>15</td>
<td>Under Reclamation’s guidance and direction, a task force of Reclamation, Roza and consultant experts conducted a value analysis study in the summer of 2015. At the time of this study, Eastern Washington was under an Emergency Drought Declaration by the Governor. Subsequent to this Study, Roza embarked on the design of an emergency, temporary floating pumping plant. When the drought was declared over in December of 2015, Roza discontinued advancing the temporary emergency floating pumping plant project, and the work through the additional design and analysis performed in late 2015, the feasibility of a floating pumping plant was verified resulting a decision was made to add this alternative into the EIS documentation. See Section 2.8.1.3 of this FEIS.</td>
</tr>
<tr>
<td>16</td>
<td>Under Reclamation’s guidance and direction, a task force of Reclamation, Roza and consultant experts conducted a value analysis study in the summer of 2015. At the time of this study, Eastern Washington was under an Emergency Drought Declaration by the Governor. Subsequent to this Study, Roza embarked on the design of an emergency, temporary floating pumping plant. When the drought was declared over in December of 2015, Roza discontinued advancing the temporary emergency floating pumping plant project, and the work through the additional design and analysis performed in late 2015, the feasibility of a floating pumping plant was verified resulting a decision was made to add this alternative into the EIS documentation. See Section 2.8.1.3 of this FEIS.</td>
</tr>
<tr>
<td>17</td>
<td>See Appendix F of the Final EIS for information on the timing and conditions of pumping operations, including both drought-relief and refill operations.</td>
</tr>
<tr>
<td>18</td>
<td>See responses to Common Issues 8 and 12.</td>
</tr>
<tr>
<td>19</td>
<td>Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.</td>
</tr>
</tbody>
</table>
ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&E fish species to prevent adverse impacts to T&E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).

See response to Common Issue 15.

Figure 4-2 in this Final EIS illustrates the shoreline area under 200,000 acre feet drawdown scenario.

Comment noted. "Reservoir" was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as "[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use." (https://www.usbr.gov/projects/glossary.php#R)

See response to Common Issue 9.

See response to Common Issue 9.

See response to Common Issue 8.

See response to Common Issue 8.

The question is not within the scope of the environmental review.

See response to Common Issue 17.

No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.

Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.

As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>34</td>
<td>During construction Kachess reservoir would release flows early in the season to meet demands in the System. The goal would be to release Kachess water but not “waste” any water. This would accelerate Kachess usage so that construction could begin as early as possible in the late summer or early fall. Kachess flow would then likely be low in the fall. This would impact mini-flip-flop so that the Keechelus reach would not be open for spawning during construction.</td>
</tr>
<tr>
<td>35</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>36</td>
<td>Thank you for your comment.</td>
</tr>
</tbody>
</table>

SDEIS Form Letter 3

<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aigner, Robert</td>
<td>Gienger, Teliah</td>
<td>P, Linda</td>
</tr>
<tr>
<td>Armstrong, Angie</td>
<td>Greben, Paul and Galina</td>
<td>Pappas, Tina</td>
</tr>
<tr>
<td>Bacon, Britta</td>
<td>Hanvold, Chris</td>
<td>Pistorose, Brent</td>
</tr>
<tr>
<td>Baldwin, Keith and Margaret</td>
<td>Hughes, Ashley</td>
<td>Robinson, Craig</td>
</tr>
<tr>
<td>Batteiger, Debbie</td>
<td>Jelovich, Jodi</td>
<td>Rosen, Ross</td>
</tr>
<tr>
<td>Burke, Maria</td>
<td>Jordan, Patty</td>
<td>Seguin, John</td>
</tr>
<tr>
<td>Burke, Mark</td>
<td>Kearny, Katherine and Ryan</td>
<td>Seguin, Kerry</td>
</tr>
<tr>
<td>Diener, Janet and Doug</td>
<td>Kim, Paul</td>
<td>Seguin, Paige</td>
</tr>
<tr>
<td>Erickson, Cheri</td>
<td>McIntyre, Danielle</td>
<td>Watts, Jerry</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>Comment #</td>
<td>Comment Response</td>
</tr>
<tr>
<td>-----------</td>
<td>--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>2</td>
<td>The NEPA adequacy of the Programmatic EIS is not under consideration in this environmental review. This EIS was tiered to the Programmatic EIS but this FEIS provides a site specific analysis of the KDRPP and KKC alternatives.</td>
</tr>
<tr>
<td>3</td>
<td>See response to Common Issue 4.</td>
</tr>
<tr>
<td>4</td>
<td>Reclamation has identified the Yakama Nation and the Colville Confederated Tribes as Tribes with a cultural connection with the project area and they are consulted with on a continual basis on cultural resources issues. The Yakama Nation and the Umatilla Tribes have potential Indian Trust Assets (ITAs) water rights. Reclamation continues to work with these Tribes in addressing potential impacts to resources of tribal concern. The Snoqualmie Tribe has not been identified as having a cultural connection to the project area, and do have any ITAs, and have not requested to be consulted.</td>
</tr>
<tr>
<td>5</td>
<td>The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.</td>
</tr>
<tr>
<td>6</td>
<td>Under Reclamation's guidance and direction, a task force of Reclamation, Roza and consultant experts conducted a value analysis study in the summer of 2015. At the time of this study, Eastern Washington was under an Emergency Drought Declaration by the Governor. Subsequent to this Study, Roza embarked on the design of an emergency, temporary floating pumping plant. When the drought was declared over in December of 2015, Roza discontinued advancing the temporary emergency floating pumping plant project, and the work through the additional design and analysis performed in late 2015, the feasibility of a floating pumping plant was verified resulting a decision was made to add this alternative into the EIS documentation. See Section 2.8.1.3 of this FEIS.</td>
</tr>
<tr>
<td>7</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
<tr>
<td>8</td>
<td>The description of alternatives was redefined in the SDEIS. The KKC project is not presented in this SDEIS as a stand-alone alternative as described in the DEIS; instead, it was included as a component of a KDRPP alternative. Reclamation and Ecology will continue to analyze KKC for other benefits. Of the two alternative KKC alignments (north tunnel and south tunnel) considered in the DEIS, the south tunnel was determined to be unfeasible because of geologic explorations and Washington State Department of Transportation construction activities near Interstate-90 (I-90); however, the KKC north tunnel remains under consideration as a component of a KDRPP alternative. See Sections 1.5.2 and 2.6.</td>
</tr>
<tr>
<td>9</td>
<td>See response to Common Issue 8.</td>
</tr>
<tr>
<td>10</td>
<td>See response to Common Issue 8.</td>
</tr>
</tbody>
</table>
11 The public comment periods met or exceeded NEPA and SEPA requirements. Reclamation and Ecology conducted public scoping for the Draft EIS. Reclamation and Ecology issued the DEIS in January 2015. The public comment period for the DEIS closed 60 days later on March 10, 2015. After considering the comments received during that comment period, Reclamation and Ecology reopened the comment period for an additional 60 days. The second comment period ended June 15, 2015. Reclamation conducted numerous community outreach events and provided updates on its website during preparation of the SDEIS. In addition, Reclamation provided extensive public notice of availability of the SDEIS and encouraged public comment. The Final EIS presents a description of outreach conducted.

12 Comment noted. "Reservoir" was used since the DEIS (and SDEIS) discuss a managed surface water system, consistent with terminology used by the Bureau of Reclamation. Specifically: Reservoir is defined as "[a] body of water impounded by a dam and in which water can be stored. Artificially impounded body of water. Any natural or artificial holding area used to store, regulate, or control water. Body of water, such as a natural or constructed lake, in which water is collected and stored for use." (https://www.usbr.gov/projects/glossary.php#R)

13 If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.

14 The 2013 “Yakima River Basin Resource Management” law (2SSB 5367) set the vision for the forest and authorized the state Board of Natural Resources to enroll the property as the Teanaway Community Forest under the Community Forest Trust Program. The 2013 state authorizing legislation specifies that if the 214,000 acre feet of water is not developed by 2025, the TCF would be returned to the common school trust. See Section 1.8.2 of the SDEIS for additional details.

15 A cost comparison for all alternatives (including Alternative 4 - KDRPP Floating Pumping Plant, which was not included in the DEIS) is provided in Section 2.7.2 of the SDEIS. This FEIS includes updated costs for Alternative 4. The socioeconomic assessment in the SDEIS provides an update to what was presented in the DEIS and presents the broader socioeconomic implications of the project.

16 Figure 4-2 in this Final EIS illustrates the shoreline area under 200,000 acre feet drawdown scenario.

17 Design of fish passage is consistent with applicable design guidance for fish passage facilities, and has been coordinated with WDFW.

18 ESA Section 7 consultation with US Fish and Wildlife Service and National Marine Fisheries Service is ongoing. Appropriate mitigation measures for T&E fish species to prevent adverse impacts to T&E species, if warranted, will be determined in consultation with the Service and NMFS, as explained in section 4.9.10 of the SDEIS. Section 4.6.10 and 4.9.10 of the SDEIS present specific mitigation measures proposed to mitigate impacts to fish, including bull trout. Further, volitional fish passage improvements at the Kachess Narrows has been integrated into the proposed action specifically to facilitate and encourage resident bull trout migration through the Narrows during drought relief pumping and refill (see Section 2.3.5).

19 See response to Common Issue 10.


21 See response to Common Issue 8.

22 See Appendix F of the Final EIS.

23 Still under development.

24 The question is not within the scope of the environmental review.
<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>25</td>
<td>See response to Common Issue 17.</td>
</tr>
<tr>
<td>26</td>
<td>Specific quantities and management of excavated and fill material for this feature would be further refined as part of final design, if KKC is included in the selected alternative.</td>
</tr>
<tr>
<td>27</td>
<td>As stated in section 4.6, &quot;Short-term exceedances of State surface water quality standards for turbidity may occur during and immediately following runoff events (see Section 4.4.4.2, Surface Water Quality). Increased turbidity would cause negative impacts on fish that visually locate prey and may alter existing predator-prey relationships in shallow shoreline areas (Gregory and Levings, 1998; Hansen et al., 2013).&quot; State of Washington water quality criteria for freshwater areas supporting salmonid rearing, such as Lake Kachess, are not to exceed turbidity levels of 5 NTU, which if exceeded for days to weeks can interfere with fish foraging and growth.</td>
</tr>
<tr>
<td>28</td>
<td>No permanent habitat loss is predicted for listed fish species including bull trout. As outlined in Section 4.9 of the SDEIS, recent surveys have indicated that suitable habitat occurs throughout much of the areas surrounding the project alternatives, but the area was not found to be currently occupied by spotted owls. Historically owls have occupied areas near the Kachess east shore and they have never been detected in the south shore area. The proposed projects would impact suitable habitat. Pre-construction surveys would be conducted to confirm if this area remains unoccupied. Project impacts would be considered to have no potential effects on northern spotted owls if pre-construction surveys verify that no owls are present within the threshold distances for disturbance or harm.</td>
</tr>
<tr>
<td>29</td>
<td>Section 4.14 of the DEIS addresses impacts on Recreation, including to residents and visitors to the study area. This FEIS has been updated to include a discussion of the socioeconomic impacts arising from impacts to recreation.</td>
</tr>
<tr>
<td>30</td>
<td>There is very little or no private property that would need to be acquired for the Preferred Alternative. See Section 4.15.17 regarding property acquisition. Reclamation would survey private properties prior to construction and would acquire any needed easements in accordance with of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970 (42 USC 4601), as amended, 49 CFR Part 24, and other applicable laws and regulations. The DEIS and SDEIS disclose reasonable property impacts based on alternatives design concepts. Actual real property acquisition will be based on refined design of a selected alternative.</td>
</tr>
<tr>
<td>31</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
<tr>
<td>32</td>
<td>As discussed in Section 4.4 of the SDEIS, both Keechelus and Kachess Reservoir are on the 303(d) Category 5 list for PCBs in fish tissue. The PCB levels in fish tissue were similar in both reservoirs. No other contaminants in Keechelus or Kachess Reservoir are on the category 5 list (i.e., polluted waters that require a TMDL or water quality improvement project). Because both reservoirs are listed with similar levels, the transfer of water from Keechelus to Kachess would like not affect the PCB concentrations in fish tissue in Kachess Reservoir.</td>
</tr>
</tbody>
</table>
During construction Kachess reservoir would release flows early in the season to meet demands in the System. The goal would be to release Kachess water but not “waste” any water. This would accelerate Kachess usage so that construction could begin as early as possible in the late summer or early fall. Kachess flow would then likely be low in the fall. This would impact mini-flip-flop so that the Keechelus reach would not be open for spawning during construction.

Thank you for your comment.
<table>
<thead>
<tr>
<th>Name</th>
<th>Name</th>
<th>Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aiken, Mike</td>
<td>Hammerstrom, Iliana</td>
<td>Paez, Omar</td>
</tr>
<tr>
<td>Aiken, Mike</td>
<td>Hammons, Emily</td>
<td>Paprite, Sydney</td>
</tr>
<tr>
<td>Aiken, Mike</td>
<td>Hanan, Mary</td>
<td>Parsons, Marvin</td>
</tr>
<tr>
<td>Aliment, Randy</td>
<td>Handle, J</td>
<td>Passy, Belle</td>
</tr>
<tr>
<td>Allen, David</td>
<td>Hansen, Bailey</td>
<td>Patterson, Margaret</td>
</tr>
<tr>
<td>Allenbough, Dave</td>
<td>Hansen, Reegan</td>
<td>Peacor, Meg</td>
</tr>
<tr>
<td>Anderson, Amna</td>
<td>Hansen, Ryan</td>
<td>Pelee, Lyneta</td>
</tr>
<tr>
<td>Anderson, Anna</td>
<td>Hardin, Emma</td>
<td>Peters, McKenna</td>
</tr>
<tr>
<td>Anderson, Keith</td>
<td>Hardtla, Tyrell</td>
<td>Peterson, Tami</td>
</tr>
<tr>
<td>Anderson, Keith</td>
<td>Harr, Mathew</td>
<td>Petry, Larry</td>
</tr>
<tr>
<td>Anderson, Larry</td>
<td>Harris, Ellen</td>
<td>Phillips, John</td>
</tr>
<tr>
<td>Anderson, Susan</td>
<td>Harrison, Jessica</td>
<td>Phillips, Makayla</td>
</tr>
<tr>
<td>Angrisano, Robert</td>
<td>Hart, Elizabeth</td>
<td>Phillips, Patty</td>
</tr>
<tr>
<td>Annis, Karen</td>
<td>Haugen, Geraldine</td>
<td>Pierce, Gail</td>
</tr>
<tr>
<td>Anthony, Kayla</td>
<td>Hawk, Chris</td>
<td>Pierce, L.M.</td>
</tr>
<tr>
<td>Anthony, Kiri</td>
<td>Hayden, Russ</td>
<td>Pinter, Jenna</td>
</tr>
<tr>
<td>Aper, Andrew</td>
<td>Haynes, Michael</td>
<td>Pitts, Donta</td>
</tr>
<tr>
<td>Baker, Chris</td>
<td>Hazard, Taylor</td>
<td>Placek, Brandon</td>
</tr>
<tr>
<td>Baker, Hallie</td>
<td>Hazelwood, Mary</td>
<td>Placek, Jessica</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>---------------</td>
<td>-----------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Baker, Michael</td>
<td>Heintz, Chris</td>
<td>Popp, Mikayla</td>
</tr>
<tr>
<td>Baker, Shirley</td>
<td>Hendry, Stefan</td>
<td>Popplenell, Steve</td>
</tr>
<tr>
<td>Baker, Yvonne</td>
<td>Henry, David</td>
<td>Porter, Shane</td>
</tr>
<tr>
<td>Balliet, Mary</td>
<td>Heric, Dave</td>
<td>Possani, Laila</td>
</tr>
<tr>
<td>Baner, Martin</td>
<td>Herman, Angela</td>
<td>Postolit, Victoria</td>
</tr>
<tr>
<td>Barber, Brent</td>
<td>Herman, Shelby</td>
<td>Powers, Sandy</td>
</tr>
<tr>
<td>Beach, JoAnne</td>
<td>Hersey, Jeffery</td>
<td>Powers, William</td>
</tr>
<tr>
<td>Bean, Tammy</td>
<td>Hink, Lindsey</td>
<td>Prest, Gretchen</td>
</tr>
<tr>
<td>Beauchamp, Jackie</td>
<td>Hoben, Tyler</td>
<td>Preston, Catrina</td>
</tr>
<tr>
<td>Beauchene, Luke</td>
<td>Hooks, Julius</td>
<td>Price, Icaya</td>
</tr>
<tr>
<td>Becker, Brooke</td>
<td>Horne, Nancy</td>
<td>Prusha, Cory</td>
</tr>
<tr>
<td>Becker, Dennis</td>
<td>Houghton, Taylor</td>
<td>Prusha, Nikki</td>
</tr>
<tr>
<td>Beekley, Doyle</td>
<td>Houses, Christie</td>
<td>Pucci, Anna</td>
</tr>
<tr>
<td>Berge, Katie</td>
<td>Howard, Amber</td>
<td>Pugel, Stephen</td>
</tr>
<tr>
<td>Berge, Terri</td>
<td>Howard, Denise</td>
<td>Purci, Gerry</td>
</tr>
<tr>
<td>Berline, emily</td>
<td>Howard, Troy</td>
<td>Rait, David</td>
</tr>
<tr>
<td>Berline, Peggy</td>
<td>Hudgens, Michael</td>
<td>Rait, Geraldine</td>
</tr>
<tr>
<td>Bod, Jen</td>
<td>Hudgins, Zoe</td>
<td>Rary, Alexa</td>
</tr>
<tr>
<td>Bonnell, Paul</td>
<td>Hughes, Randall</td>
<td>Rasera, Dante</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>--------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Book, Brad</td>
<td>Hulberte, Ethan</td>
<td>Ratliff, Abby</td>
</tr>
<tr>
<td>Boren, David</td>
<td>Hume, Matt</td>
<td>Reckaun, Regina</td>
</tr>
<tr>
<td>Boren, Nick</td>
<td>Hurst, Collyn</td>
<td>Redd, Kyle</td>
</tr>
<tr>
<td>Bowling, Bobby</td>
<td>Hutchinson, Jessica</td>
<td>Reed, Colwell</td>
</tr>
<tr>
<td>Bowling, Camryn</td>
<td>Huynh, Heidi</td>
<td>Reeves, Brad</td>
</tr>
<tr>
<td>Bowman, Tyler</td>
<td>Jackson, Mike</td>
<td>Reeves, Christine</td>
</tr>
<tr>
<td>Boynton, Carter</td>
<td>Jacqueline</td>
<td>Reeves, Harold</td>
</tr>
<tr>
<td>Brabham, Kate</td>
<td>Jaegerman, Jeanelle</td>
<td>Reeves, John</td>
</tr>
<tr>
<td>Brady, Alaina</td>
<td>Jasper, Kristina</td>
<td>Reeves, Kathryn</td>
</tr>
<tr>
<td>Braly, John</td>
<td>Jennings, Albert</td>
<td>Reily, Paul</td>
</tr>
<tr>
<td>Braly, Rita</td>
<td>Jeong, Chris</td>
<td>Reitz, Anna</td>
</tr>
<tr>
<td>Brandt, Gordon</td>
<td>Johansen, Derek</td>
<td>Reynolds, Jeff</td>
</tr>
<tr>
<td>Branworth, Aaron</td>
<td>Johnson, David</td>
<td>Richter, Neil</td>
</tr>
<tr>
<td>Branworth, Taylor</td>
<td>Johnson, Joel</td>
<td>Rivera, Lexy</td>
</tr>
<tr>
<td>Braunworth, Marci</td>
<td>Johnson, Nancy</td>
<td>Rohrbaugh, Ansley</td>
</tr>
<tr>
<td>Braunworth, Raylon</td>
<td>Johnson, Shawn</td>
<td>Roletto, Peggy</td>
</tr>
<tr>
<td>Brethack, Melanie</td>
<td>Jonas, Brad</td>
<td>Roletto, Richard</td>
</tr>
<tr>
<td>Brodie, Sean</td>
<td>Jordan, Justin</td>
<td>Rosen, Ross</td>
</tr>
<tr>
<td>Broeckling, Henry</td>
<td>Joseph, Fred</td>
<td>Rowland, Rebecca</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-------------------</td>
<td>---------------------</td>
<td>---------------</td>
</tr>
<tr>
<td>Broeckling, Joan</td>
<td>June, Ehevlie</td>
<td>Runyon, Scott</td>
</tr>
<tr>
<td>Broeckling, Michelle</td>
<td>Kalgaonek, Kaustabh</td>
<td>Russell, Kayla</td>
</tr>
<tr>
<td>Brown, Alison</td>
<td>Kammeier, Erin</td>
<td>Russell, Mark</td>
</tr>
<tr>
<td>Brown, Hannah</td>
<td>Kartes, Jessica</td>
<td>Ryan, Paige</td>
</tr>
<tr>
<td>Brown, Michael</td>
<td>Kartes, Teresa</td>
<td>Ryan, Paige</td>
</tr>
<tr>
<td>Brown, Travis</td>
<td>Kask, Tammara</td>
<td>Ryynanen, Dan</td>
</tr>
<tr>
<td>Brunner, Barbara</td>
<td>Kask, William</td>
<td>Ryynanen, Tyler</td>
</tr>
<tr>
<td>Brunner, Brian</td>
<td>Kelly, Shane</td>
<td>Ryynaner, Cindy</td>
</tr>
<tr>
<td>Bullock, Joseph</td>
<td>Kenloomis, Kyle</td>
<td>Sandoval, Jordan</td>
</tr>
<tr>
<td>Burke, Andrew</td>
<td>Kerrey, Jon</td>
<td>Sandoval, Nathan</td>
</tr>
<tr>
<td>Burke, Maria</td>
<td>Kimmel, Gayle</td>
<td>Sannes, Sam</td>
</tr>
<tr>
<td>Burke, Mark</td>
<td>King, Dylan</td>
<td>Sauer, Kevin</td>
</tr>
<tr>
<td>Burleson, Wendy</td>
<td>Kinney, Sarah</td>
<td>Sauer, Kevin</td>
</tr>
<tr>
<td>Burnett, Betty</td>
<td>Kitchell, Carolyn</td>
<td>Scheuffele, Dana</td>
</tr>
<tr>
<td>Burnett, Kurtis</td>
<td>Knauff, Mary</td>
<td>Schlutt, Claire</td>
</tr>
<tr>
<td>Burns, Mike</td>
<td>Knauss, Hannah</td>
<td>Schoener, Linda</td>
</tr>
<tr>
<td>Busby, Marci</td>
<td>Knavff, Gary</td>
<td>Schreck, Megan</td>
</tr>
<tr>
<td>Busby, Marci</td>
<td>Knavff, Sandy</td>
<td>Schwartz, Zachary</td>
</tr>
<tr>
<td>Buyel, Carell</td>
<td>Knavft, Sandy</td>
<td>Schydle, Sara</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>------------------</td>
<td>-----------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Cabrona, Alex</td>
<td>Kongsaeng, Chalida</td>
<td>Seguin, John</td>
</tr>
<tr>
<td>Cadwoleder, Wade</td>
<td>Korach, Malachi</td>
<td>Seguin, Kerry</td>
</tr>
<tr>
<td>Campbell, Bill</td>
<td>Koval, Alex</td>
<td>Senior, Viktoria</td>
</tr>
<tr>
<td>Campbell, Connor</td>
<td>Koval, Vera</td>
<td>Serov, Vasily</td>
</tr>
<tr>
<td>Campbell, Kylee</td>
<td>Krueger, Kraig</td>
<td>Sevedge, Ryan</td>
</tr>
<tr>
<td>Campell, Karen</td>
<td>Kulikovskaya, Anna</td>
<td>Severson, Andrea</td>
</tr>
<tr>
<td>Carigen, Angela</td>
<td>Kulikovskaya, Roman</td>
<td>Shaw, Megan</td>
</tr>
<tr>
<td>Carlson, John</td>
<td>Kulikovskaya, Svetlana</td>
<td>Sheldon, Jeanne</td>
</tr>
<tr>
<td>Carlson, Shawn</td>
<td>Kundtsen, Kate</td>
<td>Sheridan, David</td>
</tr>
<tr>
<td>Carmody, Tom</td>
<td>Landen, Bonnie</td>
<td>Simmons, Ben</td>
</tr>
<tr>
<td>Carpenter, Tristan</td>
<td>Landen, Dick</td>
<td>Simmons, Noah</td>
</tr>
<tr>
<td>Casebolt, Jamie</td>
<td>Langendorfen, Kurt</td>
<td>Sivertson, Conner</td>
</tr>
<tr>
<td>Cather, Connor</td>
<td>Lanler, Megan</td>
<td>Slanner, Al</td>
</tr>
<tr>
<td>Cavanaugh, Ray</td>
<td>Larange, Carter</td>
<td>Smith, Curtis</td>
</tr>
<tr>
<td>Cernick, Debbie</td>
<td>Lawrence, Alan</td>
<td>Smith, Steve</td>
</tr>
<tr>
<td>Cha, Austin</td>
<td>Lawtin, Nancy</td>
<td>Smitle, Derm</td>
</tr>
<tr>
<td>Christofferson, Jacob</td>
<td>Le, Courtney</td>
<td>Snelson, Wyatt</td>
</tr>
<tr>
<td>Christofferson, Tara</td>
<td>Learned SR, Grant</td>
<td>Snyder, Kylee</td>
</tr>
<tr>
<td>Clark, Casey</td>
<td>Lee, Mary</td>
<td>Sparks, Amy</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>-----------------------</td>
</tr>
<tr>
<td>Clements, Kaylon</td>
<td>Lee, Randy</td>
<td>Sparks, Ryan</td>
</tr>
<tr>
<td>Cline, Charlene</td>
<td>Lee-Smith, Robin</td>
<td>Spence, Rick</td>
</tr>
<tr>
<td>Cline, Dave</td>
<td>Lehto, Gabriel</td>
<td>Spence, Sue</td>
</tr>
<tr>
<td>Coby, Gail</td>
<td>Lester, Meagan</td>
<td>Stachowiak, Michele</td>
</tr>
<tr>
<td>Conklin, Kyle</td>
<td>Lewis, Ann</td>
<td>Steed, Victoria</td>
</tr>
<tr>
<td>Cook, Koleen</td>
<td>Lewis, Hayden</td>
<td>Steiner-Dodge, Jasmine</td>
</tr>
<tr>
<td>Cooper, Janine</td>
<td>Lewis, Katie</td>
<td>Stevens, Natalie</td>
</tr>
<tr>
<td>Cooper, Nathan</td>
<td>Liberda, Rick</td>
<td>Stevens, Ryan</td>
</tr>
<tr>
<td>Courage, Sean</td>
<td>Liberda, Tammi</td>
<td>Stieglitz, Ben</td>
</tr>
<tr>
<td>Cowenz, Gary</td>
<td>Link, Laura</td>
<td>Stieglitz, Jenn</td>
</tr>
<tr>
<td>Craig, Kathy</td>
<td>Litovkin, Audrey</td>
<td>Stone, Karen</td>
</tr>
<tr>
<td>Craig, Michael</td>
<td>Loftus, Jake</td>
<td>Stone, Penny</td>
</tr>
<tr>
<td>Crassman, Jeremy</td>
<td>Loftus, Jeff</td>
<td>Streby, Mike</td>
</tr>
<tr>
<td>Credene, Maclayne</td>
<td>Loftus, Stage</td>
<td>Strickland, Norman</td>
</tr>
<tr>
<td>Crickman, Rachel</td>
<td>Lomakin, Andrew</td>
<td>Sweeney, Emma</td>
</tr>
<tr>
<td>Crum, Miranda</td>
<td>Lomakin, Reuben</td>
<td>Syders, Faith</td>
</tr>
<tr>
<td>Dallman, Amanda</td>
<td>Lomakin, Tatyana</td>
<td>Sykes, Kelsie</td>
</tr>
<tr>
<td>Darney, Ben</td>
<td>Lund, Lexy</td>
<td>Syme, Clarissa</td>
</tr>
<tr>
<td>Davenport, Mikah</td>
<td>Lund, Stan</td>
<td>Taasevigen, Edward</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>---------------------</td>
<td>------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>Day, Melinda</td>
<td>Lux, Edward</td>
<td>Taasevigen, Margaret</td>
</tr>
<tr>
<td>DeBord, Julia</td>
<td>Lux, Lisa</td>
<td>Taise, Dianne</td>
</tr>
<tr>
<td>Delegans, Alexandra</td>
<td>Machlin, Kyle</td>
<td>Taise, Jonas</td>
</tr>
<tr>
<td>Delegans, George</td>
<td>MacKinam, Cheri</td>
<td>Tavernner, Starr</td>
</tr>
<tr>
<td>Dill, Joe</td>
<td>Madding, Troy</td>
<td>Taylor, Trenton</td>
</tr>
<tr>
<td>Di Pace, Chloe</td>
<td>Main, Christina</td>
<td>Thayer, Jody</td>
</tr>
<tr>
<td>Donohue, Chase</td>
<td>Malcom, Ryan</td>
<td>Thayer, Todd</td>
</tr>
<tr>
<td>Donovan, Tracey</td>
<td>Malcom, Shannon</td>
<td>Thomas, Lynne</td>
</tr>
<tr>
<td>Douglas, Colten</td>
<td>Mallon, Judith</td>
<td>Thomas, Sean</td>
</tr>
<tr>
<td>Downer, Margaret</td>
<td>Mallonee, Eileen</td>
<td>Tilley, Nick</td>
</tr>
<tr>
<td>Draaisma, Erik</td>
<td>Mallory, Joe</td>
<td>Tilton, Shiaiyn</td>
</tr>
<tr>
<td>Draaisma, Maja</td>
<td>Mankew, Mick</td>
<td>Timmerman, Bianca</td>
</tr>
<tr>
<td>Driscoll, Olivia</td>
<td>Mankus, Ashley</td>
<td>Tobin, Lauren</td>
</tr>
<tr>
<td>Drumm, Randall</td>
<td>Manus, Arden</td>
<td>Tollie, Nikki</td>
</tr>
<tr>
<td>Dulin, Andrew</td>
<td>Marconi, Olivia</td>
<td>Toman, Meuney</td>
</tr>
<tr>
<td>Duncanson, Harold</td>
<td>Marian, Aaron</td>
<td>Toman, Wendy</td>
</tr>
<tr>
<td>Duncanson, Kay</td>
<td>Marquiss, Billie</td>
<td>Town of So. Cle Elum</td>
</tr>
<tr>
<td>Durrett, Abby</td>
<td>Marquiss, William</td>
<td>Trapp, Robert</td>
</tr>
<tr>
<td>Eble, Justin</td>
<td>Marshall, Anna</td>
<td>Trimm, Alison</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------------</td>
<td>--------------------</td>
</tr>
<tr>
<td>Edde, Mike</td>
<td>Martin, Joel</td>
<td>Trimm, Bill</td>
</tr>
<tr>
<td>Edde, Mike</td>
<td>Martin, Sierra</td>
<td>Trygstad, Erin</td>
</tr>
<tr>
<td>Egberg, Cayla</td>
<td>Martinez, Tommy</td>
<td>Tubbs, Ginny</td>
</tr>
<tr>
<td>Engberg, Gregory</td>
<td>Martinez, Zoey</td>
<td>Turner, Al</td>
</tr>
<tr>
<td>England, Dustin</td>
<td>Mase, Rebecca</td>
<td>Turner, Luke</td>
</tr>
<tr>
<td>Ewen, Katie</td>
<td>Masters, Stephanie</td>
<td>Uriola, Kendra</td>
</tr>
<tr>
<td>Fabulae, Anastasia</td>
<td>Masterson, Caryon</td>
<td>Vaderwall, Jacob</td>
</tr>
<tr>
<td>Falsis, Lindsey</td>
<td>Matthai, Debbie</td>
<td>Valentine, Faith</td>
</tr>
<tr>
<td>Fasand, Renee</td>
<td>Matts, Mark</td>
<td>VanSickle, Cindi</td>
</tr>
<tr>
<td>Faubas, Alec</td>
<td>Maybo, Claudette</td>
<td>Vaughan, William</td>
</tr>
<tr>
<td>Faucher, Donovan</td>
<td>Maybo, J. Sam</td>
<td>Vaughn, William</td>
</tr>
<tr>
<td>Felipe-Ramos Gerardo</td>
<td>McDermott, Gail</td>
<td>Vedenava, Diana</td>
</tr>
<tr>
<td>Felix, Brianna</td>
<td>McGonegle, Time</td>
<td>Verhelst, Isabelle</td>
</tr>
<tr>
<td>Ferguson, Carol</td>
<td>McHenry, Traci</td>
<td>Verhelst, Natasha</td>
</tr>
<tr>
<td>Ferguson, Dan</td>
<td>McLain, Kenneth</td>
<td>Wainwright, Shirley</td>
</tr>
<tr>
<td>Fernunson, Martin</td>
<td>McLenaghan, Kevin</td>
<td>Wallace, Brenna</td>
</tr>
<tr>
<td>Fishburn, Sam</td>
<td>McNeil, Maggie</td>
<td>Wanechek, Chanty</td>
</tr>
<tr>
<td>Fitts, Dereck</td>
<td>McShane, Cathie</td>
<td>Wanechek, Connie</td>
</tr>
<tr>
<td>Fitts, Dereck</td>
<td>Meaden, Hayden</td>
<td>Ward, Bernice</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>--------------------</td>
<td>-------------------</td>
<td>-------------------</td>
</tr>
<tr>
<td>Flint, Alexis</td>
<td>Meiseyena, Olga</td>
<td>Wasell, Mary</td>
</tr>
<tr>
<td>Fodness, Carlin</td>
<td>Mensing, Jackie</td>
<td>Waterman, Anita</td>
</tr>
<tr>
<td>Fodness, Colleen</td>
<td>Miles, Brett</td>
<td>Watts, Gayle</td>
</tr>
<tr>
<td>Fornaby, Rebecca</td>
<td>Millman, Kelly</td>
<td>Watts, Jerry</td>
</tr>
<tr>
<td>Forsell, Kati</td>
<td>Misochy, Billy</td>
<td>Webb, Connor</td>
</tr>
<tr>
<td>Forsell, Kurt</td>
<td>Misochy, Jill</td>
<td>Webb, Jada</td>
</tr>
<tr>
<td>Fountain, Jean</td>
<td>Misochy, Jill</td>
<td>Westendorf, Amanda</td>
</tr>
<tr>
<td>Fountain, Jean</td>
<td>Molnar, Seth</td>
<td>Westermann, Ralph</td>
</tr>
<tr>
<td>Fountain, Tim</td>
<td>Molnar, Seth</td>
<td>Whitham, Melvena</td>
</tr>
<tr>
<td>Franklin, Ben</td>
<td>Monahan, Bree</td>
<td>Willete, Bree</td>
</tr>
<tr>
<td>Freeman, Jeffrey</td>
<td>Monroe, Keri</td>
<td>Willis, Mikayla</td>
</tr>
<tr>
<td>Freeyan, Cassi</td>
<td>Moore, Colton</td>
<td>Windsor-Newman, Judith</td>
</tr>
<tr>
<td>Frye, Ajay</td>
<td>Moore, Montana</td>
<td>Windsor-Newman, Judith</td>
</tr>
<tr>
<td>Fuda, Gia</td>
<td>Moore, Monty</td>
<td>Witonsky, Chloe</td>
</tr>
<tr>
<td>Fury, Denis</td>
<td>Mueller, Cassidy</td>
<td>Wold, Kensall</td>
</tr>
<tr>
<td>Fury, Denis</td>
<td>Mulder, Kathy</td>
<td>Wold, Lisa</td>
</tr>
<tr>
<td>Fury, Gail</td>
<td>Mulder, Tom</td>
<td>Wolff, Karen</td>
</tr>
<tr>
<td>Fury, Steve</td>
<td>Mulqueeney, Brett</td>
<td>Wood, Chris</td>
</tr>
<tr>
<td>Fyluh, Oleg</td>
<td>Mulqueeney, Christine</td>
<td>Wood, Sabrina</td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------</td>
<td>------------</td>
</tr>
<tr>
<td>Gaodnirda, Tiffany</td>
<td>Mulqueeney, Dave</td>
<td>Wood, Sam</td>
</tr>
<tr>
<td>Garcia, Nicholas</td>
<td>Mulqueeney, Erin</td>
<td>Wyman, Kurt</td>
</tr>
<tr>
<td>Garcia, Samuel</td>
<td>Mulqueeney, Kara</td>
<td>Yeager, Dorian</td>
</tr>
<tr>
<td>Gerber, Shannon</td>
<td>Mulqueeney, Tatum</td>
<td></td>
</tr>
<tr>
<td>Gibbs, Gabby</td>
<td>Murphy, Mike</td>
<td></td>
</tr>
<tr>
<td>Gienger, Chelann</td>
<td>Myers, Nicholas</td>
<td></td>
</tr>
<tr>
<td>Gienger, Kylon</td>
<td>Naibert MD, David</td>
<td></td>
</tr>
<tr>
<td>Gienger, Kylon</td>
<td>Nellis, Travis</td>
<td></td>
</tr>
<tr>
<td>Gienger, Lonnie</td>
<td>Nelson, Shelley</td>
<td></td>
</tr>
<tr>
<td>Gienger, Shelley</td>
<td>Nelson, Taryn</td>
<td></td>
</tr>
<tr>
<td>Gienger, Sky</td>
<td>Nelson-Hand, Chayna</td>
<td></td>
</tr>
<tr>
<td>Gienger, Teliah</td>
<td>Newcomb, Vaughn</td>
<td></td>
</tr>
<tr>
<td>Gienger, Teliah</td>
<td>Nicholson, Scott</td>
<td></td>
</tr>
<tr>
<td>Gillingham, Lora</td>
<td>Nielsen, Susan</td>
<td></td>
</tr>
<tr>
<td>Gilmore, Daniel</td>
<td>North, Rick</td>
<td></td>
</tr>
<tr>
<td>Gilmore, Julie</td>
<td>Northup, Sara</td>
<td></td>
</tr>
<tr>
<td>Gogan, Heather</td>
<td>Norton, Janet</td>
<td></td>
</tr>
<tr>
<td>Gold, Gerald</td>
<td>Nygren, Tammy</td>
<td></td>
</tr>
<tr>
<td>Gold, Norma</td>
<td>O'Brien, Lourene</td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Name</td>
<td>Name</td>
</tr>
<tr>
<td>------------------</td>
<td>---------------------</td>
<td>---------------------</td>
</tr>
<tr>
<td>Gonzalez, Jordan</td>
<td>O'Connel, Auren</td>
<td></td>
</tr>
<tr>
<td>Goodsite, Betsy</td>
<td>O'Connel, Lachelle</td>
<td></td>
</tr>
<tr>
<td>Gorchels, Chris</td>
<td>O'Connel, Lachelle</td>
<td></td>
</tr>
<tr>
<td>Gorchels, Kay</td>
<td>Oday, Lisa</td>
<td></td>
</tr>
<tr>
<td>Grayseth, Teresa</td>
<td>Oliver, Andrew</td>
<td></td>
</tr>
<tr>
<td>Greeger, Bob</td>
<td>Olonoras, Jonas</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Comment #</th>
<th>Comment Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Thank you for your comment.</td>
</tr>
<tr>
<td>2</td>
<td>If the Preferred Alternative is selected, Roza Irrigation District and potentially other participating proratable irrigation districts would fund the project.</td>
</tr>
</tbody>
</table>
4 May 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058


Dear Ms. McKinley:

We are continuing consultation with your agency regarding various elements of the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KDRPP/KCC) Projects. Please be advised that your proposed undertaking lies within the traditional territories of the Wenatchi Tribe, one of the twelve Tribes that make up the Confederated Tribes of the Colville Reservation (also known as the Colville Confederated Tribes or CCT), which is governed by the Colville Business Council (CBC). The CBC has delegated to the Tribal Historic Preservation Officer (THPO) the responsibility of representing the CCT with regard to cultural resources management issues throughout the traditional territories of all of the constituent tribes under Resolution 1996-29. This area includes parts of eastern Washington, northeastern Oregon, and the Palus (Palouse) territory in Idaho.

We have received a copy of the Supplemental Draft Environmental Impact Statement (SDEIS) pertaining to these projects for our review and comment. We offer the following comments for records:

• We again request that additional historical background on the Wenatchi Tribe, inclusive of the history of the Wenatshapan Fishery Reserve designated under the 1855 Treaty with the Yakima, be incorporated into subsection 3.18.2 of the SDEIS. We recommend Shutler's (2011), Taking the Bitter with the Sweet: Wenatchi Fishing Rights in the journal Environmental Law 41:981-1026, as a readily available and succinct source that may be fruitfully used to supplement this subsection.

• Cultural resources are fairly broadly defined within section 3.18. In subsection 3.18.1, the SDEIS states that, “For cultural resources, an effect occurs when the prosed project would disrupt or impact a prehistoric or historical archaeological site or a property of historical interest or cultural significance to a community or ethnic or social group. These effects are adverse if they would occur to historic properties.” In the Glossary section of
the SDEIS, on page GL-3, an historic property is defined as, “Any building, site, district, structure, or object (that has archaeological or cultural significance) included in, or eligible for inclusion in, the National Register.” It is the position of the CCT that adverse effects can occur to the range of cultural resources as more broadly defined defined in section 3.18.

- In subsection 3.18.3, we request that the sentence, “Once a preferred action alternative is selected, and precisely defined, supplemental surveys of the KDRPP APE would likely have to be performed, along with tribal consultation” be amended to read, “Once a preferred action alternative is selected, and precisely defined, supplemental surveys of the KDRPP APE will be performed, along with tribal consultation.”

- You have provided two different Kittitas place names, or two versions of the same Kittitas place name, for Lake Kachess: Hah-chesch and Hah-chee-luxsh based on a personal communication in 2017 from Jessica Lally of the YCRP. Are these alternative and equivalent terms? Is there additional evidence of the historic or contemporary use of this name to refer to Lake Kachess?

- In subsection 4.18.1, the SDEIS distinguishes between three types of cultural resources: historic properties, cultural items under NAGPRA, and resources of tribal concern. We have two comments regarding this language and these distinctions:
  o Your typology of cultural resources does not account for those resources which have not yet been evaluated regarding their eligibility for listing on the National Register of Historic Places (NRHP). It is the position of the CCT that potential historic properties that have not yet been evaluated in terms of their eligibility for listing on the NRHP be treated as eligible for listing, until proven otherwise. We request that you address impact indicators for these types of cultural resources.
  o Please provide a definition in the Glossary for the term “resources of tribal concern.”

- In subsection 4.18.10, please change the first sentence from “Reclamation would complete additional field surveys and to identify cultural resources as project designs are refined” to “Reclamation will complete additional field surveys and continue to identify cultural resources as project designs are refined.”

- In reference to subsection 4.18.10, the CCT supports the collaborative development of a Cultural Resources Management Plan in consultation with all affected and interested tribes.

Thank you for consulting with the Confederated Tribes of the Colville Reservation. Please note that these comments are based on information available to us at the time of the project review. We reserve the right to revise our comments as information becomes available. If you have any questions or concerns, please contact Karen Capuder at (509) 634-2876 or karen.capuder@colvilletribes.com. If you wish to speak with me, contact me at (509) 634-2695.

Sincerely,
Fwd: [EXTERNAL] KDRPP SDEIS Comment Letter

1 message

McKinley, Candace <cmckinley@usbr.gov>  Wed, Jul 11, 2018 at 3:38 PM
To: Gwendolyn Christensen <gchristensen@usbr.gov>, Julia Long <jlong@usbr.gov>, "Dera, Karen" <kdera@usbr.gov>, Deborah Van Meter <dvanmeter@usbr.gov>

---------- Forwarded message ----------
From: Tom Ring <Tom_Ring@yakama.com>
Date: Wed, Jul 11, 2018 at 3:29 PM
Subject: [EXTERNAL] KDRPP SDEIS Comment Letter
To: "kkbt@usbr.gov" <kkbt@usbr.gov>, Candace McKinley <cmckinley@usbr.gov>
Cc: Tom Ring <Tom_Ring@yakama.com>, Phil Rigdon <Phil_Rigdon@yakama.com>, Everett Isaac <Everett_Isaac@yakama.com>, Dave Fast <Dave_Fast@yakama.com>, Melissa Hannigan <Melissa_Hannigan@yakama.com>, Jeff Schuster <jeffschuster@att.net>, Yvonne Colfax <Yvonne_Colfax@yakama.com>

Ms McKinley,

Attached please find Yakama Nation Department of Natural Resources comment letter on the KDRPP SDEIS.

Tom

--
Candy McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901

509/575-5848 x232
509/379-0780 cell

Kachess Drought Letter.pdf
299K

March 2019

SDEIS-CR-207
July 11, 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima WA., 98901-2058
Email: kkbt@usbr.gov

Re: Yakama Nation Department of Natural Resources Comments on Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KDRPP/KKC) – Supplemental Draft Environmental Impact Statement

Dear Ms. McKinley:

I am writing as Superintendent of the Yakama Nation Department of Natural Resources to provide comments on the KDRPP/KKC Supplemental Draft Environmental Impact Statement. I incorporate prior comments by the Yakama Nation on KDRPP and on the Integrated Plan into this letter.

The Yakama Nation has participated in the development of the Yakima Basin Integrated Plan since its inception and the Yakama Tribal Council has adopted resolutions in support of the plan. We support KDRPP as a component of the YBIP provided it is implemented in a fashion that furthers the goals of YBIP to improve both water supply for agriculture and instream flow and habitat for fish and other aquatic life. Implementation of YRBWEP must not impair the Yakama Nation’s Treaty and other rights and not adversely affect the Yakama Nation’s ability to fully use its existing water rights including irrigation deliveries and instream flows in subsequent years following water short years. In keeping with this, the SDEIS makes the following important commitment (p.2-17).

“In keeping with the goals of the Integrated Plan, under the Proposed Action during Kachess Reservoir refill Reclamation would operate the Yakima Project to ensure spring (March through June) flows are at least what they would be under current operating conditions without KDRPP.”

We note that while the EIS discusses other fish species in Chapter 3 and in the sections on KKC, the discussion of potential impacts on fish associated with the preferred alternative is limited to Bull Trout and Steelhead. Given that the goal of YBIP is restoration of harvestable surpluses of
all native species of fish and other aquatic life throughout their historic range, the discussion in Chapter 4 should be expanded to include Chinook, Sockeye, Coho, and other species to which the Yakama Nation has a Treaty Right and which may be affected by changes in the flow regime associated with the preferred alternative. Yakama Nation DNR staff looks forward to working with Reclamation, Ecology, and participating portables to ensure that KDRPP and other YBIP components deliver on the promise to benefit all resources, instream and out.

The Yakama Nation notes that it has a Treaty fish right including a water right with a time immemorial priority date for fish and other aquatic life and, among other rights, a Treaty water right for irrigation to the fullest extent allowed under applicable law and court rulings. The Nation has a right at any time under its adjudicated surface water rights to make a request for water authorized for its Treaty water right for fish and other aquatic life. Any water rights or use of water described or listed in this SEIS are subject to regulation, reduction, and cessation in the future as necessary to satisfy and protect senior rights including the Yakama Nation’s rights. The Nation otherwise also reserves the right to assert any defense or remedy to protect the Nation’s Treaty or other rights. By not commenting on summaries or descriptions of specific water rights or specific structures or operations, the Yakama Nation does not concede or admit to any description in this SEIS but reserves the right to comment later.

The following are comments to specific statements in the SEIS:

Page ES-viii (suggested additions highlighted)

This should be changed to include reference to and the right to participate for other participating proratable entities including the United States as trustee for the Yakama Nation as follows:

Reclamation and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza and other participating proratable entities to fund, design, construct, operate, and maintain some or all of the Proposed Action. Participating proratable entities may include the United States, Bureau of Indian Affairs, as trustee for the Yakama Nation and water users within the Wapato-Satus Unit of the Wapato Irrigation Project.

Page ES-x

This should be changed to read as follows:

The pumping plant would be used to deliver up to 200,000 acre-feet of water during drought years to participating downstream Yakima Project irrigation districts, including Kittitas Reclamation District, Roza, and Wapato Irrigation Project. Reclamation and Ecology define a drought year as a year when water supply falls below 70 percent of proratable water entitlements. KDRPP would contribute to increasing proratoning up to 70 percent. Project proponents participants would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.
Confederated Tribes and Bands
Of the Yakama Nation
Established by the
Treaty of June 9, 1855

Kennewick Irrigation District has also expressed interest in participating in KDRPP.

Page ES-xi
Under Mitigation include the following bullet
- Monitor outflows from Kachess and other reservoirs and Yakima River flows to ensure that operation of KDRPP does not impair senior rights either by reducing Total Water Supply Available or adversely affecting instream flows needed to maintain fish and other aquatic life.

Section 1.2.1 (page 1-3). This references the fact that the Bureau of Reclamation has the duty to operate the Yakima Project “according to treaty obligations of the United States pertaining to the Yakama Nation’s Treaty of 1855, delivering the Yakama Nation’s ‘time immemorial’ water right according to court orders.” However, the subsequent list of “water entitlements” fails to fully reference the water right of the Nation for Treaty fish and other aquatic life. The Nation’s Treaty water right for fish and other aquatic life is the most senior right in the Basin with a time immemorial priority date. Both the federal court and the state court in Ecology v. Acquavella have issued a number of rulings involving the Treaty water right for fish and other aquatic life. Listing all of these rulings is beyond the scope of this comment letter, but the Yakama Nation reserves all rights and remedies established in the Treaty and subsequent legal rulings. The proratable and non-proratable irrigation rights referenced in the draft SEIS are junior to the Treaty water right for fish and other aquatic life. The SEIS fails to reference this in its list of rights.

Page 1-3
Edit the following passage as indicated.
Additionally, Reclamation operates the Yakima Project according to treaty obligations of the United States pertaining to the Yakama Nation Treaty of 1855, delivering the Yakama Nation’s "time immemorial" adjudicated time-immemorial priority date water right for fish and other aquatic life according to court orders.

Page 1-17
Correct the date on following statement.
A companion bill is expected in the U.S. House of Representatives in fall 2017.

Page 1-18
Correct the following statement.
The Washington State Legislature has yet to pass a final 2017-2019 State Capital Construction Budget, but it is expected in early 2018 or sooner.
Confederated Tribes and Bands
Of the Yakama Nation

Established by the Treaty of June 9, 1855

Are there any lands in Yakima County within the areas affected by the proposed action? If not, change the following.

**Local Agencies**

Kittitas and Yakima Counties

Critical Areas Ordinance, Shoreline Master Program

Granting of approval for actions on private land within the Counties shoreline jurisdiction.

**Section 1.4** If the proposed project is built, the Nation supports the right to be able to participate and obtain a share of the newly available irrigation water.

Suggested change:

The current plan also includes improvements to the Wapato Irrigation Project, enhancement of the Toppenish Creek Corridor, and an irrigation demonstration project for the Yakama Nation to enhance tribal economic, fish, wildlife, and cultural resources.

Add the following bullet after the listed bullets:

- 3 foot pool raise at Cle Elum Reservoir (correct the following section that characterizes the CEPR as a YRBWEP Phase III project).

Suggested change

Yakama Nation Wapato Irrigation Project System Improvements and Yakama Nation Demonstration Project are in progress and will improve irrigation efficiencies.

Make the following changes:

Store as much water as possible up to the reservoir system's full active capacity of about 1 million acre-feet from the end of the irrigation season through early spring subject to providing target flows, pulse flows, and any other water necessary to maintain fish and other aquatic life under the Yakama Nation's Time Immemorial Treaty water rights.
Is Franklin County a typo here? Should this say Kittitas?

### 4.22 Environmental Justice

| Franklin County   | would experience high and adverse human health or environmental impacts |

**Section 3.3.1.3.** The EIS refers to the target flows and states that “Reclamation has been directed by the Federal Court to consider fisheries in project operations, giving instream flows priority over storage.” The discussion of the federal court rulings ignores the state court rulings involving the Yakama Nation Treaty water right for fish and other aquatic life in *Ecology v. Acquavella*. The *Acquavella* court has also ruled that the Yakama Nation has a Treaty water right for fish and other aquatic life. The Orders are, for example, quite clear about the role of the System Operations Advisory Committee (SOAC) as well as the Bureau of Reclamation. SOAC’s duties and rights are more than to just provide “feedback” on fish related flows but to provide advice to BOR on the water needed for fish life. It is up to SOAC with BOR to determine flows on an annual basis to protect fish and other aquatic life. BOR must do more than just “consider” the Treaty water right for fish and other aquatic life but, rather, has the “responsibility” to provide water to maintain fish life at all life stages. The Treaty water right for fish and other aquatic life is the senior water right in the Basin and must be satisfied before any other water right.

**Page 4-19.** The Nation reserves the right to object to any operation that may reduce water supply for the Nation’s irrigation supply delivered through Wapato Irrigation Project.

**Section 1.2.1 and Table 2-9.** In addition to all flows or other descriptions listed in this document the Yakama Nation reserves the right to ask for flows to which it is entitled under its Treaty water right for fish and other aquatic life notwithstanding anything referenced or listed in the SEIS.
Page 3-67
The passage below is not likely correct. Whereas flows below Parker may not be directly affected after storage control, changes in reservoir operations and carryover storage may affect downstream flows below Parker. The extended study area should extend to the mouth of the Yakima River. Note that Section 3.3 describes the extended study area as "the Yakima River basin as a whole". Section 3.6 should be changed to match 3.3. The extended study area is the Yakima River basin, which encompasses all areas of potential downstream effects. This area extends from the existing Kachess and Koochelus outlet works downstream to the Wapato Irrigation Diversion just upstream of Sunnyside Dam in Parker, Washington, which is the lowermost point in the Yakima River basin where water regime influences would be experienced (Figure 1-1).

Page 3-72
It is worth noting that the oligotrophic condition of the reservoirs is due, at least in part, to the loss of marine nutrients that retuning adult anadromous fish historically contributed to the lakes. Hiebert (1999) found nutrient levels to be low in Kachess Reservoir, and Mongillo and Faulconer (1982) determined that both reservoir subbasins are relatively unproductive (oligotrophic).

Page 3-79
Suggested edit:
Flows steadily increase downstream of Sunnyside Dam (which is in the middle reach at about RM 104) in the summer as a result of irrigation return flows from groundwater sources and surface drains; the increase becomes more pronounced between Zillah and Granger (RM 88 to RM 83). Flows again drop at Prosser Dam, where much of the return flow is diverted.

Page 3-80
Suggested edit to clarify which Kachess River is being described:
**Kachess River**

Habitat in the reach of the Kachess River downstream of Kachess Dam is affected by Kachess Reservoir operations, which create flows that differ from the natural streamflow regime. During winter months (October to March), flow is reduced and less variable; in spring (April to June), flow is reduced; and in summer (July to September), flow is greatly increased (Reclamation and Ecology, 2012). The Kachess River, below the dam, is a relatively short (0.9 mile) reach that is a lesser priority for improving river flow because of other objectives in the Integrated Plan (Reclamation and Ecology, 2011f).

Page 3-80
Table 3-18 would greatly benefit from a map showing reaches and river miles and a better verbal descriptions of the reaches. At Roza, for example, summer flows reaching Roza Dam are increased upstream of the dam due to project operations, but often reduced below the dam due to diversions. Summer flows in the Wapato Reach above Sunnyside dam are increased due to operations, but greatly reduced from natural levels below Sunnyside Dam.
The reintroduction of sockeye into Cle Elum Reservoir began in 2009 when the Yakama Nation released 1,000 adults of sockeye.

Correction: Although the EIS correctly reports the DART information, the actual returns were never as low as the 13 reported in the DART. Apparently the DART was not updated with the higher number.

In 2013, the first offspring of the adults originally transported to Cle Elum Reservoir returned to Roza Dam, where they were collected and transported to Cle Elum Reservoir (Yakama Nation Fisheries, 2014a). Since the reintroduction period began (2009), the number of sockeye that have passed Roza Dam has varied annually, ranging from 13 to 3,949 fish and an average of 942. (Columbia River DART, 2017).

The following section is misleading and should be changed. The Wenatchapam are one of the 14 tribes and bands covered by the Yakama Nation's Treaty of 1855. See excerpt below.

The extended study area is also within the traditional territory of the Wenatchi, one of the Confederated Tribes of the Colville Reservation (Colville Confederated Tribes) (Miller 2017); descendants of the Wenatchee (also known as the Wenatshapam) are also found in the Confederated Tribes and Bands of the Yakama Nation (Yakama Nation).

TREATY WITH THE YAKIMA, 1855.
Articles of agreement and convention made and concluded at the treaty-ground, Camp Stevens, Walla-Walla Valley, this ninth day of June, in the year one thousand eight hundred and fifty-five, by and between Isaac I. Stevens, governor and superintendent of Indian affairs for the Territory of Washington, on the part of the United States, and the undersigned head chiefs, chiefs, headmen,
and delegates of the Yakama, Palouse, Pisquouse, Wenatshapam, Klikatat, Klinquit, Kowwas-say-ee, Li-ay-was, Skin-pah, Wish-ham. Shyiks, Ochechotes, Kah milt-pah, and Se-ap-cat, confederated tribes and bands of Indians, occupying lands hereinafter bounded and described and lying in Washington Territory, who for the purposes of this treaty are to be considered as one nation, under the name of 'Yakama,' with Kamaiaun as its head chief, on behalf of and acting for said tribes and bands, and being duly authorized thereto by them.
Source: https://www.fws.gov/pacific/ca/tribal/treaties/Yakima.pdf
Yakama Nation DNR appreciates the opportunity to comment on this important work and looks forward to working together implementing YBIP in the coming years.

Sincerely,

Everett Isaac, Acting Superintendent
Yakama Nation Department of Natural Resources
June 11, 2018

Please see CSRIA comments on SDEIS K&K Projects: CSRIA supports Roza Irrigation District Proposed Action for Kachess Inactive Storage Project.

D.O.

Darryll Olsen, Ph.D., Board Representative
Columbia-Snake River Irrigators Association
509-783-1623
Columbia-Snake River Irrigators Association
Information Memorandum

DATE: June 11, 2018

TO: Ms. Candance McKinley, Environmental Program Manager
USBR-Yakima, WA

FROM: Darryll Olsen, Ph.D., CSRIA Board Representative

SUBJECT: Comment on Draft Supplemental EIS for Kachess-Keechelus Projects:
CSRIA Supports Roza Irrigation District Proposed Action for Kachess Floating Inactive Storage Pumping Plant

CSRIA fully supports the Roza Irrigation District’s lead role for engineering, development, funding, and operations for the Supplemental Draft EIS proposed action, the Kachess Floating Inactive Storage Pumping Plant. As stated in the SDEIS:

- For full implementation of the propose action, Roza proposes to fund, design, construct, operate, and maintain a pumping plant at Kachess Reservoir (SDEIS, 1.4 Proposed Action, P-1-11).

In particular, with a lead role for funding, CSRIA would expect the associated amount of additional (instream) water supply, about 150,000-200,000 acre-ft., to be available for diversion at the Roza Irrigation District headworks, for distribution within the Roza District.

CSRIA is available for further comments, as requested from the lead EIS agencies.
June 22, 2018

Ms. Candy McKinley
Environmental Program Manager
Bureau of Reclamation
1917 Marsh Road
Yakima, WA 98901-2058

Ms. Danielle Squeochs, PhD, LHg, PE
Technical Projects Manager
Washington Department of Ecology
1250 West Alder Street
Union Gap, WA 98903

RE: Review and comment of DSEIS for Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

Dear Ms. McKinley and Ms. Squeochs:

The Washington Department of Fish and Wildlife (WDFW) has reviewed the Draft Supplemental Environmental Impact Statement (DSEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus-to-Kachess Conveyance (KKC). WDFW staff have attached the review comments.

We strongly support the Yakima Basin Integrated Plan (YBIP) and implementation of KDRPP, the first large scale water supply project. The YBIP is delivering on its promise to make significant investments in fish passage and habitat protection and restoration. Immediate or early investments included the purchase of the Teanaway Community Forest, the on-going Cle Elum Pool Rise and Cle Elum Fish Passage projects, and funding for Bull Trout Enhancement (BTE) projects, and others. Without these investments, or the cooperation and collaboration that has been created through the YBIP, opportunity for fish restoration would be delayed or lost.

The YBIP is built on the premise of a balance between fish restoration and increased water supply for out-of-stream use. KDRPP construction is essential to maintaining the appropriate and agreed upon balance between securing additional water supply and fish restoration. Accepting tradeoffs regarding local project specific impacts in exchange for an overall improvement to fish and wildlife species and habitat in the entire Yakima Basin is fundamental to our approach to the YBIP.
Our interest centers around ensuring there is adequate performance and certainty related to protecting bull trout populations in the upper Yakima Basin and ensuring that fish and wildlife species are enhanced by the YBIP. At the same time it is critical to protect especially vulnerable fish and wildlife populations, such as Lake Kachess Bull Trout. Protecting the limnology and productivity of Lake Kachess, bull trout fish passage at The Narrows between Kachess Lake and Little Kachess Lake, and providing bull trout access into spawning tributaries, are critical to ensuring a successful water supply outcome while not harming the fish restoration goals of the YBIP.

We look forward to working closely with Reclamation and Ecology to provide additional support as we progress through public review of the SDEIS through the National Environmental Policy Act (NEPA) process to make KDRPP implementation a success. We also hope that our comments prepare us for the conversations we will be having regarding mitigation required for these projects during the Hydraulic Project Approval process.

If you have questions regarding our attached comments, please call Perry Harvester at (509) 457-9314. If you have immediate needs, please feel free to contact me directly at (509) 457-9325.

Sincerely,

Mike Livingston
WDFW- South-Central Washington Region 3 Director
<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Page Number</th>
<th>Section #, Figure #, or Table #</th>
<th>Commenter Initials</th>
<th>Comment</th>
<th>Response (Resource Author)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>1-13 2-21</td>
<td>1.5.3 2.3.6</td>
<td>STK</td>
<td>BULL TROUT ENHANCEMENT Upper Yakima Basin bull trout populations are precarious at best. Normally WDFW could be skeptical of siting a new out of stream water supply project on top of these very vulnerable populations. However, the YBIP, Bull Trout MOU, and Bull Trout Enhancement Package (BTE) are the best and possibly the only chance for the long term survival of these populations. The YBIP has delivered on the promise of the Bull Trout MOU, investing about $1,000,000 per year toward bull trout recovery actions in the upper Yakima Basin. These BTE actions are part of the balanced package of YBIP that includes KDRPP. We support the package of KDRPP and BTE actions. We would like to see the investments return through implementation of the BTE.</td>
<td>2</td>
</tr>
<tr>
<td>2.</td>
<td>2-14 2-21 2-55 4-153 4-159 4-163 4-167 4-172 4-182 4-208 4-355</td>
<td>2.3.2.8 2.3.6 2.6.1.2 4.7.4.1 4.7.4.1 Table 4-88 4.7.4.1 Table 4-90 4.7.4.1 Table 4-92 4.7.10 4.8.2 4.8.10 4.9.10 4.26</td>
<td>SD</td>
<td>TERRESTRIAL IMPACTS NEED TO BE MITIGATED The SEIS identifies impacts to habitat and does not consistently mitigate for them. While we believe the Yakima Basin Integrated Plan does improve fish and wildlife habitat overall, direct impacts should be mitigated.</td>
<td>3</td>
</tr>
<tr>
<td>3.</td>
<td>4-5</td>
<td>4.2.4.2 Volitional bull trout passage improvements subsection</td>
<td>STK</td>
<td>IMPACTS TO BULL TROUT PASSAGE The 3rd para of this section states “the new drawdown conditions would be unlikely to change conditions there because the Little Kachess basin becomes separated from the main reservoir at elevation 2,223 ft. and little additional drawdown would occur in Little Kachess basin.” As described in this section, “the river between the two lake basins would incise down through sediment that has accumulated in the past 100 years … until it reaches its former natural channel. If this incision prediction is true, the river that flows when the reservoir elevation lowers to 2223 and below could incise down to the elevation of the flow control weir on the volitional fish passage structure at the downstream end of the Narrows. The incision has already occurred lower than the former natural channel from current operations.</td>
<td>4</td>
</tr>
</tbody>
</table>
If the Kachess river between the two lake basins would incise down through sediment that has accumulated in the past 100 years and disturbs the present grade control that maintains the current minimum elevation in Little Kachess Lake, this will exacerbate the passage problem for bull trout at the mouth of Box Canyon and the Kachess River. Some language needs to be included to allow adaptive management to this possible scenario and stress a mitigation performance measure that includes guaranteeing upstream passage to Box Canyon Creek, the Kachess River, and through The Narrows all year round.

Currently the volitional passage proposed at the narrows as partial mitigation for KDRPP does not include any work at the upstream end of the narrows. We estimate that the minimum Little Kachess Lake level under current operations is around 2224 (PER Bruce Heiner) and that the flow control weir on the proposed volitional fish passage structure will be the control point where future incision of the stream through the Narrows will reside eventually. Therefore, water levels at the mouth of Box Canyon Creek and the Kachess River could be approximately 16' lower than they are under current operations. Since the passage problem at the mouth appears to be exacerbated as reservoir levels get lower, this could severely worsen passage at Box Canyon and the Kachess River.

A related issue that should be discussed is determining the possibility of Little Kachess pool-lowering by hyporheic flow between the two lakes as a result of the never-before-seen head differential that will result from the KDRPP operation. Even if passage is provided, will hyporheic flow cause impassable conditions in the Narrows much like it does at the mouth of Box Canyon Creek, Kachess River, Deep Creek, and Gold Creek?

Also, it is important to consider reducing water temperature within the fishway at The Narrows during summer months prior to the spawning period for bull trout. Temperatures in the roughened channel, assumed to be sourced from the shallow surface water of Little Kachess per the SEIS, may be too high for bull trout to be able to use the fishway during the upstream migration period.

Related to the above, but relevant to section on Cumulative impacts on ESA-listed fish: The combination of lowered reservoir levels and the expected subsequent down-cutting/incision of the kachess river through the narrows could increase the incidence of poor passage into box canyon creek and kachess river for bull trout by lowering the current low-pool elevation of Little Kachess.

<table>
<thead>
<tr>
<th>Comment Number</th>
<th>Page Number</th>
<th>Section #, Figure #, or Table #</th>
<th>Commenter Initials</th>
<th>Comment</th>
<th>Response (Resource Author)</th>
</tr>
</thead>
<tbody>
<tr>
<td>4-8</td>
<td></td>
<td></td>
<td></td>
<td>If the Kachess river between the two lake basins would incise down through sediment that has accumulated in the past 100 years and disturbs the present grade control that maintains the current minimum elevation in Little Kachess Lake, this will exacerbate the passage problem for bull trout at the mouth of Box Canyon and the Kachess River. Some language needs to be included to allow adaptive management to this possible scenario and stress a mitigation performance measure that includes guaranteeing upstream passage to Box Canyon Creek, the Kachess River, and through The Narrows all year round. Currently the volitional passage proposed at the narrows as partial mitigation for KDRPP does not include any work at the upstream end of the narrows. We estimate that the minimum Little Kachess Lake level under current operations is around 2224 (PER Bruce Heiner) and that the flow control weir on the proposed volitional fish passage structure will be the control point where future incision of the stream through the Narrows will reside eventually. Therefore, water levels at the mouth of Box Canyon Creek and the Kachess River could be approximately 16' lower than they are under current operations. Since the passage problem at the mouth appears to be exacerbated as reservoir levels get lower, this could severely worsen passage at Box Canyon and the Kachess River. A related issue that should be discussed is determining the possibility of Little Kachess pool-lowering by hyporheic flow between the two lakes as a result of the never-before-seen head differential that will result from the KDRPP operation. Even if passage is provided, will hyporheic flow cause impassable conditions in the Narrows much like it does at the mouth of Box Canyon Creek, Kachess River, Deep Creek, and Gold Creek? Also, it is important to consider reducing water temperature within the fishway at The Narrows during summer months prior to the spawning period for bull trout. Temperatures in the roughened channel, assumed to be sourced from the shallow surface water of Little Kachess per the SEIS, may be too high for bull trout to be able to use the fishway during the upstream migration period. Related to the above, but relevant to section on Cumulative impacts on ESA-listed fish: The combination of lowered reservoir levels and the expected subsequent down-cutting/incision of the kachess river through the narrows could increase the incidence of poor passage into box canyon creek and kachess river for bull trout by lowering the current low-pool elevation of Little Kachess.</td>
<td>5</td>
</tr>
<tr>
<td>4-103</td>
<td>4.5.2</td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>2-79</td>
<td>Table 2-9, item 4.24</td>
<td></td>
<td></td>
<td></td>
<td>6</td>
</tr>
</tbody>
</table>
[EXTERNAL] YBFWRB Input on KDRPP & KCC SDEIS

1 message

Alex Conley <aconley@ybfwrb.org>  Mon, Jul 2, 2018 at 12:18 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Please accept the attached comment letter on the Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) projects.

Sincerely,

Alex Conley
Executive Director
Yakima Basin Fish & Wildlife Recovery Board
aconley@ybfwrb.org
(509) 453-4104

1200 Chesterly Drive, Suite 280
Yakima, WA 98902

Website: www.ybfwrb.org
Connect with us on Facebook
Sign up for our monthly Newsletter

YBFWRB comment on KDRPP Supplemental EIS.pdf
993K
June 21, 2018

Ms. Candace McKinley
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

Dear Ms. McKinley,

Thank you for the opportunity to provide this comment letter on the *Kachess Drought elief umping Plant and Keechelus Reservoir to Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement* (draft EIS).

I write on behalf of the Yakima Basin Fish and Wildlife Recovery Board (the Board). The Board was created by 21 county and city governments and the Yakama Nation to promote the recovery of at-risk fish and wildlife species in the Yakima Basin. In 2012, the Yakima Basin Fish & Wildlife Recovery Board brought local and regional partners together to complete the Yakima Bull Trout Action Plan (BTAP), which was updated in early 2018. The Board also convenes regular meetings of the Yakima Bull Trout Working Group (the Working Group), which brings together representatives from the many agencies and Non-Profit partners who are engaged in bull trout conservation actions.

As outlined in the draft EIS, the proposed actions have the potential to impact the Gold Creek, Kachess River and Box Canyon populations of federally-listed bull trout (*Salvelinus confluentus*). We would like to highlight that the BTAP identifies a suite specific and implementable actions that are designed to improve the abundance and viability of these at-risk bull trout populations. Many of these actions are also described in the Bull Trout Enhancement framework included as Appendix C in the draft EIS.

We would welcome the opportunity to work with Reclamation and Ecology to further develop and implement these priority actions. Please do let us know if you would like to discuss any of these actions with our staff and/or convene the Working Group to review bull trout specific actions that may be implemented in conjunction with the actions identified in the draft EIS.

Sincerely,

[Signature]

Adam J. Fyall
Chairman

1200 Chesterly Drive, Suite 280, Yakima, WA 98902
Phone (509) 453-4104 Email: info@ybfwrb.org Web: www.ybfwrb.org

March 2019
Fwd: USFWS Comments on the KDRPP & KKC Supplemental DEIS

1 message

McKinley, Candace <cmckinley@usbr.gov> Thu, Jul 12, 2018 at 6:58 AM
To: Gwendolyn Christensen <gchristensen@usbr.gov>, Julia Long <jlong@usbr.gov>, "Dera, Karen" <kdera@usbr.gov>

---------- Forwarded message ----------
From: Lewis, Stephen <stephen_lewis@fws.gov>
Date: Wed, Jul 11, 2018 at 4:08 PM
Subject: USFWS Comments on the KDRPP & KKC Supplemental DEIS
To: Candace McKinley <cmckinley@usbr.gov>, "Craig, Jim" <jim_l_craig@fws.gov>, Kate Terrell <kate_terrell@fws.gov>, "Dale Bambrick - NOAA Federal (dale.bambrick@noaa.gov)"
<dale.bambrick@noaa.gov>, michael.livingston@dfw.wa.gov, Scott.Kline@dfw.wa, John Easterbrooks <EASTEJAE@dfw.wa.gov>, pgarveydarda@fs.fed.us, teresatucker@fs.fed.us
Cc: Eric Rickerson <eric_rickerson@fws.gov>, Jeff Krupka <jeff_krupka@fws.gov>, Gregg Kurz <gregg_kurz@fws.gov>, "Franks, Sierra" <sierra_franks@fws.gov>, Judy Neibauer <judy_neibauer@fws.gov>, sean.gross@noaa.gov

Attached are the U.S. Fish & Wildlife Service's comments on the SDEIS for the Kachess Drought Relief Pumping Plant and the Keechelus Reservoir to Kachess Reservoir Conveyance. As you will see, many of these comments reiterate our concerns pertaining to the original DEIS, but also focus on the project alternatives, water quality and quantity, bull trout passage at Kachess Reservoir, and wildlife connectivity.

Please feel free to contact us if you need any clarification regarding these comments.

S-

--

*******************************
Stephen T. Lewis
Hydropower and Energy Coordinator
US FISH AND WILDLIFE SERVICE
CENTRAL WASHINGTON FIELD OFFICE
215 MELODY LANE STE 103
WENATCHEE, WA 98801-8122
phone: (509) 665-3508 Ext. 2002
e-mail: Stephen_Lewis@fws.gov

"If a road has no obstacles, it probably doesn't lead to anywhere." S. Lewis

--
Memorandum

To: Environmental Program Manager, Bureau of Reclamation
   Yakima, Washington

From: State Supervisor, Washington Fish and Wildlife Office
       Lacey, Washington

Subject: U.S. Fish and Wildlife Service Comments on the Kachess Drought Relief
         Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance
         Supplemental Draft Environmental Impact Statement

The U.S. Fish and Wildlife Service (Service) appreciates the opportunity to review and comment
on the April 2018 Supplemental Draft Environmental Impact Statement (SDEIS) for the
proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess
Reservoir Conveyance (KKC) projects. KDRPP and KKC will herein be collectively known as
the “Projects.” The Projects are components of the Yakima River Basin Integrated Water
Resource Management Plan (Integrated Plan). The SDEIS was prepared jointly by the Bureau of
Reclamation (Reclamation) and the Washington State Department of Ecology (Ecology), Office
of Columbia River. The Service commented previously on the Draft Environmental Impact
Statement for the Projects on June 18, 2015. In this letter we provided numerous comments
related to project sequencing, bull trout, fish passage, and wildlife connectivity.

The Proposed Action for this SDEIS is to fund, design, construct, operate, and maintain a
floating pumping plant on Kachess Reservoir in order to recover up to 200,000 acre-feet of
inactive water storage from Kachess Reservoir during drought years when prorationing is less
than 70 percent. This water would otherwise remain in Kachess Reservoir at an elevation below
the existing gravity outlet works. The Proposed Action would also include construction and
maintenance of a volitional fish passage structure at the downstream end of the Narrows which is
located between the upper and lower Kachess reservoirs. Reclamation and Ecology each
propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize the Roza Irrigation District to fund, design, construct, operate, and maintain some or all of the Proposed Action.

The SDEIS also evaluates a No Action Alternative and five action alternatives to restore and enhance instream flows and aquatic habitat for fish, including enhancements for bull trout; improving water supply reliability during drought years; improving the ability of water managers to respond and adapt to potential effects of climate change; and contributing to the vitality of the regional economy and riverine environment in the Yakima River Basin. Reclamation's Preferred Alternative (Proposed Action) is Alternative 4 – KDRPP Floating Pumping Plant.

There are three main action modifications in this SDEIS that were not in the DEIS:

- The addition of the floating pumping plant in Kachess Reservoir;
- The inclusion of fish passage (volitional) between the two lakes of Kachess Reservoir when drawn down; and
- The elimination of the south tunnel option for the Keechelus-to-Kachess conveyance tunnel.

The following are the Service's comments on the Project's SDEIS that are intended to ensure compatibility with elements of the Integrated Plan and our pending Endangered Species Act (ESA) section 7 consultation with Reclamation on the operation and maintenance of the Yakima Irrigation Project (YIP). These comments have been closely coordinated with the Service's Mid-Columbia Fish and Wildlife Conservation Office and we have incorporated their comments from a June 4, 2018 technical memorandum.

COMMENTS ON THE SDEIS

Project Alternatives

As referenced above in this document, the Service commented on the DEIS on June 18, 2015. Please refer to these comments when completing the FEIS for the Projects. Those comments are summarized here and provide further insight on the evolution of the project alternatives and the Service’s ESA section 7 consultation with Reclamation.

The Service is currently conducting an ESA section 7 consultation with Reclamation on the operation and maintenance of the YIP. Reclamation’s Biological Assessment (BA) for that consultation contains discrete actions and mitigation measures designed to minimize the impact of the YIP on bull trout. The Service has repeatedly stressed that appropriate implementation sequencing of the Integrated Plan elements along with the ongoing operations and maintenance of the YIP is essential to minimizing risks to ESA listed fish and wildlife resources in the Yakima Basin. The Service listed bull trout under the ESA coterminously in 1999, designated critical habitat for bull trout in 2010, and published a Final Recovery Plan in 2015. The Final Recovery Plan goals include protecting spawning and rearing habitat and insuring connectivity to forage, migration, and overwinterring habitat so that populations have access to cold, clean, complex, and connected habitat within their perspective core areas. The
Yakima Basin is described as one core area and one critical habitat unit. Please ensure implementation of the actions and alternatives contained in the BA does not conflict with the Recovery Plan, the Yakima Bull Trout Action Plan (BTAP), implementation of conservation measures contained in the SDEIS, Integrated Plan, and the Bull Trout Enhancement Plan (BTEP).

Construction, operation, and maintenance of new tunnel corridors and pumping plants, as well as associated changes in reservoir operations will continue to have extensive environmental impacts even though modifications have been proposed in the SDEIS. Although elimination of the south tunnel alternative for the KKC will likely reduce impacts to species under our purview, the north tunnel option will still have impacts to terrestrial resources. The Proposed Action, with the development of the floating pumping plant, is an example of new impacts that are additive to ongoing YIP operational impacts. Those impacts are discussed below in Specific Comments on the SDEIS section.

The implementation, sequencing, and frequency of use of the Projects and their relationship to the recovery of listed species are still unclear. The BTEP is attached to the SDEIS, but does not appear to be incorporated into the Proposed Action with the exception of a vague reference to the programmatic requirements for volitional passage improvements for bull trout in Kacheess Reservoir. The Proposed Action appears to be at a more advanced stage of development whereas the actions in the BTEP are more conceptual in nature, thus complicating our full understanding of potential effects of this action. There is not sufficient assurance in the SDEIS and BTEP that bull trout actions and monitoring projects will be implemented that adequately compensate for the appreciable negative effects of these water supply operations and developments. The timeline for the implementation of these enhancements is not specified to a great enough resolution in the SDEIS to ensure their associated benefits are realized before the damaging effects of the water development alternatives in the SDEIS occurs. This lack of clarity has been reiterated to Reclamation on several occasions during conference calls with the Service and other resource agencies regarding these enhancements.

The SDEIS attempts to resolve this sequencing issue by proposing a four-phased approach for year one construction of the KDRPPP. These phases include preconstruction, upland construction, marine construction, and reservoir floor construction. However, it is unclear when year one of construction would occur. Additionally, the scope and magnitude of the tasks involved in these four phases also appear too extensive to be completed in one year and are contingent upon the elevation of the reservoir. For example, the construction of the Narrows volitional fish passage roughened channel would be initiated in year one and completed in subsequent years when the reservoir is drawn down during drought relief pumping. There is no indication as to when drought relief pumping would occur in order to fully realize the benefit of this measure for bull trout. There is also no mention when Box Canyon Creek passage improvements would be initiated during this four-phased approach, if at all. Your current YIP Operations and Maintenance Biological Assessment identifies and describes that passage improvements will be occurring for Box Canyon. For consistency and clarity, we recommend that Reclamation specify in the FEIS the sequencing of all new actions and alternatives (i.e., water development and enhancement measures) contained in all
pertinent documents including the SDEIS, IP, and BTEP to ensure the success of their implementation and to show how they would be implemented within the scope of current operations associated with the YIP. Sequencing current actions and future actions described in the Proposed Action will provide clarity regarding the duration and magnitude of effects. Positive and negative impacts to ESA species and critical habitat, including the timing, duration, and location of actions should be part of the sequencing descriptions.

Aquatic Resources

Bull Trout Connectivity in the Yakima Core Area

Connectivity between populations of bull trout in the Yakima Basin is one of the most important aspects required for bull trout recovery and in providing a functioning core area. Physical and biological connectivity have been drastically challenged in the Yakima Core Area. This is evidenced by the current lack of passage at reservoir dams, turbulent flows, temperature barriers, and the lack of passage to spawning areas and prey base. Core areas across the range of bull trout show multiple migratory patterns. Monitoring conducted in core areas adjacent to the Yakima Core Area has shown use of stream, river, and lake habitats by fish from both a single local population and from many local populations. Re-establishing connectivity for foraging, migration, overwintering, and spawning/rearing habitats above and below Yakima Basin reservoirs should be the priorities for reducing impacts resulting from the Projects. Reclamation should make a stronger effort in this proposed action toward providing upstream and downstream connectivity before implementing alternatives that cause increased reservoir drawdowns and altered flow releases that create barriers to year round use of habitat by multiple life history stages of bull trout and their prey.

Bull Trout Fish Passage at Kachess Reservoir

The issue of impaired fish passage at certain elevations between the two sections of Kachess Reservoir when drawn down was not recognized in the 2015 DEIS. It emerged as a significant issue late in 2015 and we recognize Reclamation’s efforts to address it. After several Integrated Plan fish passage subcommittee meetings, Reclamation and its engineers appeared to be developing a solution to this passage issue. What emerged from this effort was the roughened channel concept which appears in this SDEIS as the 2017 Kachess Narrows Fish Passage Concept Technical Memorandum. We tentatively agreed with this roughened channel concept as it has several advantages over a fish collection barge and extended length denial fishway. Even though the memorandum has more detail than is available in the SDEIS, it merely provides detail on the construction of this facility and not on the operation, maintenance, or pre and post construction monitoring to decipher its effectiveness. Demonstrating effectiveness is key to the ability to consider the roughened channel as an adequate conservation measure to reduce operational effects to fish passage within Kachess Reservoir. We provide additional comments on these items below in the Specific Comments on the SDEIS section. Please continue to coordinate with the Service as the engineering designs and plans for the construction, operation, maintenance, and effectiveness monitoring evolve for this fish passage facility.
The issue of impeded tributary passage for bull trout into Box Canyon Creek, a tributary of Kachess Reservoir, is not addressed in the Proposed Action. Impeded passage occurs on a semi-regular basis and has required remedial action on several occasions to facilitate adult bull trout passage into the creek. These efforts, for which volunteers are always necessary, have been marginally successful and have only focused on passing adult bull trout during a portion of the spawning migration, not the full migration period or other life history stages. The Box Canyon population continues to struggle with only three bull trout redds documented last year and a recent snorkel survey conducted by WDFW indicates a low number of juvenile and subadult bull trout. During the development of the Integrated Plan, the Service has been clear that any project to extract more water from Kachess Reservoir must include permanently addressing the passage problem at the mouth of Box Canyon Creek, as this is a problem which would almost certainly be exacerbated by an additional drawdown of the reservoir. The omission of a passage solution for Box Canyon Creek from the DEIS and SDEIS is not acceptable to the Service. It is not sufficient that a solution be included solely in the BTEP, rather it should be considered part of the KDRPP proposal since it exacerbates impediments to passage into the tributaries as well. Chapter four of the SDEIS presents an extensive analysis of the increase in frequency and duration of low pool conditions resulting from the operation of KDRPP and the potential effect on tributary passage, yet no solution is presented to resolve the fish passage issue at the mouth of Box Canyon Creek, Kachess River, or other tributaries that may provide foraging opportunities. The associated effects are illustrated very clearly in Table 4.4 of the SDEIS. We strongly recommend that any of the alternatives in the SDEIS entailing the construction and operation of the proposed KDRPP include a provision for bull trout passage as specified in the BTEP, and include additional monitoring of use reservoir use by juveniles and or subadults to understand effects to all life history stages.

**Terrestrial Resources**

**Wildlife Connectivity**

We commend Reclamation for eliminating the south tunnel option of the KKC pipeline. The elimination of this tunnel option of the KKC pipeline appears to be based on geologic necessity and will likely benefit wildlife resources from a long term perspective. The south tunnel option would have interfered with the Snoqualmie Pass corridor for wildlife habitat linkages and overall ecological connectivity across the Cascade Range. While it appears that the north tunnel alignment has lower wildlife habitat value and a higher degree of fragmentation due to land clearing and current levels of human activity and noise, it is also within close proximity to the Swamp Lake wetland complex which provides substantial and diverse wetland habitats for deer, heron waterfowl, small mammals, reptiles, amphibians, cavity-nesting birds, raptors, and songbirds. Similar to our comments on the DEIS, the SDEIS also superficially evaluates potential effects on ecological connectivity for the north tunnel option of the KKC pipeline. The lack of impact indicators related to wildlife movement for the north option still exemplifies how inconsistent the wildlife effects analysis appears to be in this document. The variety and density of terrestrial resources is often greatest along fragmented habitats which exhibit a high degree of edge effect. Many species make regular use of edge habitats for feeding due to higher herbaceous productivity and larger invertebrate populations. Depending on the scope and magnitude of a fragmented habitat, a greater
number of species may inhabit the first 10 meters of a woodland edge. Refer to the I-90 wildlife monitoring program near Gold Creek and Keechelus Lake to see most recent documentation of the use of the wildlife corridors nearby.

In our previous comments on the DEIS, we noted many references to Connectivity Emphasis Areas included in the I-90 Snoqualmie Pass East highway improvement project. As you are aware, the I-90 Snoqualmie Pass East project is an outstanding example of a thorough and sophisticated connectivity analysis. The SDEIS again evaluates potential Project effects on ecological connectivity, especially effects on wildlife and threatened and endangered species, in terms of the proportion of affected acres in the project area relative to the total acres present. We requested in our comments on the DEIS that a spatially explicit analysis be conducted to determine the proximity of acres of habitat affected and their importance to habitat linkages. The current effects analysis also fails to consider the proximity of project effects to Connectivity Emphasis Areas. To make an accurate assessment of the north tunnel option, we again request that spatially explicit analyses be conducted. For example, portals associated with the KKC will be constructed and operated close to edge habitats and near the Swamp Lake wetland complex. Habitat removal during portal construction and disturbance during operation may result in avoidance behavior by wildlife. These types of spatially explicit and context-dependent effects on ecological connectivity are not analyzed in the SDEIS. Please provide this type of analysis.

SPECIFIC COMMENTS ON THE SDEIS

1.) **Major Conclusions (page ES-xvi):** The Service could not find any modelling results in the SDEIS for the frequency or duration of time Kachess Reservoir falls below a channel inflection point in the Narrows as the reservoir recedes. This elevation is important as a waterfall forms that is impassable for fish and prevents movement between the two lakes of the reservoir. It is the primary reason that a roughened channel concept is needed for fish passage. This elevation is given alternately as 2,200 or 2,208 feet (above MSL). Similarly, the elevation when the two lakes form is given as 2,220, 2,224, and 2,226 feet in several sections of the SDEIS. Based on our review, 2,220 feet is where the two lakes begin to separate and 2,226 feet is where Kachess Reservoir tributaries begin to have fish connectivity problems. Lastly, 2,204 feet is the absolute limit for no fish passage through the Narrows. Please clarify these numbers in the SDEIS to ensure accurate modelling results in the document and the ability to determine the degree of impacts to bull trout and its designated critical habitat. This information will also help to determine effects at both the Narrows and at the outlet of the upper or Little Kachess portion of the Reservoir. The Service also expects that passage is impeded at the outlet of the upper lake due to limited depth and resulting temperature alterations. Passage barriers also occur at the mouth of the Kachess River. The Service recommends that priority be given to connecting the reservoir to bull trout spawning habitat in the Kachess River.

2.) **Figure 1-2 Kachess Reservoir Schematic Hydraulic Profile (page 1-7):** The proposed KDRPP drawdown in this figure equates to approximately an 80 foot water elevation drop in the Big Kachess lake portion of the Kachess Reservoir. Please provide an analysis of
how this elevation drop will affect upstream fish passage alternatives at the Narrows segment of Kachess Reservoir and downstream fish passage alternatives at Kachess Dam considering the slow nature of refill at this reservoir as evidenced by refill rates that have taken hundreds of days or multiple springs to refill.

3.) Section 1-4 Proposed Action (page 1-10): This section states, “The Proposed Action would also include volitional fish passage at the downstream end of the Narrows which is located between the upper and lower Kachess lakes.” In order to assess effects to species under the purview of the Service, please include in the FEIS specific engineering designs, impact analysis, and elevational aspects related to Reclamation’s concept for volitional fish passage at the Narrows.

4.) Section 2.3.5 Volitional Bull Trout Passage Improvements (page 2-18): Since the proposed volitional bull trout passage improvements entail a roughened channel, we recommend adhering to the following principles: a.) natural steep channels provide a design template for “nature-like fishways”; b.) bed morphology is a major component of energy dissipation; c.) appropriate bed morphology depends on slope, target species, and hydrology; and d.) risk increases the further the project deviates from any adjacent natural channel conditions. In that spirit, please provide detailed elevational numbers pertaining to the Kachess Reservoir Narrows flow bifurcation weir for the roughened channel in order to decipher its effectiveness during high flow events. Also, please provide detailed velocity information for the roughened channel to determine the compatibility of this fish passage concept with bull trout capabilities. Lastly, Section 2.3.5 only describes the construction of the volitional bull trout passage improvements at Kachess Reservoir. Please add further description regarding the operation, maintenance, and effectiveness monitoring of this proposed fish passage improvement.

5.) Section 2.5.1.1 Pump Barge and Pumping Plant (page 2-35): Based upon our review of comments made on the DEIS in 2015, it is still apparent that project operations for KDRPP need further explanation in the FEIS as to how the lower Kachess River below the dam will not be dewatered in the event the pumps are operated continuously for two or more years outside the typical irrigation season. If the pumps were only operated during the irrigation season, and then turned off while the reservoir elevation is below the gravity outlet, the Kachess River would be completely dewatered. In addition to describing operations of KDRPP outside of the irrigation season, the FEIS should describe contingency measures that will be in place to prevent complete dewatering of the Kachess River in the event of pump failure or maintenance activities that require pump shutdown.

6.) Table 2-9 Summary Comparison of Impacts (page 2-66) and Table 4-4 Summary Impacts for Surface Water Resources (page 4-17): There is an apparent formatting error for these two tables. The same summary statistics in Table 2-9 can be found in Table 4-4. Please correct this discrepancy.

7.) Summary Comparison of Impacts, Table 2-9 (page 2-67): This table is confusing and would benefit from presenting the number of days bull trout would reasonably be able to access the referenced tributaries based upon the proposed alternatives.
8.) **Box Canyon Creek (page 3-75):** This section mentions that there is a barrier falls located at river mile 1.6 and yet there is no discussion of the bull trout passage impediment located at the confluence of Box Canyon Creek. This is an example of how baseline conditions can be further degraded with implementation of the Proposed Action. Please include information regarding the lack of bull trout passage into Box Canyon Creek from Kachess Reservoir and how the Proposed Action would further degrade the current condition.

9.) **Table 3-21. Species Federally Listed or Proposed for Listing that Potentially Occur in the Primary Study Area and Extended Study Area (page 3-104):** This table is confusing and we recommend the Primary Study Area and Extended Study Area be combined into one study area.

10.) **Section 3.9.2 Listed Species and Critical Habitat (page 3-105):** Please clarify in this section that the barred owl is a competitor of the spotted owl, not a predator. The barred owl typically outcompete the spotted owl in terms of establishing and defending territories. Barred owls may displace spotted owls from suitable habitat, being both slightly larger and more aggressive. Hybridization between the species is also known to occur, which is another threat to the spotted owl.

11.) **Section 3.9.3.1 Kachess Reservoir Subpopulation (page 3-111):** The discussion in this section implies that tributary access may be a limiting factor for the Kachess Reservoir bull trout subpopulation. This is only partially correct. The Proposed Action and future operation of the Kachess Reservoir will further limit tributary access for bull trout and the text in this section should be changed accordingly to accurately represent the impacts of impeded passage on this population.

12.) **Section 4.4 Surface Water Quality (page 4-77):** The amount and quality of water in the Yakima Core Area for bull trout is currently impacted by Reclamation’s actions as well as forest management, agriculture, and recreational development. How Reclamation conveys water continues to affect the condition, quality, quantity, and the velocity of water in bull trout habitat. While implementing new alternatives and actions associated with the SDEIS, the Service would like to see priority given to improvements in the quality, quantity, and velocities in such a way as to improve and restore habitat qualities that meet the Primary Constituent Elements described for bull trout critical habitat. The flow regimes associated with current Reclamation operations currently have impacts to bull trout and their critical habitat. The Service recommends that conservation measures should be identified prior to implementation of new alternatives or actions that may exacerbate or reduce water quality, quantity, and flow in a manner that negatively affects use of spawning, rearing, and foraging habitat, as well as connectivity.

Water conservation is a component of the YIP ongoing operations. Please consider implementing YIP conservation actions prior to the implementation of the additional drawdown of the Kachess Reservoir. Previous Reclamation analysis has described that 170,000 acre feet of water can be conserved through the Enhanced Water Conservation
YIP element. Improvements associated with this element should be in place before additional impacts beyond the ongoing operations of the YIP are applied.

13.) **Section 4.6.3 Alternative 1 – No Action: Kachess Reservoir (page 4-119):** Failure to address the passage problems at tributaries such as Box Canyon, Kachess River, and at the Narrows between the upper and lower Kachess Lakes under the No Action Alternative is unacceptable to the Service. The No Action alternative will result in continued bull trout passage issues. Analysis of the impacts associated with the lack of passage should be presented in the FEIS.

14.) **Section 4.6.4.2 Operation KDRPP East Shore Pumping Plant Facilities (page 4-129):** Please include bull trout as a fish species affected by the further reductions and fluctuations in operational elevations that would negatively influence remaining invertebrate species, particularly in nearshore shallow-water habitats. Reclamation should also include the prey species of bull trout as affected species.

15.) **Section 4.6.6.2 Operation, Kachess Reservoir (page 4-140):** Please provide additional hydrodynamic and bioenergetics analysis to decipher the impacts of withdrawing large amounts of surface water from Kachess Reservoir on bull trout. Daphnia, a prey species for fish, are available during spring (April-June) in Kachess than Keechelus reservoirs. Unlike Keechelus Reservoir, the density of Daphnia in Kachess Reservoir within the metalimnion and hypolimnion is relatively high compared to the epilimnion. The Service maintains that placement of the pump heads should be deeper in the water column to maintain predator prey relationships. Please provide an appropriate analysis that looks at location of the pump heads at multiple elevations into the metalimnion to reduce effects to the bull trout preybase along with predator prey interactions between large and small predators.

16.) **Section 4.9.6 Alternative 4 – KDRPP Floating Pumping Plant (Northern Spotted Owl) (page 4-200):** Even though Alternative 4 may have less impacts due to a lower occurrence of vegetative clearing, noise generated during construction for access roads, outlet works and other facilities landward of the reservoir will still be evident. The analysis in the SDEIS is insufficient to determine if this level of impact will force spotted owls from habitat adjacent to these activities. If spotted owls leave territories, barred owls will likely move into these vacated habits since they are more tolerable of human activity. Please adhere to designated spotted owl pre-construction survey protocols to verify presence or absence of owls within the designated area of impact for Alternative 4 as well all of the Projects’ alternatives.

**SUMMARY COMMENTS**

The Service recommends that the SDEIS be revised to acknowledge the linkage to current operational effects that could exacerbate any new actions or operations. It should also be revised to acknowledge that subsequent NEPA and ESA analysis of most BTEP actions would be required. Conservation measures to reduce effects should be synchronized for further reduction in effects. The Service recommends that the document provide a sequence of
actions that reduce multiple or long term effects caused by ongoing and new actions to the YIP. Additionally, the Service asks for additional information about reservoir elevations and passage barriers at outlets of lakes and mouths of rivers and tributaries, and alternative pump head location for conducting effects analysis and minimizing the effects of the actions. Finally, the Service requests that fish passage projects that improve connectivity to spawning, rearing habitats, foraging, migration, and overwintering habitats both above and below the reservoir dams be implemented prior to or concurrent with Project implementation.

We appreciate the opportunity to provide input on the SDEIS for the proposed Projects and look forward to continued coordination with Reclamation on the development and implementation of the Integrated Plan. Please contact Steve Lewis, Fish and Wildlife Biologist by phone at 509-665-3508 ext. 2002, or by e-mail at Stephen_Lewis@fws.gov for questions regarding the comments contained herein. Specific questions regarding the development and implementation of the Integrated Plan should be referred to Jim Craig, Project Leader by phone at 509-548-7573, or by e-mail at jim_craig@fws.gov.

cc:
USFWS, Leavenworth, WA (J. Craig)
USFWS, Leavenworth, WA (K. Terrell)
NOAA-Fisheries, Ellensburg, WA (D. Bambrick)
WDFW, Yakima, WA (M. Livingston)
WDFW, Yakima, WA (S. Kline)
WDFW, Yakima, WA (J. Easterbrooks)
USFS, Wenatchee, WA (P. Garvy-Darda)
Fwd: [EXTERNAL] Roza SDEIS comment letter
1 message

McKinley, Candace <cmckinley@usbr.gov>  Wed, Jul 11, 2018 at 4:00 PM
To: "Dera, Karen" <kdera@usbr.gov>, Julia Long <jlong@usbr.gov>, Deborah Van Meter <dvanmeter@usbr.gov>

---------- Forwarded message ----------
From: Revell, Scott <srevell@roza.org>
Date: Wed, Jul 11, 2018 at 3:02 PM
Subject: [EXTERNAL] Roza SDEIS comment letter
To: Candace McKinley <CMckinley@usbr.gov>
Cc: Wendy Christensen <GChristensen@usbr.gov>

Scott Revell
District Manager
Roza Irrigation District
srevell@roza.org
(509) 840-2721  cell

--
Candy McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901

509/575-5848 x232
509/379-0780 cell
July 11, 2018

U.S. Bureau of Reclamation
Attn: Ms. Candace McKinley
Environmental Program Manager
1917 Marsh Road
Yakima, WA 98901-2058

Re: Comments on Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects

Dear Ms. McKinley,

Roza Irrigation District (Roza) has reviewed the April 2018 Supplemental Draft Environmental Impact Statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC, and collectively with the KDRPP, Projects). Implementation of the KDRPP is of the utmost importance to Roza, as the livelihoods of irrigators within Roza’s service area are dependent on obtaining a more reliable source of water from the Yakima Project during drought years. Roza is prepared to fully fund, construct, operate, and maintain the Proposed Action, Alternative 4 – Floating Pumping Plant (Proposed Action).

Roza receives water from the Bureau of Reclamation’s Yakima Project. Roza delivers such water to 72,000 irrigable acres within its service area. Irrigators within Roza’s service area rely upon a stable source of water from the Yakima Project to grow and produce their crops, including tree fruit, hops, wine and juice grapes, corn, and row crops, as well as maintain pasture land to support a large dairy industry. The total crop value in the District approaches $1 billion. The crops produced by farmers provide a fresh food supply to both domestic and foreign markets. Therefore, a steady and reliable source of Yakima Project water is vital to Roza’s entire service area.

Recent droughts have demonstrated that Roza’s water supply from the Yakima Project may be inadequate to support crop production in water short years. Without a stable water supply from the Yakima Project, the agricultural industry within Roza’s service area—and throughout the rest of the Yakima Basin—will suffer. Because Roza’s water supply from the Yakima Project is proratable, Roza has received as little as 37% of its water entitlement in water short years.

When Roza receives a reduced amount of its water entitlement, Roza must shut down (i.e. cease water deliveries) for weeks at a time mid-season and weeks early at the end of the irrigation season. As a result, farmers receive an inadequate amount of water needed for their crops. This is
particularly true with respect to 70%+ of Roza’s 72,000 acres, which are planted with crops that require water in September—including apples, hops, wine grapes and juice grapes.

Roza has already spent tens of millions of dollars over three-plus decades to implement water conservation measures. These conservation measures allow Roza to operate its canals to run at much lower flows than originally designed. Roza has also been the largest lessee of senior water rights over the past several drought years. Despite conservation measures and leased water, Roza has still been forced to severely restrict deliveries during drought years.

Steep prorationing of water supplies not only results in lost crop production—and thus lost revenue—in water short years, but also may lead to the need to replace and replant crops. Crops such as apples can cost up to $50,000 per acre to replace, blueberries up to $25,000, hops up to $25,000, and wine grapes up to $15,000. Washington State Department of Agriculture estimates that losses and added expenses as a result of the 2015 drought were $77 million within Roza’s service area. Although costs of pursuing the Proposed Action may be high, such costs will be offset by the losses of the production value of crops and the costs of replacing trees and vines that will be avoided through development of the Proposed Action.

Based upon our review of the SDEIS’s analysis of the socioeconomic consequences of the Proposed Action (Section 4.21), we believe that the SDEIS may substantially underestimate the importance of agriculture in the Yakima Valley, and the socioeconomic benefits of the Proposed Action to the agricultural industry and the economy within Roza’s service area and throughout the Yakima Basin for at least three reasons.

First, the economic analysis is based on a four county area, which includes Kittitas, Benton, Yakima, and Franklin Counties. We think that the inclusion of Franklin County may be over-inclusive. We are concerned that, by including Franklin County, the SDEIS may have diluted or underestimated the economic importance of agriculture in the areas primarily served by Yakima Project water.

Second, the SDEIS’s economic analysis is based on 2012 data. See SDEIS at 3-178, 4-319. It is our understanding that the contributions of agriculture to the Yakima Basin economy have greatly increased over the last few years, and therefore, the SDEIS may be underestimating the economic importance of agriculture. In turn, this may result in Reclamation underestimating the potential economic consequences of pursuing the no-action alternative. We request that this information be updated in the final environmental impact statement.

Third, the economic analysis appears to provide an inadequate explanation of the negative economic impacts of the 2015 drought. As stated above, the short-term and long-term effects of the 2015 drought on the agricultural community were more significant than described in the SDEIS. For each of these reasons, the potential costs to the agricultural community of not pursuing the Proposed Action, as well as the economic benefits of the Proposed Action, are much greater than described in the SDEIS.

The Proposed Action will enhance water security in water short years. We believe that the Proposed Action is vital to protecting the economy in the Yakima Basin, so much so that Roza is prepared to fund, construct, operate and maintain the Proposed Action. Without the Proposed Action, Roza, farms served by Roza, and the broader community will continue to suffer from both the uncertainty of water resources and the impacts of the lack of water resources. The Proposed Action would allow Roza (and potentially others) to access up to 200,000 acre-feet of water in...
water short years, and would give water users peace of mind when it comes to water short years. This will provide Roza with more flexibility to respond to water short years and will help protect the area’s economy and people’s livelihoods.

Thank you for the opportunity to provide input.

Sincerely,

Scott Revell
District Manager

cc: Roza Board of Directors
File
July 5, 2018

U.S. Bureau of Reclamation
Attn: Ms. Candace McKinley
Environmental Program Manager
1917 Marsh Road
Yakima, WA 98901-2058

Re: Comments on Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects

Dear Ms. McKinley:

The Port of Benton has reviewed the April 2018 supplemental draft environmental impact statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance. The Port supports the Proposed Action, Alternative 4 – Floating Pumping Plant (the “Proposed Action”), as it will benefit both the environment and the economy in the Yakima Basin and beyond during drought years.

Agriculture forms the basis of our economy as it is one of the largest industries in the area. The jobs provided by agricultural activities sustain many local families and contribute significantly to our rural way of life and rural character.

There are hundreds farms with over 28,000 irrigated acres which are located in both the Port of Benton and the Roza Irrigation District, and such farms rely upon a stable source of water from the Yakima Project to maintain their crops. Processing those crops occurs within the Port of Benton. The Roza and Sunnyside Valley Irrigation Districts deliver Yakima Project water to such farms. The farms in the area rely upon Yakima Project water to grow and produce such as apples, tree fruits, grapes, blueberries, forage crops, hops as well as a large dairy industry.

The agricultural community is a vital aspect of the economy of the immediate area, the region and beyond. The crops produced by farms provide a fresh food supply to both domestic and foreign markets. Collectively, the annual revenue from farms in the Port of Benton is measured in hundreds of millions of dollars.

Recent droughts have demonstrated that water supply from the Yakima Project may be inadequate in water short years to support crop production. Because the water supply from the Yakima Project to the Roza Irrigation District is proratable, the irrigation districts are susceptible to reduced irrigation water allocations during drought years.
Without a stable and adequate water supply from the Yakima Project, the agricultural industry within the basin, and throughout the rest of the Yakima Basin, will suffer. This, in turn, damages the entire economy of the County and the region. For example, due the drought in 2015, the Washington State Department of Agriculture estimated economic losses of up to $30 million dollars in the portion of the Roza Irrigation District which is situated in the Port of Benton alone.

Based upon our review of the SDEIS’s analysis of the socioeconomic consequences of the Proposed Action (Section 4.21), we believe that the SDEIS may substantially underestimate the importance of agriculture in the Yakima Valley and the socioeconomic benefits of the Proposed Action to the agricultural industry and the economy within the District, and throughout the Yakima Basin for at least three reasons.

First, the economic analysis is based on a four county area, which includes Kittitas, Benton, Yakima, and Franklin Counties. We think that the inclusion of Franklin County may be over-inclusive. We are concerned that, by including Franklin County, the SDEIS may have diluted or underestimated the economic importance of agriculture in the areas primarily served by Yakima Project water.

Second, the SDEIS’s economic analysis is based on 2012 data. See SDEIS at 3-178, 4-319. It is our understanding that the contributions of agriculture to the Yakima Basin economy have greatly increased over the last few years, and therefore, the SDEIS may be underestimating the economic importance of agriculture. In turn, this may result in Reclamation underestimating the potential economic consequences of pursuing the no action alternative. We request that this information be updated in the final environmental impact statement.

Third, the economic analysis appears to provide an inadequate explanation of the negative economic impacts of the 2015 drought. As stated above, the short term and long term effects of the 2015 drought on the agricultural community were more significant than described in the SDEIS. For each of these reasons, the potential costs to the agricultural community of not pursuing the Proposed Action, as well the economic benefits of the Proposed Action, are much greater than described in the SDEIS.

The Port supports the Projects because the Projects will enhance water security in water short years. We believe that the Projects are vital to protecting the economy in the Yakima Basin. Without the Projects, farms located in and around the Port, and the broader community will continue to suffer from both the uncertainty of water resources and the impacts of the lack of water resources.

Thank you for the opportunity to provide input.

Sincerely,

SCOTT D. KELLER, PPM®
Executive Director
Fwd: [EXTERNAL] KRD Comments for the Kachess Drought Relief Pumping Plant
1 message

McKinley, Candace <cmckinley@usbr.gov>  Thu, Jul 12, 2018 at 6:56 AM
To: Julia Long <jlong@usbr.gov>, "Dera, Karen" <kdera@usbr.gov>, Gwendolyn Christensen <gchristensen@usbr.gov>

---------- Forwarded message ----------
From: Kevin Eslinger <kevin@krdistrict.org>
Date: Wed, Jul 11, 2018 at 4:39 PM
Subject: [EXTERNAL] KRD Comments for the Kachess Drought Relief Pumping Plant
To: CMckinley@usbr.gov

Dear Ms. McKinley,

Please find attached the Kittitas Reclamation District (KRD) Comments on the Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects.

Thank you,

Urban Eberhart
Secretary Manager
Kittitas Reclamation District

--
Candy McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901
July 11, 2018

U.S. Bureau of Reclamation
Attn: Ms. Candace McKinley
Environmental Program Manager
1917 Marsh Road
Yakima, WA 98901-2058

Re: Comments on Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects

Dear Ms. McKinley,

Kittitas Reclamation District ("KRD") has reviewed the April 2018 supplemental draft environmental impact statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC, and collectively with the KDRPP, Projects). The KRD strongly supports the implementation of the Yakima Basin Integrated Plan, and specifically, the implementation of Proposed Action, Alternative 4 – Floating Pumping Plant (the "Proposed Action") by Roza Irrigation District. The Proposed Action will benefit both the environment and the economy in the Yakima Basin and beyond during drought years.

A steady and reliable source of Yakima Project water is vital to KRD’s water users. The KRD is the 6th largest irrigation district in Washington State. The KRD’s 330 miles of canals and laterals service approximately two thirds of all the irrigated agricultural acres in Kittitas County. The Yakima Project water is the primary source of irrigation water for 59,122 acres of farm and ranch land in Kittitas County, Washington. These farms rely upon a stable source of water from the Yakima Project to maintain their crops. In particular, the farms within the KRD’s service area rely upon Yakima Project water to grow and produce apples, pears, cherries, corn, wheat, oats, barley, sunflowers, potatoes, beans, blueberries, Timothy hay, alfalfa hay, and livestock pasture. The crops produced by farmers provide a fresh food supply to both domestic and foreign markets.

KRD has a long term goal of increasing the efficiency of its irrigation water delivers to lands within its district boundaries that are entitled to receive irrigation water. As previously outlined in KRD’s June 12, 2015 comment letter on the KDRPP and KKC Projects Draft Environmental Impact Statement, KRD has undertaken modifications to its irrigation delivery system to increase system efficiency and the enhance fish flows in various creeks and streams.
Recent droughts have demonstrated that KRD’s water supply from the Yakima Project may be inadequate in water short years to support crop production. Without a stable water supply from the Yakima Project, the agricultural industry within KRD, and throughout the rest of the Yakima Basin, will suffer. Because KRD’s water supply from the Yakima Project is proratable, in water short years we have received less than fifty percent of our water entitlement, which then results in farmers receiving an inadequate amount of water needed for their crops. Steep prorationing of water supplies not only results in lost crop production, and thus lost revenue, in water short years, but also may lead to the need to replace and replant crops. Crops such as apples and blueberries cost up to $50,000.00 per acre to replace if they fail, hops cost up to $20,000, and wine grapes up to $15,000. Because of the 2015 drought, farmers within the KRD lost an estimated $11,420,507.55.

Although costs of pursuing the Proposed Action may be high, such costs will be offset by the losses of the production value of crops and the costs of replacing crops that will be avoided through development of the Proposed Action. The Proposed Action is specifically designed to enhance water supplies available to KRD and other proratable irrigation districts when less than a full water supply is available. Specifically, the Proposed Action will ensure that in most if not all water short years, KRD (should it elect to participate in the project) and other participating irrigation districts will receive up to 70% of their full supply. The Proposed Action will create an opportunity for KRD, if it eventually elects to participate in the project, to lengthen the irrigation season and the period of operation in its service area.

Based upon our review of the SDEIS’s analysis of the socioeconomic consequences of the Proposed Action (Section 4.21), we believe that the SDEIS may substantially underestimate the importance of agriculture in the Yakima Valley and the socioeconomic benefits of the Proposed Action to the agricultural industry and the economy throughout the Yakima Basin for at least three reasons.

First, the economic analysis is based on a four county area, which includes Kittitas, Benton, Yakima, and Franklin Counties. We think that the inclusion of Franklin County may be over-inclusive. We are concerned that, by including Franklin County, the SDEIS may have diluted or underestimated the economic importance of agriculture in the areas primarily served by Yakima Project water.

Second, the SDEIS’s economic analysis is based on 2012 data. See SDEIS at 3-178, 4-319. It is our understanding that the contributions of agriculture to the Yakima Basin economy have greatly increased over the last few years, and therefore, the SDEIS may be underestimating the economic importance of agriculture. Specifically, in the KRD since 2010, the amount of apple production has increased by 61%. In turn, this may result in Reclamation underestimating the potential economic consequences of pursuing the no action alternative. We request that this information be updated in the final environmental impact statement.

Third, the economic analysis appears to provide an inadequate explanation of the negative economic impacts of the 2015 drought. As stated above, the short term and long term effects of

---

the 2015 drought on the agricultural community were more significant than described in the SDEIS. For each of these reasons, the potential costs to the agricultural community of not pursuing the Proposed Action, as well as the economic benefits of the Proposed Action, are much greater than described in the SDEIS.

The Proposed Action will enhance water security in water short years throughout the Yakima Basin. We believe that the Proposed Action is vital to protecting the economy in the Yakima Basin, as well as fish flows.

For these reasons, KRD is supportive of the Proposed Action and is supportive of Roza Irrigation District as the operator of the Proposed Action. Moreover, KRD has consistently expressed interest in the possibility of buying into the KDRPP project in the future, and continues to be interested in this possibility.

Thank you for the opportunity to provide input.

Sincerely,

[Signature]

Urban B. Eberhart
Secretary Manager
Kittitas Reclamation District
[EXTERNAL] Comment Letter from Benton County Commissioners for July 11, 2018 Comment Period
1 message

Jerrod MacPherson <Jerrod.MacPherson@co.benton.wa.us>  Tue, Jul 10, 2018 at 11:30 AM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Jerrod B. MacPherson, Planning Manager
Benton County Planning Department
P.O. Box 910
1002 Dudley Avenue
Prosser, WA 99350
(509) 786-5612

www.co.benton.wa.us

NOTICE OF PUBLIC DISCLOSURE: This e-mail account is public domain. Any correspondence from or to this email account may be a public record. Accordingly, this email, in whole or in part, may be subject to disclosure pursuant to RCW 42.56, regardless of any claim of confidentiality or privilege asserted by an external party.
July 10, 2018

United States Bureau of Reclamation
ATTN: Candace McKinley, Environmental Program Manager
1917 Marsh Road
Yakima, Washington 98901-2058

Re: Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects Supplemental Draft Environmental Impact Statement

Dear Ms. McKinley:

Benton County has reviewed the April 2018 Supplemental Draft Environmental Impact Statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance (KtoK). The County supports the Proposed Action, Alternative 4—Floating Pumping Plant (the “Proposed Action”), as we believe it is the alternative that will best benefit both the environment and the economy in the Yakima Basin during drought years.

Despite continued economic diversification across many sectors, agriculture remains the underpinning of the Basin’s economy from the upper Kittitas Valley all the way to the confluence here in the Tri-Cities. The jobs provided by agricultural activities sustain many local families and contribute significantly to the culture and character of Benton County.

Recent droughts have demonstrated that water supply from the Yakima Project may be inadequate in water-short years to support crop production at usual and expected levels. This is true despite continued conservation and efficiency efforts. As such, a varied, complementary, and comprehensive strategy is required, one that includes the bigger and more ambitious water supply projects like KDRPP and KtoK.

While we support the general findings of the SDEIS and the direction of the Proposed Action, there are two items we would like to point out:

1. The economic analysis is based on a four-county area – Benton, Franklin, Kittitas, and Yakima. While the local economies of Benton and Franklin counties are inextricably tied together, Franklin County’s water use is not tied to the Yakima Project in any substantive way that we are aware of. We suggest that the inclusion of Franklin County in the analysis
might have dilutive effect, causing the analysis to underestimate the economic importance of agriculture in the areas primarily served by Yakima Project water.

2. The economic analysis takes inadequate account of the negative economic impacts of the 2015 drought, the most recent such event on record. The short and long-term effects of the 2015 drought on the agricultural community were more significant than described in the SDEIS.

The economic benefits of the Proposed Action, as well as the potential costs to the agricultural community of not pursuing the Proposed Action, create for us both optimism and concern. As such, Benton County supports KDRPP and KtoK because the Projects will enhance water security in water-short years. We believe that the Projects are vital to protecting the economy in the County specifically and the Yakima Basin in general. Without the Projects, our community will continue to suffer from both the uncertainty of water resources and the impacts of the lack of water resources in water-short years heading into a future where such years might be occurring with greater frequency.

Thank you for the opportunity to provide input on this important matter.

Sincerely,

BOARD OF COUNTY COMMISSIONERS

Jerome Delvin, Chairman

Shon Small

Jim Beaver
See attached letter.

Thank you,

Mary Barnett

Administrative Assistant | Port of Grandview
P.O. Box 392 | 1313 W. Wine Country Rd., #101
Grandview, Washington 98930
Office: 509.882.9975 | Cell: 509.832.0065
Office Hours: Mon. thru Thurs., 9 a.m.–1 p.m.
office@portofgrandview.org | www.portofgrandview.org

Letter - Roza Kachess Comment Letter Signed.pdf
1645K
July 10, 2018

U.S. Bureau of Reclamation  
Attn: Ms. Candace McKinley  
Environmental Program Manager  
1917 Marsh Road  
Yakima, WA 98901-2058

Re: Comments on Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance Projects

Dear Ms. McKinley:

The Port of Grandview has reviewed the April 2018 supplemental draft environmental impact statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance. The Port supports the Proposed Action, Alternative 4 - Floating Pumping Plant (the “Proposed Action”), as it will benefit both the environment and the economy in the Yakima Basin and beyond during drought years.

Agriculture forms the basis of our economy as it is one of the largest industries in the area. The jobs provided by agricultural activities sustain many local families and contribute significantly to our rural way of life and rural character.

There are hundreds of farms, with tens of thousands of irrigable acres located immediately around the Port of Grandview, and such farms rely upon a stable source of water from the Yakima Project to maintain their crops. Processing those crops occurs within the Port of Grandview. The Roza, Sunnyside Valley and Grandview irrigation districts deliver Yakima Project water to such farms. The farms in the area rely upon Yakima Project water to grow and produce crops such as apples, tree fruits, grapes, blueberries, forage crops, and hops, as well as a large dairy industry.

The agricultural community is a vital aspect of the economy of the immediate area, the region and beyond. The crops produced by farms provide a fresh food supply to both domestic and foreign markets. Collectively, the annual revenue from farms around the Port is measured in hundreds of millions of dollars.

Recent droughts have demonstrated that water supply from the Yakima Project may be inadequate in water short years to support crop production. Because the water supply from the Yakima Project to the irrigation districts is proratable, the irrigation districts are susceptible to reduced irrigation water allocations during drought years.
Without a stable and adequate water supply from the Yakima Project, the agricultural industry within the basin and throughout the rest of the Yakima Basin will suffer. This, in turn, damages the entire economy of the county and the region. For example, due to the drought in 2015, the Washington State Department of Agriculture estimated economic losses of up to $77,000,000 in the Roza Irrigation District alone.

Based upon our review of the SDEIS’s analysis of the socioeconomic consequences of the Proposed Action (Section 4.21), we believe that the SDEIS may substantially underestimate the importance of agriculture in the Yakima Valley, and the socioeconomic benefits of the Proposed Action to the agricultural industry and the economy within the District and throughout the Yakima Basin, for at least three reasons.

First, the economic analysis is based on a four-county area, which includes Kittitas, Benton, Yakima, and Franklin Counties. We think that the inclusion of Franklin County may be over-inclusive. We are concerned that, by including Franklin County, the SDEIS may have diluted or underestimated the economic importance of agriculture in the areas primarily served by Yakima Project water.

Second, the SDEIS’s economic analysis is based on 2012 data. See SDEIS at 3-178, 4-319. It is our understanding that the contributions of agriculture to the Yakima Basin economy have greatly increased over the last few years, and therefore, the SDEIS may be underestimating the economic importance of agriculture. In turn, this may result in Reclamation underestimating the potential economic consequences of pursuing the no action alternative. We request that this information be updated in the final environmental impact statement.

Third, the economic analysis appears to provide an inadequate explanation of the negative economic impacts of the 2015 drought. As stated above, the short term and long term effects of the 2015 drought on the agricultural community were more significant than described in the SDEIS. For each of these reasons, the potential costs to the agricultural community of not pursuing the Proposed Action, as well the economic benefits of the Proposed Action, are much greater than described in the SDEIS.

The Port supports the Projects because the Projects will enhance water security in water short years. We believe that the Projects are vital to protecting the economy in the Yakima Basin. Without the Projects, farms located in and around the Port and the broader community will continue to suffer from both the uncertainty of water resources and the impacts of the lack of water resources.

Thank you for the opportunity to provide input.

Sincerely,

Port of Grandview Board of Commissioners

Jim Sewell
President

Richard Sheneyer
Secretary

Ron Grow
Investment Officer

March 2019
Fwd: [EXTERNAL] KDRPP-KKC SDEIS Letter

McKinley, Candace <cmckinley@usbr.gov>
To: Julia Long <jlong@usbr.gov>, "Dera, Karen" <kdera@usbr.gov>

Thu, Jul 12, 2018 at 4:21 PM

---------- Forwarded message ----------
From: Dana Hunter - NOAA Federal <dana.hunter@noaa.gov>
Date: Thu, Jul 12, 2018 at 10:45 AM
Subject: [EXTERNAL] KDRPP-KKC SDEIS Letter
To: "McKinley, Candace A" <CMckinley@usbr.gov>, GTEB461@ecy.wa.gov

Attachment:

Comments on the Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Projects

Please direct any questions or concerns regarding this letter to Sean Gross, Columbia Basin Branch, at sean.gross@noaa.gov or (509) 962-8911 ext. 806.

Thank you,

Dana Hunter
Administrative Assistant
Columbia Basin Branch Office
NOAA Fisheries*
304 South Water Street, Suite 201
Ellensburg, Washington 98926
Office: (509) 962-8911 ext. 801
Fax: (509) 962-8544
dana.hunter@noaa.gov
*Contractor - Leading Solutions, LLC

www.westcoast.fisheries.noaa.gov

~~~~~~~~~~~~~~~

March 2019
Candy McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901

509/575-5848 x232
509/379-0780 cell

KDRPP-KKC_SDEIS_Letter_2018-07-12_Final.pdf
247K
July 12, 2018

Candace McKinley
Environmental Program Manager
Columbia-Cascades Area Office
U.S. Bureau of Reclamation
1917 Marsh Road
Yakima, WA 98901-2058

Thomas Tebb
Director
Office of the Columbia River
Washington State Department of Ecology
1250 West Alder Street
Union Gap, WA 98903-0099

Re: Comments on the Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Projects

Dear Ms. McKinley and Mr. Tebb:

The National Marine Fisheries Service (NMFS) has reviewed the supplemental draft environmental impact statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Projects, which are two of many projects that together comprise the Yakima Basin Integrated Plan (YBIP).

NMFS has enthusiastically participated in the Integrated Plan (IP) because it is a collaborative effort with the potential to greatly improve fisheries resources and water supplies in the Yakima Basin. NMFS’ primary interest in these projects is their potential to affect Mid-Columbia River steelhead, Chinook salmon, and coho salmon for which NMFS has jurisdiction through the Endangered Species Act, Magnuson-Stevens Fishery and Conservation Management Act, Federal Power Act, and the Fish and Wildlife Coordination Act.

NMFS has supported the concepts underlying the KKC and KDRPP projects based on an understanding that KKC would benefit fish and KDRPP would provide emergency irrigation water while avoiding significant impacts to fish. The benefits and impacts of these projects depend on how they will be operated.
Numerous studies and reports, authored by the U.S. Bureau of Reclamation (Reclamation), the Yakama Nation, and others, have recognized that the operation of the Yakima Irrigation Project has adversely affected salmon and steelhead by altering instream flows throughout the basin. Key impacts to these species have resulted from the water storage and delivery system reducing river flows during the winter and spring, which reduces rearing habitat and increases mortality of juvenile fish as they migrate downstream. Construction of KKC-KDRPP will provide Reclamation with the ability to further control river flows, which could result in benefits or impacts, depending on how these facilities are operated.

The SDEIS is an improvement over the DEIS in describing expected operations of KKC-KDRPP. However, more refined operational rules and water accounting are needed to ensure transparency and demonstrate that salmon and steelhead will not be harmed by the project.

The YBIP identifies increased spring flows as an objective of the YBIP in most river reaches that may be affected by KDRPP refill operations, and identifies increased winter minimum flows as an objective in several of the same reaches. Without sufficient safeguards for fish, the KDRPP could cause harm by reducing winter and spring flows in these reaches during post-drought refill years.

The SDEIS includes a key commitment to protect spring flows:

In keeping with the goals of the IP, under the Proposed Action during Kachess Reservoir refill, Reclamation would operate the Yakima Project to ensure spring (March through June) flows are at least what they would be under current operating conditions without KDRPP. Current operating conditions vary by year depending on hydrologic conditions (SDEIS, 2.3.3, p. 2-17).

Fully implementing this commitment in the regulated reaches of the Yakima Basin will go a long way toward ensuring that operation of the KDRPP does not negatively impact salmon and steelhead, because spring flow volumes and timing are critical to their survival.

Despite the commitment above, the hydrologic information in the SDEIS (i.e., Tables 4-28, 4-30, 4-32, and 4-34) indicates that operation of KDRPP would decrease spring flows in at least some cases. The SDEIS also indicates that winter flows will be reduced in some cases (e.g., Table 4-22). These results demonstrate the need for additional development of transparent operating rules to protect important instream flows.

We recommend that Reclamation and Ecology work with stakeholders to further develop operating rules, water accounting procedures, and mitigation (if necessary) that explicitly consider the effect of KDRPP operations on existing commitments such as:

- Title XII minimum flows and conservation water volumes
- Cle Elum Pool Raise storage
- Winter and spring flow targets included in Reclamation’s 2015 Biological Assessment
- Proratable deliveries.

NMFS understands that Reclamation and its partners have committed in principle to protecting these existing water uses. However, developing clear mechanisms to ensure that these protections are implemented transparently is important.
Based on our current understanding of the KDRPP project, it is not clear to NMFS how much winter flows will be reduced by operating the project during refill years. Reductions in winter flows at key locations are expected to be detrimental, so we need to better understand how and where flows may be reduced. To the degree that such reductions are harmful to steelhead or salmon, we expect that mitigation of some sort will be provided. We are open to considering a variety of mitigation alternatives, including partial subordination of hydropower production at Roza Dam.

NMFS wishes to reaffirm our support for the goals of the IP and emphasize that it is necessary to work closely with Reclamation, Washington State Department of Ecology, and other stakeholders to better configure the proposed operations of the KKC and KDRPP projects to meet the goals of the IP. Please direct any questions or concerns regarding this letter to Sean Gross, Columbia Basin Branch, at sean.gross@noaa.gov or (509) 962-8911 ext. 806.

Sincerely,

[Signature]
Michael Teahan
Assistant Regional Administrator
Interior Columbia Basin Area Office
Ms. McKinley,

Please find attached the City’s comment letter on Supplemental Draft Environmental Impact Statement-Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Hard copy to following the mail

David Brown
City of Yakima
Interim Assistant Public Works Director

www.wawarn.org
July 6, 2018

(Also Sent Via Email to: kkbt@usbr.gov)

Bureau of Reclamation Columbia-Cascades Area Office
Attn: Ms. Candace McKinley, Environmental Program Manager
1917 Marsh Rd.
Yakima, WA 98901-2058

RE: Supplemental Draft Environmental Impact Statement-Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

Dear Ms. McKinley:

This comment letter is sent on behalf of the City of Yakima in connection with the above-referenced Supplemental Draft Environmental Impact Statement (“SDEIS”):

The City of Yakima is within the Yakima Basin project and have senior, junior (May 1905 proratable) and post 1905 water rights. The citizens of Yakima rely on the Bureau of Reclamation reservoirs for much of their annual supply, including the Kachess and Keechelus reservoirs. All of the reservoirs are critical to the Total Water Supply Available (“TWSA”) yearly calculations that are used to determine supply availability to the water users in the Yakima Basin.

The City of Yakima has been actively involved in the Yakima Basin Integrated Plan and support the Plan and its objectives. The City of Yakima encourages projects and policies that provide increased access to water supplies, either through new storage, or through enhanced access to existing supplies. Even though the City of Yakima will not receive any direct benefit from the proposed actions outlined in the Supplemental Draft EIS (“SDEIS”), we fully support the proposed actions, as long as such changes and modifications to the reservoirs and water deliveries do not adversely affect water users ability to fully use their existing water rights, including deliveries for subsequent years; nor increase the cost to the City of Yakima from additional Reclamation operations.

It is the City of Yakima’s understanding, not only from the draft SDEIS, but from communications from Reclamation and other parties, that the pump station and pipeline will be operated in such a manner as to not adversely affect the ability of other water right holders to access and use their historic water rights. Any costs for these operations will be borne by Roza Irrigation District and others who are direct beneficiaries of the new reservoir operations.

We request that Reclamation, and others involved with the proposal, keep the City of Yakima advised of details of the proposed plan, including definitive operational plans. Since the

David E. Brown Interim Assistant Public Works Director
(509) 575-6204
david.brown@yakimawa.gov

March 2019
operational plan is not part of the SDEIS, the City of Yakima requests the opportunity to comment and participate on the plan as it is being developed to ensure the operational costs do not adversely impact Yakima water users.

We thank you in advance for your attention and the opportunity to comment.

Sincerely,

David Brown
Good afternoon Ms. McKinley,

Attached please find comments from the Washington State Department of Agriculture on the Supplemental Draft Environmental Impact Statement Kachess Drought Relief Pumping Plant, Kittitas County and Yakima County, Washington.

Thank you,
Megan

**Megan Finkenbinder**

Executive Assistant to the Director

mfinkenbinder@agr.wa.gov

360.902.1887
July 11, 2018

Ms. Candace McKinley  
Environmental Program Manager  
Columbia-Cascades Area Office  
1917 Marsh Road  
Yakima, Washington 98901-2058  

RE: Supplemental Draft Environmental Impact Statement Kachess Drought Relief Pumping Plant, Kittitas County and Yakima County, Washington  

Dear Ms. McKinley:  

The Washington State Department of Agriculture (WSDA) has reviewed the April 2018 Supplemental Draft Environmental Impact Statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and Kechelus Reservoir-to-Kachess Conveyance (KtoK) Projects. WSDA supports the Proposed Action, Alternative 4 – Floating Pumping Plant, given that it should help mitigate the impacts of drought on both the environment and the agricultural economy in the Yakima Basin far into the future.  

Agriculture is the dominant industry in the Yakima basin, providing approximately $3.4 billion to the state economy each year. That economic driver is in peril during drought years, as the Yakima Basin is the most drought prone river basin in the state with 7 declared droughts since 1977. Each of these droughts caused significant economic impact in the valley and across the state. In 2015, WSDA completed its first analysis of the economic impact of drought on Washington agriculture. The value of that impact was $77 million, and the majority of the impact occurred in the Yakima Basin.  

The Yakima River Basin Integrated Water Resource Management Plan (Integrated Plan) was developed to address the sum total of water resource and aquatic resource needs of the basin. The plan is providing for fish passage at all existing water reservoirs, improved habitat, and a renewed commitment to water conservation. The plan also provides for improving water supplies for domestic, municipal, and agricultural uses as well as for instream flow. KDRPP represents the first major water supply project undertaken as part of the integrated plan.
WSDA appreciates the efforts of the Bureau of Reclamation and Ecology in addressing the water needs in the Basin, as well as the active participation by the agricultural water managers (Roza Irrigation District and the Roza-Sunnyside Board of Joint Control) in supporting solutions that address multiple water resource needs. Again, we support implementation of Alternative 4 (Floating Pumping Plant) as a means of partially accomplishing the objectives of the integrated plan and appreciate the opportunity to provide comment on the SDEIS.

Sincerely,

Derek I. Sandison
Director

cc: Mr. Thomas Tebb
RE: Kennewick Irrigation District’s Comments on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance SDEIS

Ms. McKinley,

Please see the attached comment letter submitted on behalf of the Kennewick Irrigation District. An original will be postmarked today and will follow via U.S. Mail.

Best regards, Joe Brogan

Joseph (Joe) A. Brogan
ATTORNEY
Foster Pepper PLLC
1111 Third Avenue, Suite 3000
Seattle, WA 98101
joe.brogan@foster.com
Tel: 206-447-6407
Fax: 206-749-1935
foster.com

PRIVILEGED AND CONFIDENTIAL
This e-mail is from the law firm of Foster Pepper PLLC (“FP”) and is intended solely for the use of the addressee(s). Please maintain this email and its contents in confidence to preserve the privileges protecting its confidentiality. If you have received this email in error, please immediately notify the sender and delete the e-mail without copying, forwarding, or disclosing it to anyone.
July 10, 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

RE: Kennewick Irrigation District's Comments on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement ("SDEIS"), dated April 2018

Dear Ms. McKinley:

This firm represents the Kennewick Irrigation District ("KID") on a range of water supply and water right matters. KID respectfully submits the following comments on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement ("SDEIS").

I. Background

KID is pleased to partner with the U.S. Department of the Interior, Bureau of Reclamation ("BOR"), the Washington State Department of Ecology ("Ecology"), irrigation districts, and other stakeholders in pursuit of actions to implement water management actions benefitting both fisheries and irrigation in the Yakima River basin. KID previously communicated its desire to partner with BOR and Ecology in the discussion and development of alternatives to implement the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to Kachess Reservoir Conveyance (KDRPP/KKC) Projects as part of the Integrated Plan. See Exhibit A, KID Election to Participate, June 7, 2016. KID has been an active participant in the Yakima Basin Integrated Plan and is supportive of all projects within the Basin that improve water supply, either through new storage or improved use of existing supplies. Making the Yakima Basin water supplies sustainable for the next 100 years is an important endeavor and should be realized without negatively affecting existing water users.

II. Operational Concerns

KID has previously communicated a list of comments and questions to BOR and Ecology representatives regarding the potential implementation of the Proposed Action. (June 21, 2018 email from KID to BOR and Ecology). KID, BOR and Ecology addressed some of these comments and questions in a phone conference on June 21, 2018. However, a number of KID's comments and questions were not fully answered or addressed at that time. Accordingly, KID
provides the following list of comments and questions concerning the Proposed Action. As a co-participant in the KDRPP/KKC Projects, KID respectfully requests answers to these important questions prior to issuance of the FEIS and Record of Decision.

1. Is it true that only runoff into the Kachess Reservoir above the volume of 239,000 AF (total current active volume of Kachess Reservoir) will be eligible for refilling Kachess in a prorated year?

2. During refill years, how is the TWSA portion of runoff calculated?

3. Who is responsible for pumping the TWSA water below the elevation of the current outflow structure (Elev. 2192.75), during refill years?

4. Can KDRPP be pumped in water years where the prorated supply is above 70% (i.e., in refill years) to provide for no reduction in TWSA or carryover storage?

5. What guarantee is there that pumping in refill years to protect TWSA will be paid for or available?

6. What is the proposed pumping power costs estimated to be in all years pumping is projected in the modeling? Who pays for this power cost?

7. The SDEIS section 4.16 identifies approximately 30 MW being required for the pump station. Has this increased electrical demand and subsequent generating capacity been reviewed for sustainability through the lifespan of the proposed project?

8. It is unclear from the SDEIS how costs associated with the project, both construction and ongoing O, M, & R, will be distributed amongst Reclamation, Ecology, Roza and proratable entities. Please explain in detail the different construction, operations, maintenance and replacement alternatives that are being evaluated, and how that affects both participating and non-participating entities. In addition, what contractual relationships are proposed for those proratable entities that elect to participate? What portion of the 200,000 AF does each participating entity receive?

9. What volume of water will be available to each participating entity, both instantaneous and annual quantities? How is available inactive storage water determined in multiyear drought and refill years?

10. Is water pumped from KDRPP guaranteed to be delivered to Roza and/or the proratable entities on a bucket-for-bucket basis? Is there additional incidental carriage water that will be required to meet that basis for delivery? If so what is the volume of that water for deliveries both above and below Parker? What impact does this have on TWSA?
Page 4-18 Table 4-4 Water Supply Summary of Impact: The table indicates that all action alternatives will provide a change in proration of 4 additional years 70% proration reached; 2 years proration dropped below 70%; and up to 22% improvement in proration levels. Does proration improve for only those districts that buy into KDRPP? What assumptions are used to determine who is benefitting?

11. **Page 4-19 All Action Alternatives:** “When Kachess Reservoir is refilling after a drought under all action alternatives there is a potential for a slight reduction (2 to 4 percent) in water supply for proratable irrigation districts. In 2 of the 90 years modeled, the water supply was reduced slightly below 70 percent during refill (to 66 to 68 percent).” Any reduction in water supply for proratable entities is unacceptable. Please explain in detail why this water supply reduction occurs, and how the impact to the proratable entities will be mitigated.

12. **Page 4-22 Alternative 2:** Same as 4-19.

13. **Page 4-25 Kachess Reservoir:** “Based on the modeling completed, under Alternative 2, the pool elevation in Kachess Reservoir would be below the outlet elevation of 2,192.75 feet in 34 out of 90 years modeled and for a mean duration of 183 days during these years. Current reservoir operations do not draw the reservoir below the outlet elevation.” Please explain the operating and pumping plan to provide flows out of a drawn down Kachess Reservoir to other basin water uses when the elevation is below the outlet elevation of 2,192.75 feet.

14. **Page 4-25 and 4-26, Alternative 2, including Figure 4-3:** “Figure 4-3 illustrates the difference in Kachess Reservoir levels between Alternatives 1 and 2 from November 1991 to October 2009, which includes drought, refill, and normal years. During multiyear drought conditions such as those in 1992 to 1994, Reclamation would draw the reservoir down as much as 80 feet below the existing outlet elevation. Following a multiyear drought comparable to that of 1992 to 1994, reservoir levels would recover to normal operating levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the reservoir would be drawn down to 50 feet below the existing outlet elevation. Full recovery would not have been achieved until 2008, because of a series of dry years (2003 and 2004) and a subsequent drought (in 2005). During the 2005 drought year, the reservoir level would be 40 feet below the existing outlet elevation. The historical record of droughts indicates Kachess Reservoir would refill in 2 to 5 years following a drought.” It is concerning that refill after a drought would take 2 to 5 years, and in the case of the 2001 drought, 7 years. Please explain in detail, river operations and Roza operations that would occur during the refill years (e.g. 1995, 1996, 2002, 2003, 2004, 2006, and 2007). Please explain, in detail, how
river operations and Roza operations would impact carry-over storage and TWSA, and what plans are in place to mitigate other water users for negative impacts.

15. **Page 4-29 Keechelus Reservoir:** “Keechelus Reservoir levels under Alternative 2 would be lower than those under Alternative 1 because Reclamation would release more water from Keechelus Reservoir after a drought to refill Kachess Reservoir as quickly as possible (this is independent of whether KKC is constructed). Simulations indicate that Keechelus Reservoir levels would be lower than those of Alternative 1 in 44 out of 90 modeled years and for a mean duration of 225 days during those years.” Please elaborate on how the system is operated in post-drought years, and why it appears that more water is being spilled from Keechelus to help meet downstream demands and to help refill Kachess by reducing releases from Kachess that would have occurred under Alternative 1. Please explain how lower water levels in Keechelus Reservoir would impact TWSA, and what mitigation is proposed to offset reduced water supply for proratable entities.

16. **Page 4-37, Table 4-20 Rimrock Reservoir:** Please elaborate on how, in a median prorated year, that the annual minimum pool elevation of Rimrock Reservoir would decrease by 61 feet in Alternative 2 compared to the no action scenario. Please explain how system operations would require Rimrock Reservoir to be operated in this manner, and what impacts would occur to all water users. Explain how this table differs from the narrative on page 4-35, which states that “Rimrock Reservoir minimum pool elevations would be up to 9 feet higher in prorated years and up to 3 feet higher in refill years.”

17. **Page 4-40 and Appendix E, Figure E-4, Alternative 2:** “The small change in streamflow downstream from Parker gage on the Yakima River would occur as Kachess Reservoir refills after a drought. The change would occur in winter and spring.” Flows over Parker Gage prior to storage control, and particularly flood flows in winter and spring that immerse the floodplain areas in the Wapato Reach are an important contributor to water supplies in the lower Yakima River in the summertime when flows over Parker are at target. These flows contribute to the lower river water supply, and should be mitigated. Please explain, in detail, how impacts to water supplies due to these lower flows over Parker gage in the winter and spring will be mitigated.

18. **Page 4-50 Alternative 5A:** “When Kachess Reservoir is refilling after a drought year there is the potential for a slight reduction (1 to 4 percent) in water supply for proratable irrigation districts. In two of the 90 years modeled, the water supply was reduced slightly below 70 percent (to 66 to 69 percent) for Alternative 5A.” Any reduction in water supply for proratable entities is unacceptable. Please explain how this reduction in water supply for the proratable entities will be mitigated.
19. Page 4-51 and 4-52, Alternative 5A, including Table 4-38 and Figure 4-5: “Table 4-38 and Figure 4-5 summarize modeled Kachess Reservoir levels under Alternative 5A. Both the degree of drawdown and the time elapsed from drawdown to full refill would vary, depending on the degree, duration, and frequency of drought. For example, during a multiyear drought similar to that of 1992 to 1994, the reservoir level would eventually be drawn down to 80 feet below the existing minimum pool level, with recovery 2 years later, if the second year of refill was a wet year, as was the case in 1996. In a single-year drought such as 2001, the reservoir would be drawn down to 40 feet below existing minimum pool levels, with full recovery delayed by a second drought (as modeled, in 2005) and not achieved until a wet year (2006, as modeled). During the second drought year (2005, as modeled), the reservoir level would be 40 feet below the existing minimum pool level.” It is concerning that refill after a drought even with KKC included would take 2 years after the 1994 drought, and in the case of the 2001 drought, 6 years. Please explain in detail, river operations and Roza operations that would occur during the refill years (e.g. 1995, 1996, 2002, 2003, 2004, and 2006). Please explain, in detail, how river operations and Roza operations would impact carry-over storage and TWSA, and what plans are in place to mitigate other water users for negative impacts.

20. Page 4-56, 4-57 and 4-58, Keechelus Reservoir, Tables 4-43 and 4-44 and Figure 4-6: “Under Alternative 5A Keechelus Reservoir levels would be lower following a drought than under Alternative 1 because more water would be withdrawn in the first 2 or 3 post-drought years to allow the fastest possible refilling of Kachess Reservoir. As shown in Table 4-43 and Figure 4-6, the peak water levels in Keechelus Reservoir would be reduced by 10 to 25 feet and the lowest level reduced by as much as 15 feet during the post-drought refilling years. Keechelus Reservoir levels would still be within its current operating range.” As we understand it, the whole concept behind KKC was that Keechelus Reservoir typically received more runoff than the reservoir could hold (a refill ratio of 1.5:1), while Kachess Reservoir had more storage available than runoff typically available (a refill ratio of 0.9:1). KKC would take excess flows that could not be stored in Keechelus and would use them to help refill Kachess. Please elaborate on how the system is operated in post-drought years, and why it appears that water is being spilled from Keechelus to help refill Kachess, lowering the level of Keechelus in the process. Please explain how lower water levels in Keechelus Reservoir would impact TWSA, and what mitigation is proposed to offset reduced water supply for proratable entities.

21. Page 4-73 and Table 4-68, Yakima River Flow at Parker, Alternative 5A: “A small decrease in streamflow downstream of Parker gage on the Yakima River would occur as Kachess reservoir refills after a drought. The change would occur during winter and spring, when flows in the Yakima River are high relative to summer months. The overall reduction in streamflow from Parker gage downstream would be about 1 percent. The
change in streamflow downstream of Parker gage is summarized in Table 4-68.” As addressed above, flows over Parker Gage prior to storage control, and particularly flood flows in winter and spring that immerse the floodplain areas in the Wapato Reach are an important contributor to water supplies in the lower Yakima River in the summertime when flows over Parker are at target. These flows contribute to the lower river water supply, and should be mitigated. Please explain, in detail, how impacts to water supplies due to these lower flows over Parker gage in the winter and spring will be mitigated.

22. Page 4-74 and 4-75, Table 4-69 and Table 4-70, Parker Flow, Alternative 5A: “Flows in the Wapato Reach (at Parker) under Alternative 5A would be within 1.6 percent of Alternative 1 flow exceedances for all seasons. Summer median and high flows would be higher while other flows would be slightly lower. Modeled seasonal flows are tabulated in Table 4-69. Wapato Reach (Parker) low-flow exceedances during nonprorated years would be higher by 9 percent or 37 cfs under Alternative 5A compared with Alternative 1. During prorated years, median flows would increase by 7 percent or 71 cfs under Alternative 5A compared with Alternative 1. During refill years, high flows would decrease by 5 percent or 239 cfs under Alternative 5A compared to Alternative 1. Modeled Wapato Reach (Parker) flows for the types of years are tabulated in Table 4-70.” As addressed above, flows over Parker Gage prior to storage control, and particularly flood flows in winter and spring that immerse the floodplain areas in the Wapato Reach are an important contributor to water supplies in the lower Yakima River in the summertime when flows over Parker are at target. These flows contribute to the lower river water supply, and should be mitigated. Also, please explain how summer median and high flows over Parker would be higher under this alternative. Please explain how median flows over Parker would increase by 7 percent over no action alternative in prorated years.

23. Page 4-77, Mitigation Measures: “Implementation of Alternatives 2 through 5 would have a positive impact on water supply, which is consistent with the goals of the Proposed Action. Instream flows would remain within current operations, so no mitigation would be needed.” This statement appears to only be true if considering water supply for those entities that take excess water from KDRPP, which at this point may only be Roza Irrigation District. However, other districts that do not participate in KDRPP are at risk of reduced water supplies, as stated on page 4-19 and 4-50 of this SDEIS. Furthermore, in refill years, the SDEIS shows on Figure 4-3 and Figure 4-6 that periods will occur where water levels will fall below the existing pool level of Kachess Reservoir (elev. 2192.75), which indicates that KDRPP will need to be utilized to pump water from the lake to meet the needs of all downstream water users, even in non-drought years (see years 2002 and 2003, for example). It is unacceptable that the SDEIS does not address these issues, and does not provide a detail operating plan for KDRPP and Roza
July 10, 2018

Page 7

that shows exactly where the water is going and how it is being managed, especially in refill years. Mitigation to ensure no harm to water supplies for other water users must be part of the discussion of KDRPP, and should be addressed in the SDEIS. Please explain, in detail, the operating plan for KDRPP and Roza that includes water management in refill years, and the proposed mitigation to ensure no harm to water supplies for other water users.

24. KID is referenced in the Executive Summary of the SDEIS as “may also participate,” however, Section 4.3.1 Methods and Impact Indicators bullet 3 on page 4-17 states “deliveries to proratable water users along the Yakima and Naches rivers who agree to participate in KDRPP, assumed for the EIS to be KRD, Roza, and WIP.” However, KID received a letter from BOR and Ecology dated June 7, 2016 asking KID to check a box that indicated if KID will or will not participate in KDRPP. KID responded to the letter in a timely fashion, checking the “will participate” box, with additional comments that final participation in KDRPP is contingent upon the results of ongoing studies including the KDRPP SDEIS. Subsequently, KID participated in bi-weekly KDRPP update meetings as if participating in the project, while expecting to have the impacts of participating in KDRPP disclosed in the SDEIS document, which unfortunately did not occur. If KID elects to participate in one of the action alternatives, potential impacts will not have been considered due to this omission. This oversight in the SDEIS document has left it unclear to us to what level each entity is participating in the action alternatives. Please provide additional information for each participating entity (proratable entities) specific to instream flow impacts and increased diversions. In addition, if KID were to participate, what volume of water could KID expect to be available for delivery in each drought scenario?

25. Please provide daily flow data in the Wapato Reach.

III. Deficiencies in DSEIS Analysis

The following comments identify deficiencies in the SDEIS related to disclosure of potential adverse environmental impacts. The Washington Supreme Court, reaffirming the relevance of NEPA case law, consistently has emphasized that SEPA states even stronger environmental protection policies than NEPA. ASARCO Inc. v. Air Quality Coalition, 92 Wn.2d 685, 709, 601 P.2d 501 (1979); Leschi Improvement Council v. Washington State Highway Comm’n, 84 Wn.2d 271, 280, 525 P.2d 774 (1974). The identification, analysis and disclosure of potential environmental impacts must occur at the earliest stage in the SEPA process. See Barrie v. Kitsap County, 93 Wn.2d 843, 613 P.2d 1148 (1980). If information is lacking and cannot be obtained, and agency must disclose that fact and explain why it cannot be readily obtained. WAC 197-11-080(1). The failure to adequately disclose the significant environmental impacts of a proposal renders an EIS inadequate.
A. The SDEIS Improperly Defers the Analysis and Full Disclosure of Environmental Impacts to the Mitigation Phase.

SEPA is an action-forcing statute that demands a rigorous and full disclosure of potential adverse environmental impacts of a proposal. See RCW 43.21C.010. By contrast, the SDEIS improperly defers the initial study and disclosure of certain elements of the environment, including earth, water resources and wildlife, to after issuance of the SEIS to determine whether potential significant adverse impacts may occur. For example, the SDEIS' lack of adequate treatment of potential significant adverse impacts to wetlands and wetland buffers is particularly evident. The SDEIS improperly defers the study and disclosure of direct impacts to wetlands to the permitting stage alone. SDEIS at 4-149. While some modeling results are indicated, the SDEIS states "[e]stimated impacts on wetlands are not based on formal wetland delineations or functional assessment; thus, the actual extent of wetlands may vary once on-the-ground studies are conducted." The document does not disclose why wetland reconnaissance-level, or similar field information, cannot be obtained for purposes of this disclosure. See WAC 197-11-080(1).

B. The SDEIS is Based on Incomplete or Inadequate Modeling Information.

Through thorough review of the modeling of the lower Yakima River that BOR has been conducting over the past couple of years, it was identified that certain assumptions were being built into the modeling that were incorrect. One such assumption was that fifty percent of the water being diverted by Roza Irrigation District from KDRPP and other drought relief sources would be returned to the Yakima River as return flows. Through discussions with the Roza manager it was found that this assumption is not correct, as Roza would in fact be returning very little water to the river as operational spill in drought conditions where they would be utilizing water developed through the various Integrated Plan projects to elevate their supply to seventy percent. As a result, this erroneous assumption has been removed from the modeling for the Integrated Plan, and the model has been updated to reflect accurately how Roza and other IP participants will be managing water supplies. As of now BOR has not shared the most recent modeling results, and the subsequent potential impacts related to climate change scenarios. This latest update to the model is not included in the SDEIS analysis, as it was stated at the June 21\textsuperscript{st} meeting that the modeling used for the SDEIS is stand alone.

Through review of this SDEIS document, it is evident that the erroneous assumption that Roza would return fifty percent of its additional drought relief diversions from KDRPP back to the river remains in the modeling used in the SDEIS. This erroneous assumption likely explains why the SDEIS claims on pages 4-74 and 4-75 that summer median and high flows over Parker would be higher under this alternative, and median flows over Parker would increase by 7 percent over no action alternative in prorated years. It is crucial that the modeling on which the information given in the SDEIS is based upon is complete and adequate enough to analyze the environmental and operational impacts of the KDRPP and KKC projects. Incorrect assumptions should be removed from the modeling to give impacted parties assurances that the information...
provided in the SDEIS is accurate and adequate enough to evaluate and disclose the potential impacts on water supply and basin hydrology that could occur from the action alternatives. Although it is unlikely that the change in modeling will show an adverse impact to the Wapato Reach during a proration year while KDRPP is operating, the current analysis shows a negative effect to water supplies during refill years and it is likely with updated modeling that this negative effect would still be present. It is imperative that accurate modeling is reflected so as to provide assurance that no negative impacts to water supplies occurs without adequate mitigation.

The KID thanks BOR and Ecology for the opportunity to submit comments on the SDEIS. KID would welcome the opportunity to meet with BOR and Ecology as early and as frequently as possible to address the above-referenced comments prior to finalization of the Supplemental Final Environmental Impact Statement (SFEIS).

Please contact Charles Freeman, Manager, KID, at (509) 586-6012, to arrange a mutually convenient time to meet on these critical regional water supply issues.

Yours Truly,

FOSTER PEPPER PLLC

P. Stephen DiJulio
Joseph Brogan
Counsel for Kennewick Irrigation District

cc: Hon. Governor Jay Inslee
Hon. Senator Maria Cantwell
Hon. Senator Patty Murray
Hon. Rep. Dan Newhouse
KID Board
KID Manager
EXHIBIT A
Subject: Invitation to Participate – Kachess Drought Relief Pumping Plant (KDRPP)

Dear Mr. Freeman:

As sponsors of the Yakima River Basin Integrated Water Resource Management Plan (Integrated Plan), the Bureau of Reclamation and the Washington State Department of Ecology (Ecology) are joint-leads in preparing a supplemental draft environmental impact statement (SDEIS) to continue to evaluate KDRPP as a component of the Integrated Plan.

Reclamation and Ecology are requesting formal notification of your intent to participate on KDRPP for advancement as a component of the larger Integrated Plan, contingent on results of ongoing studies and environmental analyses. Intent to participate does not denote a financial obligation at this time, however details of specific schedules and cost will be defined as the project proceeds. In the future, owners/operators of the KDRPP facility will determine the future involvement of those districts not willing to state at this time an intent to participate.

The proposed KDRPP project would allow participating districts to access up to 200,000 acre feet of currently inaccessible stored water in Kachess Reservoir below existing outlet works and to utilize this water to improve water supply for proratable users during periods of drought. The KDRPP project may be operated to allow participating districts to call on that stored water, but will not provide more than 70 percent of a proratable water supply entitlement as defined in S.2012 Energy Policy Modernization Act of 2016 (see enclosed SEC. 10325. Authorization of Phase III of Yakima River Basin Water Enhancement Project).

Please mark the appropriate box below and return by Monday, June 27, 2016.

☐ Kennewick Irrigation District will not participate in KDRPP.
✔ Kennewick Irrigation District will participate in KDRPP as defined in draft YRBWEP Phase III legislation. Details TBD.
Please provide any additional comments here: 


Please respond to: Ms. Teresa Merriman, Project Manager  
Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901-2058  
509-575-5848, extension 262 (voicemail); 509-454-5650 (fax);  
tmerriman@usbr.gov (email)

Thank you very much for your assistance. We appreciate your interest and look forward to hearing from you.

Sincerely,

Dawn A. Wiedmeier  
Area Manager  
Columbia-Cascades Area Office  
Bureau of Reclamation

G. Thomas Tebb  
Director  
Office of Columbia River  
Washington Department of Ecology

Enclosure

Identical letter sent to persons on next page.
Additional Comments:

KID participation in KDRPP is contingent upon the results of ongoing studies, including but not limited to the lower Yakima River modeling, the KDRPP SEIS, and other ongoing and future studies and legal analyses that will help KID to determine the best and most feasible projects to protect and mitigate the district's water supplies. Many questions remain unanswered regarding KID's use of called upon storage to supplement diminished return flow based water supplies during water short years.
Hello!

Please find attached the Comments the Board of County Commissioners Signed today during a Regular Meeting.

Thank you!

Mandy Buchholz, CMC
Deputy Clerk of the Board II| Kittitas County Commissioners Office
205 West Fifth Street Suite #108
Ellensburg, WA 98926
509-962-7508 (Office)
509-962-7679 (Fax)
http://www.co.kittitas.wa.us/

“Try to be a Rainbow in Someone’s Cloud” ~ Maya Angelou
Notice: Email sent to Kittitas County may be subject to public disclosure as required by law.
message id: 38eb45916c6dcbdac24bb8719d004a14

3047_001.pdf
362K
July 9, 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

RE: Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement Response

Dear Ms. McKinley:

Kittitas County Board of Commissioners (BOCC) has commented previously on the Draft Environmental Impact Statement in 2015. Those comments are still valid in that there has been no response to issues raised. In addition, we have new concerns with the SDEIS. We are also on record in full support of the Yakima Basin Integrated Plan. The position in the past and restated here is that the elements of the plan need to work together in order to gain the order of magnitude needed to address the water and environmental issues in our common future.

The selection of the Kachess Floating Pumping Plant as the preferred alternative is less than ideal. Within that selection are multiple applications to be considered. Where is the inlet and outflow to be located? Who will benefit and at what contribution levels? Statements that Rosa Irrigation District will bear the entire cost and gain all the benefit of the water does not address the needs of Kittitas County, yet the impacts of the pump down will be felt by Kittitas residents and the visitors from all over Washington who recreate around Kachess reservoir. Additionally in following years after a pump down the reservoir will take time to refill. That may affect water availability for local farmers. Again the entire YBIP that includes the KKC for refill of Kachess is needed to avoid creating one problem while addressing another. When each element of the YBIP is viewed individually they all fall short by the economics or effectiveness of the proposal. However, when taken as a whole the plan can work to address the need for changes in storage and disposition of water as our climate models indicate that more precipitation may be coming to the Cascades and the Yakima River Basin, but in the form of warmer rain and less snow pack than what we rely upon now.

Many of the citizens of the Kachess Reservoir (Lake) have been sending their concerns to us at the BOCC. We do not have authority in this decision and so we submit our comments and recognize theirs in this reply.
The impact of a pump down of an additional 80 feet is called out in this report by noting that “there may be negative impacts on the quality and quantity of domestic wells in the area”. The stated response is that “a selection of wells will be monitored and mitigated as needed”. No one knows whose well will be monitored or what will the mitigations entail. We suggest that All Wells in the area be proactively mitigated by drilling them to a depth that will insure continued access to potable water as is required by Public Health. These mitigations should be completed before the pumping plant is activated.

The local Fire District (FD4) has concerns that when the water level is drawn down an additional 80 feet there will be no ability to draw water for active fire suppression. A mitigation for the Fire District could be adding a well or storage tank of sufficient volume that will address fire suppression needs. Other options may exist but will it be the role of DOE or Rosa to fulfil the mitigations? A better definition of mitigation and timing for a proactive program is needed.

During construction and primary operation of a pumping plant very heavy materials will need to be transported to the site on Kittitas County roads. Our roads in the area are not built to carry that level of service and will sustain serious damage. Will proactive mitigation compensate for upgrading the roads in the area? Will the roads need to be improved to a much higher carrying capacity before construction begins?

When the pumping plant is operating there is concern that diesel generators will be needed to power the electric pumps. The noise of generators cannot be controlled to the point that the surrounding residents anywhere on the lake will not be inundated. The better plan would be to upgrade the electrical service to the pump site so as to remove the need for diesel generators entirely. The pump noises will be difficult to control. Therefore a better option is to place the pumps on land so that buildings can attempt to control the sound levels.

Concern has been raised that once pumping starts it will continue. How long will this scenario play? The SDEIS mentions that the start is triggered by notice that the irrigators will receive less than 70% their allotment. Will the pump start at the notice or when curtailment is to begin? What is the cutoff? Will environmental health of the area be considered equally as the needs of Rosa irrigators?

Agriculture in Kittitas County affects almost every resident who lives here. Many family members of farmers work “in Town”. Many businesses provide services to farmers, shippers, and partners of our agricultural community. Water is required to continue to operate in all parts of the Yakima River Basin.

Millions of dollars have been invested in restoring the wetlands, spawning beds, and removal of fish barriers to meet the obligations signed into treaty rights with the Yakama Nation and Ten Confederated Tribes. The Bull Trout, already listed as threatened, that live in the waters of the Kachess will be further harmed with a deep drawdown. The SDEIS suggests a mitigation plan to cut a 25 foot channel to assist the Bull Trout but with an 80 foot draw down, the difference of 55 feet is unlikely to be mitigated enough.
The preceding are some of the concerns of the Kittitas Board of County Commissioners and what we have been hearing from our constituents. Included below is the comment on the 2015 Draft DEIS.

Thank you again for the opportunity to provide comments on the SDEIS. We hope you find our comments helpful and we look forward to working collaboratively to achieve the goals of the KKFP, KKC, and the overall YBIP. Please feel free to contact us if you have any questions.

Respectfully Submitted,

Laura Osjadoez  Obie O’Brien  Cory Wright
Chairman  Vice-Chairman  Commissioner
[EXTERNAL] KDRPP/KKC SDEIS comment

Clancy Flynn <cflynn@columbiairrigation.com>
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Wed, Jul 11, 2018 at 9:02 AM

Candace,

Please consider the attached document as CID's comment on the KDRPP/KKC SDEIS.

Thank you,

Clancy Flynn, District Manager
Columbia Irrigation District
10 E Kennewick Ave
Kennewick, WA 99336
Phone: 586-6118
Fax: 586-0485
www.columbiairrigation.com

SKM_C284e18071108160.pdf
473K
Columbia Irrigation District (CID) would like to respectfully provide comment on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS).

In principle CID supports any project that will conserve water or mitigate the effects of droughts within the Yakima River basin. CID would like the entire river system to be protected and made sustainable for all water users in perpetuity and welcomes ideas to that end from all parties that have a stake in the system. CID has a senior, non-proratable, water right and it is the last major diversion from the Yakima River. Therefore, any change to the flows upstream are of major concern to our operations because even though there are target flows in place to help us meet our instantaneous entitlement we have previously been impacted negatively during short water scenarios.

CID has concerns that, even though this project on paper might be viewed as having no impact to our water right because of target flows and our senior water right status, changes will make it operationally difficult to deliver full allotment to our users. In 2015, a short water year, CID had to take actions to install flashing boards to the dam, acquire permits and hire a contractor to clear a channel to our diversion. Even with all these actions CID still did not receive our full instantaneous entitlement even
though the target flows were achieved under the current TWSA calculations. Please respond to the following concerns:

1) How will TWSA be calculated in refill years?
2) Are the USBR and Washington State Dept. of Ecology prepared to offer CID any form of mitigation to respond to negative impacts, foreseen and unforeseen, this project may have on CID and its patrons? If so, what specifically will be done?

CID welcomes meetings for further discussions with USBR and Ecology regarding the SDEIS and our comments. Thank you for the opportunity to comment on this matter. Please contact me to arrange a time to discuss this matter.

Sincerely,

Clancy Flynn, District Manager
Columbia Irrigation District
10 E Kennewick Ave
Kennewick, WA 99336
Phone: 586-6118
Fax: 586-0485
cflynn@columbiairrigation.com
Candace,

Our comment letter regarding the above-mentioned proposal is attached and a hard copy is in the US Mail. Let me know if you have any questions, thanks.

Jacob Prilucik

(509) 577-1635 – prilucj@wsdot.wa.gov
July 10, 2018

Bureau of Reclamation
Columbia-Cascades Area Office
1817 Marsh Road
Yakima, WA 98901-2058

Attention: Candace McKinley, Environmental Program Manager

Subject: (KDRPP/KKC) Projects SDEIS
Kittitas and Yakima Counties, Washington

We have reviewed the Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) projects. We originally commented on the Draft Environmental Impact Statement (DEIS) in our letter to the Bureau of Reclamation dated March 10, 2015. Those comments remain valid.

Thank you for the opportunity to review and comment on this proposal. If you have any questions regarding our comments, please contact Jacob Prilucik at (509) 577-1635.

Sincerely,

[Signature]
Paul Gonseth, P.E.
Planning Engineer

PG: jjp

cc: SR 90, File #1 (2015)
Harry Nelson, Area 1 Maintenance Superintendent
Brian White, Assistant Regional Administrator
Andrew Byrd, Region Project Engineer
Jamil Anabtawi, Region Utilities Engineer
Bill Sauriol, Region Environmental Program Manager
Candace,

Attached please find the EPA comments on your DSEIS for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Projects. A hard copy of the same comments is being sent to your Office in Yakima under separate cover using the US Postal Service and should arrive soon. In the meantime, please let us know if you have questions about our comments for assistance.

Again, thank you for the opportunity to review your SDEIS and look forward to reviewing the final EIS for the projects when available.

Theo Mbabaliye, Ph.D.
US EPA Region 10
1200 6th Ave., Suite 155, OERA-140
Seattle, WA 98101-3140
Phone: (206) 553-6322
July 11, 2018

Candace McKinley, Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, Washington 98901-2058

Dear Ms. McKinley:

In accordance with Section 309 of the Clean Air Act and the National Environmental Policy Act, the U.S. Environmental Protection Agency has reviewed the Bureau of Reclamation’s Draft Supplemental Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Projects (EPA Project Number: 13-0036-BOR/CEQ No. 20180063) in Kittitas and Yakima Counties, Washington.

The DSEIS evaluates potential environmental impacts associated with activities to construct, operate and maintain the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance projects. After the initial analysis of these projects in the 2015 Draft EIS, new circumstances and information led to the decision to analyze the projects further and disclose the most current environmental impacts. We note the supplemental analyses propose a floating pumping plant alternative for the KDRPP and a northern route for the KKC, evaluated as a component of the KDRPP. The DSEIS, similar to the DEIS, does not identify a preferred alternative.

The EPA continues to support the overall goals of the proposed projects to provide more reliable and sustainable water resources for uses in the Yakima River basin, while protecting the other environmental resources in this area. We are pleased to note that coordination with the other resource management agencies and tribes affected by the projects continues, and we support this effort due to the various agency roles in assisting with a range of issues analyzed in the SDEIS.

We believe the proposed Floating Pumping Plant alternative analyzed in the SDEIS can minimize the projects’ environmental impacts. This alternative would require the least ground disturbance (i.e., 9 acres as opposed to 65 acres under the other alternatives) and allow for support facilities to be located within already impacted areas. One of this alternative’s components, Sc, would involve minimal ground disturbance as well (21 acres, significantly less than the other options estimated to disturb up to 77 acres). In addition, we appreciate the inclusion of information in the SDEIS on seismic and slope stability risks and information on the mitigation measures to be taken to reduce impacts.

Because the anticipated construction and operation activities under the other alternatives analyzed in this SDEIS are similar to those presented in the DEIS, we recommend referring to our March 10, 2015 comments on the DEIS for information regarding the issues that we believe are important to address in the NEPA analysis for these proposed projects. We understand the Final EIS will include responses to our comments on both the DEIS and SDEIS, and we recommend the Final EIS also include the preferred alternative.
Based on our review of the SDEIS, we have no objections to the additional alternative proposed and have assigned a rating of a Lack of Objections (LO) to the SDEIS. An explanation of this rating is attached for your reference.

Thank you for the opportunity to review this SDEIS. We look forward to reviewing the Final EIS when available. If you have questions about our comments, please contact Theo Mbabaliye of my staff at (206) 553-6322 or by electronic mail at mbabaliye.theogene@epa.gov, or contact me at (206) 553-1841 or by electronic mail at nogi.jill@epa.gov.

Sincerely,

Jill A. Nogi, Manager
Environmental Review and Sediment Management Unit

Enclosure:

1. US Environmental Protection Agency Rating System For Draft Environmental Impact Statements
U.S. Environmental Protection Agency Rating System for
Draft Environmental Impact Statements
Definitions and Follow-Up Action*

Environmental Impact of the Action

LO – Lack of Objections
The U.S. Environmental Protection Agency (EPA) review has not identified any potential environmental impacts requiring substantive changes to the proposal. The review may have disclosed opportunities for application of mitigation measures that could be accomplished with no more than minor changes to the proposal.

EC – Environmental Concerns
EPA review has identified environmental impacts that should be avoided in order to fully protect the environment. Corrective measures may require changes to the preferred alternative or application of mitigation measures that can reduce these impacts.

EO – Environmental Objections
EPA review has identified significant environmental impacts that should be avoided in order to provide adequate protection for the environment. Corrective measures may require substantial changes to the preferred alternative or consideration of some other project alternative (including the no-action alternative or a new alternative). EPA intends to work with the lead agency to reduce these impacts.

EU – Environmentally Unsatisfactory
EPA review has identified adverse environmental impacts that are of sufficient magnitude that they are unsatisfactory from the standpoint of public health or welfare or environmental quality. EPA intends to work with the lead agency to reduce these impacts. If the potential unsatisfactory impacts are not corrected at the final EIS stage, this proposal will be recommended for referral to the Council on Environmental Quality (CEQ).

Adequacy of the Impact Statement

Category 1 – Adequate
EPA believes the draft EIS adequately sets forth the environmental impact(s) of the preferred alternative and those of the alternatives reasonably available to the project or action. No further analysis of data collection is necessary, but the reviewer may suggest the addition of clarifying language or information.

Category 2 – Insufficient Information
The draft EIS does not contain sufficient information for EPA to fully assess environmental impacts that should be avoided in order to fully protect the environment, or the EPA reviewer has identified new reasonably available alternatives that are within the spectrum of alternatives analyzed in the draft EIS, which could reduce the environmental impacts of the action. The identified additional information, data, analyses or discussion should be included in the final EIS.

Category 3 – Inadequate
EPA does not believe that the draft EIS adequately assesses potentially significant environmental impacts of the action, or the EPA reviewer has identified new, reasonably available alternatives that are outside of the spectrum of alternatives analyzed in the draft EIS, which should be analyzed in order to reduce the potentially significant environmental impacts. EPA believes that the identified additional information, data, analyses, or discussions are of such a magnitude that they should have full public review at a draft stage. EPA does not believe that the draft EIS is adequate for the purposes of the National Environmental Policy Act and or Section 309 review, and thus should be formally revised and made available for public comment in a supplemental or revised draft EIS. On the basis of the potential significant impacts involved, this proposal could be a candidate for referral to the CEQ.

Dear Ms. McKinley:

On behalf of the Hyak Property Owners Association Board of Directors please accept the attached comment letter on the Kachess Drought Relief Pumping Plant SDEIS into the record.

Regards,
James Sammet
HPOA Board of Directors Member
425-999-2953

DRPP SDEIS Comment Letter_HPOA_07.11.2018.pdf
598K
Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir to Kachess Reservoir Conveyance (KKC) Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Ms. McKinley:

Please accept these comments/questions regarding the KDRPP SDEIS on behalf of the Board of Directors of the Hyak Home Owners Association (HPOA Board). The HPOA Board represents the home owners association for Hyak Estates located at the base of the Hyak Ski Area at Snoqualmie Pass. The HPOA Board represents an association of over 300 property owners within Hyak Estates. The HPOA Board and the residents of Hyak Estates have a direct interest in the KDRPP and KKC projects and the subject SDEIS and have previously provided comment on the 2015 DEIS.

2018 SDEIS Comments:

1. Alternatives: The HPOA Board only supports Alternative 1, "No Action" and opposes all other active alternatives presented in the SDEIS.

2. Background of Proposed Action: The SDEIS states that the Yakima Basin Integrated Water Resource Management Plan (Integrated Plan) includes the following components:
   - Reservoir fish passage
   - Structural and operational changes
   - Surface water storage
   - Groundwater storage
   - Habitat/watershed protection and enhancement
   - Enhanced water conservation
   - Market reallocation

   This SDEIS only address the first and second bullet above and ignores all other components of the integrated plan. The structural and operation changes proposed in the stand alone KDRPP project (the proposed action) only access the natural pool of Lake Kachess and does not address the need for additional surface water storage, ground water storage, habitat protection and enhancement and water conservation, and only addresses market...
reallocation in terms of the water pumped from the natural pool of the lake that will only benefit the Rosa Irrigation District (ROSA).

a. Please explain what Reclamation's plan is to address all of the components of the Integrated Plan as the KDRPP relates to each component of the Plan?

3. **Reclamation's Purpose and Need:** The stated purpose of the SDEIS is to "provide more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin". The SDEIS puts forward a plan to drain additional water from the natural pool of Lake Kachess to benefit only ROSA.

a. How does the proposed floating pump on Lake Kachess improve the health of the riverine environment?

b. How does the proposed floating pump on Lake Kachess provide more sustainable water resources for municipal needs if the water removed from the natural pool will be for the sole use of the ROSA?

c. How does the proposed floating pump on Lake Kachess provide more sustainable water for domestic needs when the wells surrounding the lake may go dry and the water pumped will only be used for ROSA's purposes?

d. What is Reclamation's plan to accurately address items a to d above?

4. **Failure to consider all viable alternatives:** The DEIS and the SDEIS only consider two alternatives: drain a natural lake to benefit downstream irrigators with junior water rights or don't drain the lake. No other alternatives are considered to meet the irrigation security needs of the ROSA farmers. The EIS process is supposed to consider all alternatives to achieve the purpose and need. This SDEIS does not consider any other viable alternatives such as conservation of existing irrigation resources including mitigation for irrigation system losses due to leakage and evaporation, instituting conservation irrigation systems and crop selection as examples of many possible alternatives. It also does not consider the decreasing snowpack storage within the watershed and ways in which to increase snowpack storage and forest health. There is research being conducted at the University of Washington that suggest with proper forest management practices snow-pack storage can be significantly increased which would benefit water storage within the basin. These types of alternatives must also be considered.

a. How does the DEIS and SDEIS meet the requirement to consider a range of reasonable alternatives which is required by NEPA?

b. What is Reclamation's plan for considering all reasonable alternatives?

c. What is Reclamation's plan, as required in the NEPA process, to list and provide a full explanation, including data, references, and review procedure for excluding each alternative not considered?
5. **SDEIS Proposed Action:** The Proposed Action will pump the natural pool of Lake Kachess to 80-ft below the gravity outfall of the dam. This action only takes water from the natural pool and does not consider how to increase surface water storage which is a component of the Integrated Plan. In addition, the proposed action no longer includes the KKC project. The 2015 DEIS linked the KDRPP and KKC projects due to the financial analysis and the fact that it would take years to re-fill Lake Kachess without the KKC project. It seems the SDEIS only considers the benefits of the KDRPP in the first year of drought.

   a. Without the KCC project how does the financial analysis show a benefit in years 2 to 8 while the lake re-fills and the pumping plant has to operate continuously?

   It is also a misconception to consider the water below the gravity outfall of the dam to be "inactive storage" because this is the approximate natural lake elevation and should be considered part of the natural habitat. Labeling the natural pool as inactive storage and using the natural pool does not meet the objective of the integrated plan to improve surface water storage—it only takes existing water.

   b. Please explain how surface water storage is improved in the 2nd drought year and beyond if the lake is unable to be refilled?

6. **Project Costs:** Alternative 4 is the "proposed option" and has a variance of -30% to +50% is difficult to interpret in terms of the stated cost of $282,000,000 estimate for the KDRPP-FPP. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms including the probability of the variance of achieving these costs should also be stated; e.g.

<table>
<thead>
<tr>
<th>Low Estimate</th>
<th>Projected Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000 (z% chance)</td>
<td>282,000,000 (y% Chance)</td>
<td>423,000,000 (X % Chance)</td>
</tr>
</tbody>
</table>

   The Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included in the above costs but should be as it will be a required element. That would bring the high cost to $444,000,000.

   This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS. The budget presentation is inadequate, misleading, and incomplete.

   a. How will Reclamation adequately address all costs associated with the project?

7. **Impact on Campers and recreational users at Lake Kachess** The Lake Kachess has over 23,000 annual campground visitors and 11,000 annual boaters that will be negatively affected by pumping down the natural lake without the ability to re-fill the lake for years. On page ES-Xii, the following suggestions are given to address recreational use of the lake “Extend boat ramps at Kachess Reservoir...if feasible, and construct new east shore ramp that would be available at all reservoir levels.

   a. Under what conditions would extending those ramps be feasible or not feasible?
This should be addressed in the SDEIS as it is an effect on recreation users that cannot be defined unless it is know if existing boat ramps is feasible.

b. What analysis of the lake geography has been done to suggest is extending any of the ramps for use during a KDRPP-FPP drawdown is truly feasible or not?

The Lake within and below the natural pool elevation has very steep banks and it should be determined during the EIS process if in fact this is feasible.

8. **Increased forest vulnerability and Fire Hazard.** The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability.

The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This fire district has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects.

This proposal fails to adequately address the added fire risks due to climate change which is reducing snow packs storage which is clearly shown by existing data including WSDOT snowpack data from Snoqualmie Pass. This plan exacerbates that fire risk because it will decrease the health of forests surrounding the Lake and will make water available by pumping for fire suppression almost impossible to retrieve during a full pumping draw-down and from wells going dry. The SDEIS identifies damage to the natural environment that will be caused by the proposed action.

If, as a result of a KDRPP draw down and forests die who will be responsible for removing the dead trees to prevent further destruction from wildfires which could end up extending all the way to Snoqualmie Pass?

9. **Refilling Lake Kachess.** The SDEIS states that the KDRPP-FPP is the “proposed action” and Reclamation and Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicated a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC).

a. Please explain how the KDRPP-FPP proposed action no longer needs to be linked to the KKC project in order to refill the lake despite no change in the stated goal of the KDRPP to pump 200,000 acre-feet from the natural lake for ROSA?

b. Please explain how Reclamation can promote the proposed action despite the detailed hydrology that the 2015 DEIS was based on that purposed that the KKC was required as a refill mechanism without which Lake Kachess would like not refill for 20 years?
c. Please explain in detail what changed between 2015 and 2018 that now allows a refill prediction of 2-8 years when the 2015 prediction was 20 years or more?

d. Which report should be relied on? 2015 KKC is required as a part of KDRPP, or 2018 KDRPP doesn’t need KKC and will refill 2-4 times faster than previously predicted?

e. How can the public be expected to make informed comments with such seemingly inconsistent hydrology predictions? Can either report be relied upon?

11. Funding: Page ES-viii: The SDEIS states the Bureau of Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FPP.

a. When will the ultimate source of funding be determined and by whom?

b. If public funds are utilized to benefit a handful of private businesses in a singular water district, will that district be required to repay those funds?

c. If public funds are used for the project, will the public be offered another comment period or another process by which voters can express if they approve of spending half a billion dollars on a water project that benefits only a select group of private interests?

d. How can the public be expected to adequately comment on the SDEIS without knowledge of whether or not public funds will be utilized?

17. Mitigation: “Volitional Bull Trout Passage Improvements are proposed as a part of the KDRPP...” This statement and others give the impression that the proposed action will improve passage and habitat for Bull Trout and perhaps even “enhance” the bull trout population. This is an inaccurate depiction of what will be a significant negative impact on the Lake Kachess bull trout population.

The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pumping station will be in continuous operation which will require continual use of the Volitional Passage. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles which could result in the destruction of the Bull Trout Population in the Lake. No evidence is provided that the Volitional Passage is effective, has been demonstrated in other Bull Trout populations or has completed a “proof of concept” test.

The volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be...
needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

a. In years where streams disappear the Volitional Passage will have to be operated by pumping. Without addressing this the mitigation plan is incomplete. What are Reclamations Plans to address this issue in the proposed mitigations?

The Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

The project as proposed will negatively affect and ESA listed species (Bull Trout) and its habitat which is not allowed under law unless all the affects can be mitigated.

a. What research has been done to suggest the Bull Trout will use the Volitional Passage?

b. How will Reclamation mitigate negative effects on the Bull Trout Population if the Volitional Fish Passage Structure fails to operate as intended?

c. What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements? How will this be mitigated?

18. **USFWS Biological Opinion:** The USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts and is not expected to be published until sometime in the fall of 2018.

a. Why was the SDEIS prepared and released PRIOR to the USFWS Biological Opinion?

b. Will another SDEIS be issued incorporating the study? How will the Biological Opinion be incorporated in the EIS process and will there be opportunity for additional public comment?

19. **Geology & Stability of the Lake Kachees Dam and surrounding steep slopes:** The existing dam at Lake Kachess is an earthen structure which may be impacted by long periods of drawdown and the SDEIS discusses the steep terrain under the current water line in some areas and suggests that landslides may occur.

a. What studies have been done to determine what impact years of low water and drying of the earthen dam will have on its structural integrity?

b. What topography is available of Lake Kachess below the current low water line?

c. What studies have been done to determine areas within the lake that are most susceptible to landslides?
d. How will these potential landslides be mitigated and what impact will they have on the operations of the KDRPP?

e. What impact would landslides have on water quality, public safety and bull trout habitat and population?

f. What is Reclamation's plan for conducting these study and will an additional SDEIS be prepared?

20. **Negative financial impacts to Kittitas County:** The implications of negative impact on private property values go beyond the directly affected citizens. A reduction in property values affects the tax base of the county, including schools and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, schools, city and county governments, and others would also be negatively impacted. Also with the Lake drawn down to levels where it becomes unusable or less desirable for recreation there will a decrease in tourist visits to the Lake Kachess campground, a reduction in business in surround communities, and a reduction in sales taxes collected which will further negative impacts to the community and public at large while benefiting ROSA.

a. Please explain how a publicly funded project that benefits private land owners and irrigators and negatively affects public funding and hurts local businesses is in the best interest of the Citizens of Kittitas County and the State of Washington?

25. **Water Rights:** A KDRPP draw down has the probability of resulting in the existing 239,000 acre-ft of water NOT being available in subsequent years for those holding senior water rights.

a. How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam?

b. How will potable water rights of well owners be addressed if wells go dry?

**Closing Comment:**

The HPOA is opposed to allowing a vital public resource to be taken to support and enhance the profits of a limited number of private businesses who have full knowledge of their lands water constraints. Reclamation and Ecology, and our elected officials should be looking for ways to preserve, protect, conserve and enhance limited natural resources rather than taking existing natural resources for a financially and environmentally unsound plan. Millions of dollars of public funds that have already been used to push this project forward that is no in the interest of the public good.

Under the NEPA and SEPA processes the HPOA requests that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.
The HPOA looks forward to seeing responses to these comments.

Respectfully,

[Signature]

James Sammet
HPOA Board of Directors Member,
on behalf of the entire
HPOA Board of Directions, and HPOA

HPOA
P.O. Box 120
Snoqualmie Pass, WA 98068

V-Mail: 425.785.6543
E-mail: hpoaboard@hotmail.com
To Whom It May Concern,

This is in response to your invitation on comments on the Kachess and Keechelus Supplement Draft ESI.

Altho' not directly related to motorized recreation my organization recognizes conservation is an important part of the overall outdoor recreational program.

Through our own education program we feel it is a key ingredient in the recipe for improving land conservation and safety – it stresses the importance of protecting “specific environment and natural resource areas”.

We feel the proposed program will enhance the specific areas and a need to proceed.

Sincerely,

Arlene Brooks, WA State Director
Pacific Northwest Four Wheel Drive Association
21520 S.E. 346th Street
Auburn, Washington 98092

CC: File
Dear Ms. McKinley,

On behalf of the Kachess Community Association I respectfully submit the following public comments regarding the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement.

Thank you for your attention to this important matter,

David Dicks – JD

Tatoosh Law and Policy Group
318 1st Ave S, Suite 310
Seattle, Washington 98104

On behalf of:

The Kachess Community Association

2 attachments

- Kachess SDEIS Final PDF.pdf
- ATT00001

March 2019
To: (via e-mail)  
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia-Cascades Area Office  
191 7 Marsh Road  
Yakima, WA 98901-2058  
Phone: 509-575-5848, ext. 603  
Fax: 509-454-5650  
Email: kkbt@usbr.gov

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement

Dear Ms. McKinley,

On behalf of the Kachess Community Association I respectfully submit the following public comments regarding the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement.

Thank you for your attention to this important matter,

David Dicks – JD

Tatoosh Law and Policy Group
318 1st Ave S, Suite 310
Seattle, Washington 98104

On behalf of:

The Kachess Community Association
You can fool all the people some of the time, and some of the people all the time, but you cannot fool all the people all the time. - Abraham Lincoln

Introduction

Although the new SDEIS is a staggering 906 pages it is hopelessly confused and fails conclusively to comply with the procedural and substantive requirements of NEPA and SEPA. It also proposes a project that indisputably violates the Endangered Species Act.

Specifically, the SDEIS has 8 fatal flaws that will be explained in this comment letter:

1. Reclamation and Ecology Should Have Published all Comments and Responses to the 2015 DEIS Before Releasing the 2018 SDEIS

2. The Purpose and Need Section is Internally Contradictory and illegally limits the number of alternatives that are analyzed in the draft. It also inappropriately takes a “public” SDEIS and converts it into “private” proposal by the Roza Irrigation District

3. The Proposed Action is The Only Alternative Other Than the No Action Alternative

4. The Project is Unauthorized by Congress and Ecology Does Not Have Funding to Implement the Project

5. The Alternatives Analysis Is Far Too Limited To Comply With NEPA and SEPA

6. All of the Alternatives Except the No Action Alternative Violate the Endangered Species Act

7. Reclamation’s Failure to Consult under The Endangered Species Act is Illegal

8. The Project Violates Water Law Generally and the Yakima Allocation Specifically

For these reasons - and many others articulated in our prior comments and the comments of others - the SDEIS must be rejected in its current form to comply with NEPA, SEPA, and the Endangered Species Act. We believe that is an impossible task and therefore recommend that the “No Action” alternative be selected.

Introduction

This SDEIS is required under both the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). Under both laws agencies considering “actions significantly affecting the quality of the human environment” must prepare and issue
an Environmental Impact Statement (EIS). 42 U.S.C. § 4332(2)(C); Nw. Envtl. Advocates v. NMFS, 460 F.3d 1125, 1133 (9th Cir. 2006). An EIS:

“Shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1; Nw. Envtl. Advocates, 460 F.3d at 1134.

Thus, the EIS is more than a mere “disclosure document.” 40 C.F.R. § 1502.1. Agencies must take a ‘hard look’ at the potential environmental consequences of the proposed action.” Klamath–Siskiyou Wildlands Ctr. v. BLM, 387 F.3d 989, 993 (9th Cir. 2004) (citing Churchill County v. Norton, 276 F.3d 1060, 1072 (9th Cir. 2001)). By focusing on the environmental effects of the proposed agency action, “NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” Marsh, 490 U.S. at 371, 109 S.Ct. 1851 (1989). Reclamation and Ecology are the agencies charged with the meeting these duties and they have failed to meet this burden in this DEIS.1

In the 2015 DEIS Reclamation and Ecology prepared the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Draft Environmental Impact Statement (DEIS) as a single document. It includes environmental analyses for the both the KKC and KDRP projects. The DEIS was released to the public in January 2015 and described the no-action alternative and five action alternatives. The public comment period ended June 15, 2015.

As we noted in our comments regarding the 2015 DEIS there are were at least seven fatal flaws with that DEIS that rendered it insufficient under NEPA and SEPA. This SDEIS does nothing to resolve these insufficiencies and, in fact, creates many new problems that make the current NEPA/SEPA process even worse. This comment letter explains a series of major substantive and procedural flaws in the SDEIS and poses a series of questions that should have been addressed in the SDEIS. As required by both NEPA and SEPA, and their implementing regulations, we expect both Reclamation and Ecology to provide responses to each of the questions posed in this letter. Importantly, Reclamation and Ecology have still not satisfied this obligation with regard to the 2015 DEIS

While we agree that the Bureau of Reclamation and the Washington State Department of Ecology needed to draft a Supplemental Draft Environmental Impact Statement (SDEIS) this supplement fails to meet even the most basic requirements of NEPA, SEPA, and all of the alternatives proposed in the document (except the “no action” alternative) blatantly violates the Endangered Species Act (ESA) because of their impact on listed Bull Trout and Spotted Owls.

The New SDEIS

---

1 Washington State’s Environmental Protection Act (SEPA) mirrors NEPA and places the same burden upon Washington State agency actions.
To understand this SDEIS one needs to understand a complex web of related processes and projects. Mr. David Ortman’s comment letter to this SDEIS does an excellent job of articulating the many problems with the historical situation and the multiple conflicting mandates that burden this entire situation. (This letter incorporates his comments by reference). As the SDEIS itself explains:

Following development of the Integrated Plan, Reclamation and Ecology prepared the Integrated Plan FPEIS to assess the environmental effects of implementing the Integrated Plan (Reclamation and Ecology, 20124). The Integrated Plan FPEIS was issued in March 2012. In July 2013, Reclamation published the Record of Decision (2013 Integrated Plan ROD) to implement the Integrated Plan in cooperation with Ecology and other Federal, State, local, and Tribal partners. The selected alternative in the 2013 Integrated Plan ROD implements the Integrated Plan. Projects associated with the seven elements will be implemented in a phased and balanced approach. The Integrated Plan three-phase strategy (10-year increments over 30 years) may combine or implement actions simultaneously. Additional project-level environmental compliance will be completed prior to implementation of specific projects and actions.

The action alternatives examine constructing and operating a pumping plant to access up to 200,000 acre-feet of water in Kachess Reservoir during drought years. Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) is evaluated as a component of the KDRPP alternatives. The KKC involves constructing and operating a gravity flow tunnel from Keechelus Reservoir to Kachess Reservoir and is also a component of the Integrated Plan, but is not being pursued as a standalone project at this time. These projects are part of the Yakima Basin Integrated Water Resources Management Plan (Integrated Plan).” (SEPA Fact Sheet p. 11 of SDEIS)

It is important to distinguish between the Integrated Plan as a political compromise document, and the Supplemental Draft Environmental Impact Statement as an environmental compliance and disclosure document. The Integrated Plan was determined as a politically appropriate synthesis of programs, taking into account the political positions of the state and federal agencies, counties and tribal representatives in the planning process organized by Ecology and Reclamation. There is no legal requirement that all viable alternatives be considered in a political planning process. There is, however, a legal requirement that all viable alternatives be considered in an environmental compliance and disclosure document required by the National Environmental Policy Act.

Previously referred to as the Kachess Reservoir Inactive Storage Project, the proposed Kachess Drought Relief Pumping Plant (KDRPP) could withdraw up to 200,000 acre-feet of lake storage water up to 80 feet below the reservoir’s existing outlet works, which were designed to allow storage and supply of water equal to the average annual watershed precipitation. In other words, the lake was increased in size to store the maximum amount of water available in the watershed. The current “storage” is all the water above the natural level of the lake prior to dam construction. The current proposal would remove water below the natural level of the
lake by up to 80 feet. This means that the proposal would drain much of the original Alpine Lake.

Supposedly, the KDRPP would operate only during a Washington State-declared drought with the goal of providing, when feasible, up to 70 percent water rights to proratable users. The SDEIS now includes a new variation of the KDRPP known as the “KDRPP Floating Pumping Plant” (KDRPP FPP) which was not analyzed or even proposed in the 2015 DEIS. This was proposed by the Roza Irrigation District. Apparently, it was the addition of this new KDRPP FFP (the new Proposed Action) which convinced Reclamation and Ecology that they needed to supplement the 2015 DEIS.

All of the Pumping Plant proposals also could include the addition of Keechelus Reservoir-to-Kachess Reservoir Conveyance project (KKC), which is intended to help refill Lake Kachess in the years following a drought by sending water from Lake Keechelus via tunnel to Lake Kachess. In addition, each of the Pumping Plant alternatives could operate without the KKC (although that would greatly increase the amount of time needed to refill the lake and significantly increase environmental damage). Finally, Reclamation and Ecology have abandoned the formerly proposed South Tunnel Alignment of the KKC because it was impractical and too expensive.

**Fatal Flaw # 1 – Reclamation and Ecology Should Have Published all Comments and Responses to the 2015 DEIS Before Releasing the 2018 SDEIS**

According to the 2018 SDEIS:

> Reclamation and Ecology have reviewed all comments on the DEIS, developed a new floating pumping plant alternative, collected additional scientific data as necessary, and evaluated new findings. The new alternative and new findings have been documented in the [Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement](#) (SDEIS) released to the public April 13, 2018. The SDEIS will not contain comment letters received on the DEIS; instead, letters and response to comments from both the DEIS and SDEIS will be in a final environmental impact statement.” ES-xvii

If Reclamation and Ecology have already reviewed all the comments from the previous DEIS why did they fail to release the comments and responses in the almost 3 years since the DEIS comment period closed? This puts the public at a substantial disadvantage to understand the need for and reasoning behind the publication of the SDEIS. The required comment period for this SDEIS is, therefore, flawed because Reclamation and Ecology have vast amounts of information that are not in the public domain. To make matters worse the SDEIS acknowledges that the comments raised issues that led in part to the decision to issue the SDEIS. (ES-xv) At a minimum the agencies should extend the current public comment period and publish the 2015 public comments and responses. This would put the public on semi-equal footing with the decision maker in terms of understanding the implications of the project, the changed
circumstances, and new information (stemming from public comments on the 2015 DEIS) that led to the decision to publish a SDEIS.

_How do the agencies justify their decision not to publish the comments and responses to the 2015 DEIS in this SDEIS?_

**Fatal Flaw # 2 - The Purpose and Need Section is Internally Contradictory**

The Purpose and Need section of an EIS is critical because it frames the entire discussion about the proposed project and leads to potential project alternatives. In this situation there are three Purpose and Need sections for three different “project proponents” and there is only one way to meet all of their goals: Selecting the “Proposed Action” as the “Preferred Alternative”.

**Reclamation’s Purpose and Need**

According to the SDEIS:

_Reclamation’s purpose and need for action is to provide more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin._

_Specifically, Reclamation needs to analyze, implement, and fund as authorized, the site-specific projects identified here in accordance with the 2013 Integrated Plan ROD. Reclamation may fund, design, construct, operate, and maintain some or all of the Proposed Action, if authorized to do so pursuant to Section 4007 of the Water Infrastructure Improvements for the Nation Act or other law which provides similar authorization._

How can reclamation participate financially in the project is not authorized by Congress? The statement above confirms that Reclamation may only “fund, design, construct, operate, and maintain some or all of the Proposed Action, if authorized to do so pursuant to Section 4007 of the Water Infrastructure Improvements for the Nation Act or other law which provides similar authorization.” How can Reclamation make financial commitments when the necessary authorization does not exist under Federal Law?

How can Reclamation wear both the project proponent hat and the regulatory hat if Congress does not authorize them to act as a project proponent?

The SDEIS further states: “Alternatively, any other project proponent may choose to fund the project independently; in which case, Reclamation then needs to respond to them as applicant and to determine whether to authorize, as necessary, any such entity to design, construct, operate and maintain certain projects, as necessary, related to the two objectives set forth in the Integrated Plan: (1) access water that is currently not accessible in the Kachess Reservoir to improve the water supply and reduce prorationing, and (2) improve water supply flexibility and storage between Kachess and Keechelus reservoirs.”
Ecology’s Purpose and Need

Ecology’s purpose for the action is to participate in the Integrated Plan and fund (not more than 50 percent) of the plan, and promote timely and effective implementation of associated projects in an aggressive pursuit of water supply solutions for instream and out-of-stream uses in the Yakima River basin [Revised Code of Washington (RCW) 90.38.005].

So, Ecology is in a slightly more legitimate position because they do have a State authorization to fund up to 50% of the Integrated Plan. Unfortunately, they do not have not ability to promise funds on their own without acts of both the Governor and the Legislature.

How does Ecology intend to fund the plan?

Why would Ecology fund a project that has no benefit to the ecology of Washington State destroys an alpine lake and violates SEPA, NEPA, and the Endangered Species Act by extirpating listed Bull Trout?

Roza and Proratable Entities’ Purpose and Need

Roza and the Proratable Entities’ purpose for the action is to access up to 200,000 acre-feet of water from Kachess Reservoir during drought years, as they need to improve water supply and reduce prorationing, whenever feasible, and improve flexibility to respond to the uncertainties of climate change. To participate in the Proposed Action, Roza and/or the Proratable Entities would need to seek all necessary authorizations. This document was prepared by Reclamation and Ecology, but Roza and/or other Proratable Entities may adopt this document for their own purposes.

At least this section of the Purpose and Need section is honest. Roza wants the water and they are willing to pay for it. This, however, takes this entire process in a very different direction as apparently this has pivoted from a “public project” led by Reclamation and Ecology to a Roza Irrigation District project hidden behind the veil of public agencies and the Integrated Plan. Reclamation and Ecology participating in a Project Action that is in effect a proposal from Roza to take 200,000 acre-feet of water from an Alpine Lake, draining the lake by 80 feet, causing untold hardships, ruining a major Federal camp ground, extirpating a Threatened species listed under the ESA, etc? How can this be justified?

- We understand why Roza wants this outcome but please explain how that result can possibly be in the public interest?
- It is obvious that the Purpose and Need section is internally contradictory. Ecology has one goal, Reclamation a different goal, and Roza a third. How can they be reconciled?
Legally, this proposal is dead on arrival as an analogous case decided by the 9th Circuit is on point here. In *National Parks & Conservation Association v. Bureau of Land Management, 606 F.3d 1058 (9th Cir. 2010)* Landowners and conservation group brought suit against the Bureau of Land Management (BLM) over a proposed public-private land swap adjacent to Joshua Tree National Park to allow a private company to build and operate a landfill. The court determined that the BLM’s considerations leading to the land swap were deficient, disallowing the exchange. The case upheld the necessity of a transparent process. The court looked to whether the BLM considered reasonable alternatives to the accepted landfill project. An agency has some discretion in selecting alternatives. However, the alternatives considered cannot be unduly narrow. In this case, the court looked to whether the goals were those of the BLM or those of Kaiser (the landfill developer). The court determined that alternatives other than Kaiser’s landfill should have been reasonably considered in the BLM’s purpose and need statement; however, the statement was so narrowly written it excluded any option other than a landfill. The court affirmed the district court’s decision, stating that the BLM put Kaiser’s needs before the public’s in the determination of purpose and need and failure to consider a reasonable range of alternatives.

This SDEIS is even worse than the situation with BLM above. In this situation there are three Purpose and Need sections for three different “project proponents” and there is only one way to meet all of their goals: Selecting the “Proposed Action” as the “Preferred Alternative”.

As the 9th Circuit wrote this is a clear violation of NEPA:

*The BLM’s definition of the project’s purpose will necessarily affect the range of alternatives considered, because when “the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved... Our holdings in Friends and Carmel–By–The–Sea forbid the BLM to define its objectives in unreasonably narrow terms. The BLM may not circumvent this proscription by adopting private interests to draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private objectives, yet that was the result of the process here. The BLM adopted Kaiser’s interests as its own to craft a purpose and need statement so narrowly drawn as to foreordain approval of the land exchange. (P. 1070)*

Here Reclamation and Ecology have adopted Roza’s interests in just the same way that the BLM adopted Kaiser’s interest. This was deemed improper by the 9th Circuit and just like in the case above by crafting the purpose and need section so narrowly Reclamation and Ecology “forordain” the selection of the Floating Pumping Plant. This will also be deemed illegal.

**Fatal Flaw #3 - The Proposed Action is The Only Alternative Other Than the No Action Alternative**

Although the SDEIS claims to evaluate true alternatives it is evident that the only real alternative to no action is the new Floating Pumping Plant which not surprisingly is defined as the “Proposed Action”. This Proposed Action is a new term that was not included in the DEIS.
Although, legally there is a potential distinction between the Proposed Action and what may be selected as the Preferred Alternative, this SDEIS seems to conflate the two terms and reveals that the agencies have already made up their mind that the Floating Pumping Plant is in fact the Preferred Alternative.

According to the SDEIS:

“The Proposed Action for this SDEIS is to fund, design, construct, operate, and maintain a floating pumping plant on Kachess Reservoir in order to recover up to 200,000 acre-feet of inactive water storage from Kachess Reservoir during drought years when prorationing is less than 70 percent supply. This water would otherwise remain in Kachess Reservoir at an elevation below the existing gravity outlet works. The Proposed Action would also include volitional fish passage at the downstream end of the Narrows which is located between the upper and lower Kachess reservoirs. Reclamation and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action.

The Proposed Action implements the Kachess Inactive Storage project identified in the 2012 Integrated Plan FPEIS to provide additional water supply from the Kachess Reservoir during a State-declared drought. Since 2012, the KDRPP has undergone additional refinement and design.

In the DEIS, the KDRPP proposal focused on a shoreline pumping plant with deep tunnel intake. Since then, Roza identified an additional design for the KDRPP proposal. Based upon this, the agencies have decided to include a floating pumping plant as the Proposed Action, and to analyze the shoreline pumping plant design alternatives considered in the DEIS as alternatives. The alternatives considered also include KKC, which was identified in the Integrated Plan FPEIS as the Keechelus-to-Kachess Pipeline. Although the floating pumping plant is the Proposed Action, Reclamation and Ecology have not yet identified a Preferred Alternative.

Reclamation would need to issue a ROD documenting the selected alternative and approving the construction of the pumping plant on Kachess Reservoir, over which the agency has jurisdiction. The agency would provide any necessary permits, agreements, or other approvals, review design, oversee construction, coordinate and manage water releases from Kachess Dam and deliveries to downstream users, and possibly enter into water, power, and transmission contracts.

Ecology may need to take actions implementing regulations, participating financially, and issuing permits as required for implementation of the selected alternatives. The changes described above require additional SEPA review in this SDEIS.”(ES-viii)

This is an embarrassing attempt to finesse a superficial distinction. There is no reason that Reclamation and Ecology would have spent three years, vast amounts of money, and added a new Project Proponent (Roza) to study a Proposed Action (proposed by Roza) that they are not going to select as the Preferred Alternative. The Floating Pumping Plant is both the Proposed
Action and the illegally predetermined Preferred Alternative. This is flatly banned by both NEPA and SEPA.

More evidence of the pre-determination can be found in the Purpose and Need section discussed above. This section suddenly includes a new player and a new “Propose and Need for the Action” that was not in the 2015 DEIS and is apparently the basis for this new SDEIS. In this instance the SDEIS does not even attempt to distinguish between the Proposed Action and Preferred Alternative:

Reclamation and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action. Reclamation expects that the ROD would determine which entity would carry out each of these functions. Reclamation, Ecology, and Roza are each referred to herein as a “project proponent” and, collectively, as “project proponents.” ES – viii (Emphasis added)

This is a remarkable paragraph. One the one hand, the Bureau and Ecology claim that they have not selected a Preferred Alternative and on the other they say they each propose to “fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action.” They continue by stating that the ROD will determine which entity would carry out each of these functions. Finally, they state that Reclamation, Ecology, and Roza are each referred to herein as a “project proponent” and, collectively, as “project proponents.” ES – viii (Emphasis added).

This is clearly predecisional and is a blatant NEPA and SEPA process violation.

Worse still, at a practical level how is it possible to generate and opinion on the project if we do not even know who would “fund, design, construct, operate, and maintain some or all of the Proposed Action”?

Knowing who is in charge of implementing the project is a threshold piece of information and even this is not clarified in the SDEIS. The sheer number of actors, combinations of actions and combinations of a potential funding mosaic make the number of potential results virtually infinite. The point of the SDEIS, and NEPA and SEPA in general, is to define what the environmental consequences from a project are. It is antithetical to the letter and spirit of NEPA and SEPA to provide a hypothetical scenario with a virtually infinite number of possibilities from which the public can only guess at.

Fatal Flaw #4 – Reclamation does not have Authorization from Congress to Implement or Fund The Project and Ecology Does Not Have Funding to Implement the Project

The SDEIS says the ROD will “determine which entity would carry out each function” but Reclamation does not currently have authorization from Congress to fund this project and by
definition has not developed an appropriations strategy? Either their potential commitment is illegal or it simply designed to confuse the public.

Similarly, how can Ecology commit to any of the functions without the funding necessary to carry them out. At best, Ecology would need to request and receive funding from the legislature and governor next year during the 2019 legislative session to receive the necessary funding. Does that mean the FEIS and ROD will not be finalized until Spring of 2019, after the legislative session, assuming Ecology gets funding from the Legislature?

The Bureau and Ecology are not known for making such bold and unauthorized statements. It seems, therefore, far more likely that the real story here is that Roza has agreed in non-public meetings to fund and operate the new floating pumping plant. If this is the case this entire SDEIS should be shelved and a new “private proponent” led Draft EIS should be prepared by Roza.

In effect the SDEIS is simply an entirely new DEIS, poorly disguised as a SDEIS in order to avoid compliance with statutory requirements and deny the public necessary information to evaluate the “new alternative” not previously contemplated. The SDEIS proposes an entirely new alternative not contemplated or researched in the DEIS. The public has no way of evaluating this alternative relative to the prior DEIS as Reclamation and Ecology have intentionally refused to publish or respond to prior comments that led to the issuance of the SDEIS.

The Major Conclusions Section

The major conclusions section of the Executive Summary validates this theory about what this proposal really is: a backdoor effort to build the Floating Pumping Plant. As the SDEIS states:

“Based upon the analysis of impacts to these resources in Chapter 4, major conclusions of the SDEIS are as follows:

- **Change in Water Supply:** Action alternatives would improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years, raising the proration percentage to about 53 percent of entitlement. This would be a substantial benefit to water supply because it would offer substantial progress toward the Integrated Plan’s 70 percent proration goal.

- **Change in Reservoir Levels:** Under all the action alternatives, Reclamation would operate Keechelus Reservoir to help Kachess Reservoir refill following a drought. This action would result in slightly lower mean Keechelus Reservoir pool levels, with a maximum incremental reservoir drawdown of 18 feet in late summer (in 1996) compared to No Action. Under all action alternatives, Kachess Reservoir would be drawn down by as much as 80 feet below existing minimum pool conditions.

 Listed Species:
Based on modeled water surface elevations, under Alternatives 2, 3 and 4, there would be an increase in days where Kachess Reservoir water surface elevation would drop below 2,200 feet (the evaluation at which Big and Little Kachess reservoirs separate and begin to affect fish passage, particularly for Bull Trout). These impacts to passage of bull trout would be mitigated by the Volitional Bull Trout Passage Improvements. Alternatives 5A, 5B, and 5C would result in an increase in days of flows in Keechelus Reach of the Yakima River that are suitable for Middle Columbia River steelhead outmigration. All alternatives would result in noise impacts to northern spotted owls, but are not expected to harm or injure northern spotted owls, or impact their habitat.

Regional Economic Impacts and Benefits: The socioeconomic effects of the action alternatives arising from changes in water supply available for agriculture would be beneficial, resulting in a net gain in regional economic activity relative to No Action.

So Roza gets the water and the supposed economic benefits and the environment, the community, and the public at large lose. It’s that simple. It is also a terrible idea and illegal.

Fatal Flaw # 5 – The Alternatives Analysis is Far Too Limited to Comply with NEPA and SEPA

It gets worse. Under National Environmental Policy Act (NEPA) agencies considering “major Federal actions significantly affecting the quality of the human environment” must prepare and issue an Environmental Impact Statement (EIS). 42 U.S.C. § 4332(2)(C); Nw. Envtl. Advocates v. NMFS, 460 F.3d 1125, 1133 (9th Cir. 2006). The EIS:

“shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1; Nw. Envtl. Advocates, 460 F.3d at 1134.

Thus, the EIS is more than a mere “disclosure document.” 40 C.F.R. § 1502.1. Agencies must take a ‘hard look’ at the potential environmental consequences of the proposed action.” Klamath–Siskiyou Wildlands Ctr. v. BLM, 387 F.3d 989, 993 (9th Cir. 2004) (citing Churchill County v. Norton, 276 F.3d 1060, 1072 (9th Cir. 2001)). By focusing on the environmental effects of the proposed agency action, “NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” Marsh, 490 U.S. at 371, 109 S.Ct. 1851 (1989). Reclamation and Ecology fail to meet this burden in this DEIS. 2

In the first landmark NEPA case, Calvert Cliffs’ Coordinating Committee, Inc. v. Atomic Energy Commission, the U.S. Court of Appeals for the D.C. Circuit highlighted the importance of these requirements and noted that they seek:

2 Washington State’s Environmental Protection Act (SEPA) mirrors NEPA and places the same burden upon Washington State agency actions.
To ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost benefit analysis. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made. 449 F.2d 1109 (D.C Cir 1971).

The SDEIS purports to evaluate:

Alternative 1 - No Action Alternative

Alternative 2 – KDRPP East Shore Pumping Plant;

Alternative 3 – KDRPP South Pumping Plant;

Alternative 4 - (Proposed Action) – KDRPP Floating Pumping Plant;

Alternative 5A – KDRPP East Shore Pumping Plant with KKC North Tunnel Alignment;

Alternative 5B – KDRPP South Pumping Plant with KKC North Tunnel Alignment;

Alternative 5C – KDRPP Floating Pumping Plant with KKC North Tunnel Alignment.

In reality it only really evaluates the Proposed Action and No Action. In doing so it doesn’t even attempt to meet the legal requirements for an alternatives analysis.

NEPA section 102(2)(C) requires an EIS to discuss “alternatives to the proposed action.” The CEQ, in its implementing regulations, emphasizes alternatives as the “heart” of the EIS. CEQ’s regulations provide detailed directions on the contents of the alternatives discussion in an EIS. Specifically, agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.
(e) Identify the agency’s preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

Another important principle outlined in the CEQ regulations is that all reasonable alternatives must be discussed. This comports with NEPA’s central purpose of fostering informed decision-making. Thus, it is not surprising that many NEPA challenges revolve around whether the agency considered a reasonable range of alternatives, with courts holding that the existence of reasonable but unexamined alternatives renders an EIS inadequate.

Courts also look to the goals, needs, and purposes defined for the project in determining whether the alternatives discussion is reasonable. While giving deference to the agencies, courts are wary when agencies narrowly define the purpose or scope of an action. For example, when considering the scope of reasonable alternatives in an EIS, the Seventh Circuit stated that “[o]ne obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence).”

Courts also look to the complexity of the action in considering whether the amount of detail in the alternatives section is sufficient. Agencies are directed to “present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.” “The touchstone for [a court’s] inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” This SDEIS conclusively fails to meet this standard.

SEPA has similar requirements to evaluate alternatives WAC 197-11-442(2) requires Ecology to:

*Discuss impacts and alternatives in the level of detail appropriate to the scope of the nonproject proposal and to the level of planning for the proposal. Alternatives should be emphasized. In particular, agencies are encouraged to describe the proposal in terms of alternative means of accomplishing a stated objective (see WAC 197-11-060(3). Alternatives including the proposed action should be analyzed at roughly comparable level of detail, sufficient to evaluate their comparative merits (this does not require devoting the same number of pages in an EIS to each alternative). [underline added]*

The Washington Supreme Court has found that “The environmental significance of the nonproject action creates the obligation to examine alternatives to the nonproject action... SEPA requires an examination of reasonable alternatives to the nonproject action.” *Citizens Alliance to Protect Our Wetlands v. City of Auburn*, 126 Wn.2d 356, 366 (1995). In *Blair et. al. v. City of Monroe*, CPSMHB 14-3-0006c, Final Decision and Order (Sept. 19, 2014), the Central...
Puget Sound Regional Growth Management Hearings Board considered the scope of review under WAC 197-11-442(4). There the Board found that the City of Monroe had failed to adequately comply with SEPA review requirements (SEPA is to function “as an environmental full disclosure law,” Blair at 22. “[t]he range of alternatives considered in an EIS must be sufficient to permit a reasoned choice.” SWAP v. Okanogan County, 66 Wn. App. 439, 444 (1992).

Thus, both NEPA and the Washington State Environmental Policy Act (SEPA) require consideration of all reasonable alternatives. Under both laws an EIS must include a detailed statement and analysis of all “reasonable alternatives” to the proposed action. This SDEIS fails this test.

Finally, it should be noted that the severely restricted alternatives analysis in both the 2015 DEIS and the 2018 SDEIS stem from the fact that the proposed projects are part of a broader political compromise solution known as the Yakima Basin Integrated Plan (YBIP) developed by the YRBWEP Workgroup (Workgroup). Because of this, it is not surprising that the Reclamation and Ecology did not want to consider other ways to achieve the desired fish enhancements and increases in water storage and flows – those options were not part of the mandate of the YBIP.

Whatever one thinks of the YBIP it is clear that it includes the KKC and KDRPP and does not include other alternatives that could meet the same underlying objectives but were not agreed upon by the Workgroup in the YBIP. Reclamation and Ecology’s inclusion of other public officials and stakeholders interested in and affected by Yakima Basin water shortage problems is perhaps laudable. It does not, however, relieve either agency from complying with the statutory requirements of state and federal law.

They SDEIS takes this predetermination even further by inviting a new proposal by Roza (the floating pumping plant) and names it the “Proposed Action” and includes Roza as a “Project Proponent”. This means that in effect there are only two alternatives the floating pumping plant or no action.

**Key Questions for Reclamation and Ecology**

**Why were more alternatives not considered?**

**Are the alternatives considered actually real alternatives or are Alternative 4 and the no action alternative really the only alternatives?**

**Why wasn’t water conservation explicitly considered as an alternative?**

**Why was Kecheelus not evaluated for a drought relief pumping plant with a canal or pipeline diversion directly from Kecheelus to Easton? This alternative would accomplish the same objectives in a significantly less environmentally harmful and dramatically less costly manner.**
Why were alternative storage locations not considered?

Fatal Flaw #6 - All of the Alternatives Except the No Action Alternative Violate the Endangered Species Act

All alternatives except, no action, violate the Endangered Species Act (ESA). As the Supreme Court articulated in the landmark ESA case TVA v. Hill:

*It may seem curious to some that the survival of a relatively small number of three-inch fish among all the countless millions of species extant would require the permanent halting of a virtually completed dam for which Congress has expended more than $100 million. . . . We conclude, however, that the explicit provisions of the Endangered Species Act require precisely that result.* “One would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the Endangered Species Act. . . . The language admits of no exceptions. TVA v. Hill

The DEIS admits in multiple locations that the draining of Lake Kachess will lead to the killing of listed Bull Trout. Killing of listed Bull Trout is illegal without an incidental take permit (ITP) which requires a Habitat Conservation Plan (HCP). There has been no discussion of a HCP or ITP in this setting.

As the SDEIS states:

*Based on modeled water surface elevations, under Alternatives 2, 3 and 4, there would be an increase in days where Kachess Reservoir water surface elevation would drop below 2,200 feet (the evaluation at which Big and Little Kachess reservoirs separate and begin to affect fish passage, particularly for Bull Trout). These impacts to passage of bull trout would be mitigated by the Volitional Bull Trout Passage Improvements. Alternatives 5A, 5B, and 5C would result in an increase in days of flows in Keechelus Reach of the Yakima River that are suitable for Middle Columbia River steelhead outmigration. All alternatives would result in noise impacts to northern spotted owls, but are not expected to harm or injure northern spotted owls, or impact their habitat.*

This means that the Bull Trout cannot migrate to their spawning grounds which is obviously “take” under the ESA and jeopardizes the species continued existence.

The plan attempts to mitigate for this damage to Bull Trout by proposing an untested and speculative Volitional Fish Passage Project. The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.
In some years (e.g., conditions such as occurred between 2001 – 2008) the pump...and therefore the channel...will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population.

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

To make matters worse, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.”

What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the Proposed Alternative and all the action alternatives?

This is simply not how the ESA works. Here we have a known major impact on listed species and an unproven, speculative, and at best limited technological proposal minimize some unknown percentage of the negative impact.

*The No Action Alternative is the only legal alternative and should be selected.*

**Fatal Flaw # 7 Failure to Consult under The Endangered Species Act**

In addition to the massive substantive impacts that will undeniably impact Bull Trout and Spotted Owls, Reclamation has inexplicably disregarded the Federal Agency process mandated under the ESA. Section 7 of the ESA requires federal agencies to consult with either the United States Fish and Wildlife Service or National Marine Fisheries Service to ensure that any action authorized or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of the species. ESA § 7, 16 U.S.C. § 1536. This process requires the Services to prepare a biological opinion that includes a finding as to whether the proposed action is likely to jeopardize the continued existence of an endangered or threatened species or its habitat. 50 C.F.R. § 402.14.
Although the current SDEIS acknowledges repeatedly that there will be substantial negative impacts to ESA listed species including Bull Trout and the Northern Spotted Owl (among others) and the habitat of these species, it fails to quantify those impacts adequately. This failure stems from the fact that the Reclamation has not initiated a Section 7 Consultation under the ESA. The SDEIS does state that such a Consultation will occur in the future but the lack of a concrete understanding of the impacts on listed species makes the selection of a preferred alternative arbitrary and capricious. It is exactly of this reason that both the NEPA and ESA regulations encourage simultaneous NEPA review and ESA Section 7 consultations.

In fact, Reclamation’s own NEPA regulations state:

NEPA activities should be coordinated with other environmental requirements so that their requirements are, “when possible, met *concurrently rather than consecutively*. This specifically includes FWCA, CWA, NHPA, ESA, and other environmental review laws and Executive orders. P 3-10, 3-11. (emphasis added).

The NEPA Guidelines state further:

To the fullest extent possible, agencies shall prepare draft environmental impact statements *concurrently with and integrated with environmental impact analyses* and related surveys and studies required by...the Endangered Species Act....” 40 C.F.R. § 1502.25. (emphasis added).

The “studies” required by section 7 are those needed for consultation on any federal action that may affect ESA-listed species. 16 U.S.C. § 1536(b), (c).

ESA section 7(c) states that the action agency's biological assessment, a precursor to a biological opinion, “may be undertaken as part of a Federal agency's compliance with the requirements of Section 102 of the [NEPA].” 16 U.S.C § 1536(c)(1). Again, what is plainly intended is that the action agency's consultation duties regarding its proposed action may be coordinated with its NEPA review of that action. Similarly, FWS's regulations regarding section 7 state: “consultation ...procedures under section 7 may be consolidated with interagency cooperation procedures required by other statutes, such as [NEPA].” 50 C.F.R. § 402.06.

Again, Reclamation’s own NEPA regulations state:

*Special attention should be given to the integration of NEPA and the ESA. Section 7(a)(2) of the ESA requires consultation with the Service and/or NOAA-NMFS for any Reclamation action which may affect a species federally listed as threatened or endangered (listed species). This consultation process may result in the Service and/or NOAA-NMFS issuing a biological opinion containing actions to be undertaken to avoid jeopardizing a species or to reduce the level of take associated with the proposed action. Reclamation shall, to the fullest extent possible, integrate ESA and NEPA analyses and schedules.”* (Bureau of Reclamation’s NEPA Handbook Section 3.15.1) (emphasis added).
The failure to consult is especially troubling because this is the second time that Reclamation has failed to conduct an ESA consultation. The first time came in the Programmatic EIS for the entire YRBIP process. In that document Reclamation stated:

Reclamation has concluded that consultation under Section 7 of the Endangered Species Act is not required at this time because preparation of the PEIS and selection of a preferred alternative would have no effect on listed species in the action area. Reclamation has discussed this conclusion with both the Service and NMFS, and neither agency found any fault with Reclamation’s reasoning which led to the no effect determination. See Appendix G for a summary of the correspondence. Consultation would be conducted for individual projects that may affect listed species or critical habitat and that Reclamation would fund, authorize, and/or carry out under the Integrated Plan in the future.” PEIS 6.2.2.

Reclamation’s failure to consult with USFWS and NOAA is inexcusable and has led to an incomplete evaluation of the true impacts on endangered species and potential mitigation for these impacts.

**Key Questions for Reclamation and Ecology**

*Why wasn’t a Section 7 consultation completed before the DEIS was published?*

*Why wasn’t a Section 7 Consultation completed before the SDEIS was published?*

*How does Reclamation believe it meets its own NEPA regulations or the CEQ regulations regarding threatened and endangered species?*

*How can the NEPA decision maker or the public fully understand the impacts on listed species without input from the ESA expert agencies USFWS and NOAA?*

*Given that Reclamation and the USFWS are both part of the Department of Interior how can the lack of a Section 7 consultation be justified?*

*How can Reclamation contend that there is “no effect on listed species” in the PEIS and then acknowledge there will be significant effects upon listed species and habitat in the SDEIS.*

**Fatal Flaw # 7 – The DEIS repeatedly relies on vague and hypothetical mitigation measures**

One essential ingredient of an EIS is to identify adverse environmental impacts and then discuss the steps that will be taken to mitigate unavoidable adverse environmental consequences. The projects evaluated in the DEIS have numerous environmental consequences that will require extensive mitigation. The requirement that an EIS contain a detailed discussion of possible
mitigation measures flows both from the language of the NEPA and, more expressly, from CEQ’s implementing regulations for NEPA.

Implicit in NEPA’s demand that an agency prepare a detailed statement on “any adverse environmental effects which cannot be avoided should the proposal be implemented,” 42 U.S.C. § 4332(C)(ii), is an understanding that the EIS will discuss the extent to which adverse effects can be avoided and mitigated for. See D. Mandelker, NEPA Law and Litigation § 10:38 (1984).

The Supreme Court considered the duty to mitigate under NEPA in Robertson v. Methow Valley Citizens Council (109 S.Ct. 1835). In that case the plaintiffs challenged a Forest Service permit for a ski resort in a national forest. The Court held that the requirement that an agency discuss mitigation measures is implicit in “NEPA’s demand” and CEQ regulations. The omission of a “reasonably complete discussion” of mitigation measures would undermine NEPA’s action-forcing functions. Without such a discussion, the Court added, neither the agency nor other interested groups or individuals, could properly evaluate the severity of the adverse effects of the action. That is exactly the problem with this SDEIS.

On January 14, 2011, the White House Council on Environmental Quality (“CEQ”) finalized guidance entitled “Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.” The guidance is intended to make federal agencies more accountable for mitigation measures that they identify in conducting National Environmental Policy Act (“NEPA”) reviews of proposed actions.

CEQ seeks better implementation of mitigation commitments by making them express, measurable, and viable. According to CEQ, NEPA and decision documents should “carefully specify[]” any relied-upon mitigation “in terms of measurable performance standards or expected results, so as to establish clear performance expectations.” CEQ also asks agencies to disclose and assess potential funding shortfalls upfront in the NEPA analysis and explore adaptive management or specific mitigation alternatives if the selected mitigation does not succeed.

The proposed mitigation in the SDEIS doesn’t even come close to meeting this standard. The mitigation proposed in the current SDEIS is far too general and hypothetical, and even undermines the mitigation already being implemented by WSDOT under the Interstate 90 FEIS. Therefore, it fails to meet the NEPA/SEPA threshold to provide the decision maker or the public with a full understanding of the environmental consequences of any of the alternatives under consideration and to

As noted above one glaring example centers around Bull Trout, a threatened species in Lake Kachess. The plan calls for reducing the level of the lake by an additional 82.75 vertical feet. This draw down will prevent the fish from spawning in Box Canyon by creating an 82 ft high cliff impediment. Yet, there is no plan to mitigate this loss of habitat and reduction in population of the threatened species. The Gold Creek bull trout are distinct from Lake Kachess Bull Trout.
Over 5 miles, 2 dam structures, and Kecheelus Ridge separate the populations. Therefore, the Gold Creek bull trout mitigation plan cannot affect the Lake Kachess bull trout population.

Therefore, the proposed mitigation plan, which only affects Lake Kecheelus, cannot mitigate this loss. The DEIS alludes to vague considerations for mitigation of bull trout habitat destruction and population decline, but does not provide definitive or even viable proposals with cost estimates, which is particularly important in this case because the harmful effects are so dramatic and potentially impossible to mitigate such as 82’ cliffs in spawning gateways.

In another example, the SDEIS accurately states the Kachess Lake aquifer will be depleted and private wells may be compromised or fail entirely (DEIS 1-19). The only accommodation will be for “...Reclamation to develop appropriate mitigation strategies” if water levels and wells are adversely impacted. This we will figure it out later approach which permeates much of the SDEIS is simply inadequate under NEPA and SEPA and supporting regulations. The DEIS does not provide any indication of what mitigation efforts would be considered or appropriate. It is essential that these mitigation efforts be identified in advance, the likelihood of their need to be implemented also identified in advance, and that these estimates be quantitative, based upon scientific evidence.

**Forest and Wetlands Will Be Impacted**

The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, Reclamation has ignored and rejected these requests. This is a clear violation of the NEPA and SEPA process and renders the current SDEIS incomplete and unacceptable.

**Private Wells Will Be Dewatered**

The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time,
without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required in this SDEIS. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

**Federal Campground Will Be Ruined**

The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend...June 1.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. We ask that the past users of USFS Lake Kachess Campground be pro-actively contacted and informed of the potential impact on Lake Kachess, and that they be provided an opportunity for public comment. It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS correct this failure.

The current SDEIS precludes public comment on specific mitigation measures and by extension does not allow the public or the NEPA/SEPA decision maker to truly understand the implications of the proposed action. That is a violation of SEPA and NEPA.

*How can the SDEIS propose to “take” a Federal campground to begin with?*

*How can the USFS allow this without a thorough mitigation plan?*

*Why is the USFS a “cooperating agency” when the action will ruin their own campground.*

**Fatal Flaw # 8 – The Alternatives Violate Water Law Generally and the Yakima Allocation Specifically**

Although the SDEIS acknowledges the proper law regarding rights to water in the Yakima basin it proposes to violate that law directly.

*The following water entitlements in the Yakima River basin include senior water rights, proratable water rights, and junior water rights:*

- **Senior water rights (referred to as nonproratable) existed prior to the development of the Yakima Project, and are served in the order of their priority dates; they have precedence over proratable and junior rights.**
• *Proratable water rights share the priority date that the United States obtained for the Yakima Project. Proratable entitlements share equal priority, as they have a common priority date, and their water deliveries are subject to proration (reduced proportionately) in years when the water supply is insufficient to meet demand based on the court doctrine of Total Water Supply Available (TWSA). TWSA is estimated by Reclamation annually based on forecasted runoff, forecasted return flows, and storage contents.*

• *Junior water rights were established after the Yakima Project, and have priority dates after May 10, 1905. When there is insufficient water, the first deliveries to be curtailed are those with junior water rights in the order of their priority dates. (Section 1.2.1)*

Many property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down.

How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? The answer: it is not possible as it is flatly illegal.

How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam?

Who will pay to provide senior water rights holders with the water they have a right to?

How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property?

How can the Bureau and Ecology allow a taking of private rights where:

1) the recipient of the taking is a private, not public entity,
2) no condemnation has occurred,
3) no compensation is contemplated
4) owners of the rights have been denied due process?

**Conclusion**

This project should not happen because it is a bad idea and has massive negative impacts on natural resources and the local community. This project will not happen because it is flatly illegal. As was noted earlier, the draining lake Kachess by 80 feet to supply water to proratable irrigators is a component if the Integrated Plan. The problem is that as part of the Integrated Plan it simply cannot survive the NEPA and SEPA requirements to evaluate a reasonable range of alternatives (not to mention the direct impact on ESA listed species). Essentially, Reclamation and Ecology are caught on the horns of a dilemma. If they do not implement the
Kachess Pumping Plant project they are not implementing the Integrated Plan and if they do attempt to implement the Kachess Pumping Plant project they are violating NEPA, SEPA, and the ESA and are not acting in the public interest.

As was noted earlier, it is important to distinguish between the Integrated Plan as a political compromise document, and the Supplemental Draft Environmental Impact Statement as an environmental compliance and disclosure document. The Integrated Plan was determined as a politically appropriate synthesis of programs, taking into account the political positions of the state and federal agencies, counties and tribal representatives in the planning process organized by Ecology and Reclamation. There is no legal requirement that all viable alternatives be considered in a political planning process. There is, however, a legal requirement that all viable alternatives be considered in an environmental compliance and disclosure document required by the National Environmental Policy Act and Washington State’s Environmental Policy Act.

The advice provided to Reclamation and Ecology by the YRBWEP Workgroup does not supplant the requirement that Reclamation and Ecology themselves consider environmental alternatives when making decisions about major actions significantly affecting the quality of the environment. Reclamation and Ecology may not delegate that decision-making authority to others, or accept a workgroup recommendation without comparing that recommendation against other alternative courses of action. That delegation, however, is exactly what Reclamation and Ecology did in the 2015 DEIS and have done again in this 2018 SDEIS. This level of “predetermination” and failure to independently evaluate reasonable alternatives to the Kachess Pumping Plant Project contained in the Integrated Plan leads to a “black letter law” violation of NEPA and SEPA is fatal to both 2015 DEIS and the 2018 SDEIS.

Ultimately the Kachess Pumping Plant project is doomed because there is no way for it to comply with the most basic provisions of Federal and State environmental laws.
Ms. McKinley,

Please see the attached letter prepared by Mr. Marn. The original letter will follow in today's U.S. regular mail.

Thank you!

Rhondda Dietrich, Legal Assistant
p. 509.248.6030 f. 509.453.6880
rdietrich@hnw.law

405 E. Lincoln Avenue, Yakima, WA 98901
halversonNW.com

*My work hours are Monday through Friday from 7:30 AM to 4:00 PM*

Confidentiality Notice: The information contained in this email and any accompanying attachment(s) are intended only for the use of the intended recipient and may be confidential and/or privileged. If any reader of this communication is not the intended recipient, unauthorized use, disclosure or copying is strictly prohibited, and may be unlawful. If you have received this communication in error, please immediately notify the sender by return email, and delete the original message and all copies from your system. Thank you.

Halverson Northwest Law Group P.C.
July 9, 2018

(Also Sent Via Email to: kkbt@usbr.gov)

Bureau of Reclamation Columbia-Cascades Area Office
Attn: Ms. Candace McKinley, Environmental Program Manager
1917 Marsh Rd.
Yakima, WA 98901-2058

RE: Supplemental Draft Environmental Impact Statement-Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

Dear Ms. McKinley:

This comment letter is sent on behalf of the following entities (collectively, “Irrigation Providers”) entities and in connection with the above-referenced Supplemental Draft Environmental Impact Statement (“SDEIS”):

1. Sunnyside Valley Irrigation District/ Sunnyside, Washington
2. Yakima-Tieton Irrigation District/ Yakima, Washington
3. Selah-Moxee Irrigation District/ Moxee, Washington
5. West Side Irrigating Company/ Ellensburg, Washington

The above-named Irrigation Providers are within the Yakima Basin project and have mainly “senior” water rights, but also a portion of “junior” or “proratable” water rights. The Irrigation Providers rely on the Bureau of Reclamation reservoirs for much of their annual supply, including the Kachess and Keechelus reservoirs. All of the reservoirs are critical to the Total Water Supply Available (“TWSA”) yearly calculations that are used to determine supply availability to the water users in the Yakima Basin.

The Irrigation Providers have been actively involved in the Yakima Basin Integrated Plan and support the Plan and its objectives. The Irrigation Providers encourage projects and policies that provide increased access to water supplies, either through new storage, or through enhanced access to existing supplies. Even though the above-named Irrigation Providers will not receive any direct benefit from the proposed actions outlined in the Supplemental Draft EIS (“SDEIS”), they fully support the proposed actions, as long as such changes and modifications to the reservoirs and water deliveries do not adversely affect the Irrigation Providers’ ability to fully use their existing water
rights, including deliveries for subsequent years; nor increase the cost to the respective Irrigation Providers from additional Reclamation operations.

It is the Irrigation Providers’ understanding, not only from the draft SDEIS, but from communications from Reclamation and other parties, that the pump station and pipeline will be operated in such a manner as to not adversely affect the ability of other water right holders to access and use their historic water rights. Any costs for these operations will be borne by Roza Irrigation District and others who are direct beneficiaries of the new reservoir operations.

We request that Reclamation, and others involved with the proposal, keep the Irrigation Providers advised of details of the proposed plan, including definitive operational plans. Since the operational plan is not part of the SDEIS, the Irrigation Providers request the opportunity to comment and participate on the plan as it is being developed to ensure the operational costs do not adversely impact the Irrigation Providers.

We thank you in advance for your attention and the opportunity to comment.

Sincerely,

Lawrence E. Martin

Halverson | Northwest Law Group P.C.
Attorneys for:
Sunnyside Valley Irrigation District (SVID)
Yakima-Tieton Irrigation District (YTID)
Selah-Moxee Irrigation District (SMID)
Naches-Selah Irrigation District (NSID)
West Side Irrigating Company (WSIC)
MC. McKinley,

I am attaching an additional letter prepared by Mr. Marr regarding Ellensburg Water Company, who joins in with the comments and letter dated July 9, 2018, which was previously emailed (below) and mailed to you. Please note, the original letter will follow in today’s U.S. regular mail.

Thank you!

Rhondda Dietrich, Legal Assistant

direct. 509.577.7803 fax. 509.453.6880
halversonNW.com

From: Rhondda Dietrich
Sent: Monday, July 9, 2018 3:51 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>
Cc: Larry Martin <lmartin@hnw.law>
Subject: Supplemental Draft Environmental Impact Statement-Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

Ms. McKinley,

Please see the attached letter prepared by Mr. Marr. The original letter will follow in today’s U.S. regular mail.
Thank you!

Rhondda Dietrich, Legal Assistant

p. 509.248.6030  f. 509.453.6880
rdietrich@hnw.law

405 E. Lincoln Avenue, Yakima, WA 98901
halversonNW.com

*My work hours are Monday through Friday from 7:30 AM to 4:00 PM*

Confidentiality Notice: The information contained in this email and any accompanying attachment(s) are intended only for the use of the intended recipient and may be confidential and/or privileged. If any reader of this communication is not the intended recipient, unauthorized use, disclosure or copying is strictly prohibited, and may be unlawful. If you have received this communication in error, please immediately notify the sender by return email, and delete the original message and all copies from your system. Thank you.

Halverson Northwest Law Group P.C.

---

File attachments:

- LEM draft ltr to BOR re Supplemental Draft EIS 7-11-18 (EWC).pdf
  662K
July 11, 2018

(Also Sent Via Email to: kkbt@usbr.gov)

Bureau of Reclamation Columbia-Cascades Area Office
Attn: Ms. Candace McKinley, Environmental Program Manager
1917 Marsh Rd.
Yakima, WA 98901-2058

RE: Supplemental Draft Environmental Impact Statement-Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

Dear Ms. McKinley:

I am sending this letter on behalf of Ellensburg Water Company ("EWC") in regards to the above referenced Supplemental Draft Environmental Impact Statement ("SDEIS"). Ellensburg Water Company has reviewed the SDEIS and joins in with the comments and letter dated July 9, 2018, which was sent on behalf of other Irrigation Providers in the Yakima Basin (SVID, YTID, SMID, NSID, and WSIC).

Ellensburg Water Company is a senior water right holder in the Yakima Basin and supports the proposed plan outlined in the SDEIS, with the understanding that the proposed actions will not adversely affect Ellensburg Water Company’s ability to fully use their existing water rights.

I thank you for your attention and the opportunity to comment.

Sincerely,

Lawrence E. Martin

[Signature]

Attorneys for:
Ellensburg Water Company (EWC)

cc: Ellensburg Water Company
Emilie Blevins <emilie.blevins@xerces.org>  
To: kkbt@usbr.gov  
Cc: Sarina Jepsen <sarina.jepsen@xerces.org>  

Attn: Ms. Candace McKinley, Environmental Program Manager  

Ms. McKinley,  
I have attached comments from the Xerces Society for Invertebrate Conservation with regards to the KDRPP and KKC SDEIS Comment Period. Please do not hesitate to be in touch should you have any questions.  
Best,  
Emilie  

Emilie Blevins  
Conservation Biologist  
Endangered Species Program  
Tel: (503) 232-6639 ext. 124  

Protecting the Life that Sustains Us  
Stay in touch: xerces.org Xerces blog E-newsletter Facebook Twitter Instagram  

Xerces_SDEIS_LakeKachess.pdf  
114K
Attn: Ms. Candace McKinley  
Environmental Program Manager  
US Bureau of Reclamation  
1917 Marsh Road  
Yakima, WA 98901

Re: Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement

Ms. McKinley,

In response to the public comment period for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance SDEIS, the Xerces Society for Invertebrate Conservation would like to provide the agency with information on species of native shellfish (freshwater mussels) found within the proposed project site.

Native species of freshwater mussels are important members of the aquatic community in Washington’s rivers, lakes, and streams. They provide valuable ecosystem services; as filter-feeders, they can substantially improve water quality and clarity. Mussels also support and improve fish habitat and are a valuable food source for other species. Freshwater mussels are relatively long-lived (reaching 10-100 years of age) and generally sessile. Activities that harm freshwater mussel beds or habitat (which includes many perennial aquatic ecosystems) may require years for recolonization and recovery to pre-impact abundance. Unfortunately, freshwater mussels are also among the most imperiled species globally. Recent research by Xerces Society staff and coauthors¹ has shown that western species like the western pearlshell, western ridged mussel, and floaters are declining in distribution. For example, our analysis indicated that Oregon and western floaters have declined in distribution by 26%.

The Xerces Society, in partnership with the Confederated Tribes of the Umatilla Indian Reservation, maintains a database of freshwater mussel records for western North America. This database includes records for three species of freshwater mussel reported from the area: the Oregon floater and western floater (from Lake Kachess), and the western pearlshell (from an unspecified area near but east of the lake).

Species such as the Oregon floater and western floater can reach high densities in aquatic habitat, particularly along banks and shorelines where softer sediments accumulate. For example, one study reported finding as many as ~275 mussels/m². These animals are impacted by drawdown and dewatering of habitat, particularly because mussels have poor ability to track rapidly declining water levels and because preferred habitat or suitable environmental

conditions may not occur at depths that remain inundated following drawdown. Floater mussels are likely to occur at high density in parts of the project area based on citizen observations of “hundreds” of dead mussels visible on exposed shores following past drawdowns.

Western pearlshell can also reach high densities in perennial rivers and streams, with estimates as high as 400 mussels/m² reported in one Oregon river. This species is similarly impacted by declining water levels, as well as reduced connectivity of aquatic habitat because the species depends upon the presence of salmon or trout (including, potentially, Bull Trout, based on a field observation) to complete metamorphosis from a larval to juvenile stage. If water management reduces connectivity of habitat or alters fish use of habitat, it may also impact recruitment and health of western pearlshell populations. The exact location of western pearlshell reported near Lake Kachess is unknown, but the species could occur in perennial streams that are currently connected to the lake.

Although western freshwater mussels are neither state nor federally listed as endangered or threatened, the western pearlshell has been identified as a Washington state “Species of Greatest Conservation Need” in the 2015 State Wildlife Action Plan. Additionally, the Washington Administrative Code [WAC 220-660-030 (30) and WAC 220-660-030 (55)] refers to shellfish (inclusive of freshwater shellfish) under definitions for fish life and habitats essential to fish life. Further, WAC 220-660-100 (2a-b), in discussion of “Fish life concerns” refers to shellfish and the potential for damage to shellfish and their habitat. Under WAC 220-660-050 (2) regarding “Fish life concerns”, “HPAs [Hydraulic Project Approvals] help ensure construction and other work is done in a manner that protects fish life.”


Freshwater mussels and the potential for impacts should be discussed and incorporated into the final SEIS, as well as into existing management decisions related to the lake to ensure that mussel populations are not extirpated from Lake Kachess or connected waterbodies. Should an HPA be issued for this or any future project at Lake Kachess, impacts to freshwater mussels should also be addressed and mitigated for to ensure that freshwater mussels and the benefits that they provide the lake and downstream waters are maintained.

Respectfully,

Emilie Blevins, MS
Freshwater Mussel Lead, Conservation Biologist
Xerces Society for Invertebrate Conservation
[EXTERNAL] Comments on the SDEIS for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance

1 message

Wendy McDermott <wmcdermott@americanrivers.org>  
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Hello,


Thank you,

Wendy

Wendy D. McDermott
Director, Rivers of Puget Sound-Columbia Basin
P.O. Box 1234
Bellingham, WA 98227
206-213-0330 ext. 1

www.AmericanRivers.org

Instagram | Facebook | Twitter


AR-TU-TWS-KDRPP-KKC SDEIS comments_Final_07.11.18.pdf

March 2019
July 11, 2018

Candace McKinley, Environmental Program Manager
Bureau of Reclamation, Columbia Cascades Area office
1917 Marsh Road
Yakima, WA 98901-2058

Ms. Danielle Squeochs, PhD, LHg, PE
Technical Projects Manager
Washington Department of Ecology
1250 West Alder Street
Union Gap, WA 98903

Submitted via email to kkbt@usbr.gov

RE: Comments on the Supplemental Draft Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance

Dear Ms. McKinley and Ms. Squeochs:

Please accept this letter as the joint comments of American Rivers, Trout Unlimited, and The Wilderness Society on the Draft Supplemental Environmental Impact Statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Conveyance (KKC).

In the Yakima River basin, our organizations have worked with government at all levels, the Yakama Nation, irrigation districts and a variety of other interests to address ecosystem restoration, fishery improvements, and water supply, all under conditions of current and anticipated climate variability. We agree on actions that will make the agricultural economy more reliable, build the growing recreational economy, restore ecosystems and a healthy fishery, and address long-standing commitments made to the Yakama Nation. The result is the Yakima River Basin Integrated Water Resource Management Plan (Integrated Plan), a phased, multi-decade plan that lays out a suite of solutions to complex problems.

Combined with significant water conservation, water marketing, and other water management efforts, KDRPP will substantially contribute to the water supply goals of...
the Integrated Plan. We support the decision to make KDRPP the first major reservoir water supply action undertaken through the Integrated Plan. Implementing KDRPP is important for maintaining balance among the Integrated Plan’s seven elements and will move forward the water supply projects needed to meet the requirements under the Teanaway land acquisition. While KDRPP’s construction and operations will have environmental impacts, strong mitigation measures can be undertaken to address these impacts, and the continued success of the Yakima Basin Integrated Plan has had and will continue to have far reaching benefits to fish and wildlife, habitat availability and quality, and to fulfilling Yakama Nation tribal treaty rights.

We are submitting comments on the KDRPP-KKC SDEIS to respond to changes since the 2015 Draft Environmental Impact Statement (DEIS) and to the Proposed Action and alternatives. Such changes include an alternative for a floating pumping, development of the Bull Trout Enhancement Memorandum of Understanding (BTEMOU), and a proposal for volitional bull trout passage at the Narrows in Kachess Reservoir.

In March 2015, American Rivers, Trout Unlimited and The Wilderness Society submitted comments on the DEIS. At the time, we supported both the KDRPP south pumping plant and KKC projects because of the potential for these projects to contribute to improving water supplies and fisheries. We withdraw our previous support of a land-based pumping project and instead support the SDEIS’ Proposed Action (Alternative 4), installation of a floating pumping plant that would discharge to the existing outlet channel, minimizing shoreline habitat disruption during both construction and operation.

We also withdraw previous support the Keechelus Reservoir-to-Kachess Reservoir Conveyance as a standalone project or as a component of the KDRPP alternatives. While this structure is intended to allow unassisted (gravity flow) transport of water from Keechelus Reservoir to refill Kachess Reservoir following its drawdown and to reduce summer high flow conditions in the upper Yakima River, its benefits are not sufficient for these purposes at this time. In the absence of facilitating adequate delivery of water to refill Kachess Reservoir, the KKC does not adequately contribute to meeting water supply goals or maintaining suitable reservoir habitat (as dictated by water levels). The KKC will alter flows downstream of the Keechelus Dam, which benefit the rearing and spawning of salmonids in the Yakima River, but the costs and uncertainties of the project are too great. We agree with Bureau of Reclamation (Reclamation) and Department of Ecology (Ecology) in their stated need for continued analysis of the KKC for other costs and benefits.

In our March 2015 letter, we also supported the associated Bull Trout Enhancement (BTE) framework, believing that it is necessary not only for mitigating the impacts of KDRPP/KKC but also meeting broader bull trout restoration goals in the Yakima Basin. We continue to strongly support the BTE actions described in Appendix C of the SDEIS and the implementation of the BTEMOU (Appendix A).
While our organizations support the SDEIS’ Proposed Action, we offer the following comments for improving the analyses and information presented in the SDEIS and request that the Final Environmental Impact Statement (FEIS) and Record of Decision address these issues:

General Comments:

- KDRPP is a water supply project, not a project designed to improve environmental conditions in the Yakima River Basin. It is, however, part and parcel of the Yakima Basin Integrated Plan which provides significant environmental and other benefits for the Yakima Basin. As a water supply project, project design, elements and mitigation should ensure that it will not make environmental conditions worse, specifically for bull trout, steelhead and salmon.

- The SDEIS lays out mitigation actions, but does not provide a commitment to undertake these mitigation measures nor does it specify what agency will be responsible for implementation. Section 2.3.6 of the SDEIS states: “Final decisions on who is responsible for implementing mitigating measures and/or reporting on them will be described in either the FEIS or ROD.” In the FEIS or ROD, we request that:
  - The mitigation measures be clearly identified and described with enough specificity that it will be possible to tell that they have been implemented;
  - Mitigation measures be based on performance standards;
  - Commitment to implementation is specified; and
  - The party responsible for implementing and/or reporting on the measures be identified.

- Given that the KDRPP project is nestled within Reclamation’s multi-reservoir Yakima Project\(^1\), it will not be operated in a vacuum. However, the SDEIS does not provide a full description of how the KDRPP project will be integrated into the reservoir operations, water deliveries, and instream flow targets and obligations. How KDRPP will affect water accounting in determining Total Water Supply Available (TWSA), what class water year is anticipated, and meeting instream flow targets is left as an open question. While the SDEIS may not be the appropriate vehicle for determining answers to these issues, the answers will affect the impacts of the project. Some of the impacts of the project are likely to be mitigated or exacerbated by future operations and accounting. Operational issues include:
  - Many of the impacts of the KDRPP project are a result of the time it may take to refill the reservoir after a drought drawdown. To a significant

---

\(^1\) The Yakima Project dams and reservoirs are Bumping Lake, Clear Creek, Tieton, Cle Elum, Kachess, and Keechelus. See https://www.usbr.gov/projects/index.php?id=400.
degree, the time needed for refill depends on the operation of both Kachess Reservoir and the other Yakima Project reservoirs. Tuning the operations and water deliveries of the Yakima Project as a whole to speed refill to at least normal minimum pool, were not examined as part of the SDEIS. The FEIS and ROD should consider changes to the Yakima Project operations and water delivery that speed refill and reduce impacts as mitigation for KDRPP.

- Impacts to salmon and steelhead in the Kachess River downstream of the reservoir, and to a lesser extent, downstream of its confluence with the Yakima River, are dependent on flows released from the reservoir. In a year, or years, following a drought drawdown, operations should not make conditions worse for salmon and steelhead, especially for critical spring and winter flows. SDEIS (2-17) includes an important commitment to protect spring flows:

  In keeping with the goals of the Integrated Plan, under the Proposed Action during Kachess Reservoir refill Reclamation would operate the Yakima Project to ensure spring (March through June) flows are at least what they would be under current operating conditions without KDRPP. Current operating conditions vary by year depending on hydrologic conditions.

  This commitment should extend to winter flows, and the accounting for how KDRPP may affect year by year operations in meeting this commitment should be described.

Bull Trout

- Bull trout, which are protected under the Endangered Species Act, in Kachess Reservoir are adversely impacted by current reservoir operations, especially when the reservoir is drawn down by limiting access to tributary habitat, such as Box Canyon Creek, and in passage through the Narrows – the divide between historic Big Kachess and Little Kachess Lakes. The KDRPP project will add to the existing impacts by increasing the time the reservoir is drawn down. Issues related to bull trout that should be addressed in an FEIS and/or ROD include:
  - While the SDEIS identifies mitigation measures, it does not provide a commitment to those mitigation measures nor does it identify the agency responsible for implementation. Commitment and responsible party should be identified clearly in the FEIS or ROD.
  - The Bull Trout Enhancement Memorandum of Understanding is referenced in the SDEIS, but which parts of the BTEMOU are to be implemented as mitigation is unclear. We recognize that several projects within the BTE is outside the Kachess watershed and we support these broader measures especially where direct mitigation in Kachess is not reasonably achievable. Reclamation and Ecology’s commitment to implementing the BTEMOU in its entirety should be explicit.
Volitional bull trout passage at the Narrows section is a proposed mitigation measure in the SDEIS, which we strongly support. Because the passage measure is essential mitigation for impacts to bull trout, it should be framed as performance standards, rather than simply construction actions. Specifically, construction of a roughened channel at the Narrows is appropriate, but the mitigation measure should be passage effective for specific life stages, rather than simply construction of a channel that may or may not be effective. Similarly, any tributary passage, should specify a performance standard.

Bull trout access to habitat in Box Canyon Creek is impeded in low water and drought years when Little Kachess is drawn down and impacts will likely be greater when KDRPP is fully operational. We were disappointed to see that mitigation measures for bull trout access to Box Canyon Creek were not included in the range of alternatives in the SDEIS. The FEIS should include Box Canyon Creek mitigation measures.

Because construction of the Narrows passage channel is dependent on reservoir levels/operation, bull trout could be negatively impacted in the years immediately following implementation of the KDRPP (i.e., when the reservoir is lowered to address water supply issues, but the passage channel has not yet been constructed). Mitigation measures should be developed to address impacts during the interim period before permanent passage is constructed.

Steelhead and Salmon

- Salmon and steelhead in Kachess River downstream of Kachess Reservoir may be affected by modified flow, especially in the years when Kachess is refilling after a drought drawdown. The FEIS and ROD should make explicit a commitment that flow conditions will not be worse in the Kachess River for salmon and steelhead as a result of KDRPP. The current statement in Section 2-17 applies only to spring flow, and should be extended to winter flows as well.

- Environmental flows at specific points in the Yakima River system are determined by the water year class. How KDRPP will affect a determination of water year class, especially in years where Kachess is being refilled after a drought drawdown, should be specified.

Geotechnical Issues

- Impacts of dredging and hardening (i.e., scour protection) of the reservoir bottom, as well as anchoring of the floating barge and pumping plant on benthic habitat should be identified.

- The SDEIS does not indicate the state of geotechnical knowledge of Kachess Reservoir’s slopes that will be exposed when dewatered. When KDRPP is fully
utilized, are there potential slope stability/landslide and erosion impacts to the newly exposed steep lake shoreline should be known and mitigated for?

Hydrology and Water Supply

- There is a lack of knowledge of the effects of drawdown on reservoir productivity, food webs, and proliferation of invasive plants species. We support continued study of these interactions and impacts.
- Impacts to groundwater and wells around Kachess has been a significant concern for area residents. While monitoring and taking “appropriate mitigation measures” is called for in the SDEIS, greater specificity in the monitoring regime, and the potential mitigation measures is needed in the FEIS and ROD
- Impacts on the ability of local fire departments to pump water from Kachess when needed has been raised as a concern of local residents. This issue should be evaluated and provision for effective access to fire water supplies specified in the FEIS and ROD.

American Rivers, Trout Unlimited, and The Wilderness Society appreciate the opportunity to provide comments on the Draft Supplemental Environmental Impact Statement for the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Conveyance. Our organizations support the Yakima Basin Integrated Plan and the SDEIS’ Proposed Action. Lastly, we applaud the current efforts by Reclamation, Ecology, Kittitas Reclamation District and Roza Irrigation District to support the ongoing Tributary Supplementation Project and encourage all parties to continue to work together as KDRPP moves forward.

Sincerely,

Wendy McDermott
Director, Puget Sound Columbia Basin Programs
American Rivers

Lisa Pelly
Director, Washington Water Project
Trout Unlimited

Kitty Craig
Washington State Deputy Director
The Wilderness Society
[EXTERNAL] Lake Kachess
1 message

Scotttsumner <Scotttsumner@comcast.net>  Thu, Jul 12, 2018 at 10:44 AM
To: kkb@usbr.gov

Please find signed comment from the following Hyak Residents:

Scott Thomas Sumner
Diane Mary Sumner
731 Hyak Drive East
Snoqualmie Pass, WA 98068

3 attachments

- filename-1.pdf
  264K

- ATT00001
  1K

- HPOA KDRPP SDEIS Comment Letter 07.11.2018.doc
  83K
Submitted via email to kkb@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir to Kachess Reservoir Conveyance (KKC) Supplemental Draft Environmental Impact Statement (SDEIS)

Dear Ms. McKinley:

Please accept these comments/questions regarding the KDRPP SDEIS on behalf of the Board of Directors of the Hyak Home Owners Association (HPOA Board). The HPOA Board represents the home owners association for Hyak Estates located at the base of the Hyak Ski Area at Snoqualmie Pass. The HPOA Board represents an association of over 300 property owners within Hyak Estates. The HPOA Board and the residents of Hyak Estates have a direct interest in the KDRPP and KKC projects and the subject SDEIS and have previously provided comment on the 2015 DEIS.

2018 SDEIS Comments:

1. Alternatives: The HPOA Board only supports Alternative 1, “No Action” and opposes all other active alternatives presented in the SDEIS.

2. Background of Proposed Action: The SDEIS states that the Yakima Basin Integrated Water Resource Management Plan (Integrated Plan) includes the following components:
   - Reservoir fish passage
   - Structural and operational changes
   - Surface water storage
   - Groundwater storage
   - Habitat/watershed protection and enhancement
   - Enhanced water conservation
   - Market reallocation
   This SDEIS only address the first and second bullet above and ignores all other components of the integrated plan. The structural and operation changes proposed in the stand alone KDRPP project (the proposed action) only access the natural pool of Lake Kachess and does not address the need for additional surface water storage, ground water storage, habitat protection and enhancement and water conservation, and only addresses market reallocation in terms of the water pumped from the natural pool of the lake that will only benefit the Rosa Irrigation District (ROSA).
   a. Please explain what Reclamation’s plan is to address all of the components of the
Integrated Plan as the KDRPP relates to each component of the Plan?

3. **Reclamation's Purpose and Need:** The stated purpose of the SDEIS is to “provide more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin”. The SDEIS puts forward a plan to drain additional water from the natural pool of Lake Kachess to benefit only ROSA.

   a. How does the proposed floating pump on Lake Kachess improve the health of the riverine environment?

   b. How does the proposed floating pump on Lake Kachess provide more sustainable water resources for municipal needs if the water removed from the natural pool will be for the sole use of the ROSA?

   c. How does the proposed floating pump on Lake Kachess provide more sustainable water for domestic needs when the wells surrounding the lake may go dry and the water pumped will only be used for ROSA’s purposes?

   d. What is Reclamation’s plan to accurately address items a to d above?

4. **Failure to consider all viable alternatives:** The DEIS and the SDEIS only consider two alternatives: drain a natural lake to benefit downstream irrigators with junior water rights or don’t drain the lake. No other alternatives are considered to meet the irrigation security needs of the ROSA farmers. The EIS process is supposed to consider all alternatives to achieve the purpose and need. This SDEIS does not consider any other viable alternatives such as conservation of existing irrigation resources including mitigation for irrigation system losses due to leakage and evaporation, instituting conservation irrigation systems and crop selection as examples of many possible alternatives. It also does not consider the decreasing snowpack storage within the watershed and ways in which to increase snowpack storage and forest health. There is research being conducted at the University of Washington that suggest with proper forest management practices snow-pack storage can be significantly increased which would benefit water storage within the basin. These types of alternatives must also be considered.

   a. How does the DEIS and SDEIS meet the requirement to consider a range of reasonable alternatives which is required by NEPA?

   b. What is Reclamation’s plan for considering all reasonable alternatives?

   c. What is Reclamation’s plan, as required in the NEPA process, to list and provide a full explanation, including data, references, and review procedure for excluding each alternative not considered?

5. **SDEIS Proposed Action:** The Proposed Action will pump the natural pool of Lake Kachess to 80-ft below the gravity outfall of the dam. This action only takes water from the natural pool and does not consider how to increase surface water storage which is a component of the Integrated Plan. In addition the proposed action no longer includes the KKC project.
The 2015 DEIS linked the KDRPP and KKC projects due to the financial analysis and the fact that it would take years to re-fill Lake Kachess without the KKC project. It seems the SDEIS only considers the benefits of the KDRPP in the first year of drought.

a. Without the KCC project how does the financial analysis show a benefit in years 2 to 8 while the lake re-fills and the pumping plant has to operate continuously?

It is also a misconception to consider the water below the gravity outfall of the dam to be “in-active storage” because this is the approximate natural lake elevation and should be considered part of the natural habitat. Labeling the natural pool as in-active storage and using the natural pool does not meet the objective of the integrated plan to improve surface water storage – it only takes existing water.

b. Please explain how surface water storage is improved in the 2nd drought year and beyond if the Lake is unable to be refilled?

6. **Project Costs:** Alternative 4 is the “proposed option” and has a variance of -30% to +50% is difficult to interpret in terms of the stated cost of $282,000,000 estimate for the KDRPP-FPP. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms including the probability of achieving these costs should also be stated; e.g.

<table>
<thead>
<tr>
<th>Low Estimate (z% chance)</th>
<th>Projected Estimate (y% Chance)</th>
<th>High Estimate (X % Chance)</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000</td>
<td>282,000,000</td>
<td>423,000,000</td>
</tr>
</tbody>
</table>

The Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included in the above costs but should be as it will be a required element. That would bring the high cost to $444,000,000.

This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS. The budget presentation is inadequate, misleading, and incomplete.

a. How will Reclamation adequately address all costs associated with the project?

7. **Impact on Campers and recreational users at Lake Kachess** The Lake Kachess has over 23,000 annual campground visitors and 11,000 annual boaters that will be negatively affected by pumping down the natural lake without the ability to re-fill the lake for years. On page ES-Xii, the following suggestions are given to address recreational use of the lake “Extend boat ramps at Kachess Reservoir…if feasible, and construct new east shore ramp that would be available at all reservoir levels.

a. Under what conditions would extending those ramps be feasible or not feasible?

This should be addressed in the SDEIS as it is an effect on recreation users that cannot be defined unless it is know if existing boat ramps is feasible.
b. What analysis of the lake geography has been done to suggest is extending any of the ramps for use during a KDRPP-FPP drawdown is truly feasible or not?

The Lake within and below the natural pool elevation has very steep banks and it should be determined during the EIS process if in fact this is feasible.

8. Increased forest vulnerability and Fire Hazard. The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS, suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability.

The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This fire district has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects.

This proposal fails to adequately address the added fire risks due to climate change which is reducing snow packs storage which is clearly shown by existing data including WSDOT snowpack data from Snoqualmie Pass. This plan exacerbates that fire risk because it will decrease the health of forests surrounding the Lake and will make water available by pumping for fire suppression almost impossible to retrieve during a full pumping draw-down and from wells going dry. The SDEIS identifies damage to the natural environment that will be caused by the proposed action.

If, as a result of a KDRPP draw down and forests die who will be responsible for removing the dead trees to prevent further destruction from wildfires which could end up extending all the way to Snoqualmie Pass?

9. Refilling Lake Kachess. The SDEIS states that the KDRPP-FPP is the “proposed action” and Reclamation and Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicated a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC).

a. Please explain how the KDRPP-FPP proposed action no longer needs to be linked to the KKC project in order to refill the lake despite no change in the stated goal of the KDRPP to pump 200,000 acre-feet from the natural lake for ROSA?

b. Please explain how Reclamation can promote the proposed action despite the detailed hydrology that the 2015 DEIS was based on that purposed that the KKC was required as a refill mechanism without which Lake Kachess would like not refill for 20 years?

c. Please explain in detail what changed between 2015 and 2018 that now allows a refill prediction of 2-8 years when the 2015 prediction was 20 years or more?
d. Which report should be relied on? 2015 KKC is required as a part of KDRPP, or 2018 KDRPP doesn’t need KKC and will refill 2-4 times faster than previously predicted?

e. How can the public be expected to make informed comments with such seemingly inconsistent hydrology predictions? Can either report be relied upon?

11. Funding: Page ES-viii: The SDEIS states the Bureau of Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FPP.

a. When will the ultimate source of funding be determined and by whom?

b. If public funds are utilized to benefit a handful of private businesses in a singular water district, will that district be required to repay those funds?

c. If public funds are used for the project, will the public be offered another comment period or another process by which voters can express if they approve of spending half a billion dollars on a water project that benefits only a select group of private interests?

d. How can the public be expected to adequately comment on the SDEIS without knowledge of whether or not public funds will be utilized?

17. Mitigation: “Volitional Bull Trout Passage Improvements are proposed as a part of the KDRPP...” This statement and others give the impression that the proposed action will improve passage and habitat for Bull Trout and perhaps even “enhance” the bull trout population. This is an inaccurate depiction of what will be a significant negative impact on the Lake Kachess bull trout population.

The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pumping station will be in continuous operation which will require continual use of the Volitional Passage. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles which could result in the destruction of the Bull Trout Population in the Lake. No evidence is provided that the Volitional Passage is effective, has been demonstrated in other Bull Trout populations or has completed a “proof of concept” test.

The volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).
a. In years where streams disappear the Volitional Passage will have to be operated by pumping. Without addressing this the mitigation plan is incomplete. What are Reclamations Plans to address this issue in the proposed mitigations?

The Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrows” and “steep shelf” originated their life cycle.

The project as proposed will negatively affect and ESA listed species (Bull Trout) and its habitat which is not allowed under law unless all the affects can be mitigated.

a. What research has been done to suggest the Bull Trout will use the Volitional Passage?

b. How will Reclamation mitigate negative effects on the Bull Trout Population if the Volitional Fish Passage Structure fails to operate as intended?

c. What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements? How will this be mitigated?

18. USFWS Biological Opinion: The USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts and is not expected to be published until sometime in the fall of 2018.

a. Why was the SDEIS prepared and released PRIOR to the USFWS Biological Opinion?

b. Will another SDEIS be issued incorporating the study? How will the Biological Opinion be incorporated in the EIS process and will there be opportunity for additional public comment?

19. Geology & Stability of the Lake Kachees Dam and surrounding steep slopes: The existing dam at Lake Kachess is an earthen structure which may be impacted by long periods of drawdown and the SDEIS discusses the steep terrain under the current water line in some areas and suggests that landslides may occur.

a. What studies have been done to determine what impact years of low water and drying of the earthen dam will have on its structural integrity?

b. What topography is available of Lake Kachess below the current low water line?

c. What studies have been done to determine areas within the lake that are most susceptible to landslides?
d. How will these potential landslides be mitigated and what impact will they have on the operations of the KDRPP?

e. What impact would landslides have on water quality, public safety and bull trout habitat and population?

f. What is Reclamation’s plan for conducting these study and will and additional SDEIS be prepared?

20. **Negative financial impacts to Kittitas County:** The implications of negative impact on private property values go beyond the directly affected citizens. A reduction in property values affects the tax base of the county, including schools and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “*while effects on property values would most directly affect property owners, the wider community would also experience effects.*” In other words, private property owners, fire departments, schools, city and county governments, and others would also be negatively impacted. Also with the Lake drawn down to levels where it becomes unusable or less desirable for recreation there will a decrease in tourist visits to the Lake Kachess campground, a reduction in business in surround communities, and a reduction in sales taxes collected which will further negative impacts to the community and public at large while benefiting ROSA.

   a. Please explain how a publically funded project that benefits private land owners and irrigators and negatively affects public funding and hurts local businesses is in the best interest of the Citizens of Kittitas County and the State of Washington?

25. **Water Rights:** A KDRPP draw down has the probability of resulting in the existing 239,000 acre-ft of water NOT being available in subsequent years for those holding senior water rights.

   a. How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam?

   b. How will potable water rights of well owners be addressed if wells go dry?

**Closing Comment:**

The HPOA is opposed to allowing a vital public resource to be taken to support and enhance the profits of a limited number of private businesses who have full knowledge of their lands water constraints. Reclamation and Ecology, and our elected officials should be looking for ways to preserve, protect, conserve and enhance limited natural resources rather than taking existing natural resources for a financially and environmentally unsound plan. Millions of dollars of public funds that have already been used to push this project forward that is no in the interest of the public good.

Under the NEPA and SEPA processes the HPOA requests that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.
The HPOA looks forward to seeing responses to these comments.

Respectfully,

James Sammet
HPOA Board of Directors Member,
on behalf of the entire
HPOA Board of Directions, and HPOA

HPOA
P.O. Box 120
Snoqualmie Pass, WA  98068

V-Mail: 425.785.6543
E-mail: hpoaboard@hotmail.com
Diane Sumner
Hyak Resident

Scott T. Sumner
Hyak Resident

731 Hyak Dr. E.
Snoqualmie Pass, WA 98068
Received in Mailroom

July 9, 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA 98901-2058
Kkbt@usbr.gov

Dear Ms. McKinley:

On March 6, 2015, the Wise Use Movement submitted comments on the Department of Ecology’s Office of Columbia River (Ecology-OCR) and Bureau of Reclamation’s (BuRec) SEPA and NEPA Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus “Reservoir”-to-Kachess “Reservoir” Conveyance (KKC) Draft Environmental Impact Statement (DEIS), dated January 9, 2015, developed as part of a Yakima Political Bargain. To date, neither Ecology-OCR nor the Bureau have provided responses to our March 6, 2015, DEIS comments.

Being unable to justify any of the limited alternatives presented in that DEIS, over three years later, the BuRec and Ecology-OCR have wasted even more time and taxpayer money to present yet another uneconomical and environmentally damaging Kachess Lake pumping alternative in a Supplemental Draft EIS (SDEIS), dated April 2018. While we expect that the BuRec and Ecology-OCR will each respond to each of our DEIS comments in our letter dated March 6, 2015, we also expect a response to the following Wise Use Movement comments that raise additional concerns with the SDEIS and Alternative 4 (the Proposed Action).

GENERAL COMMENTS

The Department of Ecology-OCR professes to operate under RCW 9038.005 (2013) “to promote the aggressive pursuit of water supply solutions,” while the BuRec operates under the Yakima River Basin Water Enhancement Project (YRBWEP), passed by Congress in 1979 (Phase I), and 1994 (Phase II), augmented with funding through the BuRec’s “WaterSmart” program. Since Congress passed YRBWEP, nearly 40 years ago, the BuRec and Ecology have wasted millions of dollars on water storage study projects in the Yakima River Basin with little to show for it.

In 1982, the BuRec and Ecology studied 35 dam sites in the Yakima River Basin.

http://news.google.com/newspapers?nid=860&dat=19820728&id=-HSUAAAIBAJ&sjid=Bo8DAAAIBAJ&pg=5454,2159561
The BuRec’s 1984 Damsite and Structure Review dam site study identified the following dam sites for additional feasibility studies:

- Bumping Lake Enlargement on the Bumping River
- Cle Elum Enlargement (Cle Elum River)
- Devil’s Table on Rattlesnake Creek (alternative Mile 4 damsite)
- Forks Project on the Teanaway River
- Horsetail Project on Little Naches River
- Tieton Dam Enlargement on Tieton River
- Wymer Project on Lumuma Creek
- Status Project on Status Creek
- Simcoe Project on Simcoe Creek
- Tampico Project on Ahtanum Creek

while eliminating other potential dam sites:

- Bakeoven South Fork - Tieton River
- Casland North Fork - Teanaway River
- Cooper Lake - Cooper River
- Cowiche - South Fork Cowiche Creek
- Dog Lake - Clear Creek
- Hole in the Wall - Dry Creek
- Horseshoe Bend - Naches River
- Hyas Lake - Cle Elum River
- Little Rattler - Rattlesnake Creek
- Lost Meadow - Little Naches River
- Lower Canyon - Yakima River
- Manastash - Manastash Creek
- Fold Four - Rattlesnake Creek
- Minnie Meadows - South Fork Tieton River
- Naneum - Naneum Creek
- Pleasant Valley - American River
- Rattlesnake - Naches River
- Soda Springs - Bumping River
- Swauk - Swauk Creek
- Toppenish - Toppenish Creek
- Upper Canyon - Yakima River
- Wapatox - Naches River
- Waptus Lake - Waptus River
- Wenas - Wenas Creek


Since then, more taxpayer money has been wasted on more storage dam sites:

- Cabin Creek Project
- Black Rock Project
- Burbank Project
- Selah Project

Since 2006, when the Washington State Legislature gave Ecology-OCR $200 million to “aggressively pursue” new water supplies, Ecology-OCR has continued to waste taxpayer money. The failure of Ecology-OCR has been amply documented in the attached Power Consulting, Inc., report “Department of Ecology Office of Columbia River: The Last Ten Years,” (December 3, 2016). We request that this report be included along with these comments in any FEIS.

The Wise Use Movement continues to strongly oppose more irrigation storage dams and pumping projects in the Yakima River Basin when over 200,000 acre-feet of water conservation remain to be carried out, and other alternatives such as aquifer storage, water banking, and water markets have not been implemented.
More Specific SDEIS Comments Are As Follows:

**Supplemental Draft Environmental Impact Statement**

**Mission Statements**
The actions taken by the BuRec and Ecology in the Yakima Basin over the past years do not correspond with the purported agency missions.

- Please revise these mission statements to more accurately reflect reality:
  
  "The mission of the Bureau of Reclamation is to manage, and develop uneconomical and environmental damaging water projects for the interest of private irrigation districts.
  The mission of the Department of Ecology is to aggressively develop new water storage projects at the expense of Washington’s water quality and environment, and promote the unwise management of our air, land and water for the benefit of private irrigation districts."

**Cooperating Governments and Agencies:**
- Why is the Bonneville Power Administration listed as a cooperating agency when the BPA appears to have contributed little to nothing to the SDEIS?

**SEPA FACT SHEET**
- Why is the State Shoreline Management Act not included on the list of Permits, Licenses, and Approvals Required for Proposal?

**Executive Summary**

**Introduction (p. ES-iii)**
It states that “This SDEIS also analyzes a new proposal to improve bull trout passage in Kachess “Reservoir” at the Narrows...”

- Please delete this sentence as the limited discussion provided in Volitional Bull Trout Passage Improvements (Sec. 2.3.5, pages 2-18 and 2-19) fails to provide sufficient detail for reviewers to evaluate this proposal.

**2015 KDRPP-KKC DEIS (p. ES-iv)**
- Please clarify that neither the 2015 DEIS nor the Yakima Political Bargain PFEIS provided a range of alternatives as required by NEPA and SEPA.

**Changes to KDRPP from DEIS (p. ES-v)**
- Please provide a link to the Bureau’s Value Analysis study prepared in June 2015, if posted on the Bureau’s Yakima Project website. If not posted, please post it.
- What was the estimated cost of the Kachess Emergency Temporary Floating Pumping Plant?
- How much of this was the Roza Irrigation District prepared to pay for?

**Changes to BTE from DEIS (p. ES-vi)**
BuRec and Ecology-OCR are segmenting this proposed project to avoid impact analysis.

- Why are specific bull trout enhancement (BTF) projects not included in the Proposed Action?

**Background of the Proposed Action (p. ES-vi)**
- Please correct the first statement in this section to explain that the Yakima Political Bargain was created by a small group self-selected by Ecology-OCR and the BuRec.
- Why did Ecology-OCR and the BuRec NOT include the cities of Ellensburg or Cle Elum?
- Why did Ecology-OCR and the BuRec fail to include any recreational or hiking groups in its Yakima Workgroup?
- Why did Ecology-OCR and the BuRec fail to identify the Yakima Workgroup members that created the Yakima Political Bargain?
Please include the Yakima Workgroup members in any FEIS, with updates, as the following list is what is posted on Ecology’s Office of Columbia River’s website:

Wendy McDermott American Rivers
Jerome Delvin Benton County Commission
Seth Defoe Kennewick Irrigation District
Paul Jewell Kittitas County Commission
Urban Eberhart Kittitas Reclamation District
Dale Bambrick NOAA Fisheries Service
Scott Revell Roza Irrigation District
Ron Cowin Sunnyside Valley Irrigation District
Lisa Pelly Trout Unlimited
Dawn Wiedmeier US Bureau of Reclamation
Jeff Thomas US Fish & Wildlife Service
Mike Williams US Forest Service
Bret Walters US Army Corps of Engineers
Jaclyn Hancock WA Department of Agriculture
Tom Tebb WA Department of Ecology
Mike Livingston WA Department of Fish & Wildlife
Rick Roeder WA Department of Natural Resources
Dave Fatz Yakama Nation
Phil Rigdon Yakama Nation
Alex Conley Yakima Basin Fish & Wildlife Recovery Board
Sid Morrison Yakima Basin Storage Alliance
Mike Leita Yakima County Commission
Carmen Méndez Yakima City Council
Rick Dieker Yakima-Teiton Irrigation District

Page ES-vii
The Wise Use Movement concurs that the current water resources infrastructure, programs, and policies in the Yakima River basin are not capable of consistently meeting the demands for fish and wildlife, irrigation, and municipal water supply because irrigation “demand” in the Yakima River basin is endless and infinite. The Yakima River basin is capable of meeting the needs for optimal fish and wildlife and municipal water supply, but not the ceaseless demand for more irrigation water.

• Please add the following sentence: “While irrigation demands cannot be met, the needs for optimal fish and wildlife and municipal water supply can be met by an aggressive combination of water conservation, water efficiency, and water marketing could provide a better balance among competing irrigation needs.”

Page ES-vii misstates the Yakima Plan Programmatic EIS (PEIS). This PEIS did not “determine the effects of implementing the Integrated Plan.” The DPEIS, page 2-1 states that the environmental impacts of the “Integrated Plan” are evaluated at a programmatic level. The BuRec and Ecology-OCR cannot issue a PEIS and then claim that effects of the Yakima Plan have been evaluated. The BuRec and Ecology-OCR cannot claim that the PEIS provides a comprehensive approach when the PEIS refused to include a range of alternatives other than the preferred alternative and a no-action alternative.

• Please delete this sentence.

Supplemental Draft EIS Proposed Action (p. ES-viii)
This section states that the Proposed Action for the SDEIS is “to fund, design, construct, operate, and maintain a floating pumping plant” on Kachess Lake. This is incorrect as the SDEIS does not set out a clear funding plan. Despite past statements from the Roza Irrigation District that it would bear the costs, this SDEIS now discloses that the BuRec and Ecology-OCR (i.e. taxpayers) will bear the costs for private irrigation benefits.

• We request that the word “fund” be deleted from the above sentence.
In addition, as with the entire Yakima Political Bargain, Ecology-OCR sought authorization from the Washington State Legislature and the BuRec continues to seek authorization for funding from Congress prior to the issuance of an adequate PEIS, or project-specific EISs. The fact that BuRec and Ecology-OCR have put forth a Proposed Action for funding, prior to compliance with NEPA/SEPA or preparing a proper benefit/cost ratio is just a signal that the BuRec and Ecology-OCR have already arrived at its decision and are merely going through the motions of selecting Alternative 4.

Purpose and Need for the Action (p. ES-ix)
It states that BuRec and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Kachess Pumping Plant.
- Hasn’t the Roza Irrigation District pledged to fund the floating pumping plant project?
- Why would BuRec and Ecology fund a project that the Roza Irrigation District has pledged to pay for?

Reclamation’s Purpose and Need (p. ES-ix)
It states that BuRec proposes to fund, design, construct, operate, and maintain some or all of the Kachess Pumping Plant.
- How much funding is BuRec planning to provide for this project?

Ecology’s Purpose and Need (p. ES-ix)
It states that Ecology’s purpose for the action is to participate in the ["Integrated"] Plan and fund (not more than 50 percent) of the plan...
- What are the projected total costs of the ["Integrated"] Plan?
- Does Ecology-OCR agree that RCW 98.38.120 would allow Ecology-OCR to fund the entire costs of the Kachess Floating Pumping Plant Project?

RCW 90.38.110 provides:
(1) Prior to the appropriation of funding for the construction of a water supply project proposed in the integrated plan with a cost of greater than one hundred million dollars, the state of Washington water research center shall review, evaluate, and prepare comments on the cost benefit analysis prepared for the project by the department and the United States bureau of reclamation.
(2) To the greatest extent possible, the center must use information from existing studies, supplemented by primary research, to measure and evaluate each project’s benefits and costs.
(3) The center must measure and report the economic benefits of any proratable entities subject to subsection (1) of this section, so that it is clear the extent to which an individual project is expected to result in increases in fish populations, increases in the reliability of irrigation water during severe drought years, and improvements in municipal and domestic water supply.
(4) The center may enter into agreements with other state universities and with private consultants as needed to accomplish the scope of work.
(5) The center may consult, as necessary, with the department of ecology and the Yakima river basin water enhancement project work group.
(6) No more than twelve percent of any appropriations provided for the implementation of this section may be retained for administrative overhead expenses.
- How and when does Ecology-OCR intend to comply with RCW 90.38.110?

Roza and Proratable Entities’ Purpose and Need (p. ES-x)
- Why does this section failure to mention any funding commitment from either Roza or other proratable entities?

Alternative 2 – Volitional Bull Trout Passage Improvements (p. ES-xi)
- Why is there mention of the length of the passage “improvements”?
- Why is there no mention of passage “improvements” at Box Canyon Creek?
Mitigation (p. ES-xii):
- How will general bull trout passage improvement activities within Keechelus Lake take place?
- Why aren’t bull trout passage improvements at Box Canyon Creek in Kachess Lake included?
- Why does the BuRec and Ecology-OCR not know if extending boat ramps at Lake Kachess is feasible?

Alternative 4 – Floating Pumping Plant (Proposed Action) (p. EX-xiii)
This is now at least the third floating pumping plant proposed by Yakima irrigation districts. A floating pumping plant was constructed at Lake Cle Elum back in 1977 and promptly burned and sank. The Roza Irrigation District proposed an emergency floating pumping plant at Lake Kachess in 2015, which was never built.
- What are the additional details, including size, costs, pumping capacity, and environmental analysis carried out on these two previous floating pumping plant projects?
- Why does Alternative 4 not include the Keechelus to Kachess Conveyance pipeline? The Yakima Political Bargain assumes that this project must be carried forward (all projects move together). Does this mean that the Yakima Political Bargain is no longer integrated?

Consultation and Coordination (p. ES-xv)
- BuRec needs to complete its ESA consultation, including a Biological Opinion on the existing Yakima Project, and issue a revised SDEIS for public review and comment.

Key Issues (p. ES-xv)
This section summarizes “key issues or resources” raised during scoping. This short list is completely inadequate and ignores a vast swath of the comments received during scoping:

The BuRec and Ecology’s Scoping Summary Report for the KDRPP and KKC DEIS, March 2014, is more notable for what it refuses to evaluate:

Surface Water Resources
Note: The EIS will not list all approved water conservation plans because these details are not sufficiently related to the alternatives and the potential for significant impacts. p. 34
This is incorrect. All alternatives propose that BuRec deliver an additional 200,000 acre-feet of water during drought years to downstream Yakima Project irrigation districts. If these irrigation districts were to reduce their demand for irrigation water these alternatives would not be necessary. Therefore, conservation plans are a viable alternative to the proposed project and must be considered.
- For each irrigation district, please provide:
  - A description of the district
  - The date of adoption and status of any water conservation plans developed by each district
  - An inventory of water resources
  - Best management practices in place
  - The criteria for evaluating the adequacy of all water conservation plans developed

Vegetation and Wetlands
Note: The EIS is not expected to contain detailed mitigation plans that include elements such as water budget, water sources, grading plans, planting plans, and/or revegetation plans. p. 34
The purpose of a project specific EIS is to provide mitigation plans to address significant adverse environmental impacts.
- Why do BuRec and Ecology-OCR continue to abuse the EIS process?

Air Quality
Note: The EIS will not conduct an analysis of the carbon footprint of the proposal because these details are not sufficiently related to the potential for significant impacts. p. 35
Providing 200,000 acre feet of additional water during drought years would generate additional agricultural activity utilizing fossil fuels that would increase the Yakima Project’s carbon footprint.
• Please quantify these additional agricultural activity impacts.

Socioeconomics
Note: The EIS will not include a detailed economic cost/benefit analysis; nor will it attempt to weigh water conservation measures versus the proposed projects. Substantial water conservation initiatives are already proposed as part of the Integrated Plan. Water conservation is understood to be part of the comprehensive solution for the Yakima Basin; conservation is not an alternative to the proposed projects. p. 35

This is incorrect. Sec. 4.21.4.4 of the DEIS (page 4-312) provided job creation summary tables for each alternative.

• Why are the BuRec and Ecology providing job creation figures in the DEIS, but refusing to disclose the benefit/cost analysis prepared by the Washington Water Research Center?

We supported the 2013 Legislature’s request that the Washington Water Research Center prepare a benefit/cost (B/C) report on the individual water storage projects in the Yakima Plan. This report, prepared by a team of experts from the University of Washington and WSU, identifies those projects in the Yakima Plan that are not economically sustainable and should be dropped from further consideration:

“Based on moderate climate and market outcomes, storage infrastructure projects implemented alone and without proposed IP instream flow augmentation result in the following estimated out-of-stream net present value and B/C ratios, none of which passes a B-C test”:

* Bumping Lake Expansion: Benefit/Cost (B/C) ratio of **0.18** [i.e. a return of 18 cents on the dollar]
* Wymer Dam and Reservoir: **B/C ratio of 0.09** [i.e. a return of nine cents on the dollar]
* Cle Elum Pool raise: **B/C ratio of 0.62** [i.e. a return of 62 cents on the dollar]
* Keechelus to Kachess Conveyance: **B/C ratio of 0.20** [i.e. a return of 20 cents on the dollar]
* Kachess Drought Relief Pumping Plant: **B/C ratio of 0.46** [i.e. a return of 46 cents on the dollar]


It is inexcusable for Ecology-OCR and the BuRec to continue to exclude all mention or references to this Washington State Legislature directed study.

• Why does Ecology-OCR and the BuRec continue to refuse to include this study or conclusions in the DEIS and this SDEIS, or as part of the Reference material list?
• We request that this information be made part of the FEIS.

In addition, an EIS must present all reasonable alternatives, such as water conservation or water marketing.

• We request that these alternatives be added.

Cumulative Effects
Note: The EIS will not reevaluate cumulative effects of the overall Integrated Plan that have been evaluated previously at a planning level in the March 2012, Yakima River Basin Integrated Water Resource Management Plan Final Programmatic EIS. The cumulative effects evaluation will instead focus on effects of the proposed projects in combination with other consequential federal, state, local, and private actions. p. 35

The BuRec and Ecology insist that the proposed projects are an integral part of the controversial Yakima Political Bargain. The March 2012 FPEIS did not evaluate cumulative impacts at the project level.

• The DEIS must evaluate the cumulative effects of the proposed project, alternatives, and the other elements of the controversial Yakima Plan.

The EIS will not advance alternatives for detailed analysis in the EIS that do not satisfy or approximate these adopted purposes of the proposed action. Substantial initiatives to promote water conservation, water marketing, aquifer storage, improved land management, and terrestrial and aquatic habitat improvements are already proposed for implementation as part of the Integrated Plan. Because these are understood to be part of the comprehensive solution for the Yakima Basin alongside the proposed projects, they are not considered alternatives to the proposed projects. Thus, water conservation, water marketing, alternative agriculture and cropping, aquifer
storage, new forest designations and practices, and related suggestions likely will not receive detailed assessment in the EIS. p. 36.

This is incorrect. The BuRec and Ecology-OCR were willing to advance alternatives as part of the Cle Elum Pool Rise DEIS (Alts. 4 and 5) that do not satisfy or approximate the Congressional authorization.

- Water conservation, water marketing, alternative agriculture and cropping, aquifer storage, new National Forest designation and practices are all alternatives and, therefore, must be analyzed in a detailed fashion in the EIS.

**Major Conclusions (p. ES-xvi)**

This section states that the proposed action would improve water supply to proratable water users, but fails to evaluate a range of alternatives. This section also concludes that under ALL the action alternatives, the KKC project would be constructed. This appears contrary to the presentation that Alternative 4 is just the floating pumping plant project.

- If BuRec and Ecology-OCR have already concluded (at the SDEIS stage) to build the KKC project, then this should be stated upfront in the alternatives section, not buried in the Executive Summary.

**Regional Economic Impacts (p. EX-xvi)**

- As discussed above, we request the Water Resource Center’s benefit/cost analysis be included in any FEIS
- Based on the BuRec and Ecology-OCR’s conclusion that changes in water supply available for agriculture would be beneficial resulting in a net gain in regional economic activity, what would be the expected increase in perennial crops grown on the Roza Irrigation District?
- What other specific net gains in regional economic activity would occur?

**Public Review of the SDEIS (p. ES-xvi)**

The Wise Use Movement continues to object to the refusal of Ecology-OCR and BuRec to hold public hearings on the SDEIS, or to hold public hearings in Western Washington where a large segment of Kachess Lake recreational users are located.

- Why did BuRec and Ecology-OCR refuse to hold a public hearing on this SDEIS, when Ecology-OCR held a public hearing on the Icicle Strategy PEIS?

**Sec. 1.1 (p. 1-1) Introduction**

The Wise Use Movement continues to object to the SDEIS being tiered to a legally insufficient FPEIS (see discussion above).

**Sec. 1-2 (p. 1-1) History and Background**

We continue to object to Ecology-OCR and BuRec’s portrayal of Kachess Lake as “Kachess Reservoir.”

- We request that the SDEIS use the US National Forest designation of “Kachess Lake.”
  See: https://www.fs.usda.gov/recarea/okawen/recreation/recarea/?reclid=57595&actid=29

This section also fails to mention that the Kachess and Keechelus watersheds are within the Okanogan-Wenatchee National Forest. In fact, this has been a persistent failure of the BuRec and Ecology to acknowledge the significant adverse environmental impacts to the Okanogan-Wenatchee National Forest.

- Please include this information in this section.

**Sec. 1.2.1 (p. 1-3) Yakima Project**

This section gives a too brief summary of senior water rights (nonproratable); proratable water rights; and junior water rights. Table 3-4 (p. 3-19) lists Yakima Project Irrigation District water rights.

- For each of the senior, proratable, and junior water right holder categories:
  - What are the total water rights of each of these categories?
  - How much acreage is devoted to perennial crops in each of these categories?
  - How many acre-feet of water are devoted to perennial crops in each of these categories?

**Sec. 1.2.2. (p. 1-3) Integrated Plan and Programmatic FEIS**
This section does not accurately describe the origins of the Yakima Political Bargain. Please include the following information in this section:

In 2003, Congress passed PL 108-7 (Feb. 20, 2003), which contains Division D, Title II, Sec. 214: "The Secretary of the Interior, acting through the Bureau of Reclamation, shall conduct a feasibility study of options for additional water storage in the Yakima River Basin, Washington, with emphasis on the feasibility of storage of Columbia River in the potential Black Rock Reservoir and the benefit of additional storage to endangered and threatened fish, irrigated agriculture, and municipal water supply. There are authorized to be appropriated such sums as may be necessary to carry out this Act."

The BuRec finished this study in Dec. of 2008, and found that Black Rock and two versions of a Wymer dam project failed to have a positive benefit/cost ratio, and refused to even include Bumping as an alternative:

Ecology then set out to conduct a separate study (Ecology #09-11-012 - June 2009), which included a new Bumping Lake and Wymer dam, but did not include a Kachess pumping plant project. Ecology deemed this 2009 study an "Integrated Water Resources Management," and includes most of the "elements" later approved by the Yakima Workgroup, which did not begin meeting until 2009.

This is ample proof that Ecology designed the "Yakima Political Bargain" during the mid-2000s, presented it in a final 2009 report, and then created the Yakima Workgroup to support, carry out, and lobby for its implementation.

- As an advisory body to the BuRec, why wasn't the Workgroup group chartered under the Federal Advisory Committee Act?

Sec. 1.2.3 (p. 1-4) “Integrated” Plan – A Package of Seven Elements
As mentioned in the above comments to ES-p. vi,
- Please correct the first statement in this section to explain that the Yakima Political Bargain was created by a small group self-selected by Ecology-OCR and the BuRec
- Why did Ecology-OCR and the BuRec NOT include the cities of Ellensburg or Cle Elum?
- Why did Ecology-OCR and the BuRec fail to include any recreational or hiking groups in its Yakima Workgroup?
- Why did Ecology-OCR and the BuRec fail to include the US Forest Service in its Yakima Workgroup until after the Workgroup adopted the Yakima Political Bargain?
- Why did Ecology-OCR and the BuRec fail to identify the Yakima Workgroup members that created the Yakima Political Bargain in the SDEIS?
- Please include the Yakima Workgroup members in any FEIS, with updates.

For each of these seven elements please provide a status of what a decade of the Yakima Political Bargain has accomplished:
1. “Reservoir” Fish Passage.
   - Please clarify that fish passage at Lake Cle Elum was authorized by Congress in 1994, nearly a quarter of a century ago. What is the status of fish passage at Kachess and Bumping Dams?
2. Structural and Operational Changes.
   - Please update the status of the Reza and Chandler power plant subordination.
   - Please update the status of all surface water storage projects, including re-regulation reservoirs.
• Please update the status of all groundwater storage projects.

• The State of Washington spent approximately $100 million to acquire and establish the Teanaway Community Forest. What is the status of the 15,000 acres of Shrub-Steppe Habitat Enhancement acquisition? What is the status of the 10,000 acres of Forest Habitat Enhancement? What is the status of Wilderness Area and Wild and Scenic River Designations?

• Please update the status of water conservation savings achieved as part of the 1979 Phase I Yakima River Basin Water Enhancement Project (YRBWEP); the 1994 Phase II Water Conservation Program; and any additional water conservation savings achieved from the Yakima Political Bargain.

7. Market Reallocation.
• Please update the status of water market reallocation (water banks, or water trusts), and the conservation savings achieved as part of the 1979 Phase I Yakima River Basin Water Enhancement Project (YRBWEP); the 1994 Phase II Water Conservation Program; and any additional water reallocation water conservation savings achieved from the Yakima Political Bargain.

Sec. 1.2.4 (pages 1-5 and 1-6) “Integrated” Plan Implementation
• This section states that the Yakima Political Bargain would be implemented in 10-year increments over 30 years. Please clarify the nature of these 10-year increments. Does this mean that the first increment covers 2012-2022? Which specific projects are proposed for the first 10-year increment? Based on the seven elements listed above, please describe the accomplishments of the Yakima Political Bargain, besides the $100 million purchase of the Teanaway property during this time period.

• This section also states that in 2013, the Washington Legislature passed the Yakima Policy Bill 2SSB 5367. This section, as well as Sec. 1.8.2, completely fails to mention the fact that the Washington Legislature refused to hand the Department of Ecology-OCR a blank check for the billions of dollars required for the Yakima Political Bargain. Please include RCW 90.38.110 in this section as follows:

Construction of a water supply project—Prior review by the state of Washington water research center. (Expires July 1, 2025.)

(1) Prior to the appropriation of funding for the construction of a water supply project proposed in the integrated plan with a cost of greater than one hundred million dollars, the state of Washington water research center shall review, evaluate, and prepare comments on the cost benefit analysis prepared for the project by the department and the United States bureau of reclamation.

(2) To the greatest extent possible, the center must use information from existing studies, supplemented by primary research, to measure and evaluate each project’s benefits and costs.

(3) The center must measure and report the economic benefits of each project subject to subsection (1) of this section, so that it is clear the extent to which an individual project is expected to result in increases in fish populations, increases in the reliability of irrigation water during severe drought years, and improvements in municipal and domestic water supply.

(4) The center may enter into agreements with other state universities and with private consultants as needed to accomplish the scope of work.

(5) The center may consult, as necessary, with the department of ecology and the Yakima river basin water enhancement project work group.

(6) No more than twelve percent of any appropriations provided for the implementation of this section may be retained for administrative overhead expenses.

(7) This section expires July 1, 2025.

RCW 90.38.110.

• We also request that the FEIS also include the Washington Water Research Center’s 2014 study report and its conclusions, as follows:

- Net benefits for out-of-stream use of individual water storage projects implemented with no other projects implemented are negative, with some exceptions under the most adverse climate and water market conditions.

Based on moderate climate and market outcomes, storage infrastructure projects implemented alone and without proposed IP instream flow augmentation result in the following estimated out-of-stream net present value and B/C ratios, none of which passes a B-C test:

- Bumping Lake Expansion: Cost = $452.3 million; B/C ratio of 0.18.
- Cle Elum Pool raise: Cost = $16.3 million; B/C ratio of 0.62. Under the most adverse climate scenario and moderate market conditions, a B/C ratio is 1.35. It is also the most likely of the storage projects to satisfy a B-C test under moderate climate based on the sum of out-of-stream and instream use value.
- Keechelus to Kachess Conveyance: Cost $138.2 million; B/C ratio of 0.20.
- Kachess Drought Relief Pumping Plant: Cost $195.8 million; B/C ratio of 0.46. Under the most adverse climate considered, Keechelus to Kachess Conveyance and Kachess Drought Relief Pumping Plant together provide net benefits of $6 million and a B/C ratio of 1.02.
- Wymer Dam and Reservoir: Cost = $1,331.2 million; B/C ratio of 0.09.

Pages iii-iv; Table 7, page 63.

- We also request the WRC’s 2014 benefit/cost analysis report be added to the References section.

Figure 1-2 (p. 1-7)
- We request that the volitional bull trout passage between Little and Big Kachess Lakes be shown on this drawing.
- Can the BuRec lower Big Kachess Lake to 2,192.75 ft. (minimum low pool) without impacting bull trout passage between Little and Big Kachess Lakes?
- How often has the BuRec lowered Big Kachess Lake to 2,192.75 feet?

Sec. 1.7 (pp. 1-14 to 1-16) National and State Environmental Policy Act Review Process
Ecology-OCR has issued the SDEIS under the State Environmental Policy Act (SEPA) for “funding, design, construction, operation, and maintenance of a floating pumping plant on Kachess ‘Reservoir’ . in order to recover up to 200,000 acre-feet of inactive water storage from Kachess ‘Reservoir’ during drought years when prorationing is less than 70 percent supply (page 2-1). In addition, the SDEIS states that it is tiered to the Yakima Plan Final Programmatic EIS (FPEIS) (Reclamation and Ecology, 2012) (page 1-15). Ecology-OCR cannot tier the SDEIS to the FPEIS because the FPEIS fails the most basic requirement of the State Environmental Policy Act (SEPA). Under RCW 43.21C.030(c)(iii), agencies must include in a detailed statement for major actions significantly affecting the quality of the environment alternatives to the proposed action. WAC 197-11-440(5)(c) requires agencies to describe reasonable alternatives. Instead, the FPEIS, other than the no-action alternative, considered only a “Yakima Political Bargain” obtained from a small group of Ecology-OCR and BuRec handpicked organizations engaged in political tradeoffs across the entire Yakima River Basin. This “Yakima Political Bargain” stands out as the real “objective” of Ecology-OCR and the BuRec, not the purported objectives that are given to provide political cover for the vast, unconsidered impacts on the physical and human environment of the Yakima River Basin, demanded by the parties who negotiated the “Yakima Political Bargain” without consideration of a full range of alternatives.

This failure to comply with the central mandate of SEPA will lead to adverse environmental impacts because alternatives were not included and not analyzed. WAC 197-11-442(4) provides that the lead agency is not required under SEPA to examine all conceivable policies, designations, or implementation measures as part of an EIS’s discussion of alternatives for a comprehensive plan, community plan, or other nonwide zoning or for shoreline or land use plans. However, the “Yakima Political Bargain” is none of these things. Rather, WAC 197-11-442(2) requires Ecology to:
The FPEIS did none of this and, therefore, under SEPA, the SDEIS cannot be tiered to a legally inadequate FPEIS. The Washington Supreme Court has found that “The environmental significance of the nonproject action creates the obligation to examine alternatives to the nonproject action... SEPA requires an examination of reasonable alternatives to the nonproject action.” Citizens Alliance to Protect Our Wetlands v. City of Auburn, 126 Wn.2d 356, 366 (1995). In Blair et. al v. City of Monroe, CPSMHB 14-3-0006c, Final Decision and Order (Sept. 19, 2014), the Central Puget Sound Regional Growth Management Hearings Board considered the scope of review under WAC 197-11-442(4). There the Board found that the City of Monroe had failed to adequately comply with SEPA review requirements (SEPA’s to function “as an environmental full disclosure law,” Blair at 22. “[t]he range of alternatives considered in an EIS must be sufficient to permit a reasoned choice.” SWAP v. Okanogan County, 66 Wn. App. 439, 444 (1992). For the FEIS to be adequate, the City must consider alternative designations for the Property and/or alternative locations within the City for additional GC development. Citizens Alliance v. City of Auburn, 126 Wn.2d 356, 365 (1995). Blair at 23.

In City of Shoreline et. al v. Snohomish County, CPSMHB Coordinated Case Nos. 09-3-0013c and 10-3-0011c, Corrected Final Decision and Order (May 17, 2011), the Board entered a determination of invalidity due to an inadequate analysis of reasonable alternatives to a proposed action. The Board found that “The record provided in this case contains a number of plans which, though not perhaps formally proposed, might have formed the basis for one or more EIS alternatives resulting in lower environmental costs.” City of Shoreline at 56-57. (“[l]imiting the analysis only to (a) the land use and zoning requested by the Intervenor and (b) the no action alternative, without considering any alternative scenarios, deprived County officials of the information necessary to determine whether a reasonable change in use of Point Wells could be achieved with less environmental impact.” City of Shoreline at 57 (emphasis added). SEPA does not excuse failing to consider alternatives beyond the Yakima Grand Bargain itself.

Of relevance to the SDEIS, the 2012 FPEIS states: “Economic impacts to existing users could be substantially reduced by improving water supplies to 70 percent of proratable water rights” and is listed as a FPEIS purpose and need (FPEIS, pages i and ii). The FPEIS failed to address a range of alternatives such as other percentages (e.g. 60 percent) or reducing perennial crops in irrigatable districts or reducing water delivery to non-proratable districts during drought years or establishing an aggressive water conservation, water efficiency, and water marketing system. Alternative methods or programs of meeting water demand are required to be identified and analyzed so that decision makers can be informed PRIOR to making a decision.

In this SDEIS, Ecology-OCR (and the Bureau) considers the decision (to proceed with the single Yakima Political Bargain alternative presented in the FPEIS) to have already been made. Therefore, contrary to SEPA, the SDEIS does not identify any alternatives to withdrawing 200,000 acre-feet from Kachess Lake. In the case of both the FPEIS and the SDEIS, Ecology has not complied with SEPA requirements for the consideration of alternatives. The only other “alternatives” considered, but eliminated from detailed study, are merely other tunnels, and other methods of extracting Kachess Lake water found in the YRBWE P Phase 1 (SDEIS, pages 2-60 to 2-63). The SDEIS jumps from the inadequate FPEIS straight into the project level floating pumping plant proposed action, with nary a thought of addressing water supply issues in the Yakima Basin by any other means. SEPA (and NEPA) requires the consideration of a range of reasonable alternatives so decision makers can make an informed decision. Before Ecology and the Bureau run off to fund a misguided floating pumping plant project, decision makers need to address alternatives that do not fall within the Yakima Political Bargain.

Because National Environmental Policy Act (NEPA) regulations similarly require that the alternatives section “is the heart of the environmental impact statement” (40 CFR §1502.14), for the reasons described above, the FPEIS is also inadequate under NEPA. The FPEIS failed to comply with NEPA or SEPA by refusing to analyze any alternatives other than a pre-selected controversial Yakima Political Bargain and a no-action alternative. This SDEIS further compounds this failure by refusing to analyze reasonable alternatives to a Kachess Lake pumping plant.
Neither the BuRec nor Ecology should adopt or incorporate by reference the FPEIS, particularly Chapter 2.

Sec. 1.8.1 (p. 1-17) Federal

- Please add the following to provide a clear understanding of the scope and intent of S. 714 to authorize the entire Yakima Political Bargain:
  
  "According to the summary of S. 714: ‘(Sec. 5) The bill directs Interior to “implement the Integrated Plan as Phase III of the Yakima River Basin Water Enhancement Project”’
  

This section states that YRBWEP was authorized by Congress in 1979. P.L. 96-162 authorized and directed the Secretary of Interior to conduct a feasibility study of the Yakima River Basin Water Enhancement Project, which shall include an analysis by the United States Geological Survey of the water-supply data for the Yakima River Basin.

- Please provide references to all studies and reports that the United States Geological Survey has prepared to analyze the water-supply data for the Yakima River basin under YRBWEP Phase I, Phase II, and the Yakima Political Bargain, including this SDEIS, as required by P.L. 96-162.

Sec. 1.8.2 (pp. 1-17 to 1-18) Washington State Authorization

As noted above in comments on Sec. 1.2.4, this section on Washington State Authorization is incomplete. Section 5057 of Engrossed Substitute Senate Bill 5035 (2013) was passed by a Washington Legislature concerned about the BuRec and Ecology manipulation of benefits values from the controversial Yakima Political Bargain.

- In our 2015 DEIS comments, we requested that the following be added to this section:
  
  "In 2013, the Washington State Legislature (Section 5057, ESSB 5035) required the Washington State Legislature’s Water Research Center to prepare a separate benefit-cost analysis on Yakima Plan elements by December 15, 2014."

In addition, 40 CFR § 1502.23 provides:

"If a cost-benefit analysis relevant to the choice among environmentally different alternatives is being considered for the proposed action, it shall be incorporated by reference or appended to the statement as an aid in evaluating the environmental consequences."

- Why have Ecology-OCR and the BuRec again refused to disclose important sections of ESSB 5035 (RCW 98.38.110) or comply with 40 CFR § 1502.23?

Sec. 1.9.1 (p. 1-18) Water Rights

This section states that Reclamation manages and operates the Yakima Project in accordance with Federal and State law, court orders, and court decisions as set forth in Section 1.2.1 of this SDEIS.

- Please delete this sentence as Section 1.2.1 does not set forth in detail the laws, court orders, or decisions.

The stated project purpose is to provide the Roza Irrigation District access to an additional 200,000 acre-feet of water from Kachess Lake (Ex. Summary, page ES-v). However, a search of the SDEIS does not find any mention or reference to the Federal District Court 1945 Consent Decree. The absence of any discussion of the 1945 Consent Decree is concerning, because it sets out the Yakima River Basin allocation of water during drought conditions. The Consent Decree defines the “Total Water Supply Available” (TWSA) as:

"That amount of water available in any year from natural flow of the Yakima River, and its tributaries, from storage in the various Government reservoirs on the Yakima River watershed and from other sources, to supply the contract obligations of the United States to the Yakima River and its tributaries, heretofore recognized by the United States."

Civil Action No. 21, Federal District Court of Eastern Washington (1945 Consent Decree).

Kachess Lake water would be part of “storage in a government reservoir,” and could also be considered "other sources." The 1945 Consent Decree requires that Senior Districts be allotted water first in a drought year.
• We request that any FEIS discuss the 1945 Consent Decree and the claim that Senior water right holders would have on Kachess Lake water superior to any claim by the Roza Irrigation District (or the Kittitas Reclamation District, the Wapato Irrigation Project, or the Kennewick Irrigation District).

Sec. 1.9.2 (p. 1-19) Water Contracts
• Please provide the status of the total repayments made to date to recover costs of the BuRec’s Yakima Project.
• Please provide the status of repayments made by each Yakima irrigation district to recover costs of the BuRec’s Yakima Project.
• Please provide a table listing the cost per acre feet of water delivery to each of the Yakima irrigation districts during the 2015, 2016, and 2017.
• What are delivery and cost recovery contract time lengths?
• How frequently are contracts re-negotiated?

Sec. 1.10 (p. 1-19) Permits, Consultations, and Approvals
• Why isn’t the US Forest Service included in Table 1-2 (p. 1-19)? Does BuRec and Ecology-OCR intend to continue to ignore the US Forest Service in this process?

Sec. 2.1.1 (p. 2-2) YRBWEP Phase II
The YRBWEP Phase II Conservation Advisory Group and BuRec completed a “Basin Conservation Plan” in 1998. After twenty years, the SDEIS mentions only three projects: A Sunnyside lateral improvement project to conserve 6,565 acre-feet when construction is completed and operational in 2032; Kittitas Reclamation District activities, which would conserve 48,500 acre-feet annually with no completion date given; and the Yakama Nation Wapato Irrigation Project System Improvements and Demonstration Project with no acre-feet savings or completion date given.

* Is this correct that these are the only three YRBWEP Phase II conservation projects to come on line in the next 17 years?
* What conservation projects were identified in the 1998 Basin Conservation Plan?
* What was the total conservation acre-feet savings identified in the 1998 Basin Conservation Plan?
* What is the total acre-feet of water conservation savings identified in the 1998 Basin Conservation Plan that has been accomplished to date?
* What specific accomplishments have occurred with the Yakama Nation Wapato Irrigation Project System Improvements and Demonstration Project authorized by Congress in 1994?

This section completely fails to describe the requirements or lack of accomplishments of YRBWEP Phase II, passed by congress nearly a quarter-century ago. This section claims that the total quantity of conserved water from “completed and on-going conservation projects” is 69,066 acre-feet.

• Please provide a table that lists the following:
  - The number of acre-feet of actual water conservation per year achieved due to YRBWEP Phase I (1979).
  - The number of acre-feet of actual water conservation per year achieved due to YRBWEP Phase II (1994).
  - The number of acre-feet of actual water conservation per year achieved due to the Yakima Political Bargain Phase III (i.e., Enhanced water conservation element) since 2012
  - The number of acre-feet of actual water conservation per year achieved due to irrigation district projects, not funded by YRBWEP Phase I, II, or III.
• Please include the following summary of YRBWEP Phase II in any FEIS:

**Water Conservation Studies**

1966 - 1979
Efforts to construct a new Bumping Lake dam in the Yakima River Basin have been the source of dam enlargement studies including in 1966, 1979 and 2006. Two enlargement alternatives, a 458,000 acre-foot reservoir and a smaller 200,000 acre-foot reservoir have been proposed.

1979 - Yakima River Basin Water Enhancement Project (Phase I)
Instead of constructing more storage dams, Congress passed the Yakima River Basin Water Enhancement Project (YRBWEP) (Phase I) in December of 1979, authorizing a feasibility study. The BuRec issued part 1 of the study in August 1982, which recommended early implementation of fish passage measures. Part 2 of the feasibility study focused on issues including waterbanking, potential storage site, and water conservation measures and a part 2 status report was issued in 1985. *Yakima River Basin Water Enhancement Project, Washington, Draft Programmatic Environmental Impact Statement, Bureau of Reclamation (BuRec Draft PEIS), April 1998, pages 11.*

1988 - Enhancement Roundtable Group
In 1988, an Enhancement Roundtable Group was formed made of irrigators, the Yakama Indian Nation, state agencies, BPA, and the BuRec to develop water conservation legislation for Congress.

1994 - Yakima River Basin Water Enhancement Project (Phase II)
To help carry out the recommendations of part 2 of the YRBWEP feasibility study, Congress passed P.L. 103-424, Title XII in 1994. In 1998, the BuRec issued a draft Programmatic EIS. According to the BuRec, the purpose of Title XII was on water conservation, although raising the gate elevation at Cle Elum Lake was also authorized. The BuRec claimed that the additional water from increased storage at Cle Elum would not be part of the Yakima River Basin total water supply available (TWSA). *BuRec Draft PEIS (1998), pages 19, 29.*

According to the BuRec:

The Yakima River Basin Water Conservation Program (the centerpiece of Title XII legislation), is a voluntary program structured to provide economic incentives with cooperative Federal, State, and local funding to stimulate the identification and implementation of structural and nonstructural water conservation measures in the Yakima River basin. Improvements in the efficiency of water delivery and use will result in improved, reach-specific streamflows for aquatic resources and improve the reliability of water supplies for irrigation. The *Basin Conservation Plan*, prepared by the Yakima River Basin Conservation Advisory Group (1998) which was charted under the Federal Advisory Committee Act and appointed by the Secretary of the Interior, was submitted to the Secretary of the Interior in 1998 and published and distributed in October 1999. The *Basin Conservation Plan* sets forth the mechanism for implementing water conservation measures, including eligibility requirements for Federal- and State-sponsored grants, standards for the scope and content of water conservation plans, criteria for evaluating and prioritizing conservation measures for implementation, and administrative procedures. *Final Planning Report/Environmental Impact Statement, Volume 1, Yakima River Basin Water Storage Feasibility Study, Yakima Project Washington, Bureau of Reclamation, December 2008 (BuRec Final Report/EIS), page 1-19, 1-20.*


The 1994 authorized targets are found in Sec. 1201:
(4) to realize sufficient water savings from the Yakima River Basin Water Conservation Program so that not less than 40,000 acre-feet of water savings per year are achieved by the end of the fourth year of the Basin Conservation Program, and not less than 110,000 acre-feet of water savings per year are achieved by the end of the eighth year of the program, to protect and enhance...
fish and wildlife resources; and not less than 55,000 acre feet of water savings per year are
achieved by the end of the eighth year of the program for availability for irrigation;
According to the Bureau’s letter of September 4, 2015, under the 1994 authorized Basin
Conservation Plan, they have achieved only 40,000 acre feet of water savings for instream flows
and 13,000 acre feet for irrigation. In addition, two districts have not installed water measuring
devices (the Bureau did not say which ones).
See http://ucrsierraclub.org/pdf/Yakima_BuRec_accomplishments_YRBWEP_letter_9-4-
2015.pdf

Despite the fact that two decades have passed since the “voluntary” Basin Conservation Plan was
published, it is difficult to pin down what efforts, if any, Yakima River Basin irrigators have taken
to actually conserve water. In addition, the Federal Advisory Committee Act (FACA) chartered
Yakima River Basin Conservation Advisory Group held their last meeting in 2018 after no
meeting for nearly two and a half years.

• In order to evaluate alternatives to the proposed pumping plant, please list all Yakima River Basin
Conservation Advisory Group meetings since June 2009.
• In order to evaluate alternatives to the proposed pumping plant, please list all presentations made by the
Yakima River Basin Conservation Advisory Group to the Yakima Workgroup since June 2009.

P.L. 103-424 (Phase II) also authorized $23 million for implementation of system improvements
to the Wapato Irrigation Project, as well as $8,500,000 for a Yakama Indian Reservation Irrigation
Demonstration Project for the construction of distribution and on-farm irrigation facilities,

• In order to evaluate conservation alternatives to the proposed pumping plant, please provide an update on
the amount spent and acre-feet savings from the 1994 system improvements to the Wapato Irrigation
Project and from the Yakama Indian Reservation Irrigation Demonstration Project.

2004 – Sunnyside Re-regulation reservoirs
In September 2004, the BuRec issues a Finding of No Significant Impact and Environmental
Assessment on a water conservation program for the Sunnyside Irrigation District. The program
consisted of three re-regulation reservoirs and automated gates, but no installation of drip

Alternative for the Yakima River Basin Water Storage Feasibility Study, No. 07-11-044. While
the report did not identify any past irrigation district water conservation measures that have been
implement, the report estimated the total water savings in the Yakima River basin for all water
conservation projects listed in the report to be 229,199 acre-feet per year. Ecology, Technical
http://www.usbr.gov/pn/programs/storage_study/reports/07-11-
044/Enhanced_Conservation_Report.pdf

As part of the BuRec’s 2008 Yakima River Basin Water Storage Feasibility Study, Final Planning
Report:
“Ecology has developed an inventory of more than 500 conservation projects and is currently
developing, screening, and ranking criteria to determine which projects best meet the goals of the
CR3WMP. Potential projects may address issues such as incentive payments to reduce water use
and full or partial water banking, improvements to municipal water infrastructure, use of
reclaimed water, improved water delivery efficiency at the irrigation district level and on farm
conservation, improved industrial infrastructure, and pump exchanges. Ecology would manage the
And as part of its 2009 “Integrated” FEIS, Ecology prepared a list of “potential” water conservation projects for water uses that divert from the Yakima and Naches River. There is no explanation of why these water conservation projects have not been carried out over the past thirty years. *Ecology Yakima River Basin Integrated Water Resource Management Alternative, June 2008* (Ecology FEIS), page 3-31. [http://www.ecy.wa.gov/programs/wr/cwp/cr_yak_storage.html#seis](http://www.ecy.wa.gov/programs/wr/cwp/cr_yak_storage.html#seis)

**2009 Yakima Workgroup and 2012 Yakima Plan**

The “Enhanced Water Conservation Element” is found in Section 2.4.8 of the 2012 Yakima Political Bargain. The scope of this element is intended to supplement, but not duplicate the conservation activities funded under YRBWEP Phase II. The Yakima Workgroup modelling estimated that the agricultural water conservation program would conserve approximately 170,000 acre-feet of water in good water years and substantially less in drought years. [https://www.usbr.gov/pn/programs/yrbwep/reports/FPEIS/fpeis.pdf](https://www.usbr.gov/pn/programs/yrbwep/reports/FPEIS/fpeis.pdf)


**Sec. 3.1.6 Enhanced Water Conservation**

This element consists of additional agricultural conservation actions not included in current YRBWEP Title XII implementation plans, along with municipal and domestic water conservation programs.

**Agricultural Conservation**

An agricultural water conservation program could conserve up to 170,000 acre-feet of water in good water years, based on a compiled list of potential projects that could be implemented under this proposed program (see Volume 2 technical memorandum, Agricultural Water Conservation). The program would include measures beyond those likely to be implemented in the existing YRBWEP Phase 2 conservation program.

Agricultural water conservation measures that could be implemented under this program include:

- Lining or piping existing canals or laterals
- Constructing re-regulating reservoirs on irrigation canals
- Installing gates and automation on irrigation canals
- Improving water measurement and accounting systems
- Installing higher efficiency sprinkler systems, drip, etc.
- Implementing irrigation water management practices and other measures to reduce seepage, evaporation, and operational spills

Although a list of specific projects was reviewed in developing the agricultural conservation program, this recommendation does not identify specific projects for implementation at this time. Projects that would be implemented under this program would be selected through detailed feasibility studies and evaluation by the existing YRBWEP Conservation Advisory Group. Irrigation districts eligible for project funding include federally and non-federally-served irrigation districts, private irrigation entities, and individual landowners (page 57). *Yakima River Basin Study, Vol. 1, Proposed Integrated Water Resource Management Plan, April 2011.* [https://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/plan/integratedplan.pdf](https://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/plan/integratedplan.pdf)

**Conservation vs. Aggressive New Water Storage Projects**

There are two recent reports that raise significant concerns regarding the Department of Ecology Office of Columbia River’s (OCR) controversial and aggressive pursuit of new water supplies in the Columbia River Basin. OCR’s policy should be changed from its present emphasis on construction of new dams (particularly hugely damaging and expensive projects such as a new
Bumping Lake dam) and to a substantially increased focus on additional water conservation and implementing effective water markets.

First, the *Columbia River Basin Long-Term Water Supply and Demand Forecast 2016 Legislative Report*:

"... agricultural water demand—which accounts for approximately 79.4% of total out-of-stream demand (agricultural plus municipal)—is forecast to decrease by approximately 4.96% (±0.81%) by 2035, across the entire Columbia River Basin. This decrease is somewhat greater within Washington, where it is forecast to reach 6.87% (±0.98%) (Table ES-2)." (emphasis added) Ex. Summary, page x.


"The economic effects of the 2015 drought described in this interim report are based on gross rather than net revenue lost. This can account for an incongruity between the estimated gross revenue lost stated in this report and the fact that net farm income for Washington in 2015 was higher than in any of the previous four years by a significant amount." (emphasis added), page 2.


These reports demonstrate that a number of critical assumptions that have been built into the Yakima Political Bargain may be inaccurate and these assumptions underpin the conclusions that currently drive the Yakima Workgroup. Continued pursuit of the very expansive and environmentally damaging proposals such as the Kachess Lake pumping plant are taking us in the wrong direction and mis-directing investment spending.

Water Conservation Projects

Water conservation projects identified or carried out can be found in the Department of Ecology-OCR’s Columbia River Legislative Reports:

* 2006 Columbia River Legislative Report - Columbia River Water Supply Inventory and Long-Term Water Supply and Demand Forecast

Water Conservation “To date, no conservation projects have been implemented under this chapter of the Bill. Therefore, this report provides an inventory of potential conservation projects and potential storage projects” (page 4-1).

* 2007 Columbia River Basin Water Supply Inventory Report

Table 2, page 15 lists six completed projects, none in the Yakima Basin.

This report is extremely general and does not appear to list conservation projects that have been implemented under this Chapter or the amount of water conservation achieved. The report includes a project supply inventory of 6,182 projects.

No reports are posted for 2011; 2012, or 2013.

---

1 Submitted to Washington State Department of Ecology pursuant to RCW 90.90.040 by: WSU, State of Washington Water Research Center, Center for Sustaining Agriculture and Natural Resources, Biological Systems Engineering, Civil and Environmental Engineering, School of Economic Science, PO Box 643002, Pullman, WA 99164-3002
This report is extremely short and does not appear to list conservation projects that have been implemented under this chapter or the amount of water conservation achieved. The report does include a project supply inventory of 6,191 projects.

This report is also extremely short and does not appear to list conservation projects that have been implemented under this chapter or the amount of water conservation achieved. The report references a project supply inventory of 6,191 projects.

"One example of an early, successful conservation project is Barker Ranch. This project improved the Barker Ranch’s water delivery system efficiency by converting 3 miles of an open canal into a piped system, allowing Barker Ranch to divert less water from the Yakima River. This added 6,436 ac-ft of water to the lower Yakima River streamflows throughout the irrigation season" (page 5).


- Please provide a yearly table of water conservation projects implemented in the Yakima River Basin by irrigation district with acre-feet of savings and source of funding (i.e., YRBWEP Phase I, Phase II, Yakima Political Bargain, or separate irrigation district funding).

Sec. 2.2.1 (pp. 2-3 to 2-4) Alternative 1 – No Action Alternative
This section states that the objectives of the current Yakima Project operation are to:
- Store as much water as possible up to the lake system’s full active capacity of about 1 million acre-feet from the end of the irrigation season through early spring
- Provide for target flows and diversion entitlements downstream from the dams, meeting Title XII flows at Sunnyside and Prosser Diversion Dams.
- Please explain any conflicts between providing for target flows and lake storage from the end of the irrigation season through early spring.
- Please explain the difference between Title XII
Sec. 2.2.1.2 (p. 2-5) Kachess “Reservoir”
This section states that BuRec makes releases from Kachess Lake from the beginning of storage control (i.e., @June 24th) to mid-October.

- What crops require irrigation through mid-October?
- Since 1950, how many years has Kachess Lake not been drawn down to Big Kachess minimum low pool of 2,197.75 (WSEL)?
- Since 1950, how many years has Kachess Lake not re-filled?

Sec. 2.3 (p. 2-6) Alternative 2 – KDRPP East Shore Pumping Plant
This section states that BuRec and Ecology-OCR define a drought year as a year when water supply falls below 70 percent of proratable water entitlement. Footnote 4 states that this is the lowest level of water supply that could be accommodated without catastrophic losses to crops, assuming aggressive water management techniques were employed.

As noted above, an Evaluation with Recommendations by the Washington State Academy of Sciences of Interim Report: 2015 Drought and Agriculture, Washington State Department of Agriculture, December 2016, found that:

“The economic effects of the 2015 drought described in this interim report are based on gross rather than net revenue lost. This can account for an incongruity between the estimated gross revenue lost stated in this report and the fact that net farm income for Washington in 2015 was higher than in any of the previous four years by a significant amount.” (emphasis added), page 2.


This calls into question the assumptions used for the Yakima Political Bargain. The BuRec reported that in 2015, Yakima River Basin proratable water right holders would receive 47 percent of their normal water allocation. See: https://fortress.wa.gov/ecy/publications/documents/1611001.pdf

As this is significantly lower than the “catastrophic” loss 70 percent curtailment level that Ecology-OCR and the BuRec have set, please provide a response to the following:

- How is “catastrophic” loss defined?
- Please list all Yakima River Basin proratable water right holders that suffered catastrophic loss in 2015.
- Did any Yakima River Basin senior water right holders suffer catastrophic losses in 2015?
- If Yakima River Basin senior water right holders had received 70 percent of their water allotment in 2015, would the remaining 30 percent of water raised the proratable water right holders to 70 percent?
- What aggressive water management techniques were employed during 2015?
- What aggressive water management techniques were not employed during 2015?

Sec. 2.3.5 (pp. 2-18 to 2-19) Volitional Bull Trout Passage Improvements.
Volitional means “relating to the use of one’s will.”

- What is the purpose of describing bull trout passage with such a term?

This short section (which is referenced as the “analysis” for Alternative 4 (p. 2-32)) is completely inadequate to provide a reviewer with sufficient detail to evaluate this proposal. This section states that “Additional Technical Details are included in the Kachess Narrows Fish Passage Concept Development Technical Memorandum (Reclamation and Ecology, 2017a). However, the Reference section (p. R-24) identifies this technical memorandum as an “Unpublished Draft prepared by HDR Engineering, February 2017.” An EIS cannot rely on unpublished drafts that are not accessible to the reviewer. In addition, Figure 2-4 fails to show the complete length of the proposed roughened channel and no cross sections are provided.

- What is the length of the proposed channel?
- Please provide a cross-section of the channel design.
• What will prevent this channel from sedimenting in?
• What will prevent erosion of the proposed isolation berm?
• How many cubic feet of material would be excavated for the proposed channel?
• How many cubic feet of fill would be needed to construct the isolation berm?
• Where would any excess excavation material be disposed?
• What time frames would the passage be operational?
• What minimum cfs flows are needed to assure that bull trout are not damaged in the “roughened channel.”
• What other resident fish would be expected to utilize the proposed passage?
• Why is there no mention or discussion of Box Canyon Creek Passage?
• Won’t withdrawing 200,000 acre feet of water from Kachess Lake make seasonal problems for bull trout at Box Canyon Creek worse?
• Doesn’t bull trout passage between lower and upper Kachess Lakes require addressing Box Canyon Creek Passage problems? Why does the SDEIS fail to address this?

Sec. 2.5 (p. 2-32+) Alternative 4 (Proposed Action) – Floating Pumping Plant
This is the “new” Alternative that has been added to the DEIS. Unfortunately, rather than present this alternative as a true alternative with a description of the affected environment and environmental impacts, the BuRec and Ecology-OCR have presented a hodge-podge of references to other sections of the SDEIS, making review of this “new” Alternative far more difficult than needed, unless this was the intent.
• We request that all information related to Alternative 4 be compiled in one section.

We continue to request that other alternatives such as water conservation, water efficiency, water markets, and other alternatives such as adjusting crop patterns to stop growing perennial crops by proratable irrigation districts, or requiring nonproratable water right holders to also receive 70 percent of their water allotment during drought years be considered. NEPA regulations require a DEIS to include “reasonable alternatives not within the jurisdiction of the lead agency.” 40 CFR § 1502.14(c). In addition, “A potential conflict with local or federal law does not necessarily render an alternative unreasonable, although such conflicts must be considered.”

As noted above, in comments on the Executive Summary, this is now at least the third floating pumping plant proposed by Yakima irrigation districts. A floating pumping plant was constructed at Lake Cle Elum back in 1977 and promptly burned and sank. The Roza Irrigation District proposed an emergency floating pumping plant at Kachess Lake in 2015, which was never built.
• Please provide information on the size, location, and history of any similar operating pumping plants.

Sec. 2.5.1.1 (p. 2-35+) Pump Barge and Pumping Plant
• What wind data has the BuRec and Ecology-OCR utilized to analyze the stability of the pump barge?

Three vertical turbine pumps would be located on the pump barge. A nylon net would be used to preclude fish from entering or becoming entrained in the pump intake. Net fish pens have failed with an alarming frequency.
• What is the life span of the proposed nylon net?
• Please provide a drawing showing the location of the proposed netting.

This section states that the vertical turbine pumps would provide minimum flows in the Kachess River whenever the lake pool level falls below sufficient gravity flow elevation to meet downstream obligations.
• What are these “downstream obligations.”

Sec. 2.5.1.2 (p. 2-38) Pipe-Bridge
• Where has such a rigid-flexible pipe bridge been used elsewhere?
• What is the life span of the proposed cardanic joints?
Figures 2-9 through 2-12 do not provide sufficient detail to allow a reviewer to understand the nature of the various pump barge/pumping plant design.

- Please provide additional drawings to clearly show each design element.

Sec. 2.5.1.4 (p. 2-39) Reservoir Floor Scour Protection
This section states that articulated concrete mats would extend 80 feet out from the toe of the flow control structure on the lake floor.

- What benthic impacts to the lake floor would occur from the concrete mats?

Sec. 2.5.2.1 (p. 2-41) Floating Barge and Pumping Plant
This section states that the lake would need to be dredged to install the pump barge,

- How many cubic feet of material would be dredged?
- What is the location of the dredge material disposal site on the lake floor?
- What permits would be needed?
- Why wouldn't an upland dredge disposal site be used?

Sec. 2.5.2.3 (p 2-42) Flow Control Structure
- Please provide a drawing of the flow control structure.

Sec. 2.5.2.4 (p. 2-43) Erosion Protection Features
- Please provide a drawing of the erosion protection features.

Sec. 2.5.2.7 (p. 2-43 to p. 2-44) Boat Ramp and Dock

- What would be the recreational boat experience along the shoreline of Big Kachess Lake when drawn down an additional 80 feet?
- Are there any boating safety concerns?

Sec. 2.5.2.10 (p. 2-45) Spoils Disposal Area and Temporary Power Supply
This section states that for Alternative 4, BuRec is considering two options for disposal of spoils from construction (Sec. 2.3.2.8). This section (p. 2-15) describes the excavation and stockpiling of 117,000 c.y. of soil and rock material for Alternative 2.

- What is amount of excavation and stockpiling for Alternative 4?

Sec. 2.5.2.8 states that no specific offsite disposal location has been identified.

- Without knowing the specific offsite disposal location, a reviewer cannot determine whether any adverse environmental impacts could occur, thus rendering the SDEIS inadequate.

This section states that temporary power supply during construction would be the same as Alternative 2 (Sec. 2.3.2.8). This section (p. 2-15) states that if electrical power cannot be supplied, diesel-powered electric generators would supply power.

- What spill prevention measures would be taken for any diesel-powered generators?

Sec. 2.5.3 (p. 2-46) Typical Annual Operation
This section states that operations for Alternative 4 would be similar to Alternative 2 (Sec. 2.3.3).

- Similar is not identical. Please describe all ways in which operations for Alternative 4 are not similar to Alternative 2.

This section states that Alternative 2 would be operated by project proponents.

- Who are the project proponents? Does this mean BuRec? Ecology-OCR? The Roza Irrigation District? All three?

- If the Roza Irrigation District is the project proponent, how can a non-federal entity operate releases from Kachess Lake independent of the BuRec’s Yakima Project?
This section states that BuRec would meet the usual obligation, calculated in the traditional way. This means meeting non-proratable water demands first in a drought year, based on the Total Water Supply Available (TWSA) (1945 Consent Decree). As previously discussed, TWSA includes all Kachess Lake water because it is “storage in a government reservoir.” The additional 200,000 acre feet proposed water withdrawal could also be considered “other sources.”

- Does the BuRec intend to meet its obligations to nonproratable irrigation districts by providing them with an additional 200,000 acre feet of proposed water withdrawal from Kachess Lake, during a drought year if necessary?
- For Alternative 4, is Sec. 2.3.3 accurate?
  - pumping could operate continuously from early June to early October?
  - pumping would continue to pump while the lake is below the outlet works to meet flow obligations, including non-drought years?
- What is the longest possible projected continuous pumping time span?

Sec. 2.5.1.8 (p. 2-40) Proposed Narrows Access.
This section states access to the Volitional Bull Trout Passage Improvements would be the same as proposed for Alternative 2 (Sec. 2.3.1.6).

- Sec. 2.3.1.6 (p. 2-11) addresses Permanent Access Roads and does not specifically reference access to the Volitional Bull Trout Passage Improvements. Is this the correct section reference?

Sec. 2.5.6 (p. 2-46)
This section states that mitigation would be the same as for Alternative 4 (Sec. 2.3.6).

- Why isn’t monitoring fish impacts downstream of Kachess Lake included as a mitigation measure?

Sec. 2.7.2 (p. 2-59) Estimated Costs for Action Alternatives
In the past, Ecology-OCR and the BuRec have been wildly off in their cost estimates and it is improper for Table 2-5 to provide exact totals.

- We request that Table 2-5 be revised to show a range of cost figures as discussed in this section of Alternatives 2 and 3 of 15 percent lower or 30 percent higher and costs for Alternative 4 of 30 percent lower or 50 percent higher.
- What is the cost range of the KKC in Table 2-6?
- What is the cost range for the “volitional” fish passage project?
- Why are these costs not added to the alternative costs?

The December 15, 2014, Water Research Center’s B/C Analysis (Table 29) presents much lower construction cost figures for the KDRPP and KKC than presented in the SDEIS Table 2-5.

- What accounts for the higher construction costs for a floating pumping plant?
- If the KDRPP Alt 2 100 year costs are $445,765,000, and Alt 3 costs are $437,102,000, and Alt 4 costs are $282,000,000, and the KKC Alt 100 year costs are $258,256,000 what are the projected dollar benefits for each alternative?
- Why are the voluntary fish passage at Kachess Lake, not included in the above figures?
- What would be the added costs of attempting to restore fish passage at Box Canyon Creek?

Sec. 2.8 (p. 2-60) Other Alternatives Considered but Eliminated from Detailed Study.
This section is inadequate and merely describes variations of pumping plants and tunnels, not real alternatives. The BuRec and Ecology have failed to comply with NEPA and SEPA. 40 CFR Sec. 1502.14(a) requires the BuRec to discuss the reasons for alternatives eliminated from detailed study. Here there is no discussion of why water conservation, water efficiencies, water marketing, or adjusting crop patterns to stop growing perennial crops by non-proratable irrigation districts, or curtailing non-proratable water users were eliminated from detailed study.

- We request that these alternatives be included.
Sec. 3.2 (pages 3-2+) Earth
While this section identifies soil deposits and seismicity in the area, there is no specific information concerning the likelihood of dam failure from a seismic event or dam failure. This is disturbing given the past failures of the BuRec to properly account for dam failure (e.g., Teton Dam, Idaho in 1976).

- Please provide this information, as well as a summary of any dam failure studies prepared for the Keechelus and Kachess dams.
- What is the potential for liquefaction during seismic activity at Kachess and Keechelus Lakes?
- What is the current analysis of dam seismic failure, earthquakes, or seepage issues at the existing Kachess and Keechelus Lakes?

Sec. 3.3.1 (pages 3-12+) (Project Operations)
Figure 3-3 (page 3-15)

- Please provide an additional line on this figure showing the historical (prior to 1900) stream flow conditions in the Upper Yakima River.

Sec. 3.3.1.1 (page 3-16) Flip-flop and Mini Flip-flop
This section states that in September and October, irrigation releases are increased from Kachess Lake.

- Please identify the type and acreage of crops in the Roza Irrigation District that require irrigation releases from Kachess Lake in September and October.
- How many acres of hay/alfalfa are grown in the Roza Irrigation District?
- How many tons of hay/alfalfa are exported overseas from the Roza Irrigation District?
- How many tons of hay/alfalfa are exported overseas from the Kittitas Reclamation District?
- How many tons of hay/alfalfa are exported overseas from the Kennewick Irrigation District?
- How many acre feet of water in Kachess Lake could be stored for carry over to the next year if irrigation releases were halted the beginning of September?

Sec. 3.3.1.3 (pp. 3-16 to 3-18) Target Flows and Sec. 3.3.1.4 Title XII Target Flows
This section states that all the fish targets instream flows in Table 3-2 are minimum flows.

- Please revise this table to include historical and optimum instream flows for each river reach.

Sec. 3.3.1.5 (p. 3-18) Proratoning
Table 3-4 depicts Yakima Project irrigation district water rights.

- For each irrigation district please provide the number of acres devoted to perennial and annual crops.
- What is amount of proratoning less than 70 percent that has occurred over the past 100 years?

As discussed above, if proratable water users received 37 percent water supply in 1994, this would seem to be a closer reality to riding out a drought year than a 70 percent level.

- Is crop insurance available to cover losses experienced in drought years?

Sec. 3.3.2 (p. 3-19+) Keechelus Dam and Reservoir Operations

- In Tables 3-5 and 3-7 please explain how the Keechelus Lake drainage area is 54.7 square miles but provides 244,000 of average annual acre-feet of runoff, while the Kachess Lake area is much bigger, 63.6 square miles, but provides only 213,398 average annual acre-feet of runoff?

Sec. 3.3.3 (p. 3-23). Upper Yakima River between Keechelus Reservoir and Lake Easton
This section states that flows are high from July through mid-to-late August when juvenile Chinook and steelhead (and potentially coho if reestablished) are rearing in this reach. And in winter, flows are lower than desired by fish biologists.

- Please provide optimum instream flows for fish for the Upper Yakima River between Keechelus Lake and Lake Easton.
- Please explain how the floating pumping plant project would improve instream flows in this reach.
- Was raising the Lake Easton dam considered an alternative? If not, why not?
The April 20, 2018, *Federal Register* (83 FR 17542) announced the Bonneville Power Administration’s Record of Decision for the Melvin R. Sampson Hatchery, northwest of Ellensburg, WA. This hatchery would produce and release up to 500,000 coho parr and up to 200,000 coho smolts, with possible conversion to an all-smolt release of 700,000 smolts. It states that the goal is for in-basin rearing using coho adults collected at Roza Dam for broodstock or at Prosser Dam as a backup source.

- Is using existing Yakima River coho and converting them to hatchery fish a good idea?
- Won’t hatchery raised coho conflict with existing coho in the Yakima River?
- What is the optimum instream flow in the Yakima River needed to sustain a hatchery production and release of nearly a million coho?
- Why was this project not mentioned in either the 2012 PEIS, the 2015 Kachess DEIS, or this 2018 SDEIS?
- Why was this project not presented to the Yakima Workgroup or included as part of the Yakima Political Bargain?
- How can a plan be “integrated” if it does not include or analyze a major project such as a new coho hatchery?
- Why was this coho hatchery not mentioned in Sec. 3.6.4.3 (p. 3-84)?

**Sec. 3.3.4 (p. 3-36) Kachess Dam and Reservoir Operations**

- In Figure 3-6, please provide additional identification on this figure marking the level of the natural Big Kachess Lake (ele. 2200), the Big Lake Kachess minimum low pool (ele. 2,192.75 feet), and proposed KDRPP drawdown (ele. 2,113).

**Sec. 3.4 (p. 3-28+) Surface Water Quality**

- What contribution do Keechelus and Kachess Lakes make to degraded water quality in the Lower Yakima River?

The Keechelus and Kachess watersheds are within the Okanogan-Wenatchee National Forest. Therefore, they would receive runoff from any forest pesticides/herbicides used within the watersheds.

- What annual types and quantities of forest pesticides/herbicides does the Okanogan-Wenatchee National Forest apply to each watershed?

Table 3-9 and 3-10 lists the Yakima River as 303(d) water quality impaired for temperature. Cliff Mass, University of Washington professor of climatology, in a presentation to the Yakima Rotary, October 23, 2014, predicted that due to climate change our mountains will get more rain and less snow. This would also increase water temperature for lake inflow and outflow.

- What impact to fish and wildlife would such higher lake and river water temperatures have?
- Did the Fish and Wildlife Coordination Report for the FPEIS address this?
- How much would the floating pumping plant project lower Kachess Lake temperatures after lowering the lake level by 80 feet?

**Total Maximum Daily Load (p. 3-31)**

This section states that both Yakima River and the Okanogan-Wenatchee National Forest TMDLs emphasize maximizing effective shade by the forest canopy to keep temperatures lower in forest streams. While it is good to have this emphasize, this apparently has not been effectively implemented as Ecology recently developed a TMDL for the Upper Yakima River Tributaries for water temperature, which identified actions needed to reduce summer water temperatures including protecting existing riparian vegetation.

- For rivers/streams within the Okanogan-Wenatchee National Forest Yakima River Basin, please provide quantitative data and information on the river/stream miles with adequate forest canopy, as well as river/stream miles where inadequate forest canopy exists due to USFS approved logging activities.

**Sec. 3.4.1.4 (p. 3-31). Washington State Antidegradation Policy**

* The BuRec and Ecology should quantify the degree of temperature increase caused by the KDRPP and KKC projects from increased rainfall and decreased snowpack.
Sec. 3.4.3 (p. 3-36) Existing Surface Water Quality Conditions

It states on p. 3-36 that "Keechelus Reservoir is an unproductive oligotrophic (nutrient-poor and oxygen-rich) lake that stratifies in the summer" and on p. 3-41 that "Keechelus Reservoir had generally had low nutrient levels." The Yakima Plan proposes fish passage at all the major Yakima River Basin dams.

- What species of fish are proposed for passage at Keechelus Lake and which species would thrive in an unproductive lake?
- Please explain how Keechelus Lake can be oxygen-rich and also fail to meet State water quality DO criteria?

Sec. 3.4.4 (p. 3-42) Kachess Reservoir and Tributaries

It states on p. 3-42 that "Kachess Reservoir is an unproductive oligotrophic body of water that stratifies in the summer." The Yakima Plan proposes fish passage at all the major Yakima River Basin dams.

- What species of fish are proposed for passage at Keechelus Lake and which species would thrive in an unproductive lake?

Sec. 3.6 (p. 3-66+) Fish

It states that the historical lakes, such as Keechelus and Kachess supported anadromous spring Chinook, summer steelhead, coho, and sockeye salmon as well as resident bull trout.

- What fish species are proposed for passage at Keechelus and Kachess Lakes?
- How do BuRec and Ecology-OCR plan on providing successful fish passage for Keechelus Lake if the KKC project is constructed?
- How do BuRec and Ecology-OCR plan on providing successful fish passage for Kachess Lake if the floating pumping plant project is constructed and Kachess Lake is lowered by an additional 80 feet?
- Has the proposed bull trout conveyance between Big and Little Kachess Lakes been shown to work for other fish species? If so, which species and where has such a comparable project been successfully operated?

Table 3-15 (p. 3-73)

- What accounts for the extraordinary low zooplankton weight per volume of water for Bumping Lake?

It states on pages 3-73 and 3-76 that the Kachess and Keechelus Lakes' zooplankton supply are comparable to or greater than that of major sockeye-producing lakes in Alaska, based on studies nearly 50 years old.

- Have these studies been updated?
- Do the comparison Alaska lakes also support Chinook, steelhead, coho salmon and bull trout?

Sec. 3.6.4.3 (p. 3-84) Coho Salmon

- As discussed above, why is the BPA funded construction and operation of the Melvin R. Sampson Hatchery northwest of Ellensburg not mentioned in this section?

Sec. 3.6.4.4 (p. 3-85) Sockeye Salmon

- Can the BuRec confirm that during the last six years (2009-2014) efforts to restore sockeye salmon in the Yakima Basin have averaged an annual return of 395 sockeye salmon passed Roza Dam?
- Why is reservoir fish passage listed as a Yakima Political Bargain component (p. ES-vi), but this section contains no information about sockeye salmon passage at either Kachess or Keechelus Lakes?

Sec. 3.6.4.5. (p. 3-85) Nonsalmonids

- What is the status of listing Pacific lamprey under the Endangered Species Act?

Sec. 3.7.2 Kachess “Reservoir” Area (p. 3-88) Wetlands

This section states that the BuRec used the National Wetland Inventory (NWI) and a site visit to identify wetlands in the study area. Page 3-88 states that "Additional site evaluations and on-site wetland delineations would be
conducted as part of project-level evaluations." The SDEIS is a project-level EIS. Ecology-OCR and BuRec cannot keep kicking environmental cans down the road and refusing to provide environmental impact analyses at the programmatic EIS level and then at the project EIS level. Without a wetland delineation study, this SDEIS is inadequate and does not provide decisionmakers with adequate information to understand the significant adverse environmental impacts to wetlands.

- Please have the Kachess project areas delineated by a professional wetland scientist prior to release of any FEIS.

Sec. 3.8 (p. 3-96+) Wildlife

The 2012 FPEIS states, "The programmatic EIS does not evaluate site-specific issues..." FPEIS Sec. 1.2 (p. 1-4). The FPEIS promised that impacts would be analyzed on each individual project. The BuRec stated, however, in Section 5.5.2 of the 2015 DEIS, that the US Fish and Wildlife Service determined that all impacts for the KDRPP and KKC were considered in the Final Fish and Wildlife Coordination Act Report for the Integrated Plan in February 2012 and separate FWCA reports for these projects are not required.

Congress requires:

In furtherance of such purposes, the reports and recommendations of the Secretary of the Interior on the wildlife aspects of such projects, and any report of the head of the State agency exercising administration over the wildlife resources of the State, based on surveys and investigations conducted by the United States Fish and Wildlife Service and such State agency for the purpose of determining the possible damage to wildlife resources and for the purpose of determining means and measures that should be adopted to prevent the loss of or damage to such wildlife resources, as well as to provide concurrently for the development and improvement of such resources, shall be made an integral part of any report prepared or submitted by any agency of the Federal Government responsible for engineering surveys and construction of such projects when such reports are presented to the Congress or to any agency or person having the authority or the power, by administrative action or otherwise,

(1) to authorize the construction of water-resource development projects or
(2) to approve a report on the modification or supplementation of plans for previously authorized projects, to which sections 661 to 666c of this title apply. Recommendations of the Secretary of the Interior shall be as specific as is practicable with respect to features recommended for wildlife conservation and development, lands to be utilized or acquired for such purposes, the results expected, and shall describe the damage to wildlife attributable to the project and the measures proposed for mitigating or compensating for these damages. The reporting officers in project reports of the Federal agencies shall give full consideration to the report and recommendations of the Secretary of the Interior and to any report of the State agency on the wildlife aspects of such projects, and the project plan shall include such justifiable means and measures for wildlife purposes as the reporting agency finds should be adopted to obtain maximum overall project benefits. 16 U.S. Code § 662(b) Reports and recommendations; consideration.

The Final Fish and Wildlife Coordination Act Report on the programmatic Yakima Plan, dated February 10, 2012, contains no recommendations on the wildlife aspects of the KDRPP or KKC projects and, therefore, the general FWCA Report prepared for the programmatic Yakima Plan is completely inadequate as a response to these two projects.

- The BuRec should comply with the FWCA and consult with the USFWS on the KDRPP and KKC Projects.

Sec. 3.9 (p. 3-103+) Federal Threatened and Endangered Species

- What steps has the US Fish and Wildlife Service taken to list Pacific lampreys as a threatened or endangered species?
- What steps has the BuRec taken to consult with the US Fish and Wildlife Service and National Marine Fisheries Service concerning annual operation of the existing Yakima Project?
- What is the status of the ESA Biological Opinion on the impacts on endangered and threatened species from the existing Yakima Project?

March 2019
• We request that a revised SDEIS be released that incorporates the baseline information from a BiOp on the BuRec’s existing Yakima Project. This SDEIS remains inadequate for failure to disclose and analyze impacts on ESA species from the existing Yakima Project.

Sec. 3.9.3 (p. 3-105) Bull Trout
This section states that bull trout require cold, clear water.
* What is the BuRec or Ecology-OCR’s estimates of temperature increase in Keechelus and Kachess Lakes from increased rainfall and decreased snowpack and impacts on bull trout?

Sec. 3.12 (p. 3-132+) Climate Change
This section states that under the Adverse climate change scenario existing lakes may not be able to refill completely before spring (p. 3-135).
- How would this impact fish passage proposals at Keechelus and Kachess Lakes?
- How does withdrawal of 200,000 additional acre-feet of water from Kachess Lake impact target flows under the Adverse climate change scenario?

Sec. 3.12.2.2 (p. 3-135) Changes in Quantity and Timing of Runoff
This section states that BuRec and Ecology-OCR expect future agricultural demand to be higher than under historical conditions in the low inflow period of the summer.
- Does the BuRec and Ecology-OCR agree with the Columbia River Basin Long-Term Water Supply and Demand Forecast 2016 Legislative Report, that water demand in the future will decrease?

Metro: "... agricultural water demand—which accounts for approximately 79.4% of total out-of-stream demand (agricultural plus municipal)—is forecast to decrease by approximately 4.96% (±0.81%) by 2035, across the entire Columbia River Basin. This decrease is somewhat greater within Washington, where it is forecast to reach 6.87% (±0.98%) (Table ES-2)." (emphasis added) Ex. Summary, page x.

- Please include the above summary in any FEIS.
- Why does BuRec and Ecology-OCR continue to ignore and refuse to present studies that contradict the Yakima Political Bargain?
- Why wasn’t this report listed in the SEIS Reference section?

Sec. 3.13 (p. 3-143+) Noise
This section is inadequate as it fails to present the reviewer with any quantifiable noise data or duration from running the proposed floating pumping plant.
- Please provide a better summary. For additional comments see Sec. 4.13.6.2 below.

Sec. 3.14 (p. 3-146) Recreation
- What is the current off-highway vehicle (OHV) use on the Keechelus and Kachess Lakes lakebeds and mud flats?
- What additional OHV use of Keechelus and Kachess Lakes lakebeds and mud flats due to additional lakebed and mud flat exposure from the KDRPP and KKC projects?

Sec. 3.15 (p. 3-154+) Land and Shoreline Use
Sec. 3.15.1.3 (p. 3-158) Okanogan-Wenatchee National Forest Plan
This section fails to disclose the proposed adverse impacts to the Okanogan-Wenatchee National Forest.

---

2 Submitted to Washington State Department of Ecology pursuant to RCW 90.90.040 by: WSU, State of Washington Water Research Center, Center for Sustaining Agriculture and Natural Resources, Biological Systems Engineering, Civil and Environmental Engineering, School of Economic Science, PO Box 643002, Pullman, WA 99164-3002
Please list all specific impacts from the KDRPP and KKC projects on National Forest land. This section completely fails to provide the reader any information of land management practices on the Okanogan-Wenatchee National Forest Plan or how such practices result in reduced snow pack within the watershed.

- What snow pack reduction in the Keechelus and Kachess watersheds is attributable to timber harvest activities?
- What is the acreage and percentage of the Keechelus and Kachess watersheds within the Okanogan-Wenatchee National Forest that has been timber harvested?
- What is the acreage and percentage that has not been replanted?
- What steps are the USFS taking to retain snow pack in the Keechelus and Kachess watersheds?

Sec. 3.15.2.3 (p. 3-161) Shoreline Management Act
The State Shoreline Management Act consists of Ecology approved local control shoreline master programs (SMP). Keechelus and Kachess Lakes are lakes of Statewide Significance. RCW 90.58.020 provides:

"The legislature declares that the interest of all of the people shall be paramount in the management of shorelines of statewide significance. The department, in adopting guidelines for shorelines of statewide significance, and local government, in developing master programs for shorelines of statewide significance, shall give preference to uses in the following order of preference which:

1. Recognize and protect the statewide interest over local interest;
2. Preserve the natural character of the shoreline;
3. Result in long term over short term benefit;
4. Protect the resources and ecology of the shoreline;
5. Increase public access to publicly owned areas of the shorelines;
6. Increase recreational opportunities for the public in the shoreline;
7. Provide for any other element as defined in RCW 90.58.100 deemed appropriate or necessary."

The EIS should explain:
- How does draining an additional 200,000 acre feet from Kachess Lake protect the statewide interest over local interest or preserve the natural character of the shoreline when additional storage water is diverted to local irrigation?

Under the recently approved amended Kittitas County SMP, the Keechelus and Kachess shorelines are within a Conservancy shoreline environment. The intent of this designation is to sustain natural resource development while maintaining the natural character of the shoreline area. Under the current SMP shoreline "works" are only allowed where they "do not substantially change the character of the environment." The proposed KDRPP and KKC projects would substantially change the character of the shoreline environment. Under the amended Kittitas County SMP the majority of the both lakes were designated Rural Conservancy, while portions of the west and east sides of Kachess Lake were designated as Shoreline Residential.

WAC 173-26-251(2) provides:

Second, the Shoreline Management Act calls for a higher level of effort in implementing its objectives on shorelines of statewide significance. RCW 90.58.090(5) states:

"The department shall approve those segments of the master program relating to shorelines of statewide significance only after determining the program provides the optimum implementation of the policy of this chapter to satisfy the statewide interest."

Kittitas County amended its Shoreline Master Program in 2016 to provide less protection to the Kachess Lake as a lake/shoreline of statewide significance.

- How does providing less protection satisfy the statewide interest?

Ecology’s SMA webpage states:
"Because federal courts have held that shoreline permits are water quality permits, federal agency projects that affect water quality may be required to obtain shoreline permits. [See Friends of the Earth v. U.S. Navy, 841 F.2d 927(C.A. 9, 1988)]."
Withdrawing additional water from Kachess Lake would affect water quality.
- Please clarify that shoreline permits may be required for the KDRPP and KKC projects.

Sec 4.3.4.2 (p. 4-22+) Operation
Table 4-5 (p. 4-22) provides a percent of entitlement available in drought years under Alternative 2 (same as for Alternative 4) for water years 1992, 1993, 1994, 2001, 2005, 2015, with 1994 figures reported as 24 percent prorating.
- Please provide references for these figures.

The prorated irrigation districts have experienced three successive drought water years (1992, 1993, and 1994) below 70 percent of water supply with the third year water supply at 24 percent.
- Please provide alternative analysis that includes a 60 percent and 50 percent water supply availability for prorated irrigation districts.

Sec. 4.4 (p. 4-76+) Surface Water Quality
Table 4-74 (p. 4-78)
- Why are there no water quality indicators for zinc, copper, or forest herbicides/pesticides?

Sec. 4.4.7.2 (page 4-96+) Operation
With the KKC project, water quality in Kachess Lake could be modified by that of the Keechelus Lake inflow. Keechelus Lake is currently listed as 303(d) Category 5 for PCBs and dieldrin in fish tissue. Ecology’s 303(d) list for fresh waters also identifies Kachess Reservoir as 303 (d)-listed for PCBs (for fish tissue) (Norton, 2014). This proposed listing indicates that PCBs are already present in Kachess Lake. Existing data indicate that Kachess Lake has higher concentrations of PCBs than Keechelus Lake. The transfer from Keechelus Lake could thus lower (dilute) Kachess Lake PCB concentrations. Over time, however, the total load of PCBs in Kachess Lake could increase.
- If existing data shows that Kachess Lake has higher concentrations of PCBs than Keechelus Lake, why is this data not provided?
- What is the source of PCBs to Kachess Lake?
- What pollutant source controls are in place to keep pollutants out of Keechelus and Kachess Lakes?
- What water quality impacts would occur in Kachess Lake, the Kachess River, Lake Easton, or the Easton and Parker Reaches of the Yakima River with the KKC project?

Sec. 4.6 (pages 4-113+) Fish
How do the KDRPP and KKC projects meet the stated objectives of the Yakima Plan to provide fish passage at the Keechelus and Kachess Lakes?

Sec. 4.6.3 (p. 4-1119+) Alternative 1 – No Action
This section states that under the No Action Alternative, Keechelus and Kachess Lakes “would remain relatively unproductive.” The DEIS fails to explain how withdrawing an additional 200,000 acre feet of water from Kachess Lake would increase productivity.
* Please explain how productivity in Kachess Lake would increase due to the KDRPP and KKC projects.

Sec. 4.6.4.2 (p. 4-129) Operation - KDRPP East Shore Pumping Plant Facilities
This section states that “Reductions in Kachess “Reservoir” elevation and persistence of lower elevations for longer periods of time (2 to 5 years to refill the “reservoir”) . . would likely reduce the abundance of benthic invertebrate prey for fish and reduce shallow shoreline area preferred by small fishes like redside shiner.” The DEIS (p. 4-113) stated that this would result in negative impacts on fish.
- Why was this conclusion deleted from the SDEIS?

Sec. 4.7 (pages 4-149+) Vegetation and Wetlands
- For each alternative, including the combined projects, please identify the location and acreage of vegetation and wetlands that would be impacted on the Okanogan-Wenatchee National Forest.
Sec. 4.13 (pp. 4-266+) Noise

Sec. 4.13.6.2 (p. 4-272) Operations – KDRRP Floating Pumping Plant Facilities

This section states that Alternative 4 would produce noise that may exceed ambient levels because of operation of pumps. This is a significant adverse environmental impact that cannot be mitigated. A computer Aided Noise Abatement modeling program cannot substitute for actual noise impacts carried across a lake for long periods of time. It states that Alternative 4 would operate 24 hours a day and 7 days per week during drought alleviation period.

- What are the maximum pumping days for a drought alleviation pumping period?
- What are the number of pumps needed to pump for instream flow purposes?
- What are the maximum pumping days for instream flow purposes?

Sec. 4.15.4.2 (p. 4-288) Operation – KDRPP East Shore Pumping Plant Facilities

This section in the DEIS (p. 4-271) stated: “The improved reliability of water supply to existing irrigated lands could encourage irrigators in prorated districts to retain or plant more permanent crops and maintain existing agriculture lands.”

Encouraging prorated irrigation districts to switch to permanent crops is contrary to sound irrigation practices in an over allocated water basin. This increases the risk of loss of permanent crops due to water curtailment to junior irrigation districts.

- We request that the above sentence from the DEIS be restored in any FEIS.
- Please clarify that this is a negative impact from the project.

Sec. 4.21 (p. 319+) Socioeconomics

This section estimates $171 million of aggregate industry output (Table 4-155, p. 4-330). The BuRec/Ecology’s “Four Accounts Analysis of the Integrated Plan,” dated September 26, 2012, estimated fish-related benefits to both WA and OR of over $7 billion.

* Why does this table fail to display any economic benefit from fishery increases?
* If the BuRec and Ecology intend to count fish-related benefits to all the residents of Oregon, what additional agricultural production benefits would occur if fish-related benefits to the State of California were counted?

Sec. 4.22 Environmental Justice

Sec. 4.22.2 (p. 4-341) Summary of Impacts

This section in the DEIS stated that that the subsistence use of renewable natural resources (such as fish, wildlife, and vegetation) by Tribes or other populations in the Kacheess Lake area and downstream has not been quantified. Page 4-330 of the DEIS, however, stated that the No-Action alternative could reduce opportunities for subsistence fishing.

- How can BuRec and Ecology draw this conclusion without any data?

Sec. 4.24 (p. 4-349+) Relationship of the Proposed Action to the Integrated Plan

The specific goals of the Yakima Plan listed on page 4-349 include “fish passage.” This section fails to explain how either the KDRPP and KKC would benefit fish passage at either Keechelus or Kachess Lakes.

- If the KDRPP and KKC do not contribute to the goal of fish passage, this section should say so.

Sec. 4.25 (pages 4-350) Cumulative Impacts Analysis

This section is completely inadequate.

The CEQ regulations (40 CFR §§ 1500 -1508) define the impacts and effects that must be addressed and considered by Federal agencies in satisfying the requirements of the NEPA process. This includes cumulative impacts:

**Cumulative impact is the impact on the environment, which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions.**

Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. 40 CFR § 1508.7. (emphasis added)

The KDRPP and KKC projects Project are designated “components” of the Yakima River Basin Integrated Water Resource Management Plan. The Yakima River Basin Integrated Water Resource Management Plan EIS stated,
"The programmatic EIS does not evaluate site-specific issues..."  *FPEIS Sec. 1.2.* This is the second project-specific EIS prepared as part of the controversial Yakima Plan.

- As required by Sec. 1508.7, the EIS must analyze the cumulative impacts from other actions taken that would modify in-stream flows and other actions that would increase storage water for irrigators.

A comment submitted in 2012 to the Final Programmatic EIS noted, “The 1998 DEIS on the YRBWEP stated a goal of ‘165,000 acre-feet of water savings in 8 years’ under the Basin Conservation Program.”

- This EIS should address whether this goal has been achieved, and if it has not been demonstrably achieved, the EIS should explain why additional water resource projects are proposed in the absence of conservation efforts.

The Yakima Project storage dams also impede or preclude movement of sediment and organic material (e.g., woody debris) to the river downstream. The consequential effects on channel morphology, substrate characteristics, habitat quality, and productivity are usually significant. The downstream migration of bed materials is an essential process which maintains channel complexity and thus habitat quality. The recruitment of gravels and small cobbles, essential for the construction of redds by spawning salmonids, is necessary to replace those that are inevitably washed downstream. Coarse particulate organic matter, ranging from large trees to leaf litter, is an important energy and structural component of all riverine ecosystems. Large woody debris (LWD) provides physical habitat for both fish and aquatic invertebrates, while leaf litter is an essential energy source in the food chain that drives stream productivity.

- How do either of these projects contribute to recruitment of gravels and small cobbles or large wood debris?

**Sec. 4.25.3.4 (p. 4-354+) Land Use Practices**

Sec. 4.25.1.1 (p. 4-341) of the 2015 DEIS stated that “Agricultural development in the Yakima River basin over the past 150 years, including Reclamation’s Yakima Project, has caused impacts to surface water, water quality, fish, vegetation and wetlands, wildlife, and cultural resources.” These are weasel words.

- Please amend and add this sentence to this section as follows:

  “Agricultural development in the Yakima River basin over the past 150 years, including Reclamation’s Yakima Project, has caused significant adverse cumulative impacts to surface water, water quality, fish, vegetation and wetlands, wildlife, and cultural resources.”

This section completely fails to provide the reader any information of past land management practices on the Okanogan-Wenatchee National Forest Plan or how such practices result in reduced snow pack within the Keechelus and Kachess watersheds.

- What has been the historical yearly water yield off the Okanogan-Wenatchee National Forest in the Keechelus and Kachess watersheds?
- How many miles of roads have been constructed within the Okanogan-Wenatchee National Forest’s Keechelus and Kachess watersheds?
- What are the current off-road vehicle policies within the Okanogan-Wenatchee National Forest’s Keechelus and Kachess watersheds?

**Sec. 4.25.3.1 (p. 4-352) Surface Water Resources**

Sec. 4.25.1.2 (p. 4-342) of the 2015 DEIS stated that “This section states that “Past water management actions have caused cumulative impacts at the Kachess and Keechelus ‘Reservoir’ areas that have affected surface water, fish, vegetation, wildlife, and cultural resources.”

- Please amend and add this sentence to this section as follows:

  “Past water management actions have caused significant adverse cumulative impacts at the Kachess and Keechelus Lake areas that have affected surface water, fish, vegetation, wildlife, and cultural resources.”

**Sec. 4.25.2 (p. 4-350) Present and Reasonably Foreseeable Future Actions**

This section completely fails to provide the reader any information of proposed land management practices on the Okanogan-Wenatchee National Forest Plan or how such practices result in reduced snow pack within the Keechelus or Kachess watersheds.
• What impacts to the Keechelus and Kachess watersheds would occur under the Proposed Action for Forest Plan Revision, released by the USFS in June 2011?

• What impacts to the Keechelus and Kachess watersheds would occur under proposed Okanogan-Wenatchee National Forest travel management plans?

Sec. 4.25.3.3 (p. 4-344) of the DEIS stated that the KDRPP and KKC in combination with other reasonably foreseeable projects would contribute to regional trends toward reduced habitat. However, this section failed to describe the reasonably foreseeable projects toward reducing habitat on the Okanogan-Wenatchee National Forest, such as the Bumping Lake Expansion project, or other Yakima Plan projects such as a new Wymer Dam.

• Please include these projects as part of the cumulative impacts.

Sec. 4.25.3.4 (p. 4-345+) of the DEIS (KDRPP Fish – p. 4-347) stated that the additional drawdown of Kachess Lake would further impede fish passage to lake tributaries and between the Kachess basin and Little Kachess basin.

• What about impeding fish passage at Kachess Lake itself?

It also stated that fish in the lake could be negatively impacted by increased water temperature, decreased water quality, and decreased food prey.

• How does this meet the goal of fish restoration in the Yakima Basin?

The DEIS section (KKC Fish – page 4-349) also failed to describe how operation of the KKC project would impact proposed fish passage at the Kachess Lake.

• Please provide this analysis.

Sec. 4.27 (p. 4-357) Irreversible and Irretrievable Commitments of Resources

• Please include drawdown of private wells at Kachess Lake as a likely irreversible impact if the additional lake drawdown lowers groundwater levels.

• If wells are impacted, what mitigation would be proposed?

Sec. 5.5 (p. 5-4) Compliance with Federal and State Laws and Executive Orders

• Why is compliance with the Federal Advisory Committee Act not listed?

• Why is compliance with the State Shoreline Management Act not listed?

Appendix A

Page 2 states that the “Integrated Plan Workgroup is primarily made up of representatives of statutorily created organizations. This includes State and Federal agencies, the Yakama Nation, local government, irrigation districts and environmental groups.”

• If the Integrated Plan Workgroup was statutorily created, please provide a citation.

Otherwise, environmental groups should not be listed as a “statutorily created organization.” In addition, the initial Workgroup included only a single environmental group.

• Please change environmental groups to “a single environmental group at the Workgroup’s initial meeting.”

Appendix C

Sec. 3.5 (p. 22) Box Canyon Creek Passage

This section describes a “temporary passage system” for Box Canyon Creek.

• Please provide a description of this temporary passage system and what success if any has been achieved.

• Please provide a list of permits obtained for this temporary passage system.

CONCLUSION

This SDEIS is inadequate because it is based on the 2012 Yakima Plan Final Programmatic EIS that failed to provide a range of alternatives, and added environmental damaging elements (National Recreation Areas for off-road vehicle use) after the close of comments on the Draft Programmatic EIS.
This SDEIS is inadequate because it fails to provide alternatives to providing the additional storage water to irrigation districts. An EIS should include a range of reasonable alternatives that meet the stated purpose and need for the project and that are responsive to the issues identified during the scoping process. This will ensure that the EIS provides the public and the decisionmaker with information that sharply defines the issues and identifies a clear basis for choice among alternatives as required by NEPA. This applies even if some of them could be outside the capability of the applicant or the jurisdiction of the agency preparing the EIS for the proposed actions. The Environmental Protection Agency (EPA) encourages selection of alternative(s) that will minimize environmental degradation.

Because both the NEPA and SEPA process must be followed, we request that the BuRec and Ecology each provide separate responses to the above comments. Please send us a copy of any FEIS that is released.

Sincerely,

John de Yonge
President
540 Main St, Apartment 5C
Chatham NJ 07928
jdeyonge@gmail.com

Department of Ecology
Office of Columbia River:
The Last Ten Years

by

Power Consulting Incorporated

Thomas Michael Power
Donovan S. Power

December 3, 2016
About the Authors:

Thomas Michael Power is the Principal Economist in Power Consulting, Inc. and a Research Professor and Professor Emeritus in the Economics Department at the University of Montana where he has been a researcher, teacher, and administrator for over 40 years. He received his undergraduate degree in Physics from Lehigh University and his MA and PhD in Economics from Princeton University.

Donovan S. Power received his undergraduate degree in Geosciences at the University of Montana and his M.S. in Geology from the University of Washington. He has been the Principal Scientist at Power Consulting, Inc. for the past eight years.
Department of Ecology
Office of Columbia River:
The Last Ten Years

Executive Summary

In 2006, the Washington Legislature tasked the Washington Department of Ecology (Ecology) to "aggressively seek out new water supplies" for both instream and out-of-stream uses (emphasis added). RCW 90.90.005(2). The same legislation set up the Columbia River Basin Development Account and authorized $200 million to fund it, much of which has been spent or committed according to OCR's 2015 Water Supply Inventory Report to the Legislature. Ecology created the Office of Columbia River (OCR) to use these funds to develop new water supplies using storage, conservation, and voluntary regional water management agreements.

In the required January 2016 report to the Washington State Legislature, the OCR reported that it had funded projects that have cumulatively developed about 396,000 acre-feet of water, with an additional 320,000 acre-feet or more in near-term development i.e. in the 2015-2019 period.

Our analysis of OCR provides a critical overview of OCR's expenditures since its creation. In light of our findings, summarized in the following conclusions and supported by the analysis contained in this report, we recommend that the Washington State Legislature not provide additional funding to OCR until a performance audit on OCR is prepared for the Legislature:

a. A significant amount of the approximately 400,000 acre-feet of water that the Office of Columbia River (OCR) reports as having been "developed" during the first decade of OCR's operations is not from "new" water supply production.

b. The approximately 400,000 acre-feet of water that the Office of Columbia River (OCR) reports as having been "developed" during the first decade of OCR's operations is, for the most part, not water that currently has been put to productive use.

c. There are hundreds of millions of additional taxpayer investment dollars that would be required over the next decade or more before all of that OCR "developed" water can actually be put to productive use.

d. Listing water as "developed" when financing has not been arranged to put that water to use exaggerates OCR's accomplishments and understates the costly taxpayer investments that will be required to put that water to use.
e. The OCR and BOR funded Yakima Plan is based on speculative fish production benefits to justify funding large and expensive surface water storage facilities.

f. Doing an aggregate benefit-cost analysis on the Yakima Plan, as the OCR and BOR chose to do, hides projects that generate major net costs among those that generate net benefits.

g. To economically justify large Yakima Basin surface storage projects, the enhanced instream flows facilitated by those surface water storage projects would have to be implausibly effective at increasing salmon production and/or the incremental salmon production would have to be assigned indefensibly high economic values.

h. In addition, within the Yakima Basin, it would be far less costly to provide the planned enhanced in-stream flows through the buying of water rights that divert water flows to out-of-stream uses, leaving the water in the rivers rather than building new or expanded large surface water storage facilities.

i. The proposed surface water storage projects OCR envisions being carried out in the Yakima Basin over the next three decades would be very expensive to Washington State and its citizens, costing Washington taxpayers as much as $2 billion.

j. The proposals to actively manipulate the level of many lakes in the Alpine Lakes Wilderness through the construction of new dams, modification of other dams, and installation of mechanical and motorized equipment within a well-known and spectacular National Wilderness Area need critical economic scrutiny.

k. OCR's 2015 Columbia Basin Water Supply Inventory Report begins with an explicit criticism of the efficacy of water conservation efforts and an argument in support of giving priority to investments in surface water storage, the most expensive elements of the OCR's plans. OCR's critique of the efficacy of water conservation compared to building surface water storage facilities is misleading in several ways.

i. OCR's critique equates water conservation with improvements in the efficiency with which water is applied to crops. There are many other important types of water conservation besides improving the efficiency of irrigating crops.

ii. Even in the context of efficiency in the amount of water applied to crops, that improved efficiency can moderate the impact of irrigation on in-stream flows at the points of diversion. It can also reduce the loss of water to evaporation, evapotranspiration, and deep water aquifers.

iii. Low in-stream flows due to irrigation withdrawals often lead to efforts to enhance the in-stream flows by building more surface storage to be used to maintain in-stream flows. For instance, about half of the planned surface water stored by the proposed Wymer Dam and Reservoir would be used to enhance in-stream flows rather than delivering water to out-of-stream uses like irrigation.
iv. OCR's own analysis of a broad range of water conservation projects demonstrates that water conservation can provide water for out-of-stream uses in a cost-effective manner.

I. Over the past 10 years, the OCR has wasted millions of dollars on new dam studies for projects that have been demonstrated to be uneconomical with substantial adverse environmental impacts.
# Table of Contents

Executive Summary .............................................................................................................. 1  
    A. The 2015 Inventory of Accomplishments of the Office of Columbia River ....... 5  
    B. OCR’s Meaning of “Developed Water” ................................................................. 6  
    C. The Cost of OCR’s Studies of New Dam Storage Projects ......................... 11  
II. OCR’s Projected Future Water Supply Development: ............................................. 16  
    Yakima and Wenatchee River Basin Projects ..................................................... 16  
        A. Focusing on the Largest and Most Costly of the OCR Proposed Future Projects .... 16  
        B. The Yakima River Basin .............................................................................. 16  
        C. The Yakima Plan ...................................................................................... 17  
        D. The Cost of the Yakima Plan ................................................................. 19  
        E. OCR Near-Term Water Supply Developments: The Kachess Drought Relief Pumping Plant and the Keechelus-to-Kachess Conveyance ............. 20  
        F. The Large Yakima Basin Storage Reservoirs in OCR’s Long-Term Development (2020+) ............................................................ 23  
        G. The Economic Evaluation of the Yakima Plan’s Large Surface Storage Projects ...... 24  
        H. Proposed Water Development Projects in the Alpine Lakes Wilderness ............ 29  
III. The Effectiveness of Water Conservation in Meeting Water Needs ................ 31  
IV. Conclusions on OCR’s Last Ten Years ................................................................. 34  
Bibliography .................................................................................................................. 40
I. The Water Supply "Developed" by the Office of Columbia River 2006-2016

A. The 2015 Inventory of Accomplishments of the Office of Columbia River

In 2006, the Washington Legislature tasked the Washington Department of Ecology (Ecology) to "aggressively seek out new water supplies" for both instream and out-of-stream uses (emphasis added). The same legislation set up the Columbia River Basin Development Account and authorized $200 million to fund it, much of which has been spent or committed according to OCR's 2015 Water Supply Inventory Report to the Legislature. Ecology created the Office of Columbia River (OCR) to use these funds to develop new water supplies using storage, conservation, and voluntary regional water management agreements.

OCR, in turn created a Columbia River Basin Water Management Program - Policy Advisory Group (PAG), which meets four times a year. The PAG is made up of 27 federal and state agencies, including the Bureau of Reclamation (BOR), tribal members, irrigation districts, cities and counties, and three "environmental" members, of which one seat is listed as open, and one member, the Washington Environmental Council, has a seat at the table, but according to meeting minutes, has not attended meetings in several years.

In early 2016 the Washington Office of Columbia River (OCR) submitted the "2015 Columbia River Basin Water Supply Inventory Report" to the Washington Legislature. That Report listed 38 projects categorized as "developed", "near-term development (2015-2019)", and "long-term development (2019+)". The 17 projects labeled "developed" between 2006 and 2015 were said to provide a total water supply of 395,700 acre-feet. A similar inventory in 2016 listed two additional projects as "developed" so that the total of "developed" water 2006-2016 was listed as 410,376 acre-feet. Those totals of "developed" water included water for both out-of-stream uses (e.g. irrigation) and in-stream uses (e.g. river and fish habitat).

These OCR inventories of "developed" water supply projects included the "Lake Roosevelt Incremental Storage Releases" and the "Odessa Subarea Groundwater Replacement" projects. Each of these projects was very large compared to the other listed OCR developed projects. The Lake Roosevelt Incremental Storage Release was listed as providing 132,500 acre-feet and the Odessa Subarea Groundwater Replacement was listed as providing 164,000 acre-feet. Just those two projects together represented 296,500 acre-feet, about three-quarters of the total water supply reported by OCR as developed between 2006 and 2016.

With federal funds appropriated to stimulate the economy during the Great Depression, groundbreaking for a low Grand Coulee Dam on the Columbia River was held on July 16, 1933. Legal challenges to the construction of the dam without specific authorization from Congress led to formal congressional authorization of the Grand Coulee Dam in 1935. What was authorized was a multi-purpose dam that not only would generate electricity but would also, among other things, store water for delivery to irrigate ("reclaim") public lands. That required a much larger...
and higher dam that created Lake Roosevelt as a large storage reservoir. The dam was completed by the end of 1941 and the larger project of which the Grand Coulee Dam was to be a central part, the Columbia Basin Project, was approved by Congress in 1943. In addition to the construction of the dam, the larger project required a series of large pumps that could move water out of Lake Roosevelt up into Banks Lake and a system of canals, pipelines, siphons, and pumps to distribute that water throughout the Columbia River Basin, primarily to benefit and promote small farming operations. The full BOR Columbia Basin Project has never been completed due to costs of doing so.

Both the Lake Roosevelt Incremental Storage Releases and the Odessa Subarea Groundwater Replacement Projects seek to extend the delivery of water from Lake Roosevelt to some areas not previously reached by the Columbia Basin Project.

For this additional Lake Roosevelt water to reach all of the planned locations in the Odessa Subarea, canals, siphons, pumps, and pipelines will have to be upgraded or newly built at considerable cost. This is especially true of the Odessa Subarea Groundwater Replacement Project that would deliver 164,000 acre-feet of surface water to irrigate 70,000 acres currently served by deep groundwater pumps. The Washington OCR and U.S. Bureau of Reclamation (BOR) estimated that the Odessa Subarea project would cost $828 million or about $11,800 per acre served to actually deliver this surface water to those acres were the groundwater would be replaced.

Table 1 summarizes these OCR/BOR projects aimed at bringing Lake Roosevelt surface water to the Odessa Subarea.

B. OCR’s Meaning of “Developed Water”

The inclusion of a project in the OCR list of developed projects does not mean that the project is actively delivering all or any of the listed water to irrigators and municipalities, which are actually using that listed water supply. “Water development,” to OCR, simply means that a certain amount of water at a particular geographic location is physically and legally available for transportation and deployment, if someone is able to fund the necessary infrastructure to get the water to potential users and fund the necessary equipment so that that water can be put to use.

“OCR’s development of water supply” means that OCR through the Department of Ecology has provided the “permitting, environmental review, funding, or other partnership” to which Ecology had committed. “For instance, once OCR has issued a new water right under one of [its] permitting programs, the impetus for continuing the project then falls on the permittee to provide..."
the necessary infrastructure to deliver water for their intended use...Delays may occur at this stage outside of OCR's control.” ¹¹ Given that OCR typically funds only a limited part of the required water delivery infrastructure, a “developed” project may not actually put the water to use for a considerable period of time because of the lack of funding.

OCR lists the Odessa Subarea Groundwater Replacement project as one of the projects for which it has “developed” 164,000 acre-feet of irrigation water in the Odessa Subarea, where that newly developed water will replace existing but failing groundwater-based irrigation. The Bureau of Reclamation’s Columbia Basin Project (CBP) was authorized over 70 years ago, in 1943.¹² According to the BOR, the delivery of Grand Coulee surface water to the Odessa Subarea is part of that original authorized project.¹³ But the infrastructure to reach that area with water from Lake Roosevelt behind Grand Coulee Dam was long delayed, and farms in the

Table 1.

Bureau of Reclamation and Office of Columbia River Projects to Deliver Irrigation Water to the Odessa Subarea

<table>
<thead>
<tr>
<th>Project</th>
<th>Approval Date</th>
<th>Planned Water Delivery (acre-feet)</th>
<th>Actual Water Delivery (acre-feet)</th>
<th>Comment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Columbia Basin Project</td>
<td>1943</td>
<td>6,500,000</td>
<td>3,500,000</td>
<td>For all of the Columbia Basin. Odessa Subarea was originally included but not served.</td>
</tr>
<tr>
<td>Lake Roosevelt Incremental Storage Releases Project</td>
<td>2009</td>
<td>30,000 to Odessa Subarea</td>
<td>Delivery systems not in place</td>
<td>132,000 ac.ft. total during drought years. 30,000 ac.ft. to go to Odessa Subarea.</td>
</tr>
<tr>
<td>Odessa Subarea Groundwater Replacement Project</td>
<td>2012</td>
<td>164,000</td>
<td>Infrastructure unfinished; delivery systems not in place.</td>
<td>Upgrade in infrastructure proceeding as funding is available.</td>
</tr>
</tbody>
</table>

Sources: "Water to the Promised Land," Tim Steury, Washington State Magazine Fall 2013.


¹¹ ibid.


Odessa Subarea were given “temporary” permits to pump groundwater to irrigate their lands while they waited for more of the “developed water” in Lake Roosevelt to be delivered to the Odessa Subarea.\textsuperscript{14}

Over past decades, the pumps to move water from Lake Roosevelt up to Banks Lake so that it could then flow, largely by gravity, to farms in the Columbia Basin, including some of the farms in the general Odessa area, were built and a system of canals was constructed that delivered water to irrigate about 670,000 acres of farmland in the Columbia River Basin. This represents about 65 percent of the total of just over a million acres authorized to receive CBP water.\textsuperscript{15} The actual water delivery to the Columbia Basin was only about half of the 6,500,000 acre-feet for which the CBP was designed and authorized.

Because of the cost of the required infrastructure and reluctance of some farms to embrace Bureau of Reclamation deliveries of water, the “developed” water associated with Grand Coulee Dam, its pumping system into Banks Lake, and the canal system moving the water into the Columbia Basin never reached parts of the Odessa Subarea. As a result, the “temporary” groundwater pumping for irrigation there continues to the present time, seriously depleting that groundwater aquifer.

Clearly authorizing and “developing” water does not automatically allow additional water to be used. The cost of delivering the water for actual use also has to be funded in one way or another. Those funding delays, as shown in the Odessa Subarea, can last many, many, decades despite the “availability” of the water in Lake Roosevelt.

For instance, the Lake Roosevelt Incremental Storage Releases Project approved in 2009 could not move water to the part of the Odessa Subarea most in need of groundwater replacement because:\textsuperscript{16}

After securing a new source of water from the Lake Roosevelt Storage Releases Project, OCR faced a new challenge: There was no way to deliver it to the southern part of the Columbia Basin. Interstate 90 was the problem. There was only one point, the Weber Siphon Complex, where water from the Columbia Basin Project passed under I-90, and it wasn’t large enough to handle the additional flow. A second siphon would be required...OCR contributed $800,000 for the design and worked with Reclamation and Washington’s congressional delegation to get stimulus funding for construction.

\textsuperscript{14} It should be pointed out that over-pumping groundwater so that other groundwater users’ wells were depleted was not “authorized.” Washington law (WAC 173-130A) forbids such damaging over-pumping of ground water but was never enforced. In addition, many irrigators in the Odessa area lie outside of the Columbia River Basin and never were “promised” Columbia surface water. OCR’s current efforts will not provide surface water to these irrigators either.

\textsuperscript{15} Record of Decision for the Odessa Subarea Special Study Final Environmental Impact Statement, Columbia Basin Project, Washington, Bureau of Reclamation, April 2, 2013, p. 3.


If it had not been for the “Great Recession” and the federal stimulus spending on “shovel-ready”
construction projects, this federal money to help move this “developed” water south of I-90
might not have been made available.

The 2012 Record of Decision prepared by the Bureau of Reclamation for the Odessa Subarea
groundwater replacement project made clear that in implementing the decision to support the
project the Bureau of Reclamation or federal government generally were not expecting to
finance the project: 17

The State [of Washington] and the irrigators anticipate moving forward with non-
Federal funding for the [Odessa Subarea groundwater replacement] project. The
expected scenario would consist of the State funding construction of conveyance
infrastructure (such as widening canals, siphons, and appurtenant structures)
and irrigators funding distribution systems from the canal to the farm through
local improvement districts, loans, or other funding mechanisms...Currently, no
Federal funding is committed or expected for implementing this [Odessa Subarea
Groundwater Replacement] project. It is possible that no Federal funding will be
needed or available for full implementation of all phases of [the Preferred]
Alternative 4A.

Thus, if this project is to move beyond OCR’s theoretical “development” level to actual delivery
and the use of that Columbia River surface water to replace ground water in the Odessa
Subarea, the estimated $828 million cost of the Odessa groundwater replacement project will
have to be obtained from Washington taxpayers and/or the Odessa Subarea irrigators who get
the benefit of a surface water supply replacing their deteriorating groundwater supply. This
irrigation water supply is not in any practical sense “developed” at this point in time.

As mentioned above, some investments in the infrastructure necessary to move replacement
water from Lake Roosevelt to Odessa Subarea groundwater irrigators have already taken place,
funded by the 2009 American Recovery and Reinvestment Act that sought to stimulate the
economy during the Great Recession. 18 In addition, OCR partially funded the upgrades of the
Lind Coulee Siphon and some of the expansion in the capacity of the East Low Canal. But
considerably more infrastructure has to be put in place to put the 164,000 acre-feet of water to
use. The funding for that additional infrastructure at this point is unknown. As the Columbia
Basin Development League’s Mike Schwisow was quoted as saying after part of the Lind
Coulee Siphon Project was completed and additional Columbia River water was being delivered
to the Odessa Subarea: “[T]hat does not mean the Odessa Groundwater Replacement Project
is completed...Expansion of the East Low Canal is the key piece; we need to have the back
bone of the facility in place in order to make deliveries to all seven anticipated distribution

---

17 Record of Decision for the Odessa Subarea Special Study FEIS, April 2, 2013, p. 24.
18 The upgrades of the Weber Siphon complex that removed a bottleneck in moving Columbia River water south of I-
90 was funded by the American Recovery and Reinvestment Act, as was the Potholes Reservoir Supplemental Feed
Route Project that reduced congestion on the East Low Canal. OCR provided funding for the Lind Siphon and part of
the funding for the expansion in the capacity of the East Low Canal. Absent another near catastrophic national
economic crisis, such additional federal funding for this project seems unlikely since the project is not likely to be able
to pass the benefit-cost tests required for Bureau of Reclamation projects. See “Review of Odessa Subarea Special
Study” and memo to Washington State Legislators from Norman Whittlesey and Walter Butcher, March 5, 2013, re:
Irrigation Development in Washington State. http://www.celp.org/archive/pdf/Odessa_Economics_Whittlesey-
Butcher_Report_3-2013.pdf and http://www.celp.org/archive/pdf/Odessa_Economics_Whittlesey-Butcher_Letter_3-5-
2013.pdf.
systems...[We] still need to identify funding to move forward. Now [we] need to identify the funds so they can wrap up the work."[19]

In addition, seven separate pumping platforms and pipeline system to move the water from the Low East Canal to the farmland now served by groundwater have to be designed, financed, and built. Some combination of the irrigation districts, the individual irrigators, and the state of Washington will be responsible for that part of the delivery system. The East Columbia Irrigation District is planning to sell municipal bonds to fund this and other parts of the water delivery system. Even with funding available for those distribution systems, it is expected to take ten years of phased development for the water to replace all of the targeted groundwater irrigation pumping. Clearly the 30,000 acre-feet Roosevelt Incremental Storage Releases to the Odessa Subarea and the Odessa Subarea Groundwater Replacement project are not actually "developed" at this point in time.

At the same time, Odessa area irrigators have not all been in agreement with BOR on how to deliver surface water to replace groundwater pumping. For example, in May 2015, Odessa Subarea Irrigators and the Columbia-Snake River Irrigators Association (CSRIA) filed a lawsuit against the BOR in the United States District Court for the Eastern District of Washington, stressing that BOR has arbitrarily delayed and blocked the approval of a new water service contract for the irrigators' Privately Funded Project to bring surface water from the BOR's East Low Canal.[20]

In mid-July of 2016 OCR's Tom Tebb noted the huge gap between the 90,000 acres in the Odessa subarea that are intended ultimately to be switched off of deep groundwater and what has actually been accomplished. He was quoted at the July 13, 2016, opening of the Lind Coulee Siphon as saying "Here we are in 2016, we have only about 2,000-3,000 acres [that] have been taken off deep wells and are actually on the Columbia River [surface] water system...[OCR] will work with...[irrigation districts]...to improve their current distribution, ensuring farmers are able to receive water when the time is right..."[21]. Table 2 below contrasts OCR's claims about the water it has "developed" with what groundwater had actually been displaced in the Odessa Subarea in mid-July 2016.

It is important to realize that OCR's "developed" new water supplies are not the same thing as having additional water available for use by farms, municipalities, and businesses. OCR's inventory of its "developed" water supplies seriously exaggerates the amount of incremental water that has actually been put to use. In addition, by not discussing the yet-to-be-incurred costs, OCR is seriously understating the economic challenges in putting this "developed" water to productive use. Most of the costs of actually putting incremental water to productive uses are not associated with the planning, permitting, and organizing of incremental claims to additional water. The vast majority of the costs are associated with the storage, transporting, and then delivery of that "developed water" to where it can be used productively. It is those costs that have to be carefully and accurately analyzed. Then the responsibility for covering those costs has to be directly analyzed and compared to the distribution of the benefits so that the feasibility and equity of the project can be evaluated. Simply knowing that there is "developed water" available at a particular location tells us nothing about the economic rationality, feasibility, and

equity of investing in the storage, transportation, and delivery of that water to specific water users.

Table 2.

| OCR Success in Replacing Odessa Subarea Groundwater with Columbia River Surface Water |
|---------------------------------|-----------------|-----------------|
| Project                         | OCR "Developed" | Odessa Subarea  |
| Surface Water for Replacement of Odessa Subarea Ground Water | Acres to Be Converted to Columbia River Surface Water | Acreage Actually Switched to Columbia |
| Ground Water                    | (acre-feet)     | (acres)         |
| Lake Roosevelt Incremental Releases (for Odessa Subarea Ground Water Replacement) | 30,000          | 10,000          |
| Odessa Subarea Groundwater Replacement Project | 184,000         | 70,000          |
| Total Columbia River Surface Water Replacing Odessa Groundwater | 194,000         | 80,000          | 2,000a-3,000a 2.5% to 3.8% |


C. The Cost of OCR’s Studies of New Dam Storage Projects

Two-thirds of OCR's $200 million account in 2006 was designated to support development of new storage facilities. As set out in OCR's 2007 Columbia River Basin Water Supply Inventory Report:

Well before the 2006 Columbia River Bill was passed, Ecology and Federal partners were considering opportunities for storage in the Columbia River Basin. Based on Congressional direction provided in 2003, Ecology and the Bureau have been jointly considering a range of proposals to increase water availability in the Yakima River Basin, including the feasibility of the proposed Black Rock Reservoir with a capacity of 1.3 million acre-feet. In 2004, Ecology signed agreements with the Colville Confederated Tribes, the Bureau, and Columbia River Basin irrigation districts to study new incremental storage releases at Lake Roosevelt and the feasibility of Columbia River mainstem water storage. The 2006 Columbia River legislation authorized further work on evaluating the feasibility of storage in the Columbia River Basin. Two-thirds of the $200 million authorized is intended to support the development of new storage facilities (RCW 90.90.010).

22 RCW 90.90.010(2)(b)
New Columbia River Basin Projects

Columbia River Basin

Because the Columbia River system already has 61 dams on the river or its tributaries, Ecology and BOR turned to looking at off-channel dam sites to which to pump water from the Columbia. In December 2004, the State of Washington, the BOR and the Columbia Basin Project (CBP) irrigation districts (the South Columbia Basin Irrigation District, the East Columbia Basin Irrigation District, and the Quincy-Columbia Basin Irrigation District) entered into a Memorandum of Understanding (MOU). The MOU describes roles and expectations of those parties in the then-anticipated Columbia River Initiative. Under provisions of the MOU, Ecology and BOR cooperated on a study to evaluate the potential for development of new large, off-channel storage sites in the Columbia River Basin.

A 2005 pre-appraisal report assessed a preliminary list of 21 potential off-channel storage sites before passage of the Columbia River Program:

1. Big Sheep Creek
2. Ninemile Flat
3. Hawk Creek
4. Banker Canyon
5. Goose Lake
6. Foster Creek
7. Twisp River
8. Eagle Creek
9. Mission Creek
10. Moses Coulee
11. Douglas Creek
12. Sand Hollow
13. Crab Creek
14. Black Rock
15. Alder Creek
16. Rock Creek East
17. Rattlesnake Creek
18. Little White Salmon
19. Panther Creek
20. Rock Creek West
21. Kalama River

The preliminary list of 21 sites was refined to 11 sites by evaluating size, dam safety issues, and compatibility with the Columbia Basin Project. In June 2007, The BOR and Ecology refined the list of 11 sites down to four sites. Sites that were structurally infeasible, had excessive leakage, or other conflicts were eliminated. Also, the Confederated Tribes of the Colville Reservation requested that two of the 11 potential reservoir sites located on their reservation not be further evaluated at this time.

The BOR and Ecology evaluated the four remaining sites, all to be filled by pumping Columbia River water, in a 2007 appraisal study in preparation for a more comprehensive feasibility study and Environmental Impact Statement (EIS) under the National Environmental Policy Act (NEPA). Those sites include:

Hawk Creek - A site in northern Lincoln County tributary to Lake Roosevelt with potential active reservoir capacity of 1,000,000 - 3,000,000 acre-feet, approaching the 5.2 million acre-feet active capacity of Grand Coulee Dam, with a capital cost of up to $8.1 billion.

Foster Coulee - A site in northern Douglas County tributary to Lake Pateros with potential active reservoir capacity of 1,210,000 acre-feet. Foster Creek was eliminated from consideration because of significant geotechnical concerns in combination with a high downstream hazard condition.


ibid., p. 3-10.
http://www.usbr.gov/projects/Facility.jsp?fac_Name=Grand%20Coulee%20Dam
Sand Hollow - A site in western Grant County tributary to Lake Wanapum with potential active storage capacity of 1,000,000 acre-feet, with a capital cost of up to $3.5 billion.

Crab Creek - A site in western Grant County tributary to Priest Rapids Lake with potential active storage capacity of 1,000,000 - 3,000,000 acre-feet, with a capital cost of up to $2.4 billion.  

The BOR and Ecology's 2007 appraisal study failed to disclose that the section of Hawk Creek between the Lake Roosevelt area and the potential dam site contains threatened bull trout or that a Lower Crab Creek dam would flood tens of thousands of acres of wetlands, streams, lakes and shrub steppe habitat, much of which is owned and managed by the Columbia National Wildlife Refuge and Washington State Columbia Wildlife Area. In addition, the new dam would flood between 5,000 and 8,600 acres of existing irrigated farmland.

Prior to conducting a feasibility study on any of the above projects, the Bureau must receive a Congressional study authorization. In addition, expenditures from the Columbia River Basin Water Supply Development Account (Account) needed for the state share of the feasibility study and EIS requires Legislative authorization.

By the end of 2007, OCR reported to the State Legislature that it was considering five new large storage facilities:

- Columbia River Mainstem Off-Channel storage (Crab Creek, Hawk Creek, Sand Hollow)
- Yakima River Water Basin water storage (Black Rock)
- Similkameen River storage (Shanker's Bend)

and one "small" storage facility:
- Wymer Dam in the Yakima Basin.

As of December 2007, OCR had not awarded funding for construction of storage (or conservation) projects, although many projects were being evaluated at different levels of study (e.g. pre-appraisal, appraisal, feasibility).

The 2007 report also identified the following water storage projects:

- Little Klicktit Basin Surface Water Storage - Potential surface storage projects in Dry Creek and Idlewild Creek are described in section 4.3.3 of Appendix B Multipurpose Water Storage Screening Assessment Report of the WRIA 30 Watershed Plan. Dry Creek and Idlewild Creek are headwater tributaries of the Little Klickitat River. Dry Creek has an extensive drainage area and appears to convey considerable winter/spring flows from snowmelt, with little groundwater base flow to sustain flows past June. The initial estimate of winter/spring discharge is 3,900 acre feet.

---

28 http://columbia-institute.org/hawkcreek/dam/Fisheries.html
29 http://www.waterplanet.ws/crabcreek/ccrhome/Home.html
31 "Similkameen Appraisal Study. The Okanogan Public Utility District (PUD) is studying the potential for a storage facility/dam at Shanker's Bend on the Similkameen River, a site that has been considered for construction of a dam since the 1940s. The proposed site is located a short distance upstream from the existing Enloe Dam. The largest facility option (Elev. -1269') would inundate Canadian lands as well as lands adjacent to Palmer Lake in Washington. In 2007, Ecology provided $300,000 for the PUD to conduct an appraisal level review of the site, due in 2008. Ibid, p. 3-12.
• Idlewild Creek, in its lower reach, is incised into a relatively deep, narrow bedrock valley that would be amenable to construction of an in-channel storage reservoir. The valley is east-west oriented, with a steep southern wall that may help shade and maintain lower water temperatures. The estimated winter/spring discharge from the creek is approximately 1,600 acre feet.

• Horse Heaven Hills Water Storage

To date, none of the above “new water storage projects” have been constructed.

In addition, OCR has also issued temporary “term” water right permits in the Walla Walla River Basin; authorized withdrawals from Sullivan Lake in NE Washington, and has funded studies and projects in the Methow River Basin.

Yakima River Basin

In December 2004, the BOR released its Appraisal Assessment of the Black Rock Alternative. This report summarized and added to numerous technical reports on the potential to build a new large storage facility called Black Rock Reservoir in eastern Yakima County. Black Rock could hold between 800,000 acre-feet to 1,300,000 acre-feet of water. This volume is greater than all five of the existing Yakima River Basin storage reservoirs combined. The proposed reservoir would be filled with water pumped from Priest Rapids Lake on the Columbia River when water is available in excess of current Columbia River flow targets. Participating Yakima basin irrigation districts would use water from the Black Rock Reservoir in exchange for water they currently divert from the Yakima River. The 2004 report estimated the cost of building Black Rock at approximately $4 billion.

In the 2006 appraisal study, BOR considered three other Yakima River basin storage alternatives: a new Bumping Lake Dam and enlarged reservoir, Wymer dam and reservoir, and Keechelus-to-Kachess pipeline. In the 2006 appraisal, the BOR concluded that while the Bumping Lake enlargement and Keechelus-to-Kachess pipelines did not meet study objectives, the Wymer reservoir should be investigated further. In December 2006, the BOR published a Notice of Intent to prepare a combined planning report and EIS for the Yakima River Basin Water Storage Feasibility Study. At the same time, Ecology published a corresponding SEPA Determination of Significance (DS), requesting comments on the scope of the proposed EIS. The scope of the EIS and feasibility study includes the following state & federally funded projects:

- Black Rock Reservoir with a capacity of 800,000 to 1.3 million acre-feet
- Wymer Reservoir with a capacity of 174,000 acre-feet
- Wymer Plus Pump Exchange 9 with a capacity of 574,000 acre-feet

---

34 http://www.aspectconsulting.com/water-resources-projects/2014/7/9/horse-heaven-hills-water-storage-appraisal-assessment
36 http://www.ecy.wa.gov/programs/wr/cwp/cr_sullivan.html
38 https://fortress.wa.gov/ecy/publications/documents/0711022.pdf p. 3-14

The BOR released its Final Planning Report/EIS on December 29, 2008. It explained why a new Bumping Lake dam did not warrant further study because of environmental impacts on endangered species, flooding 1,900 acres of ancient forests ("old growth") adjacent to the William O. Douglas Wilderness, and because a larger-capacity reservoir would not fill on a regular basis and would not be a reliable source of water.\footnote{Bureau of Reclamation, Final Planning Report/EIS, Yakima River Basin Water Storage Feasibility Study, p. 2-128 to 2-131, http://www.usbr.gov/pn/studies/yakimastoragestudy/reports/eis/final/volume1.pdf} \footnote{The Department of Ecology withdrew from this report and prepared a SEPA Supplemental Draft and Final EIS in order to resurrect storage projects, such as a new Bumping Lake dam that the BOR refused to evaluate.}

In addition, the BOR report calculated a benefit/cost ratio of 0.13 for a new Black Rock Reservoir; a benefit/cost ratio of 0.31 for a Wymer Dam and Reservoir; and a benefit/cost ratio of 0.07 of a Wymer Dam plus Yakima River Pump Exchange.\footnote{Ibid., pp. 2-125 to 2-127.}

Subsequently, through the Yakima Workgroup, OCR and BOR reviewed and rejected 30 additional new Yakima Basin storage projects:

- Bakeoven, Tieton River, South Fork
- Casland, Teanaway River, North Fork
- Cle Elum Lake Enlargement
- Cooper Lake, Cooper River
- Cowiche, Cowiche Creek, South Fork
- Dog Lake, Clear Creek
- East Selah, Yakima River
- Forks, Teanaway River
- Hole in the Wall, Dry Creek
- Horseshoe Bend, Naches River
- Hyas Lake, Cle Elum River
- Little Rattler, Rattlesnake Creek
- Lost Meadow, Little Naches River
- Lower Canyon, Yakima River
- Manastash, Manastash Creek
- Mile Four, Rattlesnake Creek
- Minnie Meadows, Tieton River, South Fork
- Naneum, Naneum Creek
- Pleasant Valley, American River
- Rattlesnake, Naches River
- Rimrock Lake Enlargement, Tieton River
- Satus, Satus Creek
- Simco, Simco Creek-Toppenish Creek
- Soda Springs, Bumping River
- Swauk, Swauk Creek
- Tampico, Ahtanum Creek
- Toppenish, Toppenish Creek
- Upper Canyon, Yakima River
- Wapatox, Naches River
- Waptus Lake, Waptus River\footnote{Yakima River Basin Integrated Water Resource Management Plan FPEIS (March 2012), Table 2-1, pp. 2-43 to 2-44.}

Despite eight years of Yakima Workgroup search for new storage sites (see above), in October 2016 the Yakima-Tieton Irrigation District announced a proposal for a new dam west of Tieton, at a cost of over $100 million. OCR had provided the irrigation district $117,000 in December 2015 to further study options.\footnote{Living on borrowed time: Canal is more than 100 years old, but replacement won’t be cheap, by Kate Prengaman, Yakima Herald, Oct. 26, 2016.} After ten years of Ecology/OCR efforts, the Department of Ecology’s 2015 Implementation Status Report on the Yakima River Basin Integrated Water, Resource Management Plan (July 2016) does not list any delivered new water from any Yakima Plan surface storage project element.\footnote{https://fortress.wa.gov/ecy/publications/documents/1612002.pdf, pp. 15-17.}
II. OCR's Projected Future Water Supply Development: Yakima and Wenatchee River Basin Projects

A. Focusing on the Largest and Most Costly of the OCR Proposed Future Projects

The OCR projects proposed, with projected completion dates between 2016 and 2019, tend to be dominated by projects in the Yakima River Basin. OCR’s 2015 Columbia River Basin Water Supply Inventory Report to the Washington Legislature estimates that "near-term development (2015-2019)" is expected to produce 320,132 acre-feet of water from eleven different projects. "Long-Term Development (2019+)" projects were projected to be served by at least ten different projects. Those long-term projects far enough along in the planning process to have estimated water development targets are projected to produce about 477,000 acre-feet of water.

Ninety-six percent of the water to be developed in the near-term projects (2015-2019) would develop water in the Yakima Basin and close to half (47 percent) of the long-term water development projects (beyond 2019) would be developed in the Yakima Basin. For that reason, it is important to understand the status, costs, and benefits associated with the various projects included in the Yakima Plan.

B. The Yakima River Basin

In the Yakima River Basin, a total of 464,000 acres of farmland are irrigated using 2.5 million acre-feet of irrigation water rights. Only 30 percent of the average annual runoff is stored in the storage system.

In the 1900s, privately-constructed crib dams on the four natural glacial lakes (Cle Elum, Kachess, Keechelus, and Bumping) contributed to the extirpation of sockeye salmon. Construction of the BOR’s five major storage dams, the previously four named dams plus Rimrock (Tieton Dam), eliminated access to previously productive spawning and rearing habitat for sockeye, spring Chinook, coho, and steelhead salmon above the new reservoirs. Because the BOR dams flooded natural lakes, this report will refer to Cle Elum Lake, Kachess Lake (which consisted of upper and lower lakes), Keechelus Lake, and Bumping Lake, rather than "reservoirs." These five major dams have a total capacity of about 1,065,400 acre-feet. Clear Lake, is located above Rimrock Lake and has a capacity of 5,300 acre-feet, and is used primarily for recreational purposes. The five major dams—Bumping, Kachess, Keechelus, Rimrock (Tieton Dam), and Cle Elum store and release water to meet irrigation demands, flood control needs, and instream flow requirements. Occasional droughts over the last several decades have led to curtailments in water delivery. The Roza Irrigation District and Kittitas Reclamation District "are proratable districts with water rights that are subject to curtailment during droughts. A small portion of the Kennewick Irrigation District and Sunnyside Division are also subject to curtailment. "Senior" water right holders are entitled to their full water allotment..."
during a drought. Irrigation districts with a majority of "senior" water rights include approximately 75 percent of the Yakima-Tieton Irrigation District, approximately 65 percent of the Sunnyside Division, and approximately half the Wapato Irrigation Project.\(^\text{51}\) For irrigation districts with mostly "senior" water rights, there is little incentive to embark on water conservation, water banking, or water efficiency measures.

C. The Yakima Plan

The Yakima Plan began as a BOR WaterSMART program authorized by the SECURE Water Act in Public Law 111-11, which in Fiscal Year 2009 also funded basin studies in the Colorado River Basin and the St. Mary and Milk River Basins in Montana and Canada. Under the WaterSMART program, BOR now has 12 studies of major river basins underway in the west. All of these major Basin Studies include structural (i.e., dams) and non-structural options to supply adequate water in the future, as well as consideration of potential new surface storage needs, as directed in the Act at Section 9503(b)(4)(e).\(^\text{52}\)

In 2009, OCR and BOR convened a select Yakima Workgroup, which included five irrigation districts, federal and state agency representatives, the Yakama Indian Nation, city and county representatives, one conservation group representative (American Rivers), as well as a local organization advocating for surface storage structures (Yakima Basin Storage Alliance).\(^\text{53}\) The Yakima Workgroup included both OCR and BOR as voting members and was not chartered under the Federal Advisory Committee Act.\(^\text{54}\) The main objective of the Yakima Plan is to provide proratable irrigation districts with 70 percent of their water allotment during drought years by increasing the amount of surface water stored in the Yakima Basin. That Yakima Plan proposes to add about another half-million acre-feet of surface water storage, increasing the total surface water storage by about 50 percent to 1.5 million acre-feet.\(^\text{55}\) This would have the effect of turning the proratable irrigation districts into near-Senior districts without modifying water rights in the basin.

The BOR and OCR commissioned a group of economic consulting firms to carry out a benefit-cost analysis of the Yakima Plan that became the BOR's "Framework for Implementation Report" for the Yakima Plan (i.e., the Four-Accounts Analysis).\(^\text{56}\)

That BOR-sponsored economic analysis of the Yakima Plan focused on the entire complex set of projects included in the Plan. That Plan divided projects into seven categories or "elements":

i. Fish Passage (six projects).

ii. Structural and Operational Changes (six projects)

iii. Surface Water Storage (five projects)

\(^\text{51}\) http://www.usbr.gov/pn/programs/yrbwep/reports/FPEIS/fpeis.pdf, Table 3-1.

\(^\text{52}\) http://www.doi.gov/dci/hearings/112/WaterSurfaceStorage_020712.cfm

\(^\text{53}\) A list of the Yakima Workgroup members (not updated) is located at: http://www.ecy.wa.gov/programs/wr/cwp/YBIP.html Several of the Yakima Workgroup members are also members of the OCR Policy Advisory Group. Compare: http://www.ecy.wa.gov/programs/wr/cwp/cr_psg.html


\(^\text{56}\) Yakima River Basin Integrated Water Resource Management Plan: Four Accounts Analysis of the Integrated Plan, "U.S. Bureau of Reclamation Contract No. 05CA076/11D11Q, prepared by ECONorthwest, Natural Resources Economics and ESA, October 2012. The BOR "Framework for Implementation Report has the same date and contract number but lists the authors beginning with HDR Engineering instead of ECONorthwest. The author list of the Implementation Report was HDR Engineering, Anchor QEA, ECONorthwest, Natural Resource Economics, and ESA.
iv. Groundwater Storage. (Multiple projects)

v. Habitat/Watershed Protection and Enhancement. (Multiple projects)

vi. Enhanced Water Conservation. (Multiple projects)

vii. Market Driven Reallocation (Multiple projects).

In each of the categories or elements listed above there are a half-dozen to dozens of separate projects, including projects that do not meet the goal of providing proratable irrigation districts with additional water supplies. The BOR-OCR sponsored benefit-cost study combined all of these individual projects into a single conceptual aggregation, namely the whole of the Yakima Plan. The economic analysis then proceeded to estimate the benefits and cost of each and every individual project and summed those benefits and costs up, trying to take into account interactions among the individual projects and avoid double-counting or under-counting. The No Action Alternative was simply that none of the Yakima Plan projects would be pursued, even though the Yakima Plan FPEIS listed dozens of on-going programs in the Yakima Basin. This allowed the comparison of the total costs and total benefits, appropriately discounted, to determine the net benefits or net costs associated with the whole of the Yakima Plan.

The conclusion from this OCR-BOR-commissioned benefit-cost analysis was that even under the worst-case scenario considered, economic benefits were 40 percent higher than the economic costs, resulting in discounted net benefits over the next hundred years of $1.8 billion.

From an economic point of view, this is not a productive way to use benefit-cost analysis because it does not test the economic rationality of individual projects within the Yakima Plan. It is possible that a few elements of the Plan that are relatively inexpensive are the source of most of the benefits while other, much more costly projects with almost no benefits, offset many of the benefits flowing from the more economically productive projects, reducing the net benefits from the Yakima Plan. Uneconomic projects could be added as long as the whole set of projects still had positive net benefits suggesting that all of projects included in the aggregate were economically rational when they were not. From an economic point of view, the economic rationality of each project within the larger “plan” should be analyzed and rejected if its costs are higher than its benefits. What is needed for an overall plan with many individual projects is just what the Washington Legislature called for in 2013: “separate benefit-cost analyses for each of the projects proposed in the 2012 Yakima River basin water resource plan (IP).”

The Washington State Legislature recognized the inadequacy of combining many different projects into just one big project and only calculating the benefits and costs for that artificial aggregate project rather than also analyzing the incremental benefits and costs of each individual project.

In 2013 Washington State Legislature mandated that the State of Washington Water Research Center (WRC) at Washington State University “prepare separate benefit-cost analyses for each
of the projects proposed in the 2012 Yakima River Basin Water Resource Management Plan."60

In response to that mandate, the WRC issued a report at the end of 2014 to the Washington State Legislature.61 RCW 90.38.110.

That report pointed out that, as calculated by WRC, about 90 percent of the estimated benefits of the overall Yakima Plan were associated with the enhanced fisheries, not irrigated agriculture or municipal water. Benefits to irrigated agriculture represented only 5 to 10 percent of the total benefits. Improved municipal water supplies were the source of 2 to 3 percent of the benefits. Just the fish passage projects alone on Yakima Basin dams provided 75 to 80 percent of the estimated benefits of the Yakima Plan even though they were responsible for only a small percentage of the aggregate costs of the Yakima Plan. On the other hand, 66 percent of the costs were associated with out-of-stream and instream uses that produced only a small fraction of the overall benefits.62 This clearly indicates that some of the costliest proposed projects generate very few benefits to justify the costs. The net losses associated with those uneconomic proposed projects are "covered" by the fish-production benefits associated with building fish passages at existing Yakima dams. In that sense the fish passage projects were being used to "indirectly fund" economically indefensible surface water storage projects even though the fish passage projects were largely unrelated to the surface water storage projects.

In addition, the "Four-Accounts Analysis" fish-production benefits were calculated using the "contingent valuation" methodology by estimating what economic value all of the households in the entire states of Washington and Oregon would place on increased salmon returns in the Yakima Basin.63 Salmon production benefits are also based on artificial, untried, and highly engineered projects such as a giant "helix" downstream fish passage project at the existing Cle Elum dam and a "Whooshh" tube to shoot returning salmon over existing Yakima dams.64 Projected fish-production benefits are also suspect because they fail to factor in the dire impacts of hot summer temperatures in the Lower Columbia River. In 2015, of the hundreds of thousands of sockeye returning to the Columbia Basin, only 300 made it up the Yakima River due to unprecedented warm water.65

D. The Cost of the Yakima Plan

The Yakima Plan is a 30-year plan that would be implemented in three 10-year stages. The Initial Development Phase is to run from 2013 to 2023. In the 2013-2015 biennium Washington State funding amounted to a $143 million share of the $234 million total project costs.66 For the 2015 to 2017 biennium the Washington Legislature has appropriated an additional $30 million for continued implementation of the Yakima Plan. OCR projects that to fully fund the State's share of the Initial Development Phase, the state will have to invest $100 to $110 million in each

---

60 Ibid. Quote from page ii.
61 Ibid.
62 Ibid. pp. iii-v.
63 The analysis considered using only Washington households. The result was fish values about 40 percent below what was obtained using both Washington and Oregon households. Stated slightly differently, by combining the two states, fish values were boosted over 60 percent. See page 8 of http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/2012meetings/2012-09-26/presentation.pdf
64 See: http://www.usbr.gov/pn/programs/exempt/cee-plan/2012-exempt-plan.html
66 The state's share was so high because of the state's purchase of the Teanaway Community Forest at a cost of almost $100 million.

OCR: Last Ten Years Power Consulting Inc. December 3, 2016 19 | Page
of the next three biennia, ending in 2023.\textsuperscript{67} The total cost of the ten-year Initial Development Phase of the Yakima Plan (2013-2023) is projected by OCR to be about $882 million of which the State would be responsible for about $407 million.\textsuperscript{68}

This Initial Development Phase of the Yakima Plan on which the State of Washington is currently working is the least expensive of the three 10-year phases. The 2023-2033 Intermediate Phase is projected to cost 75 percent more than the Initial Phase, a decade total of almost $1.6 billion. The Final Development Phase (2000-2043) would be slightly less costly: about an additional $1.5 billion. The "Full Development Costs" over the three decades would be just over $4 billion.\textsuperscript{69} The Washington Legislature has mandated that the State of Washington is to pay, at most, half of the total costs of the Yakima Plan (not specific elements). Federal, private, and other non-state sources, including a significant contribution of funding from local project beneficiaries of the Yakima Plan (e.g. proratable irrigation districts that would receive additional water) are expected to pay at least half of the plan costs.\textsuperscript{70}

Below we review the economic rationality of the major surface water supply projects included in the OCR's future development plans, all of which are part of the Yakima Plan.

E. OCR Near-Term Water Supply Developments: The Kachess Drought Relief Pumping Plant and the Keechelus-to-Kachess Conveyance

OCR lists one major surface water storage project among its "near-term (2016-2020)" water developments: The Kachess Drought Relief Pumping Plant that during drought years would access the water that lies below that lake's current gravity flow outlet facilities, i.e. the "inactive" storage, in Kachess Lake. That single project would provide almost two-thirds, 200,000 acre-feet, of OCR's 2015 estimated total near-term water development of 320,000 acre-feet.\textsuperscript{71} This Kachess Drought Relief Pumping Plant (KDRPP) also listed as part of the Initial Development decade of the Yakima Plan and was scheduled in December 2014 to be completed by 2018.\textsuperscript{72} A closely related project, the Keechelus to Kachess Conveyance (KKC), that is also part of the "Initial Development" decade of the Yakima Plan would allow the movement of Keechelus Lake water via a tunnel to Kachess Lake to facilitate the refilling of that lake after its inactive storage has been drawn down during drought periods by the drought relief pumping plant. In a December 2014 report to the Legislature on the projected costs of pursuing the Yakima Plan, OCR stated that "subsequent evaluations determined that the Kachess Reservoir Drought Relief Pumping Plant Project is unlikely to be viable without the inclusion of the [Keechelus to

---


\textsuperscript{68} Ibid. p. 25. The total cost of the Initial Development Phase was estimated as $896.9 million in the December 2014 "Cost Estimate and Financing Plan-Legislative Report," Department of Ecology and Office of the Treasurer," Figure 4.

\textsuperscript{69} Ibid. Cost Estimate and Financing Plant, December 2014, Figure 4.

\textsuperscript{70} RCW 38.120(1)(a). The State's obligation is to pay for at least half of the entire Yakima Plan, but could fund 100 percent of any specific element of the Yakima Plan, as it did when the State paid $97 million for the Teanaway Community Forest. See: http://www.dnr.wa.gov/news/teanaway-land-purchase-clears-way-washington\%20to\%20first%20community%20forest

\textsuperscript{71} The OCR 2016 "Water Supply Development" (Rev. 08.19.16) also lists this facility as part of the Near-Term Development.

Kachess conveyance system as a project component. This significantly increased the cost associated with a feasible Kachess Drought Relief Pumping plant since now the costs associated with the water conveyance facilities have to be considered costs of the drought relief pumping project. The KDRPP and KKC Draft EIS published in January 2015 provided estimates of the total costs of each project. Adding the costs of the KKC to the KDRPP would increase the cost of the drought relief pumping project by 58 percent.

Three months later in March 2015 the BOR released the “Feasibility Design Reports-Draft” for the Kachess Drought Relief Pumping Plant and, separately, for the Keechelus-to-Kachess Conveyance. Those documents provided another estimate of the field costs of each of these components of the Kachess drought relief pumping project. As the earlier Kachess DEIS made clear, to such field costs must be added a variety of other very real costs to obtain the total cost of these projects. In the Kachess DEIS this led to estimated total project costs that were 53 percent higher than the field costs for the Kachess Drought Relief Pumping Plant element and 46 percent for the Keechelus-to-Kachess Conveyance element. When these additional costs are included, the BOR feasibility design report costs for the overall Kachess Drought Relief project increases by $205 million or about a third to $850 million compared to the January 2015 DEIS estimated total costs. See Table 3 below.

Table 3.

<table>
<thead>
<tr>
<th>Source of Cost Estimate</th>
<th>Date of Estimate</th>
<th>Type of Estimate</th>
<th>&quot;Middle&quot; or &quot;Average&quot; Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>BOR/OCR Documents</td>
<td></td>
<td></td>
<td>KDRPP</td>
</tr>
<tr>
<td>Costs of YIP HDR Engin. &amp; Anchor QEA (1)</td>
<td>March 2011</td>
<td>Includes Non-Contract and O&amp;M</td>
<td>$226,406,000</td>
</tr>
<tr>
<td>KDRPP and KKC Draft EIS (2)</td>
<td>January 2015</td>
<td>Full Cost</td>
<td>$347,556,000</td>
</tr>
<tr>
<td>KDRPP &amp; KKC Feasibility Design Reports (3)</td>
<td>March 2015</td>
<td>Full Cost</td>
<td>$509,207,350</td>
</tr>
<tr>
<td>KDRPP &amp; KKC Draft EIS (2)</td>
<td>January 2015</td>
<td>Full Cost</td>
<td>$340,994,364</td>
</tr>
<tr>
<td>Total: KDRPP &amp; KKC</td>
<td></td>
<td></td>
<td>$850,201,714</td>
</tr>
</tbody>
</table>

Average or middle value used when multiple alternative estimates were provided.

(1) Table 1, p. 3, non-contract costs were 30% of construction costs, annual O&M were capitalized using a 4% discount rate.

(2) Tables 2.13 and 2.14 on pages 2.54 and 2.55.

(3) These "Field Cost" estimates were adjusted to total costs using the markups developed in the KDRPP and KKC Draft EIS. See (2) above.

A little more than a year later, in June 2016, OCR reported to the legislature that it could not provide a cost estimate for the Kachess Drought Relief Pumping Plant because the plans for that facility were in flux. After issuing a Draft EIS for the Kachess pumping and conveyance projects in January 2015 and receiving public comments on these projects, OCR and BOR decided that they needed to collect additional scientific data to reevaluate these projects in a Supplemental Draft EIS scheduled to be released in late 2016 or early 2017. Clearly the basic

---


74 Kachess Drought Relief Pumping Plant and Keechelus Reservoir to Kachess Reservoir Conveyance, Draft EIS, U.S. Bureau of Reclamation and WA Department of Ecology, January 2015, Tables 2-13 and 2-14, pp. 2-54 and 2-55.

75 U.S. Bureau of Reclamation, Contract No. RT3PC1006 ID/IQ, prepared by HDR Engineering, Inc.


design and costs of this large “near-term” OCR project remain uncertain although the costs show a steep upward trend.

The 2014 Washington Water Research Center benefit-cost study of the individual elements of the Yakima Plan commissioned by the Legislature estimated that the economic costs would exceed the economic benefits for each of the Kachess Lake projects. The economic loss associated with the Kachess Drought Relief Pumping Plant was estimated to be $107 million and the economic loss associated with the Keechelus to Kachess Conveyance was estimated at $110 million for a total loss of $217 million.\textsuperscript{78} The ratio of benefits to costs was estimated to be 0.46 for the Drought Relief Pumping Plant and 0.20 for the Keechelus to Kachess Conveyance.\textsuperscript{79} With the higher more recent cost estimates associated with the Keechelus to Kachess Conveyance discussed above, the economic losses associated with these proposed projects would be even greater given that OCR has now concluded that the Keechelus to Kachess water conveyance project is necessary to the successful operation of the Drought Relief Pumping project, the costs and benefits of these different parts of a joint project should be combined. That will increase the cost of the project by 71 percent while adding only about 50 percent to the benefits, increasing the net loss associated with the combined project. While the drought relief pumping plant by itself has a benefit-cost ratio of 0.46, having to combine it with the water conveyance component reduces the benefit-cost ratio by about 40 percent to 0.29. The net loss associated with the combined project more than doubles.\textsuperscript{80, 81}

As OCR and BOR have indicated by delaying the Final EIS and planning to produce a Supplemental Draft EIS,\textsuperscript{82} there are many unanswered questions about the practicality and economic rationality of the Kachess surface water supply project. The actual costs of these two related projects appear to be unknown at this time, but on a steep upward trend line. In addition, it seems highly unlikely that this project should be classified as a near-term development that will be constructed in the 2015-2019 period.\textsuperscript{83} OCR has had to repeatedly “go back to the drawing board” with these projects, redesigning them, and re-estimating their cost. This makes it nearly impossible for the Legislature and public to evaluate the likely “success” of the OCR’s

\textsuperscript{78} Ibid, page 63 (Table 7) and page ii. The WRC net costs reported here are the “middle” estimates among a range of net benefit estimates associated with different WRC scenarios that varied the intensity of the impact of climate change on the hydrology of the Yakima Basin and the effectiveness of water markets within the state of Washington to move water from lower valued to higher valued uses. In addition, these “middle” estimates assume that the individual projects are analyzed on a “stand alone” basis rather than as part of the Yakima Plan. This boosts the benefits associated with the projects. Finally, only out-of-stream benefits are included. The fish benefits associated with fish passages at dams and improved instream flows are assumed to be pursued separately without the additional surface storage projects. These are the net-benefits or net-losses WRC reported in the Executive Summary of their report.

\textsuperscript{79} Op. cit. WRC 2014, pp. ii and iv. The WRC adds that “Under the most adverse climate considered [in the scenarios run], these two projects together would have net benefits of $6 million and a B/C ratio of 1.02.” p. iv.

\textsuperscript{80} Ibid. Table 20, p. 87, least adverse future climate scenario.

\textsuperscript{81} OCR, in its June 2016 report to the Legislature on the Keechelus to Kachess Conveyance, stated that the water supply benefits of this project “would be minimal” because there was already “unutilized storage capacity in Kachess Reservoir and limitations on when water could be transferred between these two reservoirs. For that reason, OCR noted that “...the quantity of water transferred does not mean that quantity would become available for water supply. As noted above, the water supply benefits from KKC are minimal and Ecology and Reclamation have concluded the water supply benefits do not provide a basis for project construction.” The Conveyance between the two lakes, however, would provide water benefits during drought periods by accelerating the refilling of the inactive storage in Kachess Lake that would be drawn down by drought relief pumping. However, over its lifetime, those benefits would not justify the costs.

\textsuperscript{82} http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/2016meetings/06-08-2016/02mtgnotes.pdf

\textsuperscript{83} That was its status in the “2015 Columbia River Basin Water Supply Inventory Report” submitted to the Washington State Legislature, Ecology Publication Number 15-12-006, January 6, 2016, p. 12.
primary “near-term” water supply project, namely the Kachess Drought Relief Pumping Plant. Furthermore, the benefit-cost analysis of the individual components of the Yakima Plan that the Legislature asked WRC to carry out documented the sizeable economic loss associated with these Kachess projects that would likely block the use of federal funds to help finance them.

A further concern is that although the Yakima Plan has been characterized as one in which “farmers themselves have agreed to pay for investments that promise to enable their water needs to be met” when given an opportunity to make a major investment to secure additional water during drought conditions, the irrigators balked at the cost: In October, 2015, as a result of significantly low projected snowpack in the Yakima Basin, the Roza Irrigation District (RID) voted to pursue a Kachess Emergency Temporary Floating Pumping Plant Project (KETFPP). The proposed KETFPP would have consisted of a temporary floating pump facility with the ability to access up to 50,000 acre-feet of water from Kachess Lake that otherwise would be inaccessible due to low water elevations. This water could then be pumped into the Yakima River system to supply RID with temporary emergency drought relief in 2016. Because this would have impacted the BOR existing Yakima Project, the BOR scheduled public workshops on December 7 and 8, 2015. But when the cost of the project reached $58 million plus, many farmers in the irrigation district said that extra water was not worth the extra $85 per acre they would likely have to pay for 10 years and a full page newspaper ad by concerned Roza Growers, urged farmers to voice their opinions on the pumping plant. By mid-December, the RID had withdrawn its support of the project and BOR cancelled review of the proposed project.

F. The Large Yakima Basin Storage Reservoirs in OCR’s Long-Term Development (2020+)

OCR’s list of “Long-Term Development” projects that are part of the 2015 Report to the Legislature on Columbia River Basin Water Supply Inventory includes 226,000 acre-feet of water development within the Yakima Basin that would be developed after 2019. This is part of the 450,000 acre-feet of additional surface storage that the Yakima Plan proposes to develop over 30 years. As discussed above, the “near-term” Kachess Drought Relief Pumping Plant project would involve extracting up to 200,000 acre-feet of water from the inactive storage pool of Kachess Lake and accelerating its replacement with the Keechelus to Kachess Conveyance. This leaves another 250,000 acre-feet of surface storage associated with the Yakima Plan to be identified. The 226,000 acre-feet that the OCR lists for the Yakima Plan in its “long-term” projects (meaning developed after 2019) would provide most of that remaining planned surface storage development. Although the Yakima Plan calls for constructing both a new Bumping Lake dam and a Wymer Dam, OCR now claims that this additional surface storage would

---

84 http://www.yakimaforever.org/2016/10/26/innovative-water-solutions/#more-1775
86 See:
88 http://www.usbr.gov/newsroom/newsrelease/detail.cfm?RecordID=51608
91 http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/2016meetings/06-08-2016/03slideupda le.pdf
come from one large storage reservoir that would be built in the second or third decade of the Yakima Plan, either the Wymer Dam and Reservoir (162,500 acre-feet) or a new Bumping Lake dam (156,300 acre-feet net increase).\textsuperscript{92} The remainder of the envisioned water development would come from smaller projects.

OCR’s projection of the costs of pursuing this additional surface water storage increases substantially as one moves from the first decade of the Yakima Plan to the second decade. In the first decade (2013-2023), the projected surface water storage costs are about $414 million. In the second decade, the surface water storage investment costs will rise to just over a billion dollars, a 140 percent increase. In the third decade, the capital investments in surface water storage will be approximated one billion dollars more. Over the three decades $2.4 billion will be spent on surface water storage by the Yakima Plan. If, as ORC projects, the state will cover about half of the costs of these projects,\textsuperscript{93} this represents a very substantial future financial obligation for the State of Washington of at least $1.2 billion, just for surface water storage in the Yakima Basin and does not account for likely cost overruns.

Of course, surface storage of water is just one of the elements of the Yakima Plan. In the Initial Development Phase, the cost of surface water storage was about $414 million, the total cost of all of the elements of the Yakima Plan in that decade was projected to be $897 million, over twice as high. For the second and third decades, the total costs are 50 to 60 percent higher than the surface water storage investment costs alone. The whole of the “Initial Development Phase” of the Yakima Plan, the first decade, 2013-2023, on which ORC is currently working, is projected to cost almost $900 million, while the cost over thirty years would be $4 billion, up to half of which may be a state obligation.\textsuperscript{94} See Table 4 below.

<table>
<thead>
<tr>
<th>Integrated Plan Element</th>
<th>Initial Development Phase 2013-2023</th>
<th>Intermediate Development Phase 2023-2033</th>
<th>Final Development Phase 2033-2043</th>
<th>Full Development Costs 2013-2043</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water Storage</td>
<td>$413,900,000</td>
<td>$1,003,600,000</td>
<td>$999,000,000</td>
<td>$2,416,500,000</td>
</tr>
<tr>
<td>Total for All Elements</td>
<td>$896,900,000</td>
<td>$1,572,600,000</td>
<td>$1,542,250,000</td>
<td>$4,011,200,000</td>
</tr>
</tbody>
</table>


G. The Economic Evaluation of the Yakima Plan’s Large Surface Storage Projects

A high priced element of the Yakima Plan is the addition of a large surface water storage facility during the second or third decade of the Plan. Two alternatives are currently getting the most scrutiny: A new Bumping Lake Dam and the building of the Wymer Dam.


\textsuperscript{94} Ibid. Figures 4 and 5 (not paginated).
New Bumping Lake Dam
Unsuccessful efforts to construct a new Bumping Lake dam downstream of and flooding the existing dam on the Bumping river, upstream from Goose Prairie, WA, date back over half a century. Bills to construct a new Bumping Lake dam were introduced in Congress in 1979, 1981, and 1985. All failed. As described above, opposition to a new Bumping Lake dam and adverse environmental impacts caused the BOR to exclude this project from its 2008 Final Planning Report/EIS. Only through the support of Washington Governor Christine Gregoire, who had been a major backer of a new Black Rock dam, was a new Bumping Lake dam project brought back for consideration.

Wymer Dam
Also, as described above, in its 2008 Final Planning Report/EIS the BOR evaluated two versions of a Wymer Dam in Lmuma Creek (an intermittent stream), approximately 8 miles upstream of Roza Diversion Dam, off-channel of the Yakima River, between Ellensburg and Yakima. The BOR’s report calculated that either project version had a benefit-cost ratio well below 1.0: For the Wymer Dam and Reservoir it was 0.31; and for the Wymer Dam plus Yakima River Pump Exchange it was 0.07. Again, the Gregoire administration brought back the Wymer dam project.

OCR plans to finance studies of these two proposals and possibly others that might be proposed during the end of the first decade and the beginning of the second decade of the Plan and make a decision on what surface water storage alternatives should be pursued.

In 2015, Senators Cantwell and Murray introduced S. 1694 in Congress, which authorizes continued federal funding for studies of water projects in the Yakima Basin, including presumably the new Bumping and Wymer dams. Reps. Reichert and Newhouse introduced a companion House bill. This legislation did not pass the 2016 session of Congress.

As discussed above, the Washington Legislature mandated that the Washington Water Resource Center (WRC) carry out benefit-cost analysis of each major project that was part of the Yakima Plan. That report was delivered to the Legislature in December 2014. That WRC report concluded that a new Bumping Lake Dam would cost $371 million more than the benefits it provided over the next 100 years. The benefit-cost ratio would be 0.18. Five out of six of the dollars invested in it would not be justified by the benefits. For the Wymer Dam and Reservoir, the costs would exceed the benefits by $1.2 billion. The benefit-cost ratio would be 0.09. Ten out of eleven of the dollars invested in it would not be justified by the benefits.

As the WRC discussed at length in its report to the Legislature, the WRC estimated benefits do not include the value of the planned increase in-stream flows that these reservoirs are projected to provide.

100 Ibid., pp. 2-125 to 2-127.
103 Ibid. pp. iii and iv.
to provide. Because these enhanced in-stream flows are intended to increase the population of salmon in the Yakima basin rivers and streams, the benefits of these proposed increased in-stream flows will depend on both the effectiveness of in-stream flow in boosting fish production and the value that is placed on the increased salmon populations.

The benefit-cost analysis commissioned by the OCR and BOR in support of the Yakima Plan calculated very high economic benefits from the in-stream flows. As a result, the OCR-BOR economic analysis found that fish benefits would be worth $5 to $7.4 billion while the agricultural benefits were only $0.8 billion, only one-sixth to one-ninth of the extremely high estimated fish-production benefits.

Municipal water benefits were only $0.4 billion. Put slightly differently, the OCR-BOR analysis finds that 80 to 90 percent of the benefits of the Yakima Plan are fish-production benefits derived primarily from proposed fish passage projects at existing dams. Agriculture, apparently, is a relatively minor beneficiary of the Yakima Plan, providing only about 10 percent of the benefits of the Plan. The Yakima Plan is, according to the OCR-BOR economic analysis, primarily a multi-billion-dollar plan to increase salmon populations in the Yakima Basin.

There is no doubt that improving salmon habitat and river and stream ecosystems has economic value. Over the last half-century economists have developed the tools to estimate such non-market economic values. The question raised by the Washington Water Research Center was whether the OCR-BOR economic analysis accurately estimated those values.

For example, using the same Four-Accounts methodology, the WRC report estimates that the loss of 1,000 acres of ancient forest due to flooding from a new Bumping Lake dam would exceed $1.85 billion. These costs were not incorporated in the OCR and BOR estimates of costs and benefits.

It is important to understand that the reliability of those fish economic values associated with in-stream flows was different than the reliability of the agricultural and municipal water benefits for several reasons:

i. It is difficult, if not impossible, to separate out the beneficial impacts on fish populations of investments in fish passages at Yakima Basin dams from fish-production impacts of habitat rehabilitation along streams and rivers and/or increased in-stream flows. Some of these are activities that complement other activities, boosting the overall impact on fish populations. But it is also likely that there are declining marginal benefits as additional improvements in salmon habitat and survival are made.

ii. The effectiveness of in-stream flows on fish survival is difficult to measure.

iii. The economic value of improved native fisheries is difficult to measure, especially in a setting where the number and mix of fish are uncertain and varying over time.

iv. The opportunity cost of providing in-stream flows by purchasing out-of-stream water rights (e.g. irrigation water rights) is only a fraction of what it costs to provide for in-stream flows by constructing additional water storage.

---

104 Ibid. p. iv.
106 Ibid. Table 24, p. 91.
On the other hand, the value of water committed to agriculture or municipal water supplies can be more easily measured because:

i. There are market-based water transfers that take place in the region that can be analyzed,

ii. the alternative costs of obtaining the water from groundwater pumping, surface water treatment, or conservation measures is known, and

iii. because irrigation water is used to raise crops that are sold into commercial agricultural markets.

Because of this large difference in the precision of and confidence in the impacts of additional in-stream water flows on fish-production economic values versus agricultural and municipal water values, the WRC analyzed the out-of-stream (agricultural and municipal) benefits separately from the in-stream (fish-production) benefits. In order to objectively narrow the plausible range of values associated with in-stream flows the WRC established two reference points.107

The first reference point was tied solely to the irrigation and municipal (out-of-stream) water benefits. By calculating those accurately and comparing them to the cost of the storage projects, one can calculate how valuable the fish-production values would have to be in order to bring the total benefits (irrigation and municipal, as well as fish-production) up to the level of the surface water storage costs. That tells us how high the value of fish-passage, fish habitat rehabilitation, and in-stream flows for fish production taken together would have to be for the surface water storage project to produce net benefits that are positive or a benefit-cost ratio that is 1.0 or above. One can then ask if there is any evidence that fish-production benefits, especially those that are not directly associated with investing in fish passage at the Yakima Basin reservoirs, could be that high.

The second reference point for valuing in stream flows is to ask what irrigation and municipal water benefits are lost if the instream flows are provided by reducing agricultural and municipal surface water uses. This, arguably, would be the lowest price that irrigators or municipal water users would accept in return for voluntarily reducing their surface water use. In that sense this would be the opportunity cost of providing in-stream flows by foregoing agricultural and municipal surface water benefits. This tells us what economic value is lost if in-stream flows are pursued by reducing irrigation and municipal uses. That cost can be compared with the cost of providing the instream flow by building surface water storage facilities to see if shifting water from irrigation and municipal use is a less costly way of providing in-stream flow fish-production benefits than building large surface water storage.

Pursuing enhanced in-stream flows and their associated benefits in terms of fish production by purchasing water rights from irrigators is already part of the Yakima Plan. That Plan had seven “elements” which included a “Market Driven Reallocation Element” that would “[c]reate conditions within which water banks can facilitate the sale or lease of water between willing parties on a temporary or permanent basis, to improve water supply and in stream flow conditions in the Yakima basin.”108 Such transfers of water rights were projected to [i]ncrease

107 The following two paragraphs are a paraphrasing of the WRC’s explanation of how they approached the valuation of in-stream flow. Ibid. p. 20.

the overall value of goods and services derived from the [Yakima] basin's water resources, by reallocating water from lower-value to higher-value uses."109

The WRC's report to the legislature on the benefits and costs of the individual projects within the Yakima Plan explored the implicit cost of providing instream flows by such market-based transfers of existing water. To do that, the WRC estimated the agricultural value of surface water being used for irrigation in the Yakima basin (the agricultural benefits gained or lost by increasing or decreasing the irrigation water available). WRC recognized that the cost of diverting water from irrigated agriculture to instream flows would be higher than the lost market value of the reduced agricultural production because of the use of less water. WRC therefor increased that agricultural market value by a third to cover transaction costs, other values farms might attach to that water and the agricultural activity it supported, risk and uncertainty, etc.110

WRC estimated that the annual agricultural benefit of an acre-foot of water would be about $84 a year if it were to be leased. Assuming a discount rate of 4 percent, the cost to purchase in-stream flows in perpetuity from an irrigator was estimated to be about $2,750 per acre foot. This assumed that only intra-irrigation-district water trading was possible and that historical climate conditions persisted. If full water rights trading were possible, the cost of purchasing the water for instream flows from irrigators would be lower. If climate change was much more adverse than historical climate conditions, the cost of purchasing the in-stream flows would be higher.

The WRC study commissioned by the legislature concluded that under moderately adverse climate change and intra-district water trading only, the cost of providing the in-stream flows by constructing additional surface water storage would be 16 times as high as purchasing water rights to protect instream flows. If full water trading within the region were possible, providing for those instream flows by constructing addition surface water storage would be 25 times what it would cost to purchase the water rights from irrigators. On the other hand, if no increase in water trading was possible and there was moderately adverse climate change, the construction of additional surface water storage would cost nine times what purchasing water rights to supplement instream flows would cost.111

The unavoidable conclusion is that the agricultural benefits associated with having more irrigation water due to the construction of additional surface water storage would justify only a tiny fraction of dam and reservoir construction costs, 4 to 10 percent of those costs. That is a serious problem for OCR and BOR since to get federal funding (and possibly state funding, too), the proposed water projects need to pass a benefit-cost test: showing positive net values when costs are subtracted from benefits or a benefit-cost ratio greater than 1.0.

The WRC economic analysis that was mandated by the Legislature also studied directly the value of the in-stream flow enhancements for fish-production values to see if those projected fish-production values could turn around the results of the economic analysis and show that the separate projects of the Yakima Plan water development projects made economic sense. The Yakima Plan investments for surface storage to support both in-stream and out-of-stream uses

111 Ibid. p. 91. The text on p. 21 says that with intra-district water trade and the CGCM climate regime, the cost of pursuing in-stream flows via the Yakima Plan would be 25 times the cost of pursuing enhance in-stream flows by using water markets. That is incorrect. As pointed out here, the 25-fold increase in cost is associated with full water trading.
account for about 66 percent of the costs of the Yakima Plan.\textsuperscript{112} We have already discussed the agricultural and municipal water benefits, the out-of-stream benefits. We now turn to the WRC's estimates of the benefits of the in-stream flows.

The WRC economic analysis estimates that the in-stream flows combined with fish habitat restoration would generate $48 to $294 million in fish-production benefits. Just the mainstem river habitat restoration of the Yakima Plan would cost $338 million.\textsuperscript{113} Thus, even if the enhanced instream flows could be provided from new storage at no cost, the costs of improving fish habitat would exceed the benefits, generating net losses rather than net benefits. But, of course, the cost of creating the surface water storage reservoirs to support the proposed in-stream flows would not be zero. The capital costs of the Wymer Reservoir were estimated by the OCR and BOR in 2012 as $1.14 billion and the capital cost of a new Bumping Lake Dam was $517 million.\textsuperscript{114} The Yakima Plan, as adopted, includes building both of these two large surface storage projects, but more recently OCR has backed away from that part of the Plan, stating, instead, that only one of the be built, at least in the near term. One of the primary stated purposes of these surface water storage reservoirs is to enhance in-stream flows and enhance fish populations. For instance, it is projected that “on average, around half of the storage capacity [of the Wymer Reservoir] would be used annually to improve instream flows upstream and downstream of the reservoir.”\textsuperscript{115} Clearly a substantial part of the costs associated with these surface water storage projects would have to be allocated to in-stream flows. That would make these efforts to improve fish habitat appear even more uneconomic, increasing the net losses associated with the projects. The estimated fish-production values associated with enhanced instream flows when added to the agricultural and municipal water values cannot not provide sufficient benefits to justify the costs of the proposed surface water storage projects of the Yakima Plan.

H. Proposed Water Development Projects in the Alpine Lakes Wilderness

Despite the fact that all of the major proposed water storage projects in the Yakima Basin have costs that grossly exceed benefits, Yakima Plan supporters have called the Yakima Plan a “National Model.”\textsuperscript{116} OCR has applied that same “model” of “aggressive development of new water storage” to Washington’s Alpine Lakes Wilderness. OCR’s 2015 Columbia River Basin Water Supply Inventory Report discusses this set of projects immediately after discussing the Yakima River Basin Plan.\textsuperscript{117}

The Alpine Lakes Wilderness straddles the central Cascade Mountains crest and is one of the most popular National Wilderness Areas in the nation. The Wenatchee National Forest part of that wilderness contains the Enchantment Lakes that are part of the headwaters of the Wenatchee River. A tributary, Icicle Creek, is fed by some of those wilderness lakes. Given

---

\textsuperscript{112} Ibid. p. iv-v.
\textsuperscript{113} Ibid. p. 100.
\textsuperscript{116} http://krdistrict.org/EnlighteningNR.pdf.
\textsuperscript{117} Op. cit. WA Department of Ecology Publication Number 15-12-006.
current demands on Icicle Creek's water, that watershed has faced chronic water supply issues.\textsuperscript{118}

In December 2012, OCR and Chelan County co-convened a small workgroup, the Icicle Work Group (IWG), to resolve water rights litigation, fish hatchery concerns, and water supply issues facing the Wenatchee River and its tributary Icicle Creek. The Icicle-Peshastin Irrigation District (IPID) had historic water rights and easements that allowed it to store and divert water from the Enchantment Lakes in the Alpine Lakes Wilderness. Potential IWG water supply enhancement projects include increases in the water diversions from seven lakes in the Enchantment Lakes region.\textsuperscript{119} These proposals include the rebuilding of a collapsed dam on Eightmile Lake so that the lake level can be raised to store more water and, during drawdown, can be lowered below current levels. Another proposal would install a siphon or pump or blast a tunnel to allow the draining of Upper Kionaqua Lake into Lower Kionaqua Lake so that additional water could be stored and delivered to the IPID. The IWG is also considering installing remotely controlled equipment so that the levels of all seven of these wilderness lakes can be controlled by IPID from its offices, adjusting the quantities of water removed from the lakes to meet both consumptive use and instream flow requirements.

These and other possible manipulations of the level of these wilderness lakes are currently part of a State Environmental Policy Act EIS process.\textsuperscript{120} Presumably there will also be a NEPA process, since the lakes are within a National Forest managed by the U.S. Forest Service. OCR is funding the work of the IWG through a $700,000 contract with the Chelan County Natural Resources Department. OCR also sought another $3.5 million to continue the IWG work into the 2015-2017 biennium.\textsuperscript{121}

These proposals to actively manipulate the level of many lakes in the Alpine Lakes Wilderness through the construction of new dams, modification of other dams, and installation of mechanical and motorized equipment within a well-known and spectacular National Wilderness Area are certain to be controversial. It is not clear that the 2006 Washington legislation that established the OCR envisioned that a Washington state government agency would support this type of intrusion into one of the state's most valued natural areas. At the very least, the legislature should require a clear and convincing showing that each of these proposed activities within the Alpine Lakes Wilderness has benefits exceeding costs and, given the unavoidable environmental costs, that the problems of water supply in the Wenatchee River Basin cannot be solved by aggressive water conservation plans throughout that water basin and the expansion of regional water markets that encourage the selling and trading of water rights so that existing water can voluntarily move from lower to higher valued uses. New commercial intrusions into the Alpine Lakes Wilderness and the commercial manipulation of the water levels in these wilderness lakes are unlikely to be economically justifiable.

\textsuperscript{118} Ibid, p. 11.
\textsuperscript{119} Colchuck, Eightmile, Upper and Lower Snow, Nada, Upper Kionaqua, and Square Lakes.
\textsuperscript{120} https://fortress.wa.gov/ecy/publications/documents/1512006.pdf, p. 11.
\textsuperscript{121} More information is posted at the Icicle Work Group website:

http://www.co.chelan.wa.us/natural-resources/pages/icicle-work-group

OCR: Last Ten Years Power Consulting Inc. December 3, 2016 30 | Page
March 2019
III. The Effectiveness of Water Conservation in Meeting Water Needs

In the first few pages of the 2015 "Columbia River Basin Water Supply Inventory Report" to the Washington Legislature, OCR presents water conservation as though it has no clear beneficial use. Although the report goes on to detail that there are clear, large, and real benefits from water conservation, water conservation is initially presented as a lesson to which OCR has learned not to pay attention.

OCR begins its discussion of "lessons learned" "since OCR's inception" that now "shape the way [OCR] allocate[s] funds and prioritize[s] our efforts" with the assertion that "certain project types, such as water acquisition and storage...more efficiently and reliably provide additional water supply than conservation and efficiency improvements."

This is an important, if disturbing, assertion of bias in favor of those approaches to improving water supply that are the most expensive and pose the greatest likelihood of significant and permanent environmental damage: large reservoirs that capture and store water from natural waterways. Since OCR's 2015 report to the legislature on its success at developing water supply over the last decade and its projections of water supply it expects to develop in the near future heavily depends on reservoir storage, it is important to understand the misleading character of OCR's asserted "lesson learned" that water conservation is largely ineffective in improving the delivery of the services of water to agriculture, cities, and businesses.

Page 2 of the "2015 Columbia River Basin Water Supply Inventory Report" presents the following figure.

---

122 Page 8 shows 10,000 AF of conservation savings from the Odessa Subarea Groundwater Replacement Program and page 12 shows 3,476 AF of Irrigation Efficiency conservation that has already taken place.
The figure above is presented by OCR to show that there are only very small benefits from water conservation when that conservation is associated with the more efficient application of water to crops. This figure is described by OCR in the following manner:

Conservation projects, which are abundant on our project inventory lists, are often suggested as a way to make more water available for instream flow and other uses. Despite the presumed benefits, increasing irrigation efficiency does not readily translate to water supply made available for new allocation. While these projects can provide valuable benefits to streamflows supporting aquatic species and habitat, implementation of these projects generally does not yield enough benefits to achieve out-of-stream goals. The amount of water used consumptively by crops remains essentially constant throughout a range of application efficiencies. In some instances, enhanced water use efficiency results in higher consumptive use by crops and less water being available in stream.

As depicted in the [illustration above], water conserved through increased efficiency generally would have returned to the water body as "return flow", and would not have been used consumptively by the crops. However, as OCR attempts to allocate new sources of water, we cannot use these return flow portions, because it will actually reduce streamflow in areas downstream from the historic return flow location. (Page 2.)

There are two very important pieces to this ORC argument about the ineffectiveness of water conservation in enhancing water supply that have to be critically analyzed:

i. A distinction must be made about different types of water conservation efforts. In this OCR description of the lessons it has learned, ORC used the phrase "water conservation" only to refer to applying the appropriate amount of water to crops. But, as OCR knows, this is just one type of water conservation. ORC’s own water conservation projects have indeed been among the most important means by which the Columbia Basin has been able to allocate more water to new/current users. Water conservation includes, and has been highly effective in, lining irrigation ditches or replacing them with piping in the Columbia Basin. Because of these projects that discourage seepage from the different canals and conduits, the Columbia Basin as a whole has far more water than otherwise would be available to irrigate crops. This is important because the OCR quote presented above seems to dismiss all forms water conservation using an example of one type of water conservation. Clearly OCR cannot mean all conservation projects are ineffective since conservation projects that reduce the loss of water in the transportation of water from large bodies of water (like the Columbia or numerous reservoirs) have been shown to be highly effective in providing additional supplies of water to the farmers who use the water. OCR’s "lesson learned" and its accompanying "teaching aid" are not about water conservation generally but about the efficiency with which water is applied to crops, avoiding wasteful over-watering of crops.
OCR's discussion of the impact of improved irrigation efficiency is misleading. It ignores the instream benefit that is shown in the OCR figure, a benefit that should not be dismissed. Although keeping instream flows at levels sufficient to maintain healthy rivers and fish population may not directly provide more water for irrigation and other off-stream uses, in the situation depicted in the OCR figure, the instream benefits are clearly obtained without any loss in crop production. Assuming that the crops receive enough water, as they do in this figure, then the enhanced instream benefits at the point of diversion would certainly provide some justification for the water conservation measures as it is applied to the crops. Since the damage to riverine ecosystems caused by low stream flows due to the diversion of river water to irrigate crops often leads to the search for additional water sources to enhance instream flows, improved crop watering efficiency that reduces the decline in stream flows at diversion points can indirectly reduce the need to find other water sources to supplement the low stream flows. Efforts to supplement instream flows can reduce the water flows available for out-of-stream uses.

However, the OCR’s figure depicting the impact of improved efficiency in applying water to crops is inaccurate. In the “Columbia Basin Project Coordinated Water Conservation Plan-Final Draft,” 17 percent of the water not used by the plants that seeps into the ground is lost to “deep groundwater systems, evaporation, and evapotranspiration.” This loss of water due to over-watering that seeps into the ground or is absorbed into the air clearly shows that the OCR figure that is presented above is not representative of the actual hydrology. The right-hand figure (after conservation) would remain the same. But the left-hand figure (before conservation) would have 17 percent of the 20 percent return flow (3.4 percent) lost to deep groundwater systems, evaporation, and evapotranspiration. It is possible that some of the water that makes it into the deep groundwater systems could, at a cost, be returned through groundwater pumping, but the portion lost to evaporation and evapotranspiration would be gone forever. Even if the water can be pumped from the deep groundwater system, it is unclear who would benefit from this water. A careful understanding of where the water goes before it is in the deep groundwater system would need to be better understood. In addition, OCR has not used updated crop water requirements. The Washington Irrigation Guide (WIG) is the standard in Washington State for estimating crop water needs, but the guide has not been revised since 1997.

Water conservation is a very real and reliable strategy that has been proven to provide more water to the Columbia Basin Water Inventory. Conservation should not be dismissed as ineffective. Discouraging water conservation, as the above figure and quoted language does, can only harm efforts to cost-effectively provide more water to the farmers of the Columbia Basin. Providing a simplistic figure and language that discourages conservation will lead to less water available for other farmers to use and less water available in the streams that are adjacent to each farm. Indeed, conservation, including improved application of water to plants, is important in developing water supply.

---

126 http://www.ecy.wa.gov/programs/wr/wig/wig.html
OCR has also supported the “Columbia Basin Project Coordinated Water Conservation Plan” which was developed by the three Columbia Basin Project irrigation districts. The goal of this project was to identify water conservation projects that would allow additional acreage to be served without disrupting the water supply of existing acreage while also not increasing the withdrawals of water from the Columbia River. The water saved by this coordinated water conservation effort “would be available as a replacement water supply for groundwater deliveries in the Odessa Subarea, environmental uses, and municipal and industrial water supply.”

Note OCR’s direct assertions that these conservation efforts would make water supply available for out-of-stream uses such as crop irrigation and water supplies to municipalities and industrial operations. Also, note the recognition that low stream flows can require the diversion of water from out-of-stream use to instream flows.

OCR estimates that 18,267 acre-feet of water savings were generated by the Coordinated Water Conservation efforts between 2009 and 2012, “freeing up enough water to irrigate almost 6,100 acres of land.” “The project allows OCR to begin replacing some groundwater water rights with surface water rights in the Odessa Subarea, immediately…” The OCR list of developed water projects between 2006 and 2016, lists the Columbia Basin Irrigation District Piping of open water canals as resulting in the saving of 33,822 acre-feet of water for other uses. That was the third largest of the OCR’s list of developed water supply projects. Only the Odessa Subarea Groundwater Replacement Project (164,000 acre-feet) and the Lake Roosevelt Incremental Storage Releases Project (132,500 acre feet) provided larger developed water supplies.

Given these OCR-documented water conservation programs’ support for out-of-stream water uses, the OCR’s report of the negative “lessons learned” about the effectiveness of water conservation in its 2015 Columbia River Basin Water Supply Inventory Report to the Legislature is incomprehensible.

IV. Conclusions on OCR’s Last Ten Years

The above analysis of OCR provides a critical overview of OCR’s expenditures since its creation. That critical overview raises serious concerns about the actual accomplishments of OCR and the economic rationality of the projects that OCR has supported with its expenditures. The overall conclusion from the above analysis is: The Washington State Legislature should provide no additional funding to OCR until a performance audit on OCR is prepared for the Legislature.

The more detailed conclusions drawn from the above analysis include the following:

128 http://www.ecy.wa.gov/programs/wr/cwp/CBID.html
a. A significant amount of the approximately 400,000 acre-feet of water that the Office of Columbia River (OCR) reports as having been "developed" during the first decade of OCR's operations is not from "new" water supply production. For example, as explained in OCR’s 2008 Columbia River Basin Water Supply Inventory Report, "On March 20, 2008, Governor Chris Gregoire signed legislation that will provide for the release the largest delivery (132,500 acre-feet) of new water to towns and farms in the Columbia Basin, and for endangered salmon, in three decades. New withdrawals from Lake Roosevelt, behind Grand Coulee Dam, are expected to begin in 2009." In other words, OCR merely arranged to withdraw more water from the existing Lake Roosevelt reservoir.

b. The approximately 400,000 acre-feet of water that the Office of Columbia River (OCR) reports as having been "developed" during the first decade of OCR's operations is, for the most part, not water that currently has been put to productive use. For instance, 194,000 acre feet of "developed" water currently stored in Lake Roosevelt behind Grand Coulee Dam has been authorized to be delivered to the Odessa Subarea to replace failing groundwater sources currently being used for irrigation. However, that Columbia River surface water cannot be delivered to those croplands until major additional investments are made in expanding the capacity of the East Low Canal and its associated facilities and to fund and build the delivery systems to carry the water from the canal to the croplands. As a result, as of mid-July, 2016, over 95 percent of the "developed" water that is supposed to be replacing groundwater pumping in the Odessa Subarea has not been delivered to those lands. According to the Bureau of Reclamation (BOR), the original Columbia Basin Project authorized delivery of Lake Roosevelt water to the Odessa Subarea in 1943. For much of that land, the cost of delivering that water has continued to prevent the use of Columbia River surface water to irrigate those lands. Of the 90,000 acres of Odessa Subarea land where Columbia River surface water is supposed to displace deep groundwater pumping, such displacement has taken place on only 2,000 to 3,000 acres of land as of mid-July 2016.

And, despite OCR spending nearly $200 million of state funds, no new major storage projects have been constructed within the Yakima Basin to provide new water supplies.

c. There are hundreds of millions of additional taxpayers' investment dollars that will have to be made over the next decade or more before all of that OCR "developed" water is actually put to productive use. Some combination of funding from Washington State taxpayers, the irrigated farms and municipalities that are beneficiaries, and the federal government will have to be put together before this water is actually "developed" in the sense of being put to productive use. A funding plan for completing this first decade of OCR water "development" has not yet been developed.

d. Listing water as “developed” when financing has not been arranged to put that water to use exaggerates OCR’s accomplishments and understates the costly taxpayer investments that will be required to put that water to use.

e. The OCR and BOR funded Yakima Plan is based on speculative fish production benefits to justify funding large and expensive surface water storage facilities. Ninety-six percent of the water to be developed in the OCR “near-term” (2015-2019) water projects are located in the Yakima River Basin and 47 percent of the water from “long-term” development projects (2019+) are also located there. The Yakima Plan lays out a thirty-year vision to develop approximately 500,000 acre-feet of water. As the OCR and BOR calculate the benefits of this 30-year water development project, about 85-90 percent of the benefits of the Yakima Plan are dependent on projected enhanced salmon populations. Only 5 to 10 percent of the benefits are associated with irrigated agriculture. Improved municipal water supplies would be the source of 2 to 3 percent of the benefits.

f. Doing an aggregate benefit-cost analysis on the Yakima Plan as the OCR and BOR chose to do hides projects that generate major net costs among those that generate net benefits. The benefit-cost analysis paid for by OCR-BOR found that even under the worst-case scenario the benefits of all of the projects associated with the Yakima Plan generate net benefits of $1.8 billion with a benefit-cost ratio of 1.4. The Washington Legislature in 2013 was not satisfied with the OCR-BOR aggregate benefit-cost analysis and ordered the Washington State Water Research Center (WRC) to do a benefit-cost analysis of each of the component projects within the Yakima Plan. That is a more appropriate use of benefit-cost analysis since it prevents economically very productive projects with very high benefits and very low costs from being used to justify economically irrational projects that have low benefits and high costs.

g. To economically justify large Yakima Basin surface storage projects, the enhanced instream flows facilitated by those surface water storage projects would have to be implausibly effective at increasing salmon production and/or the incremental salmon production would have to be assigned indefensibly high economic values. The WRC benefit-cost analysis mandated by the Washington Legislature concluded that none of the OCR larger surface water storage projects in the Yakima Basin could be justified on the basis of the irrigated agriculture and municipal water supply benefits. This includes the combined Kachess Drought Relief Pumping Plant and the related Keechelus-to-Kachess Conveyance. That water conveyance project is needed to make the drought relief pumping from the Kachess Lake’s inactive storage viable. The WRC benefit-cost analysis also concluded that neither the Wymer Dam and Reservoir nor a new Bumping Lake Dam could be economically justified on the basis of irrigation and municipal water benefits.

The WRC estimated the fish-production value of those enhanced in-stream flows to be far too small when combined with irrigation and municipal water benefits to justify the cost of building of those surface water storage facilities.

h. In addition, within the Yakima Basin, it would be far less costly to provide the planned enhanced in-stream flows by the buying water rights to divert water flows
to out-of-stream uses and leaving the water in the rivers rather than building new or expanded large surface water storage facilities. Diverting water from out-of-stream uses to in-stream uses would cost a fraction, 4 to 33 percent, of the in-stream-flows' share of the costs of building the surface water storage facilities. Stated differently, in order to economically justify the overall Yakima Project, OCR-BOR had to assume the fish-production value of the water was so much higher than the agricultural and municipal water values (at least 3 to 25 times higher) that it does not make economic sense to use that water for agricultural and municipal uses. It should be devoted instead to fish production via in-stream flows. If that assumption is abandoned, then the Yakima Plan no longer is economically rational nor are most of its component parts.

i. The proposed surface water storage projects OCR envisions being carried out in the Yakima Basin over the next three decades would be very expensive to Washington State and its citizens, costing Washington taxpayers as much as $2 billion. OCR's projection of the costs of pursuing this additional surface water storage increases substantially as one moves from the first decade of the Yakima Plan to the second decade. In the first decade (2013-2023), the projected surface water storage costs are about $414 million. In the second decade, the surface water storage investment costs will rise to just over a billion dollars, a 140 percent increase. In the third decade the capital investments in surface water storage will be approximated one billion dollars more. Over the three decades $2.4 billion will be spent on surface water storage by the Yakima Plan. If, as the 2006 ORC legislation requires, the state will cover about half of the costs of the total plan, this represent very substantial future financial obligation for the State of Washington, including at least $1.2 billion, just for surface water storage.

In addition, as the Yakima Plan is implemented, BOR and OCR intend to conduct appraisals and, potentially, feasibility-level studies on other water supply enhancements, including the potential for an inter-basin transfers from the Columbia River. A presentation was made to the Yakima Workgroup on November 8, 2009, on pumping Columbia River water into a new Wymer dam has been proposed. A presentation was made to the Yakima Workgroup on November 8, 2009, on pumping Columbia River water into a new Selah Creek dam. None of these proposals are included in the costs of the Yakima Plan.

Of course, surface storage of water is just one of the elements of the Yakima Plan. In the Initial Development Phase, the cost of surface water storage was about $414 million. The total cost of all of the elements of the Yakima Plan in that decade was projected to be $697 million, over twice as high. For the second and third decades, the total costs are 50 to 60 percent higher than the surface water storage investment costs alone. The whole of the “Initial Development Phase” of the Yakima Plan, the first decade, 2013-2023, on which ORC is currently working, is projected to cost almost $900 million, while the cost over thirty years would be $4 billion, up to half of which may be a state obligation. See Table 5 below.

---

### Table 5.
Estimated Costs of Implementing the Yakima Integrated Plan

<table>
<thead>
<tr>
<th>Integrated Plan Element</th>
<th>Initial Development Phase 2013-2023</th>
<th>Intermediate Development Phase 2023-2033</th>
<th>Final Development Phase 2033-2043</th>
<th>Full Development Costs 2013-2043</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface Water Storage</td>
<td>$413,900,000</td>
<td>$1,003,600,000</td>
<td>$999,000,000</td>
<td>$2,416,500,000</td>
</tr>
<tr>
<td>Total for All Elements</td>
<td>$896,900,000</td>
<td>$1,572,050,000</td>
<td>$1,542,250,000</td>
<td>$4,011,200,000</td>
</tr>
</tbody>
</table>


j. The proposals to actively manipulate the level of many lakes in the Alpine Lakes Wilderness through the construction of new dams, modification of other dams, and installation of mechanical and motorized equipment within a well-known and spectacular National Wilderness Area need critical economic scrutiny. At the very least, the legislature should require a clear and convincing showing that each of these proposed activities within the Alpine Lakes Wilderness has benefits exceeding costs and, given the unavoidable environmental costs, that the problems of water supply in the Wenatchee River Basin cannot be solved by aggressive water conservation plans throughout that water basin and the expansion of regional water markets that encourage the selling and trading of water rights so that existing water can voluntarily move from lower to higher valued uses. New commercial intrusions into the Alpine Lakes Wilderness and the commercial manipulation of the water levels in these wilderness lakes are unlikely to be economically justifiable.

k. OCR’s 2105 Columbia Basin Water Supply Inventory Report begins with an explicit criticism of the efficacy of water conservation efforts and an argument in support of giving priority to investments in surface water storage, the most expensive elements of the OCR’s plans. OCR’s critique of the efficacy of water conservation compared to building surface water storage facilities is misleading in several ways.

i. OCR’s critique equates water conservation with improvements in the efficiency with which water is applied to crops. There are many other important types of water conservation besides improving the efficiency of irrigating crops.

ii. Even in the context of efficiency in the amount of water applied to crops, that improved efficiency can moderate the impact of irrigation on in-stream flows at the points of diversion. It can also reduce the loss of water to evaporation, evapotranspiration, and deep water aquifers.

iii. Low in-stream flows due to irrigation withdrawals often lead to efforts to enhance the in-stream flows by building more surface storage to be used to maintain in-stream flows. For instance, about half of the planned surface water stored by the proposed Wymer Dam and Reservoir would be used to enhance in-stream flows rather than delivering water to out-of-stream uses like irrigation.
iv. OCR's own analysis of a broad range of water conservation projects demonstrates that water conservation can provide water of out-of-stream uses in a cost-effective manner.

I. Over the past 10 years, the OCR has wasted millions of dollars on new dam studies that are uneconomical with adverse environmental impacts.
Bibliography


[EXTERNAL] Comments about the 2018 KDRPP and KKC SDEIS (Lake Kachess)
1 message

roniaspamonia@gmail.com <roniaspamonia@gmail.com> Tue, Jul 10, 2018 at 4:01 PM
To: kkbtl.usbr.gov
Cc: Christine Johnson <christine@wreservices.com>, Terry Montoya <terry.montoya@comcast.net>,
chris@friendsofbumpinglake.org, ncccinfo@northcascades.org, alpinelakes.info@gmail.com,
trolfe@celp.org, bpowers@snoqualmierpassfirerescue.org, roniaspamonia@gmail.com, "Campbell,
William H" <bill_campbell@unc.edu>

Candance McKinley
Environmental Program Manager
Bureau of Reclamation
1917 Marsh Road,
Yakima, WA 98901-2058

Dear Ms. McKinley,

Please find attached our comments concerning the Kachess Drought Relief Pumping Plant
(KDRPP) and Keechelus to Kachess Conveyance (KKC) Supplemental Draft Environmental Impact
Statement (SDEIS). Accompanying that letter and considered a part of our 2018 comments are
attached five additional letters of comment and concern from 2015.

We look forward to working with you to protect Lake Kachess--a wonderful, natural lake in our State
of Washington.

Sincerely,

Ann Lewis

6 attachments
July 10, 2018

Submitted via email to kkb@usbr.gov

Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 Marsh Road  
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley:

We are submitting comments on the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13, 2018.

Attached are prior comments by Alpine Lakes Protection Society, Sierra Club, Wise Use Movement and North Cascades Conservation Council and a letter by the Kittitas County Fire District #8 about the KDRPP and KKC initial Draft Environmental Impact Statement (DEIS), dated January 9, 2015. These comments and concerns are hereby included in our 2018 comments.

All comments are submitted under both NEPA and SEPA.

Comments

1) **Alternative 1 No Action** We oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

2) **The Yakima Plan programmatic FEIS failed to provide a range of alternatives.** The only alternatives presented were the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

3) **Failure to comply with NEPA requirement for consideration of alternatives.** The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.
The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-1, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they in fact one alternative…extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

We have previously noted this deficiency in the 2015 DEIS, and repeat it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.
We ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given…including data, references, and review procedures…for excluding each alternative.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

4) **Involve all affected native tribes** The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and they be brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final EIS and/or ROD? Also, please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

5) **Impact on Campers at Lake Kachess** The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend…June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

6) **Impossible to Evaluate** The SDEIS presents four construction projects, the tunnel and three different pumping plants. The plans shown are very rudimentary and conceptual only. The
locations are only general, indicating that little or no on-site investigation or detailed design has been carried out. In these circumstances it is impossible to evaluate what if any environmental impacts may result from the construction and subsequent operation of the proposed facilities. Please provide detailed designs for both the KDRPP and KKC in a subsequent SDEIS.

7) **Water Deficit and Water Rights Mitigation** When the pumping plant withdraws an additional 200,000 acre-feet from Lake Kachess, lowering the lake level 80 feet below the gravity spillway, how and when will the water be replaced? Lake Kachess normally receives 213,398 acre-feet of water from the catchment basin. This water is allocated to various water right holders. So, when additional water is withdrawn for drought relief there will be a deficit of as much as 413,398 acre-feet. Should the next year be an average year, there will only be 213,398 acre-feet of precipitation in the catchment basin to replace the deficit. It will be necessary to run the pumps to deliver most of the normal allocation from the lake below the level of the gravity spillway. After the drought of 2001 when Lake Kachess was drawn down to normal low pool at the level of the gravity spillway, it took eight years to again reach full pool elevation. And that was without drawing down another 80 feet by pumping out 200,000 acre-feet from the natural lake (inaccurately named inactive storage). Do Reclamation and Ecology have any plans on managing the water resources in the entire Yakima River Basin to replace this deficit? The SDEIS doesn’t mention them. Will the junior water right holder be allocated less than 100% of their allocation in order to “repay” the 200,000 acre-feet they borrowed during the drought? The SDEIS doesn’t say. A subsequent SDEIS is required to provide detailed answers to these questions.

8) **Objectivity vs “Suggestion”** *Executive Summary, page ES-v* The SDEIS asserts the presence of a “value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a “suggestion”, brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,’ including the methods, data, and conclusions implied by the inadequate and confusing term “suggestions.”

9) **Funding ambiguity requires another SDEIS** *Page ES-viii and Page 1.11* Page 1-11, Table 1-1, indicates the Role and Responsibility of the Department of Ecology, as an agency of the State of Washington is to provide “potential funding of the selected alternatives.” This apparently refers to the passage of Senate Bill 2SSB(5367) Sec. 11 (1)(a) in 2013 which indicates the State of Washington will pay up to one-half of the project costs from additional tax or revenue resources that would have to be identified at a future time. The SDEIS implies the Department of Ecology will fund the project from its annual budget. That is not correct; it is clear any funding of the project will require Washington State taxpayers to come up with not more than 50% of the plan from funds that have neither been identified or appropriated. The statement should read “Washington taxpayers may be required to fund not more than 50% of the plan from funds not currently available.” The preface to the SDEIS states the Department’ of Ecology's purpose is to protect and preserve the environment. To suggest it now has a “purpose” to spend unappropriated funds is hyperbole, at best, and
deception at worst. We ask that the statement be corrected, to indicate that Washington State taxpayers are not currently obligated to pay for any part of the plan, but may in the future be obligated to fund up to 50% of the plan.

Also, the Dept of Ecology has for the past 10 years, continuing in the current biennial budget, been expending funds for design, review, promotion, communication, and development of the YBIP, primarily under contract with BoR. Since 2015, or before, substantial state funds have been expended on the KDRPP-FPP. We ask that these funds be included in any representation of the costs of KDRPP-FPP. Any representation of the cost of KDRPP-FPP, without these tax funds included, understates the true costs of this project to taxpayers and participating entities.

With regard to funding of the yet-to-be-selected alternative, Table 1-1 further confuses the matter by indicating it is a Role and Responsibility of the Bureau of Reclamation to provide potential funding of the selected alternative. There is no reference to a legislative or executive action that would make this statement true. If there is a commitment by the federal government, in the form of either authorized or appropriated funds, to make this statement true, it must be included in the SDEIS. We ask that any passed...not contemplated, pending, or speculative...federal, state, or regulation that commits federal funding through the Bureau of Reclamation be identified in a subsequent SDEIS.

To further confuse the matter, Page 1-11 states: "For full implementation of the selected alternative, Roza proposes to fund, design, construct, operate, and maintain a pumping plant at Kachess Reservoir." There is no legally binding legislative, contractual, public statement, or other documentation that would prove this statement to be true. We ask that whatever obligatory documentation from Roza that exists be provided to allow citizens to assess the legitimacy of this statement, and that this be provided in a future SDEIS.

In summary, the funding of the "selected alternative" is a collection of speculative obligations that may or may not commit State of Washington citizens, Roza farmers, and/or U.S. citizens to all or a portion of the selected alternative. This confusion and obfuscation is unacceptable. We ask that the actual amounts of funding obligation by all entities be revealed for public review, and this be provided in a future SDEIS.

10) Change in Scope Page ES-viii The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to
citizens’ understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

11) **Impact on private wells**  
**Page ES-xi**  
The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final EIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FEIS or ROD.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated.

12) **Lack of communication to the affected public**  
**Page ES-xiii**  
The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement that most affected individuals come from the Seattle area, it is clear the NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. A subsequent SDEIS must be published with accompanying public comment period and the public informed. Please develop, describe, distribute for comment, and implement a “public communications...
strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

13) **Misrepresentation of Lake Kachess**  Chapter 1, Section 1.2 The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7.

14) **Who will be responsible for costs, implementation and operation?**  Chapter 1, Table 1-1 on page 1-11 This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate...etc....the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final EIS and/or ROD be issued. We ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP-FPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entitles.

15) **Misrepresentation about the Teanaway Community Forest**  Chapter 1, Section 1.8.2 on Page 1-18 The terms and conditions of the purchase of the Teanaway Property (TCF) is misrepresented with regard to its relationship to KDRPP-FPP and does so in a way that introduces extreme bias in favor of the project proponents. Page 1-18 indicates 214,000 acre-feet of additional water supply must be in place by 2025, and if not the Board of Natural Resources is authorized to transfer the TCF to the common school trust and manage it for the beneficiaries of the trust.
The proponents of KDRPP-FPP make public representations that this means, unless their project is implemented, the TCF will be sold, clear-cut for timber revenue, and the property lost forever for recreation purposes. Simply stated, that is not true. The terms of the TCF do not require the property be reverted to the educational trust; that is only one alternative provided among many. *(See RCW 90.38.130 Authorization to purchase land—management and disposal of land)* Other options include continued management of the property for recreation, maintaining wildlife habitat, implementing conservation projects, and other beneficial purposes.

In fact, the only obligation is that a report be submitted indicating what progress has been achieved toward the milestone and requiring submission of a new plan if the milestone is not achieved. This can continue until the year 2045. It further states the milestone can be achieved through any of a combination of methods: conservation, improved management techniques, water marketing strategies, storage, and others. In fact, the report is required to state how much “net increase in available water” (the correct term, not “additional water supply” as stated in the SDEIS which implies all milestone water must be from storage). To date, the SDEIS claims 124,131 acre-feet of net increase in water due to conservation, and in the past has claimed as much as 300,000 acre-feet in future conservation savings. This would more than fulfill the 214,000 acre-feet milestone, were the planned conservation projects fully implemented.

Finally, if the very unlikely possibility of a reversion to trust fund management and clearcutting is selectively highlighted in the SDEIS, then the far more likely alternatives should be given equal space. After a decade of public recreation use, with untold thousands of new citizen-recreationists advocating for the Teanaway as a new resource, and an army of volunteer citizens and organizations upgrading the Teanaway, the public backlash against clearcutting would be overwhelming. With its misrepresentation of the Teanaway Purchase, the SDEIS has veered into a political speculation that is both inappropriate and inaccurate. However, given that SDEIS has now opened the door, in a subsequent SDEIS it must clarify, correct, and accurately inform the public of what is, and is not, required and implied by the Teanaway Purchase. We ask that this be done not only in a future SDEIS, but in all communication about the relationship between Teanaway and KDRPP-FPP, or any other element of YBIP. In addition, we asked that a notification of clarification be immediately issued stating that based on current and future water conservation savings, it is anticipated that the obligations under RCW 90.38.130 will be met with no additional water needed from the YBIP projects.

16) **Accurate Cost Estimate Chapter 2, Sections 2.7**  The statement of budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The “estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the “proposed option” it will be the focus of this comment (however these comments apply equally to the other alternatives). An “estimate” that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.
as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitonal Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final EIS and/or ROD is released.

17) **Accurate view of exposed shoreline Chapter 2, Section 2.10** Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS (Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.
18) **Fish Passage** The Yakima Plan envisions seven components for improvements in the Yakima River basin. The SDEIS ignores two very relevant ones: Reservoir Fish Passage and Enhanced Water Conservation. The initial DEIS in 2015 recognized that anadromous fish (salmon) were present in natural glacial lakes Keechelus and Kachess prior to construction of irrigation control structures, dams and spillways, in the early twentieth century. Why aren’t there any plans for enhanced fish passage at either Lake Kachess or Lake Keechelus included in either the DEIS or the SDEIS?

When Fish Passage is finally provided for Lake Kachess and the inactive storage water is pumped out, lowering the lake level behind the dam, how will the migrating salmon coming up the fish passage get down to the lower lake level?

19) **Bull Trout Chapter 2, Section 2.10 and elsewhere in the SDEIS** The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump…and therefore the channel...will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrow” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will
not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

We ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final EIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements?

20) **USFWS BiOp**  It is known that the USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts. That BiOp is not expected to be published until sometime in the fall of 2018. We request that another SDEIS be produced after said BiOp is published as it could impact the entire watershed including the necessity for the projects named in the current SDEIS for Kachess.

21) **Increased forest vulnerability and Fire Hazard.** The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final EIS or ROD.
22) Impact to private property  The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences…etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily numbers 300 homesites, far more than would be inferred from the term “several.” The systematic bias against representing impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. We ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

23) Impact to private property  BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn’t notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view…but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts…” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!
The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. We demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final EIS or ROD is issued.

24) **Impact on Senior Water Rights**  How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? We request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments.

25) **Drought Definition**  Who will define the 70% of prorated water? What unbiased, independent, non-irrigation-district expert or organization will make that determination? Page 2-6 of the SDEIS says, “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.” Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)? Why would the pump be used in following years “as the reservoir refills to a level above the existing gravity outlet?” Would that not prevent or delay refill?

26) **New Water Rights**  Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan. How will new water rights be issued? To whom?

27) **Water Conservation and Market Reallocation**  Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.
28) **Noise** Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA. What is the expected noise level in dBA at 100 feet from the pumps? At 1000 feet? Will the pumps be running 24/7 once they start running?

29) **KKC tunnel material** 115,000 cubic yards of KKC tunnel excavated material comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off. Where will the 115,000 cubic yards of KKC tunnel material be deposited? What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?

30) **Turbidity** P2-68 notes all action alternatives will result in localized short-term exceedance of turbidity standard. Define the degree of turbidity exceedance and the effect it will have on native fish populations.

31) **Permanent Habitat Loss** P2-71 notes permanent habitat loss with the preferred alternative. Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species.

32) **Decreased Recreation Desirability** P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ” Quantify the economic impact of the decreased recreation desirability. Under what authority are established SIL/VOQ permitted to be violated?

33) **Purchase of private property** P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot. There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased? These additional costs should be included in the SDEIS Alternatives. A revised SDEIS is warranted.

34) **Water Impairment** P3-29, 3-45: both Keechelus and Kachess are listed as “category 5” water impairment because of PCB contamination. In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination. Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

35) **Water Filtering** How will the water from Keechelus be moved to Kachess? What kind of filtration system will be installed to prevent any I-90 pollutants in Lake Keechelus from being transferred to Lake Kachess? If any hydraulic equipment is used, how will any PAH be kept from entering Lake Kachess?

36) **Lake Drainage during construction** The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the
“flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Kachess Community Association  
Christine Johnson, President  
Christine@WREServices.com  
40 Mountain View Lane  
Easton, WA 98925

East Kachess Homeowner’s Association  
Gordon Brandt, President  
6100 Kachess Dam Road  
Easton WA 98925

Kachess Ridge Maintenance Association  
Terry Montoya, President  
terry.montoya@comcast.net  
PO Box 93  
Easton WA 98925

Friends of Bumping Lake  
Chris Maykut, President  
chris@friendsofbumpinglake.org

North Cascades Conservation Council  
Tom Hammond, President  
ncccinfo@northcascades.org

Alpine Lakes Protection Society

Rick McGuire, President  
alpinelakes.info@gmail.com

Center for Environmental Law Policy (CELP)  
Trish Rolfe, Executive Director,  
trolfe@celp.org  
85 S Washington St., Suite 301  
Seattle, WA 98104

Snoqualmie Pass Fire and Rescue,  
Board of Commissioners  
William J. Powers, President  
bpowers@snoqualmiefirerescue.org  
1211 State Route 906  
Snoqualmie Pass, Kittitas County, WA 98068-0099

Yakima Coalition  
Co-Chairs Ann Lewis, Bill Campbell, and Chris Maykut  
Ann Lewis, roniaspamonia@gmail.com  
86-157th Ave SE, Bellevue, WA 98008  
Bill Campbell, bill_campbell@unc.edu  
31 Brookside Ct., Easton, WA 98925  
Chris Maykut,  
chris@friendsofbumpinglake.org

Attachments
cc: elected officials
We emphatically vote for alternative one -no action

Sent from my iPhone
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Hannah Cooley

Sent from Yahoo Mail on Android
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Sarah Dunkel
[EXTERNAL] Question about SDEIS
1 message

Jean/Tim Fountain <kachess385@gmail.com> Sat, Apr 28, 2018 at 3:30 PM
To: kkbt@usbr.gov

I have questions about the THE SUPPLEMENTAL DRAFT ENVIRONMENTAL IMPACT STATEMENT for the proposed KACHESS DROUGHT RELIEF PUMPING PLANT.

1. Why do you refer to LAKE KACHESS as Kachess Reservoir???

2. How much is this project going to cost the small farmers???

3. Are the small farmers willing to spend their hard earned money on this project when know one knows if it is going to work???

4. What is the lake level that a fire truck can get water safely out to fight a fire???

5. Lake Keechelus does not have any private property owners, does not have a state park, is not used by the public like Lake Kachess. Why is it not being considered as an option???

Thank you
Hi Candace,

I have a simple question: Does the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental DRAFT Environmental Impact Statement contain everything or do we need to have the original 2015 DEIS as well? i.e. is the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental DRAFT Environmental Impact Statement complete by itself?

Thanks,

Ann Lewis
Dear Ms. McKinley,

I am writing to express my opposition to the KDRPP/KCC project. I am a Washington resident from Vancouver and I believe that this proposed plan does NOT serve the majority of Washington residents and their interests. The proposed plan risks Bull Run trout habitat for spawning and draining Lake Kachess will irreparably damage current wells. I am also concerned that draining the lake will eliminate recreation ON the lake, but also create a huge mud hole along which many Washington access high alpine wilderness through accessible trails; I would no longer use these trails if I needed to pass along a dirty, smelly and insect laden mud hole!! Finally, it appears that this proposed project will cost Washington taxpayers a huge sum of money; this expensive project serves a small number of farmers, not the global interests of state citizens.

Thank you for considering my thoughts as you deliberate on this proposal.

Sincerely,

Lisa Morrison, MD
Vancouver, WA

Sent from my iPhone
Ms McKinley,

I am a resident of WA and have owned a cabin on Lake Kachess for 29 years. By email, I am saying how STRONGLY opposed I am to this.

Alyxandra hazard

Sent from my iPhone
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Emily Hazard
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Kiefer Hazard, DVM

Sent from my iPad
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,
Morgan Hazard
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Alec Hendren
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Josie Johnson
NICU nurse
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess. I am **strongly opposed** to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS. I am concerned about the endangered bull trout population, as well as the cost vs. benefit of this plan.

Thank you,
Maggie Halpin
Supplemental Draft Environment Impact Statement (SDEIS) for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) project released for public comment. I have several questions I would like answered.

Why is Lake Keechelus not an Alternative? Lake Keechelus is very shallow at the westerly end of the lakebed. It would be much easier and cost effective to excavate the lakebed to increase the water storage capacity and achieve the additional 200,000 acre feet of water.

What has been done to hold the water that comes from Lake Keechelus? At one of the meetings that I attended it was stated the canals that take water from Lake Keechelus had many leaks have they been fixed?

Has a water market and/or a water bank been created to improve water supply in the Yakima River Basin?

Has anything been done to improve Surface Water Storage?
Build a surface storage facility at Wymer on Lmuma Creek?
Construct a new dam at Bumping Reservoir to increase capacity?
Projects to transfer water from the Columbia River to the Yakima Basin?

What has been done about groundwater Storage?

Have the farmers or Water Districts created any new reservoirs to hold the water that they do receive?

What are the farmers doing to conserve water?

Are ALL the farmers using drip systems now for ALL crops?

Kachess Community has Senior Water rights how is this project effecting our Senior Water Rights?

What is being done to offset the negative impacts on private property?

Who is paying for this project?

Please answer my questions, Thank J P Owens

jpowens99@yahoo.com
253-750-4731

March 2019
Ms. McKinley,

I am a Washington State resident and frequent user of Lake Kachess, by way of email I am strongly opposed to the KDRPP/KKC plans and support the no action alternative as outlined in the current SDEIS.

Thank you,

Kaylin Rostron
Weisman Design Group
971.285.7870
Johnson, Nancy and Joel
K projects Comment via voicemail – 11 a.m., May 30, 2018
Transcribed by KDera, - message at Extension 603.

“Hello. My name is Nancy Johnson and my husband is Joel Johnson. We have a home over in the Easton Area, a cabin home. And, I’m calling to complain about Reclamation taking down Kachess Dam, as far as the water. I grew up in a farm area in the Skaggit Valley, and I know how you can take care of your water system in more of a drip way vs. the massive amount of water they're doing over in Eastern Washington.

“I’m totally against anything of ruining the Kachess Dam. We would also lose the use of the home that we built over there. There are several families in that area that are going to be devastated. There is no excuse of this, absolutely none. I want to leave my name, Nancy Johnson, date of birth, 5/22/61, and we live in Auburn, Washington. We also have a home over in Easton.

“I want my voice heard. You can call me back if you like at (253) 332-6348. Thank you very much.”
[EXTERNAL] Fw: public comment on federal register rights of birds and wildie to have access to water to drink - taking that all away to kill them?

1 message

Jean Public <jeanpublic1@yahoo.com> Fri, Apr 13, 2018 at 10:15 AM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>
Cc: Humanelines <humanelines@hsus.org>, PETA <info@peta.org>, idausa <info@idausa.org>, Cok Info <info@cok.net>, Lohv Info <info@lohv.org>, NYCLASS <info@nyclass.org>, "madraven@gmail.com" <madraven@gmail.com>, Godscreaturesministry Info <info@godscreaturesministry.org>, "AMERICANVOICES@MAIL.HOUSE.GOV" <americanvoices@mail.house.gov>, Pew Trusts <info@pewtrusts.org>, earthjustice <info@earthjustice.org>, SIERRA SIERRA CLUB <information@sierraclub.org>, "scoops@huffpost.com" <scoops@huffpost.com>, "jean.harrison@gmail.com" <jean.harrison@gmail.com>, The Center for Biological Diversity <center@biologicaldiversity.org>, Aplnj Info <info@aplnj.org>

any plans for water alwayshave to make sure that wildlife, birds, reptiles have access to water too. you cannot make this project only for humans. this comment is for the public record. please receipt. jean upbliee jeanpublic1@yahoo.com

Subject: rights of birds and wildie to have access to water to drink - taking that all away to kill them?

Federal Register, Volume 83 Issue 72 (Friday, April 13, 2018)

Federal Register Volume 83, Number 72 (Friday, April 13, 2018)
[Notices]
[Pages 16126-16127]
From the Federal Register Online via the Government Publishing Office
[www.gpo.gov]
[FR Doc No: 2018-07737]

[[Page 16126]]
To: Ms. Candace McKinley, Environmental Program Manager  
Bureau of Reclamation, Columbia-Cascades Area Office  
1917 Marsh Road, Yakima, WA 98901 - 2058

From: James E. Rowe, 14429 SE 260th St., Kent, WA 98042

Reference: Environmental Impact Statement (SDEIS) for the purposed Kachess Drought Relief Pumping (KDRPP) and Keechelus Reservoir to Kachess Reservoir Conveyance (KKC) projects. These projects are components of the Yakima River Basin Integrated Water Resource Management Plan (Integrated Plan). The SDEIS has been prepared jointly by the Bureau of Reclamation and the Washington State Department of (Ecology), Office of Columbia River.

My opinion: We (My family) have close friends who have owned property in Kachess Village for many years. As a result my daughter and her husband built a house there. My wife and daughter are serious naturalists and members of the Audubon Society. I love the peace and quiet as well as the beauty the outdoors offers. We have been “often visitors” to the Lake and its surroundings. It is my opinion that the “No action: alternative one” should be adopted. The possible irreversible negative results of the six action alternatives considered outweigh the benefits and the statistics back up the issues of concern. I feel it is grossly irresponsible to adopt the “rob Peter to pay Paul” solution to resolve the water management issues. As I see it, there are two salient issues here. One is the natural issue of a finite availability of water at any given time and two is an inconsiderate use of the water available. I agree that the issues voiced for the Yakima River Basin are important but they should not overshadow the importance of the problems that could or would be generated by the adoption of any of the six action alternatives considered. In addition there is serious concern for the community’s ability to have an adequate supply of water for wells and to support firefighting demands.

I would like to restate the importance of the fact the greatest possible problems is the possibility that the degree of drawdown in the Reservoirs considered would NEVER be recovered and the statistics back up this concern. The general ecology surrounding the Reservoirs would suffer as a result of the slow recovery. The negative results on recreation and its economy is to be considered. The economic impact on real estate in the area would take a hit. A very important consideration is the quality of life for the people in the area of the Reservoirs. It is as important for them as it is for those people in the Yakima River Basin.

I ask that you also consider cost of the engineering, construction and maintenance of the six action alternatives as well as the ongoing noise of the pumps. Perhaps it is time to “return to the drawing board” on this one.

Thank you for your consideration.

Sincerely, James E. (Jim) Rowe
Ms Candance McKinley
Bureau of Reclamation

Comments on; Kachess Drought Relief Pumping Plant and Kachelus Reservoir-to Kachess Reservoir Conveyance (KDRPP/KKC) Projects Supplemenental Draft Environmental Impact Statement, Kittitas and Yakima Counties, Washington

Dear Ms McKinley

Attached are my comments on this supplemental draft. Please assure me that they will be provided to appropriate staffs. How will I be informed of their responses/explanations?

Sincerely,

Larry Wilson
11701 NE 145th St
Kirkland, WA 98034
425-488-8855
Comments on Supplemental Draft EIS

1) Overall premise throughout Supplemental draft is that periodically a drought year will necessitate implementation of conveyance of water from lake to lake, running pumps, etc. It does not address successive drought years (once Kachess is pumped down and subsequent partial refill). a) What are socioeconomic impacts on downstream irrigators? What is recovery plan by year and multiple years? b) In this scenario what is impact on fish along total course of Yakima river? c) per plan it is projected that drawdown will replenish in 2 to 5 years following a single drought year. Plan does not address replenishment after multiple drought years. What is impact after successive drought years? What is ultimate management recovery plan and duration?

2) page ES-ki "...measures wells...coordinate appropriate mitigation...” a) Specifically what agency does dry well owner appeal to? b) What will be their reaction timing and when will dry well be operational (drilled deeper, or other action)? Is there a firm commitment for resolution? c) Has funding been allocated for drilling deeper well or alternative connections? If so, who controls these funds? The owner of a performing well cannot exist without water, particularly as a victim of action over which he has no control.

3) page ES kiii It is planned for pumps to be electrically powered. a) What is dB from pumps and ventilation fans (p 4-268) themselves, assuming motors are relatively silent? b) Auxiliary power is supplied by diesel engines. When in operation what is dB of these engines? c) Will these run 24 hours a day until grid power is restored?

4) page ES xv Overall plan addresses key issues during construction. These same issues are not addressed once system is operational? Why were these factors omitted?

5) page ES x "...deliver up to 200,00 acre feet...” page 1-1 “active capacity of 239,000 acre feet...” Stated another way, it means that the project will remove 84% of water in Lake Kachess or reducing the lake to 1/6th its present size. This greatly reduces the size of the lake. That 1/6 has a significant psychological effect. What is overall impact on Kachess basin, wildlife, underground water in close proximity of lake and river? During wildfires the lake was been used as resource for dipping water by aerial fire bombers. Such drawdown will prohibit this option. What is alternative water source during fire season?

6) The overall plan seems to be extremely expensive for the benefit derived. a) What other options have been explored and consequently rejected? What criterion was used? Other possible options could include injection wells, dredging Kachelus to increase holding capacity and minor dams, as reservoirs,
on tributary streams, drawing irrigation from Columbia, etc.

7) The plan places extensive interest on fish recovery for migratory fish as well as resident fish. For an integrated/comprehensive plan to succeed what is plans for seals gluttonously feeding at base of Bonneville Dam. What other agencies are you working with to achieve an all encompassing plan? Yes, the overall fish population needs to be enhanced but with seals having a smorgsboard on migrating fish what good does it do to have a great home to live and breed if at the same time the seals are decimating the returning adults. Given enough time we will have a great place for them to live but none will be getting there. (refer to newspaper article attached) Has this big picture been addressed? What action is planned? What other agencies are integrated into this plan?

8) Reference Sibley's Guide to North American Birds, pages 358 to 365 The "Pacific Flyway" straddles Easton and Lake Kachess. Humming birds are plentiful every May on migration north at time of year nectar is abundant. During southern migration the lake level is low and vegetation has dried along shoreline due to moisture absence so insects are not prevalent. This will be aggravated by extensive shoreline enlargement and water level significantly lower. How are birds to obtain nourishment? Humming birds do eat insects by foraging on forest floor but when vegetation is crisp there is an absence of "bugs". When food is absent birds do not exist. Is it anticipated that birds will merely move to other, more nourishing routes? Page 4-125 What is plan for restoring vegetation on 56 acres when construction is completed? Page 4-157 and 175 acknowledge reduction of wetlands and shift in existing wetlands and increased anthropogenic noise both effecting bird habitat.

9) page 4-128 "...future restoration scenarios." Is this effort funded? What is schedule? What are these restoration scenarios?

10) page 4-129 "...loss of zooplanankton" and ...negatively affected..." What is planned mitigation? Schedule? Funding allocated?

11) page 4-131 "Short term exceedance of state surface water quality..." How is this justified? Can state sue for non-compliance?

12) page 4-131 "Most small fish...not occur in deep water..." Study admits to larval stage of some species pass through screen but seldom found at depth when reservoir is full. But when reservoir is drawn down and not fully recharged the following year the larval are no longer 123.75 feet below former surface. This statement exhibits faulty logic. Provide a full explanation of this reasoning.

13) page 4-137 Trout Passage Improvements When upper and lower lake are connected will passage improvements impact boats transiting between lakes?

14) page 4-145 In previous EIS it was stated PCB's are present in Lake Kachellus but not in Lake Kachess. This supplemental EIS acknowledges PCB's in both lakes. What statement is accurate? Regarding transfer of diseases and exotic species what is plan for minimizing this eventuality and potential negative impact if conditions are ignored?

15) page 4-277 "...access...at many other sites on east shore." This statement
needs to be limited in its conclusion. There are no other boat launch sites, and access would only be by cross country trekking on foot, in some cases across private land. This is simply a feel good statement. This needs correction in EIS.

16) Page 4-284 “....would not increase the amount of irrigated land.....” This is contrary to presentation given during public meetings previously where increases in agricultural business were a wonderful situation for Washington state where agriculture generates X revenue already. What constraints exist to curtail additional new land brought under irrigation and consequently requiring more water? Will this additional water be economically affordable to the agricultural community? Otherwise this whole concept, as expensive as it is, is coming to fruition to benefit adventurous land speculators primarily.

17) Pages 4-320, 4-326 and 327 “...engaged an appraiser to study....land value impacts...” It is apparent the study did not observe land value impacts from other areas of lake front properties. For instance, in cases where lake front disappeared or compare lake front to non-lake front in same local, compare values in upstate New York, Minnesota, Michigan and even more closely to Lake Washington. Once lake front property reverts to so called mud flat or steep and inaccessible rocky slopes the value invariably decreases. The reported analysis smacks of seeking an answer that supports a preconceived opinion. This situation needs a more thorough study and perhaps by more than one appraiser. When will it be completed?
Salmon runs may be losing the battle with sea lions

By Philip Watens

The Pioneer

The lowly spring Chinook run is 12 years old for fisheries managers looking at better tools to manage sea lion predation of the once abundant species.

Joe Hymer, a fish biologist with the Washington State Department of Fish and Wildlife, reported that only 101 adult Chinook had been counted at Bonneville Dam through Tuesday, April 10. The last time fisheries workers had seen that low of a run was back in 2005 when just 120 Chinook passed the dam.

That tracks with what they’ve seen this year. Just 25 Chinook had been counted through Sunday, April 1, the third lowest on record since at least 1938. The lowest ever recorded were just 11 fish through April 1, 1969. Last year, the 17 fish that passed the dam comprised the second lowest count through that date.

While all salmon runs fluctuate from year to year, the decline in the Chinook run can be attributed, in part, to the burgeoning population of California and Stellar sea lions below the dam.

In 2002, sea lions ate an estimated 0.4 percent of salmon and steelhead below Bonneville Dam. Thirty sea lions feasted on 1,016 salmon that year. In 2017, the sea lion population had increased while the overall runs have diminished. When the runs are high, as they were in 2015, the number of salmon taken by sea lions also rises. Of the 239,326 salmon/steelhead counted three years ago, sea lions took 13,694 of them.

Another issue is that more and more sea lions throughout the spring Chinook run to scare them away from the areas where the salmon congregate below the dam.

Fisheries agencies have continued on p.10

U.S. Rep. Jaime Herrera Beutler spots sea lions below Bonneville Dam during a media presentation regarding sea lion predation on Wednesday, April 4. Photo by Philip L. Watens

In 2008 – and they keep coming back in numbers ranging from 89 in 2011 to 63 last year.

Fisheries managers have also ramped up efforts to lethally remove more sea lions over the past few years. In 2012, 24 sea lions were trapped and destroyed. In 2016, 54 sea lions were trapped and destroyed. In 2018, 195 sea lions were removed by trapping, marking and releasing the subject animal; observed at Bonneville Dam for five days; been previously observed eating salmon at the dam; and subjected to nonlethal hazing while at the dam.

If those criteria are met, managers then request approval to euthanize an identified sea lion from the National Marine and Atmospheric Administration. Once approved, the specific sea lion must be trapped again before it can be killed.

"They have to be here for at least five days and they have to be observed eating a salmon," said Steve Jeffreys, "We’ve actually marked hundreds of animals here. We started working here in 2005, 2006. Before 2000, very few sea lions had ever been seen up here. There was a big smolt run in the river in 2000 and I think that drew a lot of California sea lions upriver. When the smolt left, a bunch of animals were still looking for food and they came up here and discovered the spring Chinook."

Fisheries agencies have...
Salmon runs...continued from p.1


House Resolution 2083 would "authorize the National Oceanic and Atmospheric Administration (NOAA) to issue one-year permits allowing (the states of) Washington, Oregon, Idaho, the Nez Perce Tribe, the Confederated Tribes of the Umatilla Indian Reservation, the Confederated Tribes of the Warm Springs Reservation of Oregon, the Confederated Tribes and Bands of the Yakama Nation, the Columbia River Inter-Tribal Fish Commission, and the Cowlitz Indian Tribe to kill sea lions in a portion of the Columbia River or certain tributaries in order to protect fish from sea lion predation."

The agencies would be allowed to kill up to 100 sea lions per year. The legislation would also require NOAA to issue or deny a permit within 30 days of application, much faster than the current process. While the bill was approved by the House Committee on Natural Resources (21 ayes, 14 no's) and sent to the full House of Representatives on July 26, 2017.

Rep. Herrera Beutler hosted a media tour on Wednesday, April 4, to put pressure on lawmakers to consider the bill in the House with the hope that passage would prompt the Senate to also approve the legislation. The legislation has garnered the support of the governors of Oregon, Washington and Idaho, the Columbia River Intertribal Fish Commission, state and federal fisheries agencies, and others.

Standing on the shore of Bradford Island below Bonneville Dam, the congresswoman told TV and print journalists that the fisheries managers needed the new tool to address the increasing sea lion predation of salmon runs and the spring Chinook run, in particular.

Shotgun blasts and explosive charges echoed around the members of the media as Herrera Beutler talked about her bill. Sea lions lazily swam a few feet offshore as she spoke, adding a visual footnote to her comments.

Herrera Beutler said some salmon runs face extinction if the sea lion predation isn't curbed — and quickly.

She said opponents to her legislation remain fixed on removing hydroelectric dams as the ultimate solution to protecting and enhancing salmon runs.

"The main argument I've heard is that if you really want to protect the runs, you need to rip out the dams," Herrera Beutler said. "At this point, we mitigate like putting in fish ladders. We do a lot and we should but the next step is dam removal and there are proposals out there to do that which I don't support."

She said she supports the manifold approach to managing the sea lion population and supporting the salmon runs.

"It's not just one thing," she said.

The workers who haze the sea lions get up before dawn to catch the animals before they disperse from their overnight slumber.

Steven Jeffries, fish biologist for Washington State, said hazing works best on new arrivals to the dam.

"It's effective on naïve animals, those that haven't been here very long," he said. "The animals that are habitual here — probably not so much. They recognize the boat. It's a constant battle to outsmart them."

Workers spot sea lions from the roadway which crosses in front of the dam and direct the hazing boat to them. They monitor the three tail races (where water is pouring through the dam) to identify sea lions munching on spring Chinook. A worker with a shotgun shoots at the animals from the dam while boats navigate the waters below.

Three traps are set around the area in front of the dam. Sea lions are individually identified and tagged. Workers remove and euthanize the ones previously identified for removal.

"Some of them have previously been marked so we hot-brand them," Jeffries said. "Some of them have natural marks that are identifiable but the most reliable mark is the hot-brand so they get an individual number. Observers are watching those animals and then identifying them."

March 2019
To take this great recreation area from the hundreds of people using this area every year is a crime. This plan is only to put more money in the pockets of farmers to grow more produce. The big farmers are running the little farmers out of business because the small farmer cannot keep up.

I have a house on the lake in the Lake Kachess Community Assoc. Many of the trees are already dying because of the lack of water since the lake is low. Lake Kachess should not be lowered any more. The pumping plant would take so much water out, it would take the lake years to recover.

And what good would it do the farmers in the following years, when the lake is already so low.

The State park at the end of the lake is very popular and filled every weekend in the summer. It would be severely effected for many years. Even when they lowered the lake to install a boat ramp, it took many years to recover from that.

Please reconsider this proposed Kachess Drought Relief pumping plant, it is an absurd idea.

Thank you, Bonnie Aguilar, Lake Kachess Community Assoc.
Hello;

I am writing, again, to express my disapproval of the proposed Kachess Drought Relief Pumping Plant.

I simply feel that not all constituencies have been assessed nor do I believe that an accurate cost-benefit analysis has been provided.

For the dollars that are considered being expended and for the corresponding benefit, it just does not make sound financial sense.

Nor, have all of the potential ramifications of the proposed been evaluated.

Thank you.

Rob Aigner | SVP & Regional Manager | Harsch Investment Properties
13228 NE 20th Street, Suite 300 | Bellevue, WA 98005
O: 425.974.3200  C: 206.948.0607 | roba@harsch.com
www.harsch.com |
Your plan to pump water from Lake Kachess is foolish… and a huge waste of tax payers money.

How about this………………..

Every spring season millions of acres of water are allowed to run down the Yakima River from the snow melt..!!

Instead why not form another reservoir somewhere near Yakima and capture this water to be used later for irrigation…

Also demand that water users conserve and prove it or they won’t get water..

Mike Canan
Hello,

My family has owned property on Lake Kachess for over 25 years. My greatest memories growing up are of time spent on Lake Kachess. Polar bear jumps in the early spring, kayaking/racing across the great expanse to explore the other side, and basking in the summer sun. This plan to drain Lake Kachess will not only devastate the local ecosystem and drain our natural Lake to historic lows from which it will never recover, but it will also steal the place that has been so meaningful to me and my family, as well as the many other families who live at Lake Kachess.

A couple of additional points I would urge you to consider that have been keeping us up at night for the past couple of years:
- There is no current plan in place to ensure that all residents of Lake Kachess maintain a working well or source of running water. As you are well aware, water is critical to survival and draining Lake Kachess will put our water source at high risk of failing without the ability to recover. I challenge you to consider the extreme, and in many cases impossible financial burden this will put on all residents of Lake Kachess, forcing many to find a new home.
- Every year we face a fire ban due to the areas extreme heat and dry spring-fall. This plan removes our fire department’s readily accessible resources to ensure effective fire prevention and spread in our community. This could have truly epic consequences as we’ve seen more frequently across our beautiful state in recent years.

We must be able to come up with an alternate solution. Without a LONG TERM plan for supporting the farming industry of eastern Washington while global warming is only intensifying droughts, we really have found no solution at all. I plead with you to reconsider this decision, to keep our beautiful natural lake and continue discussing plausible long term options that we could implement in support of everyone’s best interests.

I want to reiterate my petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Please feel free to reach out if you have any additional questions.

Best,

--

Ms Sarah Kitchell
sckitchell@gmail.com
May 30, 2018

Ms. Candace McKinley
Environmental Program Manager
Columbia-Cascades Area Office
Bureau of Reclamation
1917 Marsh Road
Yakima, Washington 98901-2058

RE: Comments on Supplemental Draft Environmental Impact Statement (SDEIS) for the Kachess Drought Relief Pumping Plant (KDRPP)

I have reviewed the SDEIS for the KDRPP. My comments are:

1. The SDEIS was—as these things go—“a pleasure to read.” The writers organized it well and drafted it using active and plain language. Refreshing! Compliments to all who worked on it.

2. The public involvement process for the project was satisfactory. I consider the Upper Kittitas Valley my second home and I had no difficulty following along the proposed project as it has evolved over the years even though I live on the west side. Anyone paying attention to the world around them should have had no difficulty following along and weighing in at appropriate opportunities. People unhappy with the substantive conclusions of the environmental review documents always attack the public involvement process. In this case, there is no merit for doing so.

3. The SDEIS appears essentially complete in terms of examining the various environmental, economic, and social factors that reasonably can be evaluated for a project of this type. I imagine others may fill in minor gaps but I’d be surprised if there were any significant omissions based on the thoroughness of the SDEIS.

4. The 2015 drought was a wake-up call and a “trial run” for the hotter, lower-snow-pack future in store for us due to global warming (“climate change” in the—a hem—“dry” language of the SDEIS). If implemented, the KDRPP will help the Yakima basin and thus Washington State adapt to this future.

5. Based on the analysis of the SDEIS, I strongly support Alternative 4 and the corollary Alternative 5C that includes the Keechelus Reservoir-to-Kachess Reservoir Conveyance. These projects have both the least environmental impacts among the “action alternatives” while also having the lowest lifetime costs.

6. The only concern I have after reading the SDEIS is the ambiguity regarding who will pay for the project. The SDEIS discusses the degree to which Reclamation can assign costs to the proratable entities but there also is reference to Ecology (that is, we Washington taxpayers) paying for a substantial portion of the project. While the proposed project is impressive in that it has the...
potential for increasing the water available for irrigation and water for threatened & endangered fish species in a few reaches of the Yakima watershed, the primary purpose of KDRPP is irrigation. There is nothing wrong with that. But the principal beneficiaries – the proratable entities – should pay the lion’s share of the costs. In a well-regulated free market, they can and should pass those costs on to us consumers. I acknowledge that cost are “to be determined” but I express my preference for an outcome in which the primary beneficiaries pay.

Thank you for your consideration.

Sincerely,

Dennis Clark

PO Box 1381

Anacortes, WA 98221
I would like to register my objections to the KDRPP and KKC projects. We all need to figure out how to manage our water resources in a shared way that is fair to all stakeholders and is economically rational. Spending $500m to pump water from Lake Kachess so that a handful of large farms can irrigate more water intensive crops is not a good solution. We can manage our water needs in a more rational way – by for example shifting to less water intensive crops and investing in water conservation generally.

I admit I am a Lake Kachess property owner so I have concerns specifically about the impact on Lake Kachess, but I am also a tax payer and an environmentalist have those more general concerns as well.

Mark Klebanoff
Hello, I am writing this in response to the comment period for the Kachess and Keechelus projects. As a lifelong resident of Easton I oppose any actions that would change the level of the lakes. There is no reason to drop them below the historical levels. I support no action proposition 1.

Michael Berline
[EXTERNAL] Don't Drain Lake Kachess
1 message

Lucia Fox <lmarie@sprynet.com>  Sun, Jun 3, 2018 at 10:45 AM
To: kkbt@usbr.gov

It does make good sense to drain the lake...please quit wasting precious natural resources for the almighty dollar...ugh!

Sent from my Verizon, Samsung Galaxy smartphone
The proposed pump will not realize the supposed goal, but will drain the lake, have negative impacts on wildlife and small farmers, and ruin natural beauty. I don't support the plan to install a pump in Lake Kachess. Please stop this action.

Thank you, Sue Grinius-Hill
Sammamish, WA
Hello,

I am writing to express concern about this project regarding changes to water in Lake Kachelus. This has been a beautiful and fun lake for recreation for many years to the full time and part time residents of Snoqualmie Pass. I am slightly confused with the intentions of the project as a whole, and what the expected results will be. Could you help clarify what the goal of the project is, and what steps could be taken to achieve this goal? Thanks!

-Henry (Resident of Snoqualmie Pass)
Please save Lake Kachess!

We are new residents to the area and are deeply concerned about our property - particularly our well and the reason we bought on Lake Kachess, to enjoy the LAKE!

Beyond draining the lake, the KDRPP has the potential to:

- De-water many of the wells surrounding Lake Kachess and in upper Kittitas County
- Limit (eliminate) recreational activities on the lake
- Compromise the efforts of local fire districts to suppress forest fires
- And makes NO mention of any financial restitution for property values which will plummet in our community
- Cost tax payers an estimated $400 Million Dollars for a project that will ultimately fail

We are a small community but we will not sit by and watch our quality of life be of detriment.
Please consider other options and #SaveLakeKachess

Kara/Shawn Mulqueeney
111 Winter Park Ln
Easton, WA

Thank you
Hi,

I reviewed the Kachess Drought Relief Pumping Plant Supplemental Draft Environmental impact statement dated April 2018 and would like to offer the following questions and observations.

Observations:

- Power cost looks like an order of magnitude to low. 260kW average? Are there backup calculations I could review?
- Both the construction and operating CO2 emissions are incredibly large. The EPA’s social cost of carbon should be applied to this lifetime value (8000 tons/yr * $50/ton) as part of the life cycle cost. Although below significance thresholds, this is NOT in-line with state goals.
- $450M is an tremendously expensive burden for taxpayers to bear with the benefit going to only a select few individuals during infrequent drought years. This study needs to show the estimated cost per gallon, the number of people directly impacted, and the alternative cost (ie not planting year)- I suspect it may be less expensive to leave the field fallow and pay a distribution to the farmer.
- With lake drawdown decreasing rim stability – what is the estimated cost if implementing the proposed erosion control measures (what are these measures?)

My general concern is lack of cost/benefit quantification and analysis.

I look forward to your feedback.

Thanks.

Baraka Poulin
WA State Professional Engineer #51231
[EXTERNAL] Lake Kachess
1 message

Amy Shirley <woodinvilleshirleys@yahoo.com>  Fri, Jun 1, 2018 at 1:20 PM
To: kkbt@usbr.gov

Please don’t drain/lower lake Kachess. It’s an amazing, quiet lake where you can go for vacation. It’s peaceful and beautiful. So many people have invested in the economy and have homes on the lake. Their value will be drastically affected by this action. Thousands of people visit the area every summer, this also is going to affect money coming in as the government will lose those funds from summer campers.

Please find another way.

Sincerely,
Amy Shirley

Sent from my iPhone
On the proposed Lake Kachess drought pumping proposal I favor the alternative of “no action”. My concerns are for homeowners, recreationists, fire management, in an area where in the life of the project fire will be increasingly a concern, and environmental concerns.

Gary Brill

Seattle 98133
Lake Kachess -

Why would we drain this lake? I don't understand the reasoning for doing something so unsustainable. Is this so that we can continue to plant crops that consume too much water for the terrain? This is the opposite of conservation, this is the opposite of what any reasonable person would do.

This benefits a few wealthy farmers at the cost of a natural resource, taxpayer dollars and common sense. Please - find the courage to do the right thing here. You know what it is. Lead, don't follow.

Best,

Paul T. Cook
I was more than shocked to hear of the plan to drain Lake Kachess. One of the most beautiful and unspoiled lakes in Washington. I was lucky enough to spend my younger years growing up on the lake in summer and can not believe this treasure would be destroyed by needs of a few. It was my hope that many generations could continue to enjoy the beauty of the lake. There surely are other options for this. Like perhaps water conservation instead of waste.
Sent from my iPad
[EXTERNAL] Keechelus Reservoir to Kacheess Reservoir Conveyance project.
1 message

Kevin Wolcott <Kevin.Wolcott@workspaceinteriorsod.com> Mon, Jun 11, 2018 at 6:51 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Attn Candace Mckinley

Regarding the Keechelus Reservoir to Kacheess Reservoir Conveyance project.

Dumb idea.

God put in rivers to drain water, please leave our lake alone as it is part of the wild & scenic properties that must be preserved as part of our state.

As my favorite T shirt says "Strip mine the earth we'll do the other planets later". Stealing natural resources from our community can not be allowed.

Kevin Wolcott
Snoqualmie Pass resident

Tel: 206.399.2450

CONFIDENTIALITY NOTICE: The information contained in this email and attached document(s) may contain confidential information that is intended only for the addressee(s). If you are not the intended recipient, you are hereby advised that any disclosure, copying, distribution or the taking of any action in reliance upon the information is prohibited. If you have received this email in error, please immediately notify the sender and delete it from your system.
[EXTERNAL] Save Lake Kachess

1 message

Malcolm MacLeod <mrmacleod3@yahoo.com> Wed, Jun 13, 2018 at 3:53 PM
To: kkbt@usbr.gov

I am saddened to learn about more detailed plans to pump out more water from Lake Kachess. This is absolutely unacceptable, and it represents a dubious solution for irrigation practices that are irresponsible and unsustainable in the first place. The proposed solution to drain lake water is financially and environmentally costly and greatly exceed any benefit, except that for big farming industry stakeholders who fail to recognize the true value of natural resources and assume it is theirs for the taking.

Please use your influence and expertise to stop this pump plant and lake draining from proceeding further.

Thank you for your support.

Malcolm MacLeod
847.722.5720

Malcolm MacLeod
Sent from my iPhone
No, no, no, no!!!! This area of upper Kittitas county is a beautiful, natural resource for visitors and locals. Its resources are not to be ruined by special interest groups who have no connection to our beautiful area. For years and years, lake Kechelus has been drawn down to nothing for the irrigation of eastern Washington farmers, now they want to ruin lake Kachess? Please please do what you can to stop this horrible plan. The upper Kittitas area is a beautiful area, please lets not it be taken apart piece by piece by greed and careless people.
June 15, 2018

Hello,

I am a resident at Kachess Village, adjacent to Kachess Lake in Kittitas County, Washington. Last night I attended a meeting in Issaquah regarding the proposed Kachess Drought Relief Pumping Plant. I would like you to know that I am extremely concerned about the facts based in this project.

Lake Kachess is a gem. It is a place of incredible natural beauty, and it is home to many (including my husband and me). It is used extensively as a recreational lake, by people from all over, thanks to the beautiful campground located on the north end of the lake. It also provides drinking water and fire safety.

Destroying a priceless natural resource which many enjoy in order to irrigate low value crops (such as hay) is cruel. The entire effect of homes and environment in upper Kittitas County around Lake Kachess and Keechelus due to lack of water in an area prone to fires is unimaginable. The overall effect of properties being red tagged in one area of Kittitas county so other areas can prosper is crazy.

I have some questions I would like answered:

1. Who will pay for this project, which is estimated to be in the $300 million range, but easily run up to $500 million?

2. Wildfires are increasingly common in the area. How will drawing down the lake, and hence the water table, help with firefighting efforts?

3. If the water table lowers it is not unreasonable to believe that wells will dry up and increase wildfires, wells will run dry and make our homes uninhabitable. That is a tremendous financial and environmental burden for local residents, and taxpayers in general. Has an accurate cost/value analysis been done which compares realistic losses to Kittitas County in exchange for crop irrigation downstream?
4. Kachess is home to the endangered bulltrout. How will these and other fish be saved? Trucking them to another location does not seem like a reasonable solution to this issue.

5. You are proposing a floating pump on the lake. What will be the noise pollution and how far can residents hear the pumps?

6. One neighbor has not been able to get insurance on his home due to wildfire hazard. How many other areas will be affected by this new problem which would only get larger if you pump water out of the lake?

7. The lakes are full in spring or late spring. What are you doing with the runoff water coming down into lower Kittitas County now? What could be done in the future?

8. Are all farms in the Yakima valley which your report targets rigged with efficient water use irrigation systems? What conservation measures will be put in place (piped systems, additional storage, etc.).

Please count me as being vehemently opposed to this boondoggle project, which will pump down and ruin the lake and environs where I live, and which I love. As proposed this expensive project will wreak havoc on Kachess and Keecheluss Lakes, and all of those who benefit from them.

Phil Day
2331 Via Kachess
Easton, WA 98925-0184
Keechelus-kachess pumping proposal

My name is Edward A. Giaudrone, 71 years old, born and raised in Kittitas County all of my life. Your current proposal to install a pipe from Keechelus to Kachess for the purpose to keep Kachess full during an draught period is unwarranted. Also installing a pumping station on Lake Kachess will totally ruin and destroy the lake for recreation purposes and aqua levels for surrounding homes on the lake, as well as property owners East of the lakes that depend on our wells for our homes and irrigation.

I have lived here all of my life, and there has never been a problem with smartly supplying water to the lower valley, even in the toughest of times. Now that more wineries and the like have started up in the desert areas, there becomes a great shortage for water to operate. Rather than mismanage our water, and totally destroy our lakes and recreational livelihoods why not drill your own wells in the lower valley so that you can supply your own water.

I have fished these lakes with my parents and grandparents almost all of my life, and there is no possible way that once you pump Lake Kachess down as proposed, it will NEVER be able to return to it's natural state, destroying everything around it, including water to fight our own forest fires.

The Bureau of Indians have begun reintroducing salmon to our lakes and the destruction of our lakes will also impact those up and coming projects.

My opinion therefore is that if the desert does not have it’s own water for the projects proposed, then stop stealing water from the Upper County and drill your own.

Start managing the flow from our existing lakes better, and let them fill up sooner instead of turning it down the rivers too early for no benefit.

You cannot tell me that you cannot let water out from the lakes faster than snow melts into them; and I have no college education. They have been fine for years past.

LEAVE OUR LAKES ALONE AND QUIT TRYING TO DESTROY THEM FOR THE BENEFIT OF THE LOWER VALLEY.

DISGUSTED e

Edward A. Giaudrone
I have been a resident of Snoqualmie Pass since 2003. Also I have a bachelor’s degree in landscape architecture from Cornell university a own a multimillion dollar company in the landscape and irrigation industry. I know water isn’t being used effectively and the farmers could be using modern technology decreasing usage. I deem this project a waste of money and and have detrimental effects to the established environment

Adam Gorski
425-766-8605

Sent from my iPhone
Dear Ms McKinley,
I am writing to express my opposition to the KDRPP/KCC project. I am a Washington State resident from Vancouver and I believe that this project does not serve the majority of Washington residents and interests. The proposed plan risks Bull Run habitat for trout spawning and draining Lake Kachess will damage current wells and result in a lake that cannot be used for recreational purposes for all Washington residents. This project will cost Washington tax payers a huge sum of money and I do not believe that it serves us well.
Please carefully consider my opinion as you make this important decision.

Sincerely,
Lisa Morrison, MD
Vancouver, WA

Sent from my iPad
We were not notified of the potential to install a floating pump, is someone notifying those of us that pay taxes on Lake Kachess? Will someone be issuing a notice to residents about the security of water to our wells/fire pumping trucks to protect our property? Please let us know if this project will actually be enough water for farmers in need during drought years and if it’s not then why spend the money and damage an alpine lake taking away recreation, environmental impacts and negatively affecting not only our property values but possibly deeming our houses uninhabitable.

Kara/ Shawn Mulqueeney
111 Winter Park Ln
Easton, WA

Please save Lake Kachess!

We are new residents to the area and are deeply concerned about our property - particularly our well and the reason we bought on Lake Kachess, to enjoy the LAKE!

Beyond draining the lake, the KDRPP has the potential to:

    De-water many of the wells surrounding Lake Kachess and in upper Kittitas County

    Limit (eliminate) recreational activities on the lake
Compromise the efforts of local fire districts to suppress forest fires

And makes NO mention of any financial restitution for property values which will plummet in our community

Cost tax payers an estimated $400 Million Dollars for a project that will ultimately fail

We are a small community but we will not sit by and watch our quality of life be of detriment. Please consider other options and #SaveLakeKachess

Kara/Shawn Mulqueeney
111 Winter Park Ln
Easton, WA

Thank you
Hello,

I am a resident up at Lake Kachess and I went to a meeting in Issaquah last night in regards to the proposed Kachess Drought Relief Pumping Plant. I would like you to know, I am extremely concerned about the facts based in this project, cannot even believe it is being proposed and am vehemently opposed to the project. Spending money on crops (hay) that don't make money is ludicrous. Destroying a natural resource which many enjoy is cruel. The entire effect of homes and environment in upper Kittitas County around Lake Kachess and Keechelus due to lack of water in an area prone to fires is unimaginable. The overall effect of properties being red tagged in one area of Kittitas county so other areas can prosper is crazy.

I do have some questions I would like answered.

1. You are proposing a floating pump on the lake. What will be the noise pollution and how far can residents hear the pumps?

2. One neighbor has not been able to get insurance on his home due to wildfire hazard. How many other areas will be affected by this new problem which would only get larger if you pump water out of the lake?

3. The lakes are full in spring or late spring. What are you doing with the runoff water coming down into lower Kittitas County now? What could be done in the
4. Are all farms in the Yakima valley which your report targets rigged with efficient water use irrigation systems?

Rick North

2331 Via Kachess

Easton, WA 98925
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Please send me a detailed account of what you have spent (and wasted) of the Washington tax payers money so far on this project.

Who is paying for this project going forward?
The Washington Tax payers?

Why do you want to turn a beautiful LAKE into dried up dirt?

This is BIG Corporate welfare at its worst.

Please respond,
Cliff Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Who is paying for this project?

Why not dig out LAKE Keechelus and take your extra water from there?

With your plan how does this benefit the LAKE Kachess property owners?

Please respond, C C Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

What benefits to KDRPP stay in Kittitas county?

What is your plan when private wells in upper Kittitas county are de-watered?

How many Yakima Farmers are Really backing KDRPP?

I would like to know the count of the family farms vs the corporate farms.

Please respond, J Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Who is funding this project?

When LAKE Kachess is at an unusable water level, what is being done to meditate needed water for a wild fire?

When LAKE Kachess is at an unusable water level, what is being done to meditate the loss of wells for LAKE Kachess residents?

Please respond, J Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

What is being done when the lake has been drained for water to fight Forest Fires?

Who is paying for this project?

What are the Yakima farmers doing to conserve water?

Please Respond, Jo Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

With lowering LAKE Kachess water level so the lake is unusable how much water do you plan on bringing over from LAKE Keechelus?

Do you plan on putting in a filter to filter out all of the sand and salt that is thrown into LAKE Keechelus from the snow removal along I90.?

Who is paying for this project?

Please Respond, Rachel Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Has an Environmental Study been done?

If so what were the results?

Who is paying for this project?

Who does this project benefit?

Please Respond, Stephanie Owens

1 message

Dan Ryno <rynoman222@gmail.com> Sat, Jun 16, 2018 at 3:21 AM
To: kkbt@usbr.gov
Cc: Dan Rynanen <rynoman222@gmail.com>, Sonshinefarm <rfarm2@msn.com>

Please address the following questions:

1. If the Kachess Pumping Plant is installed in Lake Kachess, what compensation will be provided to Homeowners around the lake to offset a resulting drop in property values?
2. Have studies been done on both Lake Kachess and Keechelus to help assess the risk of landslides or land movement as a result of lowering the level of both lakes?
3. With global warming occurring, what impact will a warmer climate have on Lake Kachess in conjunction with a max drawdown from a floating pump? Will this impact the fish and clams in the lake?
4. The Bull Trout populations in Lake Kachess and Lake Keechelus is relatively low. If the populations in both lakes decline as a result of lake level drawdown below natural levels, what penalties will be paid and who will pay them? As a fisherman I have to pay a fine if I harvest a single bull trout.
5. What type of water rights were/will be granted allowing drawdown of Lake Kachess and Keechelus, both natural glacier made lakes? What department authorized/will authorize this?
6. Where will Roza Irrigation District come up with the money to pay for a floating pump on Lake Kachess and other related expenses, and if they rely on government bonds, how will we be sure they don’t default, burdening taxpayers? Who will pay for the Bull Trout Volitional Channel, boat launch, reduced property values, dewatered wells, and any other related costs?
7. From what depth would the floating pump draw water from Lake Kachess? The reason I ask is if the pump draws from the cold deep water the impact to lake temperature would be much greater, potentially impacting the Bull Trout population.

A concerned citizen,

Dan Rynanen
Dear Ms. Candace McKinley,

I have reviewed KachessDroughtReliefPumpingPlantandKeechelusReservoir-to-KachessReservoir Conveyance (KDRPP/KKC) Projects Supplemental Draft Environmental Impact Statement, Kittitas and Yakima Counties, Washington. As an owner of property on Kachess lake, I have many concerns and questions. I have quoted the sections and add my comments specific to the each quotes below. Please review my comments.

- All the wells on the East side will be dewatered according to DOE’s own study (p2-68). But the DEIS notes only that they will continue to be “monitored and … coordinate appropriate mitigation if needed” (p ES-xi).”
  - If one has senior water rights for his/her well, According to the SDEIS, their well will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater my well which has senior water rights? The SDEIS notes the wells on the East side of Lake Kachess will be dewatered. There is no money for mitigation. Exactly what is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

- Bull trout: the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.”
  - What fraction of the resident endangered Bull Trout population in Lake Kachess will be killed under the proposed alternative?

- Time pumps could be used: “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.” (p2-6)
  - Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)? Why would the pump be used in following years?
“as the reservoir refills to a level above the existing gravity outlet?” would that not prevent or delay refill?

- Page 1-4 notes that the integrated plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation).
  - Please define the number of kAf saved by water conservation and market reallocation.

- Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA.
  - How is the noise expected to change as a function of distance away from the pumps? Will the pumps be running 24/7 once they start running? For how long?

- Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan.
  - What is the legal mechanism by which new water rights be issued? To whom?

- The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Can we raise the issue of how this will be done (what happens to the excess water, the “flip-flop,” etc) to delay the plan?
  - The SDEIS notes the lake would need to be drained for construction. How will this affect flows for fish passage and the “flip-flop”?

- 115,000 cubic yards of KKC tunnel muck comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off.
  - Where will the 115,000 cubic yards of KKC tunnel muck be deposited?

- P2-68 notes all action alternatives will result in localized short term exceedance of turbidity standard.
  - Please provide a definition of the degree of turbidity exceedance and the effect it will have on native fish populations.

- P2-71 notes permanent habitat loss with the preferred alternative
  - Please Define the effect of permanent habitat loss on the spotted own, bull trout, and other endangered / listed species.

- P2-73 notes decreased recreation desirability
  - Please quantify the economic impact of the decreased recreation desirability.
• P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot.
  o There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased?

• P3-29, 3-45: both Keechelus and Kachess are now listed as “category 5” water impairment because of PCB contamination.
  o In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination. Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

• P3-172 notes indian sites on kachess.
  o Please describe what happens with indian artifacts unearthed during construction.

Thank you for your time.

Best Regards,
Junichi

Junichi Tsuneoka
phone 206.407.4546
9407 21st Ave SW
Seattle WA. 98106
Dear Candace McKinley – Environmental Program Manager

We are writing this written comment regarding the KDRPP & KKC SCEIS project.

We are strongly opposed to this project.

We have the following questions that require a response:

1. How will the lake be refilled when the SDEIS (released 4/13/18) says it will take 5 years for the lake to return to pre-drawn down levels, when there is analysis of the KDRPP data that says the lake will never recover because the water shed above the lake does not produce enough excess water? How does the Bureau plan to refill this lake if the water shed does not have enough excess to refill the lake as proposed?
2. Has the research been completely finished regarding the FULL environmental impact when 400,000+ acre feed from Lake Kachess is drained? What are the long term effects?
3. What will happen to the bull trout when they cannot reach their spawning grounds?
4. How will the noise and pollution be addressed when the pump continues to run even after the lake has been drawn down?
5. What is the plan when there is a fire and there is no water in the lake to assist in fire fighting efforts? This is a major concern and must be addressed.
6. Why are none of the benefits of this water staying in Kittitas County? Why are none of the farmers in Kittitas County receiving ANY of this water?
7. There is the very real threat of the wells going dry for land owners around the lake and perhaps beyond. How will this be mitigated when that happens? What are the plans to replenish the wells? How will the landowners be compensated when their wells go dry and the homes are now inhabitable?
8. What happens to the small farmer who cannot afford the KDRPP water rates? How will those farmers be compensated and how will assurances be made that these farms will NOT be forced to sell to larger farmers? Many of these small farms have been in families for years.
9. How do you plan to justify this to the many visitors that enjoy Lake Kachess every summer and will no longer be able to? How will you explain this to the news media when a beautiful pristine lake has been drained to benefit only a few farmers in Yakima County?
10. How will it be addressed when Lake Kachess isn’t enough for unsustainable agricultural practices? What pristine lake will you drain next?
11. What alternatives have been researched in place of this project and how do those costs compare to this project?
12. What happens when the bonds cannot be repaid by Rosa Water district? Will the taxpayers be stuck paying for this dead-end project even after all the water is gone?
13. How do you plan on “undoing” the damage caused by this project?
14. What is each farmer paying to cover the cost of the $444M+?
15. What is the cost/income ratio for the crops vs paying for this project?
16. Has anyone looked into raising the price of the crops during a drought year due to a lower supply instead vs the cost of this project and the potential damage it can cause?
17. KDRPP is built on faulty science and faulty economics. Is there a new study being done that is more accurate?
18. Can water be drawn from the Columbia River instead? Has a study been done for this alternative?
19. What are the names of the farmers who will be the major benefactors of this water? Do they realize this is NOT a long term solution?
20. What will happen to any salmon that are currently in this lake and any future salmon that are legally being released into Kachess to increase the salmon population?

Thank you for looking into this further.

Again, we strongly oppose this project. It is NOT in the best interest of ALL the people and stands to benefit only a few farmers. It’s too risky and expensive for such a small gain.

Respectfully,

Dan and Carol Ferguson
5834 Kachess Dam Road
Easton, WA 98925
To whom it may concern,

Do not go forward with this project. It is detrimental to habitat of water creatures, and local Flora and fauna. If you go forward, it will be proof positive that you, our government, is saying F you, we do what we want and you do as you're told. As a General contractor, I could never do any of the work you propose as it is environmentally protected. I am a life long Washington State resident and am tired of the double standard. Start making developers responsible for water usage and putting in Wells and infrastructure to supply water for the structures they are building. I own land I had subdivided, then my subdivide was withdrawn due to water restrictions. I'm not DR Horton or some mega builder, so I got the big F you from my State and local government. This is a bad plan on so many levels. Leave that water up there alone.

Sincerely,

Raylan Thompson
Comment Letter 287

K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] Lake Kachess

1 message

Kathryn Bernhardt <kathryn.l.bernhardt@gmail.com> Mon, Jun 25, 2018 at 12:43 PM
To: kkbt@usbr.gov

Please do not install a pumping plant to drain Lake Kachess. This lake is a glacier formed natural lake which only a small portion has been converted for a reservoir. The draining of this lake will have devastating impact on local wildlife, bull trout, fires, recreation, and homes.

I am trying to understand how this is the only answer? I am trying to understand why the larger hop farmers are seemingly the only ones who will benefit? The small farmers have been very vocal that they cannot afford the cost of this water and it could cause their farms to go under. This is not fair nor is it right to cause so much damage for the benefit of a few.

We are also hearing that information is being shared by proponents is that Kachess will refill in 1 year. This is not accurate information and the public should be given, and is entitled to accurate transparent information. Kachess when drained beyond the natural waterline could take 2-3 years or more to regain its level. The facts being offered are only in a perfect case scenario. I have personally seen this lake lowered in time of a drought and the subsequent year we had another drought. It took Kachess 3 years to recover and it was not drained anywhere near what is being proposed. (I have pictures that substantiate what I am saying.). Rethink this. There are other options that are much less damaging to our environment.

Thank you,
Kathryn Bernhardt
Don't let special interest groups drain Lake Kachess! Adding a pumping facility to Lake Kachess is bad for farms, fish, wildlife, recreation, and local businesses.

Thanks,
Nikki Fountain

#SaveLakeKachess
To whom it may concern,
I would like to vocalize that I am whole heartedly against the draining of the lake. Special interest groups do not out weigh the needs of our Washington state citizens to enjoy the serine beauty of this natural lake. What a gift you would be distroying.
Sincerely,
Joslynn Jelovich
I read in the Kirkland Reporter about the plans to add a pumping station at Lake Kachess which would "drop the level of Kachess Lake by an additional 80 feet" (Kirkland Reporter, "Kachess Lake Plan Raises Concerns," June 1.)

My family is very worried about this plan. We often come up to Lake Kachess for day trips to go kayaking, and minor variations in the level of the lake really affect the activity. A few years ago, when we had that drought, we came up to Lake Kachess late in the summer. To our surprise, there were absolutely no campers, and when we drove to our favorite beach, we could see why: mud flats everywhere. I'm not sure how much the lake dropped--maybe 12 feet--but it made the site totally unusable. We had to haul our kayaks a long distance over thick deep mud to even get to the lake. When we got there, we could see dead clams, as well as the tracks of freshwater clams that had all been forced to retreat to the center of the lake, and could only imagine what devastation was happening to the lake wildlife.

We want you to know that even a small drop in lake level makes the lake almost impossible to use for recreation.

Sincerely,

Loralee Leavitt
12425 NE 73rd Street
Kirkland, WA 98033
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

Say NO to KDRPP because

KDRPP is built on faulty science and faulty economics

Once drawn-down water levels may never fully recover

Once KDRPP damage is done, it can't be undone

What's next when Lake Kachess isn't enough for unsustainable agricultural practices?

**How Much will it Cost... and who will pay for it?**

Please respond, J R Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

If the LAKE gets drawn down to the lowest level what happens if it NEVER recovers?

What are the environmental impacts if the LAKE NEVER recovers?

What's next when LAKE Kachess isn't enough for unsustainable agricultural practices?

What happens if there is no water in LAKE Kachess for the thousand of people each year who fish, swim and go boating?

What happens to the bull trout in LAKE Kachess?

What happens if we are not given HONEST and TRUEFULL answers to all the questions being sent about this project?

Please Respond, R B Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

What benefits to KDRPP stay in Kittitas County?  
What benefits will the Kittitas farmer receive?  
What will be done when private wells in upper Kittitas County run dry?  
Which Yakima farmers can afford the high cost of water?  
Why do you want to take away a rare accessible alpine lake?  
What will be done about the environmental impacts?

Please respond, Charles C Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

LAKE Kachess is a LAKE NOT a reservoir. Calling it a reservoir does not make it a reservoir. This is an LAKE enjoyed by several thousand of people each year. This lake should not be taken away from us for a group of special interest Yakima farmers. This group ignores and misrepresents the cost, overstates the benefits and excludes affected citizens from being part of the process.

The Yakima Basin Integrated Plan (YBIP) proposal for a Kachess Drought Relief Floating Plant (KDRPP) is an attack on a natural glacier-built lake. It has nothing to do with a reservoir, every drop of water will be taken from a natural LAKE.

The truth is the water in LAKE Kachess is divided into both a lake and a reservoir the original glacier created water (about 80% of the total water) is a natural lake and the top 20% is a man made regulated reservoir. So only 20% of the water should ever be taken out of LAKE Kachess.

Why would you want to ruin a beautiful LAKE for a special interest group?
Why should the tax payers of Washington pay for a special interest group?
What are the benefits for Kittitas county?
What have the Yakima farmers done to conserve the water that they already get from LAKE Keechelus and LAKE Kachess?
Why don't they use the water in Yakima and leave our water alone?

Please respond, Cliff Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

**The Proposed SDEIS Action:**

**A Floating Pumping Plant in Lake Kachess**

**How Much will it Cost… and who will pay for it?**

Two simple questions…questions that should have ready answers: *How much will it cost, and who will pay for it?* But the special interests promoting YBIP have engaged in a “shifting sands” strategy, apparently designed to obfuscate and deceive the public. Their approach seems to be, “if you don’t like the answer this week, stick around and we’ll come up with a different answer next week.”
In 2012 the Bureau of Reclamation “Four Accounts Analysis” calculated the cost of a Lake Kachess pumping plant to be $195.8 mil.

- By January, 2015 the cost had risen to $509.4 mil.
- Then, it jumped another $135 million, to $645.4.
- That number omitted mitigation obligations that could easily add another $100 mil.
- In three years a $195.8 mil. project became a $750 mil. project... and climbing.
- But while the costs skyrocketed, the benefits stayed the same, or went down.
- The prestigious Water Research Center at WSU calculated the benefits at approximately $165 mil...meaning it would LOSE 80 cents of every dollar invested.
- After trying desperately to get federal taxpayer dollars for this boondoggle, it became DOA...Dead on Arrival.

Then there was the ill-fated “Emergency Floating Pumping Plant” proposed by Roza Board of Directors in 2015. It would cost $85 mil., provide 50,000 acre/ft. of water, and be “totally paid for” by the farmers of Roza Irrigation District. But somebody forgot to tell the farmers, and they calculated the costs per acre of irrigated land. Their conclusion? In a full-page ad in the Yakima herald, here is what they said:

“for the opportunity to add 8-acre inches of water to your farm...the additional cost in drought years would be $92/acre, and in drought years...the cost would be $141.92/acre...The potential for lawsuits to hold up this project is HUGE...the increase in water delivered to you... would not be significant. The proposed plan would in effect have smaller operations, which benefit less from the plan, subsidizing the largest land owners for 10 years. It is not right.
The farmers were smarter than the bureaucrats; they knew they couldn’t pay for it, and that ended the project.

Now we are starting the process again, with a new project… the KDRPP Floating Pump proposed by Roza Irrigation District. Table 2-5 (p. 2-59) shows the cost of the project to be $282 mil. However, it further states the project must anticipate a 50% increase in cost, which would bring the project cost to $423 mil. But this does not include cost of the Bull Trout Volitional Channel project, shown to cost $23 mil. (but mysteriously missing from the budget). It does not include any mitigation costs such as:

- Negative impact on private property values (previously shown by BoR contracted study with Potter LLC to be at least 5-10% of affected property values).
- Mitigation cost of “dewatered” private and community wells
- Mitigation costs of Fire District increased exposure to wildland fires
- Increased costs of Fire Districts for emergency medical services
- Costs of U.S. Forest Service improvement of USFS Lake Kachess Campground
- Litigation costs
- Costs of building new boat launch and other services
- …and at least a dozen other items

Given past history, and the items omitted from cost calculations, it is clear the cost of this project will be well in advance of $500 mil.

Scott Revell, General Manager of the Roza Irrigation Districted, has stated publicly that “Roza will pay 100% of the costs of this Project.” This seems to be confirmed by Table 1.1, page 1-4 that states the Role and Responsibility of Roza Irrigation District is to “Fund, design, construct, operate, maintain [the project].” However, the refusal of Roza farmers to pay for an $85 mil. project in 2015, brings into question whether they would pay $500 mil. for a project in 2018.
If Roza doesn’t pay for the project, that can only mean taxpayers will be asked to foot the bill. For a project that returns pennies on the dollar? That destroys local environments? That has ignored the concerns of citizens and denied their participation and representation? That has been shown by independent analysis to fall short of delivering the amount of water promised (Schwartz)?

How much will it cost, and who will pay for it?
We are still waiting for the answer....

Please respond, J R Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

What is the plan for LAKE Keechelus how much water do you plan on taking out of it?

LAKE Kachess and LAKE Keechelus belong to all of the residents of Washington how is it that you think a Special Interest group of Yakima Farmers can ruin the usage of these 2 lakes?

Who is paying for this project?

Please respond, J R Owens
Keechelus-to-Kachess Conveyance Project not comprehensively planned.

The gist of this proposal is that the KKC would divert water from the Yakima River immediately downstream from the Keechelus Dam and convey it through a new tunnel to the Kachess Reservoir and the purposes this would achieve would be to reduce high flows below the dam for fish and accelerate refilling of the Kachess Reservoir for drought relief.

Nowhere in the description of this text is there any acknowledgment of climate change as an exacerbating force in drought or water issues. Yet we know Ecology is aware based on this quote from an article June 18, 2018 in The Daily Record: “Dry weather will mean less water for irrigators” is the headline. In this article Ecology is quoted: “The Department of Ecology attributes the drop in water supply to climate changes, which are increasing temperatures and causing snow to melt faster, which results in problems maintaining water supply throughout the year.”

Climate forecasts and science need to be included in the analysis of water in our area in all aspects: how we get it, how we use it and how we manage it.

Kittitas County has recently enacted ‘No Solar on our Farm Lands’ proclamation and yet here we are destroying property rights along the lake in question and diverting water to said farmers.

Special interests again are forcing this poorly collaborated plan in the upper county. Ecology needs to get its science in order and make sure the proposals and planning work in accordance with the greater good in a comprehensive analysis.

Kittitas County needs to reassess its stance on solar in the county if it’s going to be asking to force water from other areas in an effort to help farmers more. Farmers need to support Initiative 1631, the climate initiative, which specifically exempts farm diesel from the carbon tax in deference to the special interest of farmer needs, if they are going to get ANY support for more water.

Special interest groups can’t have whatever they want, whenever they want it in the form of ‘no solar and more water’.

Comprehensive, collaborative planning on the County and State level is not happening in the Keechelus water project. Until it does, please stop the current KKC proposal.
Sincerely,
Meghan Anderson
6083 Secret Canyon Rd
Ellensburg, WA 98926
Commandeering a public asset as vital as water to benefit only a handful of private businesses is WRONG!!! SAVE and PROTECT LAKE KACHESS.

Sincerely,

Alice M. Bickford
Ms. Candace McKinley

Environmental Program Manager

Bureau of Reclamation / Columbia-Cascades Area Office

1917 March Road

Yakima, WA 98901-2058

I request additional information to be added to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018.

Wells on the East side of Lake Kachess will be dewatered according to DOE's own study (p2-68). But the DEIS notes only that they will continue to be "monitored and ... coordinate appropriate mitigation if needed" (p ES-xi)."

Residents on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. Under what law is it allowed that prorated junior water rights holders of the Roza irrigation district can dewater wells which have senior water rights? Please cite sections of Washington state or Federal law.

The SDEIS notes my well on the East side of Lake Kachess will be dewatered. There is no money for mitigation. The EIS or ROD must detail exactly what is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry. This question was asked in comments to the 2015 DEIS and was not answered.

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells below the lake? Will wells in Easton also run dry?

Bull trout: the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes "While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS."
What fraction of the resident endangered Bull Trout population in Lake Kachess will be killed under the proposed alternative? Under what law is extirpation of one population allowed by augmentation of a disparate population? This question was asked in comments to the 2015 DEIS and was not answered.

P 2-6 notes: “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.”

Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)?

Why would the pump be used in following years “as the reservoir refills to a level above the existing gravity outlet?” would that not prevent or delay refill?

Page 1-4 notes that the integrated plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation).

Define the number of kAf saved by water conservation and market reallocation.

Why are these alternatives not included in the SDEIS?

Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA.

What is the expected noise level in dBA at 100 feet from the pumps? At 1000 feet?

Will the pumps be running 24/7 once they start running?

Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan.

How will new water rights be issued? To whom? Under what authority? Please site Federal or Washington state law.

115,000 cubic yards of KKC tunnel muck comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off.

Where will the 115,000 cubic yards of KKC tunnel muck be deposited?

P2-68 notes all action alternatives will result in localized short term exceedance of turbidity standard.

Define the degree of turbidity exceedance and the effect it will have on native fish populations

P2-71 notes permanent habitat loss with the preferred alternative

Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species

P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ”

Quantify the economic impact of the decreased recreation desirability

Under what authority are established SIL/VOQ permitted to be violated?

P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot.

There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased.

P3-29, 3-45: both Keechelus and Kachess are listed as “category 5” water impairment because of PCB contamination.

In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination.

Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

P3-172 notes indian sites on kachess.

Describe what happens with indian artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.
The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff).

- Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

- Under what legal authority can a natural lake (below the level of the reservoir) be drained for the benefit of a private entity (Roza Irrigation District)?

- Under what legal authority can a public resource Lake Kachess be drained for the benefit of a private entity Roza Irrigation District?

Thank you, Gordon Brandt
When did we change the name of Lake Kachess to Kachess Reservoir? Oh yeah, when a few people decided that taking more water (that can’t be replenished in a year or two with average snowpack and rainfall) from a pre-historic glacier-carved alpine lake was a good idea!

Thank you for your comments and questions on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Supplemental Environmental Impact Statement (SDEIS).

Your comments and questions have been recorded for consideration and attention. We will be collecting comments throughout the 90-day comment period (April 13 through July 11, 2018). After July 11, all comments and questions will be categorized, considered, and responded to in the Final Environmental Impact Statement.

Many of your questions and concerns may already be addressed in the SDEIS. You can access this document at
We appreciate your participation in the comment period. We have recorded your email address, and you will be notified when the Final Environmental Impact Statement is released.

Thank you
I think water conservation needs to be the priority. The amount of wasteful water practices I see around Kittitas valley is mind boggling. Let’s practice good water practices. Let’s cover our culverts. Let’s stop watering the lawn all day and night, let’s not water in the middle of the day. How about we stop continually creeping further up the valley walls. Do we really need grapes growing in what was once desert? Against lowering the lake so some tech millionaires can build a winery. Against wasting tax money to destroy summer lake recreation.

Thanks,
Kevin Curd
Hyak
Upper county resident for twenty years
Ms Candance Mckinley,

I am writing to you about my concerns of the KDRPP proposal

How much is this project going to cost us tax payers??

This seems like a waste of tax payers money for only one water district with no. senior water rights to get the water.

How are you going to replace the lost of boating, swimming, picnicking, and general enjoyment of the lake as our water disappears??

There are only a few alpine lakes that people can come to and enjoy all these outdoor activities. Why do you want to take this away when you have no idea if or when LAKE Kachess will refill when it drained another 80 vertical feet. Please respond to my concerns.

PLEASE DON'T DRAIN LAKE KACHESS

Thank you,

Jean Fountain
I have no idea why you are trying to call Lake Kachess a reservoir. It is not. It is a natural alpine lake that has been in existence for eons. It would be criminal to drain this lake, just so some eastern WA farmers would have more water. You would ruin a wonderful campground, and greatly affect the value of the cabins around the lake. The Colombia River has been extremely high all spring. I suggest you find a way to use that water.

Chris Gorchels
3180 Willow pointe Dr
Richland, WA 99354
Dear Sirs,

I appreciate the opportunity to express my feelings and opinions concerning the proposed KDRPP project. I live in Richland WA and have been enjoying visiting Lake Kachess for several years. My husband and I have camped at the campground and now are happy "cabin owners". This lake is special to us because of its beauty, accessibility and memories formed from our many visits. It is truly a place we love and cherish. It is always startling to see how far down the level of the lake is at the end of each summer. But each spring, we happily see the lake back up to its high level. I have learned that this big fluctuation of the water level has been taking place for over 100 years without adverse consequences. When the Kachess dam was constructed, creating the current reservoir, the amount of water drained from the lake for irrigation purposes was calculated to match the amount of snow pack available each winter to replenish the lake. And thus, I have learned that even when the lake is so very low in September, it will be back to its full potential each spring. The folks that constructed the dam all those years ago knew what they were doing! After the initial creation of the reservoir, along came the campground and cabins that surround the lake. Think of how many thousands of people have enjoyed this lake for all those years!!!

Recently we have been hearing about a plan to increase the amount of water drained from the lake to create more irrigation opportunities in the Yakima Valley. The addition of a floating pump, to drastically increase the amount of water drained from the lake, raises many questions. What will happen to the water sources for the campground and cabins? Right now, the water levels in the lake adequately supply the needs for both. But what happens when the water level is reduced another 80 vertical feet? Will those water sources that currently supply water, still be functional? Also, will the expected, typical snow pack that currently replenishes the water level in the lake each year, be enough to replenish a lake that has been drained way beyond the amount of the original design? And if Lake Kachess is not able to recover its high water level in the spring because the snow pack available does not match with the amount of water drained, what happens to the folks in the Yakima Valley who have become dependent on this new, additional irrigation water that no longer is available?

There are more objections that I have about the proposed floating pump, but these questions are of the utmost importance to me. I have not heard any satisfactory answers to these questions. The idea of moving forward without knowing the answers is not using wisdom. The installation of the floating pump, for the sole purpose of creating unnecessary additional irrigation, that may very well be unsustainable due to the inability of Lake Kachess to rise to the necessary water levels, is unthinkable. Please consider the consequences of your decision carefully, thoughtfully and rationally. Is all this uncertainty worth the destruction of one of the prettiest places in our state? I say NO!!!

Kay Gorchels
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn't enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Thanks, C C Owens
**[EXTERNAL] NO to KDRPP**

1 message

**J R Owens** <laketapps242@gmail.com>  
**To:** laura.osiadacz@co.kittitas.wa.us, obie.obrien@co.kittitas.wa.us  
**Cc:** kkbt@usbr.gov

Thu, Jul 5, 2018 at 8:31 PM

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Thank You Jaxon Owens
LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100 years.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Thank You, J P Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Thank You, J R Owens
LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Stephanie Owens
I understand that you have been contacted regarding the draining of Lake Kachess for severe drought. Many people are concerned of destroying the beauty, going beyond the man-made dam and draining into the natural levels of the glacier and the loss of recreation, not to mention home owners losing property value. In addition to this I want to point out the environmental effects. I hear people plan to relocate the bullhead trout. First of all, I do not know how that will happen successfully but I am certain there are other fish at risk as well and many fresh water clams. Then there are the larger animals that go to the lake for water. If the lake is drained as low as they intend to drain it, all that will be left is clay and silt which will cause the animals to get stuck. I saw a picture of the purposes plan and even if the animals were to make it to the water, there would be no way for them to get out. The effects would be devistating. The firefighters use this water to fight wild fires. I understand that it would take 7 years to replenish the lake, so the money made from the water temporary. The money is not worth all the negative this will cause. Please do not drain Lake Kachess. There are so many other water options.

Thank you for your consideration,
Christine Reeves

Tina

"it would also be mistaken to view other living beings as mere objects subjected to arbitrary human domination." - Pope Francis #PopeUS
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

Dear Ms. McKinley,

The following are comments on the draft supplemental EIS on the Caches Drought Relief Pumping Plant and Keechedlus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be build. Instead, spend funding on promoting water conservation, water efficiencies and water markets during drought years instead of more uneconomical and environmentally damaging water projects in the Yakima River Basin.

This proposal for a floating pumping plant is a travesty and completely a misuse of public funds which those that are promoting it will regret when the worst comes to fruition. Those of us who do care about fiscal responsibility and the environment will be sure to publicize our opposition and grow louder in our voice in the days ahead.

Sincerely,
Avery M. Aresu  
20207 Island Parkway E  
Lake Tapps, WA 98391
FROM CHRIS BAKER 430 BAKER LANE LAKE KACHESS I WOULD LIKE TO EXPRESS MY THOUGHS ABOUT THE LAKE I OWN CABINS ON THE LAKE THAT HAVE BEEN IN MY FAMILY FOR ABOUT A HUNDRED YEARS HOW WILL I MAKE A LIVING IF THERE IS NO LAKE WHEN NOBODY WANTS TO COME HERE I JUST WONDER HOW I WILL PAY THE BILLS
[EXTERNAL] Kachess Drought Relief Pumping Plant

1 message

Sarah Buri <sburi2@aol.com>    Wed, Jul 11, 2018 at 4:24 PM
To: kkbt@usbr.gov

Via email to: Kkbt@usbr.gov
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA  98901-2058

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.
Sarah Buri
Kent WA
[EXTERNAL] Oppose KDRPP

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS. The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.

Joseph Dill
4917 Wallingford Ave N
Seattle, WA 98103
Greetings,

A notice was sent out from the Dept of Ecology "Reminder--KDRPP & KKC SDEIS 90 day Comment Period Ends July 11, 2018". On April 13, 2018 our 90 days started, but the post card was not sent out until May 25th. Why was it not sent out until May 25th? I did not received it until May 28th giving us only 45 days to make our comments.

Also, what provisions are being made for the devaluation of our property value after the lake gets drained and is never that same beautiful lake it was before?

I am opposed to any of the Kachess SDEIS alternatives. The only one is **NO ACTION that is acceptable. Please send me a response to my questions and concerns.**

**PLEASE SAVE OUR LAKE**

Thank you.

Jean Fountain
Greetings,

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

--
Ms J Fountain
sundance385@gmail.com
Lonnie Gienger
lonnie@wilkinsoncorporation.com

To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess DEIS

Dear Candace,

I am writing to you to express my strong opposition to any of the Kachess SDEIS active alternatives (2-5); any type of pumping plant and/or pipeline at Lake Kachess. I own an apple orchard in the Yakima Valley and I own property on Via Kachess road. So I have some personal understanding of the farmer’s need for water and of the Lake Kachess and Kittitas County resident concerns. Following are some of my specific concerns and questions that I would like answers to.

1) **Impact on my private wells** The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” I own two wells on lake front property which serve two residences valued at nearly three million dollars. It is unacceptable to tell me that my water will likely disappear, and then offer a vague statement that you’ll “monitor and mitigate.” A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. I ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD. Please describe exactly how I can be assured that I will not lose water needed for my properties. How much will I be paid for drilling new or deeper wells? How much will I be compensated if there is a loss of property value because of this?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated?
2) **Impact to my private property**  The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences...etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily number 300 homesites, far more than would be inferred from the term “several.” The systematic bias against representing impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. I ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

3) **Impact to my property value** I have one of my properties on Lake Kachess for sale and one of the first questions that potential buyers ask my realtor is how much property values will be reduced if this initiative to lower the level of Lake Kachess is passed. We have had to drop the price of our home on Lake Kachess by over 15% and are still getting the same question and objection with no one even wanting to make an offer because it is lakefront property that would drastically be impacted both in view, usage and well water if this initiative is passed. BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn’t notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view...but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts...” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private
property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!

The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. I request that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued. Please let me know exactly how I will be compensated for the loss of property value if this initiative goes through.

4) Impact on Water Rights  How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? I request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments. I also have senior water rights on water that comes from this same source in the orchard I own in Yakima. My land is in Yakima County and I paid more than three times the amount per acre for my land as what the average prices for farm land are in the Rosa district. Part of this difference in land price comes from the fact that I have senior water rights and the farmers in Rosa district pay less for their land because they have junior rights. If this project goes through, over time, it will definitely increase the value of the Rosa farmer’s land and possibly decrease the value of my farm land. Please tell me exactly how I will be compensated for this loss in value of my farm land in Yakima.

5) Water Conservation and Market Reallocation  Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed. Please let me know exactly what other measures are being pursued to conserve water and which other measures are in the works. And please let me know what the cost benefit analysis looks like for those conservation measures. My guess is that they look better than this highly costly solution being proposed which is a one time fix to drain a lake in a drought year which may never fill up to previous historic levels and therefore is not a sustainable solution.
6) Financial Impact  The statement of budget (Page 2-59) for KDRPP-FPP is clearly incomplete and under-valued. It appears that the budget should presented as a $423,000,000 base. And all the mitigation costs must be included. For example, the required Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost even higher. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

The budget presentation seems inadequate, misleading, incomplete, and systematically biased to undervaluation. I request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

Economics – Simply put, there is no meaningful economic analysis in the SDEIS. It assumes broad econometric analysis is the same as substantial Benefit-Cost or ROI analysis. And it specifically fails to address the question of how much the water will cost and how and where it will be used in a rational economic return on investment approach.

Given the likely negative Benefit-Cost for a majority of Yakima Basin crops, how can the overall economics of the KDRPP provide any positive economic return? How can the water be used only on crops with a positive Benefit-Cost? How can you enable only those irrigators with a positive Benefit-Cost to pay for and use the water from KDRPP?

Some additional specific questions that I want answered are:

- How much will the water cost and explain how this a good economic decision?
- How much water will this project actually deliver and what are is the factual basis for these assumptions?
- What is the life-time cost per Acre Foot of water for the KDRPP project?
- What is the incremental profit of an acre-foot of water per crop type in the Yakima Basin?
- Which crops have a positive Benefit-Cost vs a negative Benefit-Cost?
- For crops with a negative Benefit-Cost, how can the using KDRPP water be justified as a private or public good?
As you can see, there are many valid concerns regarding this proposal and many unanswered questions that must be answered.

Thank you so much for your prompt attention to this. And thanks in advance for answering my questions.

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Lonnie Gienger

**Mailing Address:**
PO Box 625
Easton, WA 98925

**Physical Address:**
950 Via Kachess Rd
Easton, WA 98925
Laura Hamilton <4hamiltons@gmail.com>  
To: kkbt@usbr.gov  

Wed, Jul 11, 2018 at 4:29 PM

The SDEIS makes very clear statements about the devastating impact of this pumping project and the recommendation of the bureau shows that they are not being open to data or facts that go against their foregone conclusion that draining Lake Kachess is the way to solve future droughts.

There are sustainable alternatives that have not been explored in favor of this “easy” answer of putting a straw into a pristine glacial lake. We need to work harder and commit to economically viable and ecologically responsible approaches with ALL stakeholders. The impacts described are severe and irreversible.

Thank you,

Laura Lottman Hamilton  
631-335-3284

Sent from my iPhone
To whom it may concern,

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

I am very opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

It certainly appears that other measures should be taken to AKA "fixing the ditch" in an effort to minimize and/or eliminate loss of water that is currently conveyed via aging and defective irrigation canals from reservoirs such as Lake Kachess. This "fixing the ditch" should be done before any efforts are made to draw these lakes/reservoirs down below the levels they were before they were first dammed. To not fix the current problem of leaking irrigation canals prior to engaging in any other efforts (such as pumping down Lake Kachess) seems irresponsible on the part of the State. In addition to being a safeguard of the environment, I fully expect the State to be a good steward of our public funds and "fixing the ditch" seems to be a good way to be fiscally prudent in this regard.

Finally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

Sincerely,

- Kirk

Kirk Harris
4921 370th CT SE
Fall City, WA 98024
kirkaharris@gmail.com
Hi

I travel for work so I just heard about this plan to drain Kachess to send water toward Yakima. This has to be the dumbest idea I've heard of in quite some time. I'm not exactly a tree hugger but come on. If you farm in the desert you might have dry years. Leave the lake where it is to serve the communities that are more local to it. Yakima has no right to the lake.

Mark Hoover
I am opposed to any of the Kachess active alternatives (2-5); a pumping plant and/or pipeline at the Lake Kachess. Alternative #1, NO Action is the only acceptable alternative.

Larisa Lavrentyev
Max lavrentyev <maxim.lavrent@icloud.com>  
To: kkbt@usbr.gov  

Tue, Jul 10, 2018 at 11:29 PM

I am opposed to any of the Kachess active alternatives (2-5); a pumping plant and/or pipeline at the Lake Kachess. Alternative #1, NO Action is the only acceptable alternative.

Sent from my iPhone
Sergey Lavrentyev <sergeylavrentyev1969@icloud.com>  
To: kkbt@usbr.gov  
Cc: la.sergey@yahoo.com  

I am opposed to any of the Kachess active alternatives (2-5); a pumping plant and/or pipeline at the Lake Kachess. Alternative #1, NO Action is the only acceptable alternative.

Sergey L
I am another long time user of Lake Kachess and oppose the plans for the Kachess Drought Relief Pumping Plant and the Keechelus Reservoir to Kachess Reservoir conveyance. In simple terms the enormous expense to Washington taxpayers and immense environmental degradation to our beautiful Snoqualmie Pass and surrounding lakes benefits too few at too great a cost. I don’t minimize the reality of climate change and the probability of dryer, warmer winters that could decrease available water and increase risks of wildfire. I don’t dispute that a long term plan must be developed that preserves our natural resources but shares both the benefit and their costs across the state. This plan costs everyone too much, damages ecosystems and benefits too few for their high water-utilization, high profit crops. I attach photos of current water usage that this proposal would support. How can this be fair to all state residents, to destroy our lakes, some peoples water supplies, and wonderful recreational resources for the economic profit of so few? The photos below are from Prosser, but they could be from any of the agricultural areas in eastern Kittitas County, where we watch water sprayed into the air all day long to keep private lawns green.

Please do not promote this boondoggle. Let’s find better ways to conserve water and maintain resources fairly for all Washington State residents.

Nancy Lawton, MN, ARNP, FNP-BC, FAANP
Adjunct Clinical Faculty, WSU School of Nursing
Adjunct Clinical Faculty, UW School of Nursing
nelawton1@gmail.com
[EXTERNAL] Comments on KDRPP/KKC SDEIS

1 message

Katie Lewis <katri.lewis@gmail.com>       Wed, Jul 11, 2018 at 4:23 PM
To: kkbt@usbr.gov

Ms. Candace McKinley  
Environmental Program Manager  
Columbia-Cascades Area Office  
1917 Marsh Road Yakima, Washington 98901-2058  
Phone: 509-575-5848, ext. 603 Fax: 509-454-5650  
Email: kkbt@usbr.gov

Thank you for being the recipient for comments and questions on the KDRPP/KKC SDEIS. My family owns property near Lake Kachess so as you can imagine I care deeply about the impacts this project may have on Kachess lake, the environment surrounding it, and properties in the area.

Below are my questions:

What's the difference in toxins present in Keechelus versus in Kachess? If Keechelus has higher levels of toxins (Keechelus is in a watershed with I-90 and Kachess isn't) are there plans to filter out such chemicals prior to putting Keechelus water into Kachess? Would there be any health impacts to folk swimming in Kachess or on the fish in Kachess due to any chemicals present in water piped from Keechelus to Kachess?

What alternatives to pumping Kachess could be considered and how do they compare to the options considered in the report? The current report considers four alternatives of pumping Kachess and one alternative of do nothing but does not consider any water management options besides pumping Kachess lake. To really understand our alternatives it seems like it would make sense to also consider other forms of water storage and conservation. How does this plan compare to water market strategies, water conservation methods, crop mix management, and use of technology?

For which parts of the shoreline of Kachess lake would the pumping station be audible for each of the different pump alternatives?

Would the "Volitional Bull Trout Passage Improvements" be completed and operational before the pump is used to lower the lake?

What is the process by which property impact mitigations would be determined? Who will pay any mitigation if there is a cost associated? What time frame will be involved in the mitigation process? What mitigation would be provided if any wells are impacted when Kachess lake water levels are lowered an additional 80 feet? What mitigation would be provided if property values are impacted? If the increase in fire danger from this makes fire insurance harder or more expensive to maintain? Since Kachess lake is part of firefighting strategy and may be more difficult to use when it is lower, what mitigations will be in place to enable fire departments to continue to effectively handle fires?
Will there be impacts on when Kachess campground is open?

Who will pay for this project?

If there is more than one year of drought in a row. Would Kachess lake be allowed to return to a certain minimum level before being drawn down again or could it be kept below it's current minimum lake level for multiple years in a row?

What protections are in place to limit the amount the lake is drawn down if it is causing negative impacts on fish, wildlife, ecosystems, properties, or recreation?

Please let me know by email if any additional SDEIS, FEIS, Record of Decision or other updates are released.

Thank you,

Katie Lewis
Save LAKE Kachess. A group of special interest and large irrigators want to drain the natural glacial lake. The new plan will pump water from the natural lake below the existing dam outlet. This is not sustainable because the watershed cannot replace the extra water taken. It will turn the lake into a deep pool of water surrounded mostly by canyon walls. The lake may never recover, and it will cost tax payers hundreds of millions of dollars to do this!

Pumping out extra water and lowering the lake will:
Severely limit access and recreation opportunities by campers and boaters

A rare accessible alpine lake will be lost

Cost Taxpayers hundreds of millions for a project that will ultimately fail

Make the cost of irrigation water unaffordable for most farmers

Compromise the efforts of local fire districts to suppress forest fires

The water will only benefit a few private irrigators in single water district Roza Irrigation district a district with no senior water rights

Waste of Taxpayer’s money for one water district

There are NO benefits to Kittitas County
LAKE Kachess is a LAKE NOT a reservoir

Please Do NOT support the KDRPP or KKC projects.

Thank you, Cliff Owens
J P Owens <epxcanyon@gmail.com>  
To: kkbt@usbr.gov  
Tue, Jul 10, 2018 at 9:36 AM

Additional Comments and Questions

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens.

This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

Why are you trying to confuse and mislead the public and call LAKE Kachess a reservoir?

What water saving techniques have been developed by the Yakima farmers?

What new watering technologies have been implemented by the Yakima Farmers?

What have the Yakima Farmers done to conserve on water?

Why are the Yakima Farmers still planting "Too-Thirsty" crops?
NO TO KDRPP and KK

Please respond, Cliff Owens
[EXTERNAL] Opposing the pump! Save Lake Kachees

1 message

Patricia Phillips <mytkdnews@comcast.net> Wed, Jul 11, 2018 at 4:55 PM
Reply-To: Patricia Phillips <mytkdnews@comcast.net>
To: kkbt@usbr.gov

Dear Ms Mkinley,

I am writing you in opposition to the plans on installing a diesel pump on Lake Kachees and ruining this beautiful lake. It would be tragic to have anything ruin this beautiful place that so many of us in this region love and count on! Please take note the Yakima Valley needs to do their work fix their ditches before ruining this natural resource.

Sincerely, Master Patty Phillips

Phillips Taekwondo Center LLC
[EXTERNAL] Do not drain our lake!

1 message

Jenna Richter <richterj@thorpschools.org>  
To: Kkbt@usbr.gov  

Tue, Jul 10, 2018 at 7:41 PM

Via email to: Kkbt@usbr.gov
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA  98901-2058

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS. The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.

Jenna Richter
Sent from my iPad
Additional Comments and Questions

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens.

This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

Have the Yakima farmers purchased land with Senior Water Rights?

Have they purchased water on the Free Market from Senior Water Right Holders?

Have they purchased crop insurance to protect against losses due to drought?

Have they invested in water sparing technology?

What have the Yakima Farmers done to help themselves?
How many Family Farms are there in the Roza Water District? How many Corporate Farms in the Roza Water District?

How many of the Family Farmers will be able to afford the water?

How many Family owned farms to the Corporate Farms plan on forcing them to sell because they can't afford the water?

**NO TO KDRPP and KKC**

Please Respond, Jaxon Owens
The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens. This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

What plan has been addressed when our property value is effected when there is no water in the lake?

What mitigation has been done for the private wells in the LAKE Kachess area?

In Kachess Village we have Senior water rights there is no way that you should be allowed to drain our wells when Roza only has Junior Water rights.
What mitigation has been done for fires in the Upper Kittitas area when you have drained all the water from LAKE Kachess and we have no water in our wells?

If there is a fire and there is no water do you plan on paying for all the damage done?

How many lawsuits do you think you can cover? Do you have enough insurance to cover all the litigation that will be brought against the Roza Water District?

Why do you want to ruin a beautiful Alpine LAKE?

NO TO KDRPP and KKC

Please respond, Joann Owens
Additional Comments and Questions

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens.

This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

What mitigation has been put in place if our property value is negatively impacted if LAKE Kachess is drained?

Has an audit been done on the Ecology Office of Columbia River (OCR) to determine what has happened to the $200 million dollars given to the ORC?

I would like to see a detailed report on where this money was spent.

NO TO KDRPP and KKC

Thank You. J P Owens
**[EXTERNAL] SAVE LAKE KACHESS**

1 message

**J P Owens** <epxkachess@gmail.com>  
Sun, Jul 8, 2018 at 1:50 PM

To: laura.osiadacz@co.kittitas.wa.us, obie.obrien@co.kittitas.wa.us  
Cc: kkbt@usbr.gov

---

**Save LAKE Kachess.** A group of special interest and large irrigators want to drain the natural glacial lake. The new plan will pump water from the natural lake below the existing dam outlet. This is not sustainable because the watershed cannot replace the extra water taken. It will turn the lake into a deep pool of water surrounded mostly by canyon walls. The lake may never recover, and it will cost taxpayers hundreds of millions of dollars to do this!

**Pumping out extra water and lowering the lake will:**

- Severely limit access and recreation opportunities by campers and boaters
- A rare accessible alpine lake will be lost
- Cost Taxpayers hundreds of millions for a project that will ultimately fail
- Make the cost of irrigation water unaffordable for most farmers
- Compromise the efforts of local fire districts to suppress forest fires
- The water will only benefit a few private irrigators in single water district Roza Irrigation district a district with no senior water rights
- Waste of Taxpayer’s money for one water district
- There are NO benefits to Kittitas County
LAKE Kachess is a LAKE **NOT** a reservoir

Please **Do NOT** support the KDRPP or KKC projects.

Thank you, J R Owens
Additional Comments and Questions

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens.

This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

Have you communicated with the campers and boaters who use the LAKE Kachess camp grounds of your plans to drain this Alpine LAKE?

What mitigation has been done for the private wells in the LAKE Kachess area?

Why do you call LAKE Kachess a reservoir?

NO TO KDRPP and KKC

Please Respond, Rachel Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Thank You, R L Owens
Save LAKE Kachess. A group of special interest and large irrigators want to drain the natural glacial lake. The new plan will pump water from the natural lake below the existing dam outlet. This is not sustainable because the watershed cannot replace the extra water taken. It will turn the lake into a deep pool of water surrounded mostly by canyon walls. The lake may never recover, and it will cost taxpayers hundreds of millions of dollars to do this!

Pumping out extra water and lowering the lake will:
- Severely limit access and recreation opportunities by campers and boaters
- A rare accessible alpine lake will be lost
- Cost Taxpayers hundreds of millions for a project that will ultimately fail
- Make the cost of irrigation water unaffordable for most farmers
- Compromise the efforts of local fire districts to suppress forest fires
- The water will only benefit a few private irrigators in single water district Roza Irrigation district a district with no senior water rights
- Waste of Taxpayer’s money for one water district
- There are NO benefits to Kittitas County
- LAKE Kachess is a LAKE NOT a reservoir
- Please Do NOT support the KDRPP or KKC projects.

Thank you, R L Owens
Additional Comments and Questions

There is a group of special interest farmers who has been planning for a decade to take water from Upper Kittitas for their use the Yakima Basin Integrated Plan (YBIP). Operating in secrecy and denying every request for representation and involvement from Upper County citizens.

This is exactly the type of process that most Americans are fed up with government today. Backroom deals in the dark of night, without public input or proper consideration of viable alternatives. Then when discovered, the name of the organization is changed to protect the violators.

LAKE Kachess is a natural lake not a reservoir as the proponents would like the public to think.

Why is your only alternative to drain LAKE Kachess or not drain LAKE Kachess?

Has modification been made to the Kittitas Reclamation District Canals to provide efficiency savings?

Have efficiency improvements to the Waptox canal been done?

What water conservation plans have been put in place to conserve water?

Has a fund to promote water use efficiency basin-wide been put in place?
Has a surface storage facility at Wymer on Lmuma Creek been done?

What about transferring water from the Columbia River to the Yakima Basin?

Why didn't the Yakima Basin Farmers buy Senior Water Rights?

Has Lake Cle Elum been raised to add to water storage?

NO TO KDRPP and KKC

Please Respond, Stephanie Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.
Thank You S L Owens
Hello Candace, I became aware of the plan to drain lake Kachees and wanted to voice my strong opposition. This lake is one of the most beautiful places I have visited in Washington state. I have been taking my family here for the past 26 years. It is a true shame that the draining of this lake is even being considered for the gain of what, special interest groups who stand to make money. Shame on everyone who allowed this project to get this far.

Thank you for taking the time to read my email.

John
Do not drain Lake Kachess

Rachel Smith <rachel_stew@hotmail.com>  
To: "kkbt@usbr.gov" <kkbt@usbr.gov>  

Tue, Jul 10, 2018 at 5:19 PM

Please take the time to read the following document and take no action to drain Lake Kachess.

-Rachel Smith

KDRPP-public-comments.pages
865K
Dear Ms. McKinley,

The Kachess Drought Relief Pumping Plant (KDRPP) is not a public benefit and must not be enacted, either by the Bureau of Reclamation and Department of Ecology, or by the Proratable Entities interested in implementing it. It is inconsistent with adopted plans, the analysis is based on missing data and questionable assumptions, proposed mitigation is lacking, groundwater impacts could be detrimental to property owners and public recreationists, there are insignificant agricultural impacts given the negative recreation and environmental impacts, lake habitat for fish is negatively impacted, and it could potentially increase the fire susceptibility of the area while decreasing the ability of emergency responders to fight fires. It also radically changes the use of the Yakima Project, which has been managed for over 100 years as a system for all users and instead essentially earmarks one reservoir for one irrigation district.

Inconsistency with Mission and Adopted Plans

Comprehensive planning within the State of Washington requires that all plans and projects be consistent with adopted policies; KDRPP does not appear to meet that test in several regards, including contrasting with the mission of the proposing agencies.

The opening page of the DSEIS cites the missions of the US Department of the Interior, the Bureau of Reclamation, and the state Department of Ecology. While all agencies have mission facets that can compete with one another, making mission-project consistency a balancing act, this project does not fit with the adopted missions more than it does.

* Though the US Department of the Interior is directed to “supply the energy to power our future,” this part of the mission is tertiary to protecting natural resources, which KDRPP does not do. Instead, it denigrates a natural environment in order to provide economic benefit to a small group.

* Reclamation is directed to “manage, develop and protect water” and clearly KDRPP fits within that purview. However, Reclamation must also do this work “in an environmentally and economically sound manner,” which is not descriptive of the proposed project.

* This project is most inconsistent with the state Department of Ecology’s mission to “protect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations.” Undertaking KDRPP has significant negative environmental and recreational impacts which are not consistent with Ecology’s mission.
Comment Letter 341

K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] SDEIS
1 message

Bonnie Aguilar <BONAGI@msn.com> Wed, Jul 11, 2018 at 3:06 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

   It is absolutely ridiculous that you would want to get more water out of Lake Kachess, when you have hundreds of people with homes around the lake, and thousands who use the State park for camping and boating.

   If you really think about it, this action would cost millions, and only help a few people for the first year, then it will take many years to recuperate.

   In the mean time, the fish habitat will suffer, animals of all kinds live in these hills and depend on this water. And most of all, the trees become weak and are attacked by bark beetles, ants and other diseases, causing devastation and extreme fire danger.

   We depend on this water to fight forest fires, too.

   Thank you, for listening
   Bonnie Aguilar
   Property Owner
   Kachess Community Assoc.
The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

1. How do you plan on saving the Bull Trout that will not be able to spawn?
2. How will you compensate the many houses in the area?
3. Where will the thousands of people that use this beautiful natural lake go to camp, boat and enjoy the area?
4. What will you do to mitigate the wells that will run dry?
5. Why haven't you considered other options like conservation and rebuilding the ditch which looses hundreds of thousands of gallons of water?
6. How will you mitigate potential forest fire danger?
7. This natural lake should never be drawn down further then it’s natural level, it will likely never fill up again.
8. The farmers knew how much water they would get in drought years when they bought their land, why do they get more water now? At the price of thousands of others who enjoy this natural beautiful lake. It makes no economic or common sense. Do not allow this lake to be destroyed to benefit a few, keep it for the thousands that use it.

Please answer each of my questions above.

Thank you.
Dear Ms. McKinley:

Please accept my comment regarding the KDRPP SDEIS:

Alternative 1 No Action: I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No Action" is acceptable.

Thank you,

Michelle Albulet

526 Yale Ave N #606 Seattle, WA 98109

Michelle Albulet

Human Resources Generalist

GreggPCNWLogo(sig)Finale

(206) 519-3234 - Direct

(206) 920-8523 Cell

www.copiersnw.com

Copiers Northwest, Inc. 601 Dexter Ave N Seattle, WA 98109

Confidentiality Notice: This email message, including any attachments, is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited.
[EXTERNAL] Opposition to Floating Pumping Plant for Lake Kachess

1 message

Diana Aresu <dianaaresu@comcast.net> Wed, Jul 11, 2018 at 4:35 PM
To: Kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

Dear Ms. McKinley,

The following are comments on the draft supplemental EIS on the Caches Drought Relief Pumping Plant and Keechedlus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be build. Instead, spend funding on promoting water conservation, water efficiencies and water markets during drought years instead of more uneconomical and environmentally damaging water projects in the Yakima River Basin.

This proposal for a floating pumping plant is an travesty and completely a misuse of public funds which those that are promoting it will regret when the worst comes to fruition. Those of us who do care about fiscal responsibility and the environment will be sure to publicize our opposition and grow louder in our voice in the days ahead.

Sincerely,
Diana E. Aresu
20207 Island Parkway E
Lake Tapps, WA 98391
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA  98901-2058

Dear Ms. McKinley,

The following are comments on the draft supplemental EIS on the Caches Drought Relief Pumping Plant and Keechedlus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be build. Instead, spend funding on promoting water conservation, water efficiencies and water markets during drought years instead of more uneconomical and environmentally damaging water projects in the Yakima River Basin.

This proposal for a floating pumping plant is an travesty and completely a misuse of public funds which those that are promoting it will regret when the worst comes to fruition. Those of us who do care about fiscal responsibility and the
environment will be sure to publicize our opposition and grow louder in our voice in the days ahead.

Thank you,
Tony Aresu
20207 Island Parkway East
Lake Tapps, WA.
[EXTERNAL] Opposed to draining of Lake Kachess

Inna Avdeyev <innaavdeyev@yahoo.com>  
To: kkbt@usbr.gov  
Tue, Jul 10, 2018 at 11:14 PM

I am opposed to any of the Kachess SDEIS active alternatives (2-5) a pumping plant and/or pipeline at Lake Kachess. Alternative #1 no action is the only acceptable alternative

Sent from my iPhone
Thank you for considering the comments attached.

Gloria Baldi
July 11, 2018

To: Candace McKinley
Environmental Program Manager, B of R

Please consider the following comments part of the response to the SDEIS regarding the proposed Kachess Lake Pumping Plant and the pipeline proposal from Lake Keechelus to Lake Kachess. When we consider the effects of the proposed projects, the first alternative of **No Action** is the only acceptable action. The others (2-5) are definitely unacceptable.

The effects of water removal are always drastic. Lowering the storage pool at Lake Kachess up to 80 feet more during drought conditions, taking 2 to 5 years for the level of water to return, indicates there will be much less water in the reservoir for Bull Trout, other fish and animals. With such a lowered water level, have the effects of a higher water temperature on fish been considered? Have the effects of water into surrounding streams, or even access to those streams been researched? Has the importance of the water table been taken into account for the surrounding forest and habitat, especially in drought years with heavy fire potential? And it appears the public, both those who live near the lake or the public which recreates on Lake Kachess, have not been considered.

We are concerned about Swamp Lake, a very high quality wetland, with the possibility of a tunnel being drilled underneath to pipe water to Lake Kachess. Again, the water table needs to be a high consideration for the habitat of plants and animals that follow Swamp Creek under I-90 to the Yakima River.

There is no way to mitigate for such risky projects. With Climate Change factoring in agriculture production in the lower Yakima Valley, we do not even know if it will be possible if farmers will be able to produce the products grown at this time. **Conservation** should be the project considered rather than the risky and highly expensive taking of water from one area for the benefit of another.

We are adamantly opposed to the both the Kachess Drought Relief Pumping Plant and the proposed tunnel transferring water from one Lake to the other.

Thank you for the opportunity to comment.

Sincerely,
Gloria and Jeb Baldi
440 Riverbottom Road
Ellensburg, WA 98926
The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.

Rebecca M Beaty
RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

The only alternative I can endorse is Alternative 1 No Action.

My objection to the other proposals reflects my financial and emotional commitment to preserving Lake Kachess, and my conviction that this proposal ignores stated legal requirements, will be ineffective and hugely expensive, and will degrade a natural resource of the kind that is becoming less and less available to future generations.

I have been concerned from the beginning about the limited participant, process and intention of the KDRPP and KKC. As I understand it, the NEPA guidelines specifically state that proposals should not be slanted to benefit any special interest group, yet it is clear that this SDEIS benefits some special interest groups at the expense of others. How do you intend to rectify this? Will you demand an unbiased, independent and thorough study as that satisfies the requirements of NEPA?

A new study should include alternatives other than “do nothing” or pump water from Lake Kachess one way or another. How will you rectify the failure to provide alternatives as required by NEPA? Surely there are other options; building a reservoir near Rosa to capture winter rain and snow, for example.

Why is there no detailed examination of methods of conservation? How will this omission be addressed? The response to a diminishing resource must be first, conservation, second, increased supply, not the other way around. If I were a farmer being asked to pony up money to build a portable or fixed pumping station on Lake Kachess so that I could get a larger share of my water allotment, I would welcome an alternative, or example, funds or tax breaks for installing water conservation irrigation. Take a drive through Kittitas and Yakima valleys and beyond. You’ll see open irrigation ditches, spray sprinklers, water running away, as well as “thirsty” crops expanding into increasingly dry land. Why spend money to build a temporary, inconsistent, and finally inadequate (given the trajectory of climate change) solution to a lack of water when it could much better be spent on methods of conservation!!!
Supply increases demand. The study says no new rights will be generated but then contradicts itself saying “it will issue water rights as necessary”? How will this contradiction be resolved? What are the specific restrictions and requirements on new applications for water rights?

As a senior water rights holder, what are the protections of my rights? Are they being violated in favor of lesser rights? And what will be the cost of remuneration for those lost rights? Will the Bureau redig my well, compensate me for lost property value? How much? To what extent?

What are the true losses and costs to the environment? Among those might be the repercussions from exposing a huge area of dust and silt. Surely the Bureau recognizes the danger of exposed shoreline to poor air quality, increased danger of fire, and vulnerability to disease of the surrounding trees and vegetation. What will be done to provide a complete, thorough, and accurate assessment of environmental impact? Have the concerns of the fire district been heard? What does the EPA say about damage to air and water quality if Lake Kachess were drawn down?

It’s hard to imagine that the small streams will actually make the journey to a lake that has been drawn down an additional 80 feet below its current level. Which means less water to refill the lake – all wasted – and an imperiled journey for Bull Trout from Box Canyon Creek, a major spawning stream. What proposal do you have for protecting the species that depend on travel to and from these streams into the lake? The tunnel or bypass between the lakes is inadequate and may not achieve its stated goals.

My family has owned a cabin on the east side of Lake Kachess since 1979, and it is our place for coming together with our children and grandchildren. The property is not just a piece of land but a piece of our heritage. Less so than to the Native Americans who came to Lake Kachess to set up camps, pick huckleberries, and hunt. The arrowheads we have found at the end of the lake attest to Kachess Lake’s long history as a place for preserving culture as well as resources and species. Have all the native American tribes that used this area been thoroughly consulted about these proposals? Have the campers and boaters and snow mobilers? What is the dollar amount of the loss to Native Americans, cabin owners, and the thousands of people who visit annually to swim and fish and enjoy the beauty of this lake?

My only option is to support, vehemently, Alternative 1, No Action.

Sincerely,
Lynn Benediktsson, Cabin Owner, East Lake Kachess
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation/ Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

Dear Ms. McKinley:

As a cabin owner on the east side of Lake Kachess, I am writing to endorse Alternative 1 No Action, as the only acceptable alternative to the plan to install a pumping station on Lake Kachess. Below I offer a series of questions to indicate why I regard the plan to be flawed.

First and very importantly, the proposal lacks a range of alternatives. Why, for instance, is there no consideration to create another catchment area downstream to recover early spring runoff when Lakes Keecheless and Kachess are full? There is a considerable spring flow, and you project that with climate change there will be a greater one. Why can't it be captured?

Furthermore, why is there no proposal to encourage and fund water conservation technologies and techniques of crop management? I understand that quite sophisticated water-saving irrigation technologies exist. Wouldn't it be cheaper and better in the long run to fund them, rather than pumping more water downstream to be wasted? I am supported in this speculation by a Washington State University study of the pumping project, which concluded that it is not only economically unfeasible, but also that water conservation will achieve the same benefits at a much lesser cost. Why has that study not led to a "conservation" alternative that we could endorse?
Another concern: I have not read exactly who will have financial responsibility for implementing, operating and maintaining the pumping station, and who will have responsibility for mitigation and litigation and other costs? Bureau of Reclamation estimates range to almost half a billion dollars, and that is just for construction. Who will pay?

The proposal implies that the pumping station will be deployed only under drought conditions. What if there are successive years of drought? With a relatively small inflow, will Lake Kachess actually refill? If not, then will the pumping station be deployed earlier and more often, and ultimately be ineffectual? If as well there is an economic expansion of agriculture in the Yakima River drainage beyond the capacity of the water supply, will "drought" be the new normal? And with congruent failures to capture spring water runoff or to implement water conservation technologies or to rotate to less "thirsty" crops, will the half billion dollars have been wasted?

As I am sure you are aware, the original Big Lake Kachess still exists under the dam water. Will pumping 80 feet below the dam actually be draining a natural lake? Is it legal to drain a natural lake?

I now move to more specific questions relating to our own local situation. There are more than 300 homesites around the lake. The proposal projects that our wells will run dry. What exactly will be done to mitigate that? Will the Bureau of Reclamation send someone to drill them 80 or more feet deeper and how long will that take? The document offers no details, only to acknowledge that wells will be "dewatered." On that note, several of us on the East Side have senior water rights. How do junior water rights holders downstream have the right to "dewater" us?

The Snoqualmie Pass Fire and Rescue Agency has raised concerns about increased area fire risk if the lake level is lowered. I have read that the Bureau of Reclamation refused to meet with them. I am shocked: why? What if they are right, and some of our homes burn down because the Fire and Rescue people can't access a lake that is well over a hundred feet below its high water mark?

On that note--what will be the new shoreline of the lake when it has been pumped to capacity? How much of the lakeside will become mud or silt? As the silt dries will those prevalent strong winds create blowing dust? I am asthmatic; I want to know.

I have so far neglected the obvious, because I'm not sure it matters to the Bureau of Reclamation. But I must speak. Like all of our neighbors, we are here because we love the lake. Our family has had a cabin here for forty-seven years, and our grandchildren are the fourth generation to enjoy it. We have strewn ashes here. The proposal presents an existential threat to the lives we lead on these shores. If the pumping station is built, Lake Kachess will be degraded into a noisy and polluted industrial site, a violation of what it is now-- not only an irrigation resource but also a homesite for hundreds of people, and for thousands a profoundly beautiful boating and camping experience-- a jewel of Washington State.
Ms. McKinley, please take note of the questions I have raised above, and add my voice to the others who endorsed **Alternative One**. I look forward to your response.

Sincerely,

Tom Benediktsson

benediktssont@montclair.edu
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.”
Hi Candace,

Attached please find our letter in opposition to the proposed pumping of Lake Kachess along with the Geological Assessment that was done for our Well.

I have also sent the letter and assessment by fax as noted in the letter.

Kind regards,

Lynn Brewer
253.318.3188 (mobile)
Sent via email to: kkbt@usbr.gov
And by fax (509) 454-2530

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia – Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

Re: KDRPP & KKC SDEIS
   Critical Area Assessment

Dear Ms. McKinley:

I am writing to you today to submit a critical area assessment for our property located at 770 Kachess River Road in Easton, which is located adjacent to Kachess River.

Enclosed please find the Geological Assessment from Migizi Group we had performed as it pertains to our well and the aquifer from which the nine wells in our sub-division draw water. As you will see in the “Conclusion,” our subdivision has a high risk of potential groundwater contamination within the well system and that static water levels are approximately 15 feet below existing grades.

We are full-time residents in our sub-division and our well is our only source of potable water. The well serving our property sits approximately 100’ from the Kachess River and is located within the designated flood zone of Kachess River. When we participated in these meetings a few years ago, I was informed by the U.S. Corp of Engineer representative, it is likely this project (as proposed at that time) could negatively impact our potable water and the downstream demand for water could cause insufficient water resources to keep the Kachess River flowing or could impact the available water source for our well. Can you provide us with what assurances you have this will not occur? We are deeply concerned about the impact the above-referenced project will have on our water source, as well as the noise pollution that will occur as a result of the proposed project and therefore are opposed to the proposed pumping of Lake Kachess.

Sincerely,

Lynn Brewer
November 4, 2015

Richard T. Cole, P.S.
Attorney and Counselor at Law
P.O. Box 638
1206 North Dolarway Road, Suite 108
Ellensburg, WA 98926
(509) 925-1900

Subject: Geological Assessment

Brewer v. Lake Easton Estates HOA, et al
Cause of Action for Damages
Negligence for Failure to Manage Wellhead Protection Zones / Sanitary Control Areas

Dear Mr. Cole:

Migizi Group, Inc. (MGI) is pleased to submit this Geological Assessment as it pertains to the pending lawsuit Brewer v. Lake Easton Estates HOA, et al. The purpose of this assessment is to address the geologic conditions present underlying the Brewer property and the larger Lake Easton Estates. Specifically, how these geologic conditions could impact water quality within the estates.

Our scope of services is limited to the review of well logs, maps of the Lake Easton Estates Plat, environmental test results, and geologic research.

INTRODUCTION

Lake Easton Estates is a 52 lot subdivision located in Kittitas County on the west side of the Kachess River, between Kachess Lake (to the north) and Lake Easton (to the south), see Figure 1, Topographic and Location Map. Water is supplied to the occupants of Lake Easton Estates through nine Group B Wells (Figure 2), with each well serving four to six lots. Based on the well logs provided to us (attached), the original 5 wells for the estates were installed between August and September of 1990. A permit dated November 18, 1990 for an additional 4 wells was also provided to us, and can likely be attributed to the remaining wells servicing the community. No well logs are available for these additional wells. Based on information provided by the Washington State Department of Health, the system effective date for these secondary wells was December 19, 2002, with the implementation of these well systems likely being phased with the continued development of the site. Figure 2 shows the relative location of the wells in relation to the layout of Lake Easton Estates and the individual residential lots.
Of the 9 wells servicing the Lake Easton Estates, 8 have known encroachments within their 100 foot Sanitary Control Areas by either structures or septic systems, and all 9 of the well heads are within 100 feet of the major roadways servicing the community (Kachess River Rd and Evergreen Way). The green coloration within Figure 1 highlights the properties which contain structures within the Sanitary Control Areas for the given wells. Given the fact that all potable water within the estates is provided through this well system, if it were to become compromised, Brewer and the other occupants of the Lake Easton Estates could unknowingly suffer adverse health conditions. This would particularly be true if each well were drawing from the same aquifer, and could then potentially receive contaminants from the multitude of possible sources listed above.

GEOLOGIC SETTING
The Lake Easton Estates is located in what is generally considered the Yakima River Basin, shown in Figure 3; an area which includes almost all of Yakima County, more than 80 percent of Kittitas County, about 50 percent of Benton County and less than 1 percent of Klickitat County. The headwaters for the basin are located on the upper, humid east slope of the Cascade Range, with the basin terminating at the confluence of the Yakima and Columbia Rivers towards the southeast; encompassing approximately 6,200 mi² of central Washington. Eight major rivers and numerous smaller streams tributary to the Yakima River, with the largest of these being the Naches River.

The upper (western) Yakima River Basin, where the Lake Easton Estates is located, was the focus of a hydrogeologic study conducted by Gendazek and others (2014). Using subsurface information garnered from previous geologic maps developed by Dragovich and others (2002), Brown and Dragovich (2003), Cheney and Hayman (2007), and Haugerud and Tabor (2009), and additional lithostratigraphic information obtained from drillers' logs from 271 project wells located in the study area, 6 primary hydrogeologic units were identified within the larger aquifer system of the region. These hydrogeologic units are identified as unconsolidated sediment (UNC), basalt (BAS), volcanic rocks (VOLC), sedimentary rocks (SED), metamorphic rocks (META), and intrusive rocks (INT). The unconsolidated sediment unit occurs at land surface over about 27 percent of the study area, basalt 3 percent, volcanic rocks 27 percent, sedimentary rocks 34 percent, metamorphic rocks 4 percent, and intrusive rocks 5 percent.

The UNC hydrogeologic unit is composed of unconsolidated glacial and non-glacial deposits, including alluvium, talus, landslide deposits, alpine glacial deposits, recessional outwash, and outburst flood deposits; at depth, the unit also includes thick glaciolacustrine deposits beneath the broad valley floors. Though somewhat scattered throughout the study area, a large proponent of the UNC unit is concentrated within what is known as the Roslyn Basin, Figure 4. The Roslyn Basin is one of six identified structural basins within the greater Yakima River Basin (Roslyn, Kittitas, Selah, Yakima, Toppenish, and Benton Basins), and extends from the broad valley floors down valley from Kachess and Cle Elum Lakes toward the southeast, terminating near Teanaway. A structural basin is typically described as a geological depression formed by the tectonic warping of previously flat lying rock strata.
In a detailed analysis of the sedimentary deposits in the Roslyn Basin, Jones and others (2006) reported three subunits that make up the unconsolidated sediment unit comprising the Roslyn Basin. Jones and others (2006) described these as an upper coarse-grained (gravel and sand) aquifer with a median thickness of 80 feet, a middle fine-grained (silt and clay) and low productivity unit with a median thickness of 170 feet, and a lower coarse-grained (gravel) aquifer with a median thickness of 50 feet.

A review of the well logs provided to us for the Lake Easton Estates indicate that rapidly permeable gravelly outwash soils were encountered during the installation of Wells 1 through 4 from near surface elevations to the termination depth of each well; a depth from 80 to 100 feet below grade. Additionally, the National Cooperative Soil Survey for Kittitas County identifies subsurface soils in the vicinity of the Lake Easton Estates as 237, or Kladnick ashy sandy loam. This soil group is derived from glacial outwash, and ranges in composition from a gravelly sandy loam to an extremely gravelly sand.

Static water level based on the well logs is at approximately 15 feet below existing grades.

CONCLUSIONS
Given the relative location of the Lake Easton Estates, well log soils information, and geologic mapping of the region, it is our opinion that the Lake Easton Estates is located in what is known as the Roslyn Basin, and each well servicing the community draws from the same aquifer; the upper coarse-grained subunit of the larger unconsolidated sediment (UNC) hydrogeologic unit described by both Gendazek and others (2014) and Jones and others (2006). Additionally, given the high permeability of site soils, it is our opinion that the Lake Easton Estates contains a high risk of potential groundwater contamination within their well systems should contaminants be introduced from an above or below ground source.

REFERENCES CITED


We appreciate the opportunity to be of service on this project. If you have any questions regarding this letter or any aspects of the project, please feel free to contact our office.

Respectfully submitted,

MIGIZI GROUP, INC.

Casey R. Lowe, P.E.
Principal Engineer

Attachments:  
Figure 1. Topographic and Location Map
Figure 2. Well Location Map
Figure 3. Yakima River Basin
Figure 4. Roslyn Basin
Well Log
Migizi Group, Inc.
P.O. Box 44840
Tacoma, WA 98448

Brewer v. Lake Easton Estates HOA, et al
Cause of Action for Damages
Topographic and Location Map

FIGURE 1
Migizi Group, Inc.
P.O. Box 44840
Tacoma, WA 98448

Brewer v. Lake Easton Estates HOA, et al
Cause of Action for Damages
Well Location Map

FIGURE 2

March 2019
Figure 6. Location of six sedimentary basins, Yakima River Basin, Washington.
Figure 2. Upper Yakima River Basin, Kittitas County, central Washington. Abbreviations refer to streamflow-gaging stations as shown in Table 1.
WATER WELL REPORT

STATE OF WASHINGTON

OWNER: Name: [Name]
Address: [Address]

LOCATION OF WELL: County: Kittitas
Street Address: East Eaton Rd, Sec 29, T 29 N, R 17 W

PROPOSED USE: Domestic

TYPE OF WORK: Owner's number of wells: ___
Abandoned [ ] New well [ ] Method: Dug [ ] Bored [ ]
Deepened [ ] Cable [ ] Tested Well [ ] Other [ ]
Reconditioned [ ] Rotary [ ] Jetted [ ]

DIMENSIONS: Diameter of well: ___ inches
Depth of completed well: ___ ft.

CONSTRUCTION DETAILS:
Casing installed: [ ] Dia. from ___ to ___ ft.
Waxed: [ ] Dia. from ___ to ___ ft.
Threaded: [ ] Dia. from ___ to ___ ft.

Perforations: Yes [ ] No [ ]
Type of perforator used: ___
Size of perforations: ___ in.
Perforations from: ___ ft. to ___ ft.

Gravel packed: Yes [ ] No [ ]
Size of gravel: ___
Gravel placed from: ___ ft. to ___ ft.

Surface seal: Yes [ ] No [ ]
To what depth: ___ ft.
Material used in seal: ___

Did any strata contain unusable water? Yes [ ] No [ ]
Type of water: ___

Method of sealing strata off: ___

PUMP:
Manufacturer's Name: ___

WATER LEVELS:
Type: ___

Detection level: ft. below top of well
Date: ___
Artesian pressure: lbs. per square inch
Date: ___
Artesian water controlled by: ___

WELL TESTS:
Drawdown is amount water level is lowered below static level
Was a pump test made? Yes [ ] No [ ]
Yield: ___ gal./min. with ___ ft. drawdown after ___ hrs.

Recovery data (time taken for zero when pump turned off) (water level measured from well top to water level)
Time: ___ Water Level: ___
Time: ___ Water Level: ___

Date of test: ___

Bailer test: ___ gal./min. with ___ ft. drawdown after ___ hrs.
Artesian flow: ___ gal./min. with stem set at ___ gpm,
Artesian flow: ___ gpm Date: ___

Temperature of water: ___ Was a chemical analysis made? Yes [ ] No [ ]

WELL CONSTRUCTOR CERTIFICATION:
I constructed and/or accept responsibility for construction of this well, and its compliance with all Washington well construction standards. Materials used and the information reported above are true to my best knowledge and belief.

NAME: (PERSON, FIRM, OR CORPORATION) (TYPE OR PRINT)
Address: ___

(Signed) ___
(WELL DRIER) License No: ___
Contractor's Registration No: ___
End Date: ___

(USE ADDITIONAL SHEETS IF NECESSARY)

March 2019
Good morning
Thank you for the opportunity to provide questions on the KDRPP & KKC SDEIS
These are the written questions submitted on behalf of YBSA by Charlie de La Chapelle.
charliedela@gmail.com

1. **Who pays how much and when.**
   We have seen the projection ranging from $150M to $450M when mitigation is included. A breakdown of capital costs, O&M, mitigation and interest. It should be divided by 72,000 acres to get per acre cost if Roza is to pay 100%. And would Roza be expected to pay 100% of K-to-K pipeline too?
   This information needs to be quickly disseminated to their growers so decisions can be made and contracts signed ASAP.
   Also, I don’t see the estimated pumping cost in the event the dead storage is needed to fulfil the obligation to supply senior water contracts over the period of record. Are we further correct that should that event occur, Roza growers would receive no water from the project but would incur the full pumping bill? How can they be expected to pay if they receive no water to grow their crops? Lenders will want to know too.

2. **Performance of the project.**
   Can we ask for an analysis of how well the project performs over the period of record with the UW assumption for climate change, relative to the 70% target goal?
   We are especially interested in the back to back drought years.

3. **Salmonid restoration.**
   Can we ask for a comparative analysis of the project on instream flows below Parker. We are concerned about the impacts to flow volumes, temperatures, predation and survival of the Sockeye runs in the lower 100 miles. We also think some of the studies cited for survival are over 50 years old and need to be updated with more current data. The quick analysis comparing the Sockeye mortality of 2015 and 2017 need to be addressed!

4. **Pumped storage.**
   As costs climb ever upward we need to investigate additional sources of revenue generation. One of the possibilities of the K-to-K pipeline is to incorporate pumped storage to take advantage of the imbalance between power supplies and power demand to store solar and wind surpluses. Even if the possibilities are marginal or negative we should be learning what modifications can be made to offer values that other sectors will pay to have.
Can we ask for analysis of profit potential of a pumped storage project on the k-to-k pipeline, complete with limiting factor analysis.

5. Value
Initially three irrigation entities of the Yakima Project were identified as needing a supplemental water supply in drought years. However, if the costs are beyond their ability to pay how are these needs to be met?

Thanks for your attention.
ATTN: Ms. Candace McKinley, Environmental Program Manager

Bureau of Reclamation

1917 Marsh Road, Yakima WA 98901-2058

Dear Ms. McKinley:

I am writing to present my observations, concerns and questions regarding the KDRPP

1. The inset photo on the cover of the SDEIS labeled Kachess Reservoir is not Kachess Reservoir. What is shown it Lake Kachess with most or all of the “reservoir” water drained down as evidenced by the visibility of the outlet channel to the dam. Other figures in the SDEIS also use the label “Kachess Reservoir”. It is misleading to refer to the subject water body as Kachess Reservoir. The pumps will not pump from Kachess Reservoir. They will pump from Lake Kachess. Other text throughout the SDEIS also consistently refer to Kachess Reservoir, when what is at stake is natural Lake Kachess, below the reservoir. The document needs to be revised to clarify to the public what is proposed. This is not pumping reservoir water that people are used to seeing fluctuate up and down. The KDRPP is proposing to more than double the furthest drawdown ever seen.

2. I respectfully request that you extend the comment period for another 60 days. I was in Easton last weekend and found a number of people, who still did not even know about this proposal.

3. If implemented, how specifically would the KDRPP be funded? What will be the State and Federal taxpayer obligations?

4. If implemented, how specifically will the recreation opportunities be mitigated?

5. Why was no alternative for conservation considered?

Thank you for your consideration. I look forward to your reply to my questions.
Dear Sirs;

I am writing as a concerned resident of the Lake Kachess community regarding the SDEIS. My wife and I have been owners of a vacation home at Lake Kachess for 38 years. The floating barge or tunnel to Lake Keechelus would drain Lake Kachess to a level where recreation on the lake would be impossible. It would seriously affect property values of homeowners and be detrimental to the ecology of the area. In addition, it would impact the ability to provide water for fire protection in this fire prone area. It would make a wonderful state park less attractive with the lake dropping to a level where it would be inaccessible, thereby destroying a wonderful recreational opportunity for thousands of campers. In short this drainage plan will ruin a pristine recreational area not only for residents but all Washington residents. Would you please respond how all this issues would be mitigated if the plan is approved.

Sincerely,

James and Barbara Elder
3730 Rodesco Dr. SE
Puyallup, Wa  98374

jimbarbelder@gmail.com
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley:

Please accept my comment regarding the KDRPP SDEIS:

Alternative 1 No Action: I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No Action" is acceptable.

Brandon Erickson  
526 Yale Ave N #606  
Seattle, WA 98109
My question is why aren't there other choices beside draining a natural lake to benefit a small group of corporate farmers with no senior water rights?

Has the Roza Water District done repairs or made improvements to their trenches, reservoirs or added any water conservation programs?

How can you trust the SDEIS when they have tried to confuse, mislead and deceive the public. Like calling LAKE KACHESS a reservoir it is NOT a reservoir it is a LAKE.

I am opposed to any of the Kachess SDEIS alternatives. The only one is NO ACTION that is acceptable. Please send me a response to my questions and concerns.

AP Fountain
Greetings,

I have a residence in Kachess Village and I know if this project goes through our property value will go down.

Will mitigation be provided to owners whose property values are reduced by this project?

How will this lost in property value be calculated?

Who will pay for any mitigation?

The SDEIS does not address any mitigation for reductions in private property values. So, what assurances would private property owners have that mitigation would be available to us?

The SDEIS does not seem to have any reliable facts about how long if ever Lake Kachess will refill. No one can predict how much snow/rain we will get in any year. With the possibility of the KKC it was questionable if it would refill, without the KKC most likely it will take even more years. Then the only way it could refilled is that they don't take water for years out of Lake Kachess. So won't that make all the money spent on installing the floating pumping plant, a real waste of money? In the process, they will have ruined a beautiful Alpine Lake for years.

I am opposed to any of the Kachess SDEIS alternatives. The only one is NO ACTION that is acceptable. Please send me a response to my questions and concerns.

Thank you,

Tim Fountain
Kachess Village Residence
We would like to express support for the "no action" alternative proposed in the Kachess Drought Relief Pump Plant EIS.

We are diversified Roza irrigation district farmers. We raise a mix of permanent crops and row (forage) crops.

Our current management has been in place since 1979 and has witnessed many changes and many droughts on the Roza.

Our primary concern is the substantial cost of this project falling onto one irrigation district. The project, should it proceed, will substantially increase water rates for the two decades following its implementation. Rates would likely increase such (taking into account the current estimates and the likelihood that the project would go over budget) that anything other than high value permanent crops would be unprofitable. This would increase the current high percentage of water heavy permanent crops and make an already brittle irrigation district ever more reliant on extraordinary measures like the KDRPP and other continued outside subsidization. There is a reason that the Roza is the only district pursuing this part of the integrated plan, the water is simply too expensive.

Additionally we do not feel that the Roza board is doing an adequate job of communicating to it's stakeholders what is being proposed. We try and stay relatively well informed and we struggle to keep up with this project and just what it will mean if it is approved by all interested parties and pursued by the Roza board. We think there are many farmers within the Roza that do not understand the cost of what is being pursued by the Roza board here.

We hope that the Bureau of Reclamation will continue to work to improve the availability of water in the Yakima Basin, but in a way that will work for a majority of the users, not simply the largest growers with the loudest voices.

Respectfully,

Neil Garrison
Tom Garrison

Sunnyside WA
Dear Candace,

Wow!! What a huge responsibility you have to sift through all these SDEIS comments letters. Thank you in advance for your service to our county and this country.

My name is Shelley Gienger. I am a registered nurse and health-coach business owner in Upper Kittitas County.

I grew up on, and am part owner, of a multigenerationally owned and operated, crop growing, 4000 acre-mostly dry land farming-cattle ranch in Indian Valley, Idaho. We have built several reservoirs over the years to help water crops and cattle.

My husband Lonnie and I currently have two properties in the Lake Kachess Ridge area and have owned the one for sale since 1991. We also have an apple orchard in Yakima West Valley area.

I state these facts only to establish credibility as I speak on behalf of many home/land owners in both counties as well as ranchers and farmers.

Even though we sympathize with the perceived need for more water in lower Yakima Valley and beyond; the property owners bought the land knowing it only had junior water rights and would grow only certain crops. As you know, property prices have always been adjusted lower based on this fact.

The solution to a perceived potential shortage of any resource with a limited supply, like water, is not to find ways to use more of that resource and take water from everyone else for private use.

So, I ask you this?

Why should people who paid less for their land be entitled to an expensive and unsustainable solution that increases their property values while all of our county land decreases? Kittitas County is left with the many downsides and messes of the decision—and they get all the benefit!

Knowing there are other solutions for capturing and conserving the water currently flowing past their farms, (like building reservoirs on their own property) we adamantly oppose the currently proposed SDEIS plan to pump out Lake Kachess in order to provide that extra water. There are many concerns, but most concerning is how there could be (will be and already is in some cases) reduced property values for people living on the lake and in Kittitas and Yakima Counties.
Lower property values will have a domino effect caused by less taxes being collected from property owners. That in turn could (will) cause, but not be limited to the following issues.

Less taxes collected could (would) lessen budget monies for county/federal projects, and decrease the effective running of our county/federal programs with budget cuts. Public school dollars will be affected.

The domino effect could (will) affect the ability to recruit and pay needed county employees the well deserved salaries they are accustomed to. We definitely want our local counties to be well run!!

This domino effect has already started from only the word getting out that the lake may be dramatically lowered an additional 80 vertical feet. The concern about the eventuality of wells drying up; actual affected wells that do dry up. The threat of damaged views from homes, campground recreation changes and no boating, (with less visitors the challenge on tourism and economy is another large subject of concern with county and federal tax dollars being affected) all these cause big hits on property values.

Also, people in all of Kittitas/Yakima counties could (will) feel the lowered property value results when they lack allotted water for senior water rights holders in year two and beyond after the drought year.

So, you see that it's a critical decision; a one time fix for junior water rights holders that affects all of Kittitas and Yakima counties. It's not just a Lake Kachess home owner challenge.

Are you, as a representative of the BofR prepared to live with and deal with the fallout challenges that will happen if you let this go through?

Just this week, a potential buyer from Seattle called about the house we have for sale in the Lake Kachess area. He asked our realtor, ‘Is the draining of Lake Kachess a real threat?’ And our realtor had to say, ‘Yes’ and look for other benefits to share about the property. The man wanted the beauty of a lake home and is now looking for a home in a different area.

This SDEIS proposal doesn’t look good for the property values and long term prosperity balance in our county and federal government and beyond.

Let's find another solution or two for our farmers.

Sincerely,
Shelley Gienger RN
healthadvantagecoach.com

Sent from my iPhone
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 Marsh Road  
Yakima, WA 98901-2058  
kkbtr@usbr.gov  

RE: Kachess and Keechelus SDEIS  

Dear Ms. McKinley:

I am submitting comments on the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13, 2018. All comments are submitted under both NEPA and SEPA.

Concerns:

I am a concerned citizen who has been attending YBIP Workgroup meetings throughout this process. I represent various groups, though these comments are my own. My main concern is that the YBIP mainly addresses only the issues of two stakeholders, irrigated agriculture in the basin and tribal fisheries. The YBIP attempts to solve their history of litigation and contention at the expense of other stakeholders who have much to lose with the current plan. The Workgroup as consistently not publicly alerted, included or listened to the other stakeholders, such as property owners, other environmental groups, taxpayers, most recreational organizations and individuals. As the word spread, impacted groups have showed up at the Workgroup meetings and over time have been allowed to speak and submit comments and documents. But the Workgroup, united and committed to the Plan, refuses to respond or enter into dialogue or consider their concerns or suggestions. There is a basic unfairness and inequality here that the interests of irrigated agriculture take precedent over other interests. The Workgroup also spends considerable money and time advocating for their Plan, and lobbying the State Legislature and Congress for support and financing for their Plan.

Comments:

1) I support Alternative 1 No Action, I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

The Yakima Plan programmatic FEIS failed to provide a range of alternatives. The only alternatives presented were the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. This is a failure to comply with NEPA requirement for consideration of a range of alternatives. The National Environmental Protection Act (NEPA) requires consideration of a range of reasonable alternatives, which are not slanted to favor the interests of a particular party. The 2018 SDEIS’s alternatives only included a conveyance tunnel with two locations, and a pumping plant with three locations. Other alternatives need to be considered. The Water Research Center of Washington State University has shown that the purpose of the YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by
application of conservation and water market strategies. This report was ignored and denigrated by the Workgroup.

Water conservation could be carried out to save over 200,000 acre-feet of water instead of this expensive project. Other alternative solutions such as aquifer storage, water banks, water marketing, advanced water technology and crop management changes need to be considered.

2) The SDEIS inadequately accounts for the financial and “pursuit of happiness” impacts to the approximately 300 Lake Kachess area homeowners by the ongoing project construction and the 80 foot drawdown of Lake Kachess. This is a considerable number of people that were drawn here by shoreline homesites, views or access to Lake Kachess. That is a considerable component of their property’s value and of their enjoyment of the many recreational opportunities Lake Kachess provides. The financial impacts to the property owners need to be accurately determined by an independent real estate appraisal firm. Also, please detail how property owners would be compensated.

In addition, the impact to property owners’ wells of Lake Kachess drawdowns needs to be better determined and plans to “monitor and mitigate” described. Obviously not having available water is a major impact to homeowners that here is not here treated seriously. Please outline your plans to monitor and mitigate impacted homeowners wells?

3) The impact on the USFS Lake Kachess Campground during construction and drawdowns is not adequately or seriously considered. There are 23,000 annual visitors and 11,000 annual boaters here. This impacts a very large number of recreational users. How will this user be notified and what public meetings and opportunity to comment will be planned? Is there an assessment of the financial impact to the nearby communities to the loss of recreational dollars?

4) The environmental damage of these projects is not fully considered in the SDEIS. The federally listed Kachess bull trout pass from Lake Kachess by passage to Little Lake Kachess to their destination in Box Canyon, which when the Lake is lowered does not allow passage. (Others have submitted the photos shown of a drained Lake Kachess with totally inadequate plastic and bales of hay attempting to delineate a passage) What is the “temporary passage system” and how successful has it been shown to be?

Also, when Lake Kachess is drawn down, it is a mudflat that exposes and kills freshwater mussels, that are recently a species of concern. (See the photos that others have submitted.) Please detail what is your plan to protect these freshwater mussels?

Conclusion:

I support the No Action Alternative, as this SDEIS is inadequate because it is based on the 2012 Yakima Plan Final Programmatic EIS that failed to provide a range of alternatives. The 2018 SDEIS is also inadequate because it fails to provide a range of alternatives for providing the additional storage water to irrigation districts. minimizesAn EIS should include a range of reasonable alternatives that meet the stated purpose and need for the project. The EIS should also offer alternatives that minimizes environmental degradation.

I request that the BuRec and Ecology each provide separate responses to the above comments. Please send me a copy of any FEIS that is released.

Thank you for considering my comments.

Raelene Gold
4028 NE 196th St.
Dear Ms. McKinley:

I have attached a letter including comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

Best,

Candace Gratama
20 Crestview Court
Easton, WA 98925
Dear Ms. McKinley,

Our family has been enjoying the beauty of Lake Kachess since 1992 when we first discovered the campground. We spent much of our time on the lake and enjoyed nature. In 2007, after 15 years of camping, we were finally able to recognize our dream and purchase a house on the lake, which we live in 50% of the time.

We strongly believe the proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years. I'm particularly concerned that there are no efforts to line the tunnels that transport the water.

Please accept these comments/questions regarding the KDRPP SDEIS.

**Comments**

1. **Alternative 1 No Action** I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

2. **Failure to consider alternatives** The DEIS and the SDEIS really only consider two alternatives: drain a natural lake to benefit downstream irrigators with no senior water rights or don’t drain the lake. No other alternatives are considered to meet the irrigation security needs of the Roza Irrigation District farmers. My questions related to this topic are as follows:
   a. Why was water conservation, including repairs to the Roza open trenches not considered or at least integrated into the plan to reduce the additional water needs?
   b. Why was taking water from the Columbia River not considered?
   c. Why wasn’t appropriate crop selection on lands without senior water rights considered?
   d. Why wasn’t advanced water conservation methods considered?
   e. How does this DEIS and SDEIS meet the requirement to consider a range of reasonable alternatives which is required by NEPA?

3. **Mitigation for reduced property values** I own and live part-time in a home located at 20 Crest View, Easton, WA 98925. My daughter currently lives there fulltime. My home is waterfront. Should the KDRPP be approved and implemented, there is no question that the value of my property will be significantly reduced. My questions related to this topic are as follows:
a. Why does the SDEIS not address any mitigation for reductions in private property values effected by this proposed action?
b. Will mitigation be provided for property owners whose property values are reduced by this action?
c. How will any mitigation be calculated?
d. If the parties do not agree on the mitigation amount, how will any disputes be resolved?
e. Who will pay any mitigation?
f. What timeframe will be involved in the mitigation process?
g. Because the SDEIS does not address any mitigation for reductions in private property values, what assurances would private property owners have that mitigation would be available?

4. Impact on Campers and recreational users at Lake Kachess. Despite having the information and ability to do so, the DEIS and SDEIS process failed to notify a large segment of the public who would be effected by this plan. The over 23,000 annual campground visitors and 11,000 annual boaters are entirely unaware of this plan. We have been visiting the campground weekly in an effort to notify these users and have been met with a complete lack of awareness of the proposal. In fact, we have been told we cannot distribute information within the campground to raise awareness on the issue. My questions related to this subject are as follows:
a. Why has no effort been made to communicate with this segment of the public who should have been given an opportunity to participate in the process?
b. When will this group receive communication on the KDRPP proposal?
c. Will they be provided any opportunity to comment or participate in the process?
d. Simply telling them about it after it’s a done deal fails to meet the SDEIS’s public information obligation.
e. Why were no SDEIS public information sessions held West of the Cascades, when it is well known that a large population of the public who live on the West side of the Cascades regularly use Lake Kachess, many for decades or generations.
f. On page ES-Xii, the following suggestions are given to address recreational use of the lake “Extend boat ramps at Kachess Reservoir…if feasible, and construct new east shore ramp that would be available at all reservoir levels. My questions related to this topic are as follows:
i) Would extending boat ramps at Kachess Reservoir include both public and private ramps?
ii) Under what conditions would extending those ramps be feasible or not feasible?
iii) What analysis of the lake geography has been done to suggest is extending any of the ramps for use during a KDRPP-FPP drawdown is truly feasible or not?
iv) Describe the geography of the East shore ramp location and what the slope of the ramp will be during a drawdown. Will it be physically possible to use the ramp or will the slope simply be too steep for practical use as a boat launch?

5. Increased forest vulnerability and Fire Hazard. The vegetation and wetlands and densely forested watershed will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and
repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD. Under the guise of addressing the potential of global warming, this proposal fails to adequately address another element of global warming – that of added fire risk. In fact, this plan exacerbates that fire risk. My questions related to this topic are as follows:

a. Given that the SDEIS identifies damage to the natural environment will be caused by the proposed action, what responsibility will those who approve and execute on this plan have for those ongoing damages?

b. If there is a significant wildfire in the area that is exacerbated by a KDRPP-FPP draw down and cannot be adequately battled due to the unavailability of Kachess water for firefighting, who will be responsible for the damage and certain public outrage to follow?

c. If, as a result of a KDRPP draw down, trees die on my property or on the property of the homeowners association to which I belong, who will pay for the cost of removal of those dead trees?

6. **Refill timing** How long the lake will take to refill is paramount to my concerns about the proposed action. While it may be difficult to precisely predict the refill timing after a KDRPP-FPP draw down, the variations between the DEIS and the SDEIS raise questions as to the accuracy of the hydrology in both reports. The DEIS stated that without the KKC, Lake Kachess would likely not refill for 20 years. Now the SDEIS as much as throws out the KKC and states that after a KDRPP drawdown, Lake Kachess will take two to five years for refill without the benefit of KKC water (although a chart within the SDEIS shows a maximum of eight years to refill vs. five). My questions related to this topic are as follows:

a. Please provide the detailed hydrology that the 2015 DEIS was based on that purposed that the KKC was required as a refill mechanism without which Lake Kachess would like not refill for 20 years.

b. Please explain in detail what changed between 2015 and 2018 that now allows a refill prediction of 2-8 years when the 2015 prediction was 20 years or more.

c. Which report should be relied on? 2015 KKC is required as a part of KDRPP, or 2018 KDRPP doesn’t need KKC and will refill 2-4 times faster than previously predicted?

d. How can the public be expected to make informed comments with such seemingly inconsistent hydrology predictions? Can either report be relied upon?

7. **Impact on private wells** My home is served by a public “group A” water system located a few hundred feet from the Lake Kachess shoreline with senior water rights dating back to Pre-May 10, 1905. This water system serves water to 162 homes in our community, to our fire hydrants and for fire-fighting. Our community provided comments to the DEIS which included a request for specifics regarding mitigation in the probable event that our well goes dry due to a draw down and subsequent refill period. The SDEIS states clearly that wells in the area are in danger of being “de-watered”. In the 2.5 years since the DEIS, the best the SDEIS can offer in regards to drying up private wells is to “monitor and mitigate” without any specificity as to how a dried up well can be mitigated. My questions related to this topic are as follows:
a. By what right does any entity, whether BofR, Roza or any other “participating entity” usurp the senior water rights of 162 homeowners (plus others in other communities around Lake Kachess) and take an action that they know will dry up senior water rights wells. Please state specifically what gives the BofR, Roza or any other entity the right to usurp senior water rights.
b. How can I, or my neighbors, make informed comments on this SDEIS when have no idea what “monitor and mitigate” might mean?
c. Why does the SDEIS not provide or even discuss any funding for well-dewatering mitigation?
d. Who will pay for mitigation?
e. Please provide a detailed action plan for well-dewatering mitigation in a supplemental SDEIS with appropriate comment period.

Thank you.

Candace and Pete Gratama
20 Crestview Ct.
Easton, WA 98925
(No Mail Delivery at this address)

MAILING ADDRESS
Candace and Pete Gratama
12851 111 Ave NE
Kirkland, WA 98034
I am opposed to any of the kachess SDEIS active alternatives, a pumping plant and/or pipeline at lake kachess, no action is the only acceptable alternative.
Dear Ms. McKinley,

Please accept these comments/questions regarding the KDRPP and KKC projects.

We are opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only alternative that would not harm the Columbia River. Section 3.9.3 of the KDRPP and KKC SEIS has a short section on bull trout, but virtually no information on Box Canyon Creek. Attached is a photo taken by the WDFW showing the artificial channel from Little Kachess Lake to Box Canyon Creek that has been scattered and allowed to enter the water. This would appear to be a discharge of pollutants (straw and plastic) into Lake Kachess. Did the WDFW System (NPDES) permit or a Department of Ecology 401 Water Quality Certification, or a Shoreline Management Act Substantial Development Permit exist for this project?

Sincerely,

Galina Greben

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA  98901-2058
Sincerely,

Paul and Galina Greben
21 Summer Park Court
Easton, WA 98925
(NO MAIL DELIVERY AT THIS ADDRESS)
Comment Letter 365

K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] KRDPP questions
1 message

Josh Guilfoyle <jasta@devtcg.org> Tue, Jul 10, 2018 at 9:51 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

I generally oppose the KRDPP project on the basis of significant environmental damage to the area and have a few questions for the final EIS:

1. Drought years in the past suggest that this project may need to be active for on average 1 in every 4 years, but the refill timing can be up to 5 years. This suggests the project will nearly permanently see the lake in a fully or partially drained state and would likely totally collapse recreation in the area.

2. The conveyance project was initially floated as being critically tied to the KDRPP project but now appears to not be the proposed action plan in the SDEIS. This feels like a bait and switch and I'd like to see detailed analysis for why the project is no longer considered essential to KDRPP.

3. NEPA requirements suggest that genuine alternative strategies be explored and documented fully, including the reason they were not selected. In this case I believe that obviously excludes conservation strategies and infrastructure improvements for instance in the existing channel carrying water from Lake Kachess. The only serious plans on the table involve substantial environmental damage to a naturally formed lake with no real consideration of more conservative strategies.

Thank you for your consideration.
Hi, Ms. McKinley,

I am writing regarding the project intended to use water in Lake Kachess for irrigation (KDRPP and KKC SEIS). This plan seems rush and ill-advised, and benefits big farmers.

I have concerns that the Roza water district has mismanaged it's whole crop plan. It was known that the area did not have enough water on its own to support crops, and yet they planted. It was also known that they would need to purchase senior water rights. Finally, the ditches used to store water are in need of repair, and they leak this precious resource. With all of these known issues, what assurances do we have that the water pulled from Lake Kachess will be properly used? Are there plans to repair the current irrigation ditch?

What plans are in place to "mitigate" if the wells around Lake Kachess dry up when the water is pumped out of the lake? We cannot expect homeowners to live in homes with no water supply. Nor can we expect them to be able to sell their homes and relocate to areas that have water - there is no resale value in beautiful home without running water. Could you please elaborate on the proposed mitigation in case this happens?

Has the Roza irrigation district fully investigated all other options for crop irrigation, including root irrigation? What was the outcome of that research, and why did they decide against those options?

How will the project be funded? Will it be funded through taxpayer bonds, or will there be any government assistance provided? Historically, taxpayer bonds for water projects have a very low rate of repayment, and it seems unfair to ask homeowners to pay a tax that will fund a project that could rob their homes of all water.

There are also environmental concerns for wildlife, including bull trout. Has this been fully addressed? Outside of the bull trout, the lake is a significant water source for all other wildlife and plant life. If the lake is drained, has the study been completed to understand how that will affect all plant and animal species in that water basin?

Lake Kachess is a water resource during wildfires, which happen during the same drought years when the lake would be drained. Please explain what solid and feasible plans are in place to provide water to fight wildland fires if Lake Kachess is not available.

I appreciate your time, and I look forward to your response.

Best,
Carrera Halwachs
317 Powell Ave SW
Renton, WA 98057
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia- Cascades Area Office

KDRPP & KKC SDEIS Comment

The SDEIS makes very clear statements about the devastating impact of this pumping project and the recommendation of the bureau shows that they are not being open to data or facts that go against their foregone conclusion that draining Lake Kachess is the way to solve future droughts.

There are sustainable alternatives that have not been explored in favor of this “easy” answer of putting a straw into a pristine glacial lake. We need to work harder and commit to economically viable and ecologically responsible approaches with ALL stakeholders. The impacts described are severe and irreversible.

Thank you,

Alistair Hamilton  
425-442-9554
K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] KDRPP & KKC SDEIS Comment
1 message

Grace Hamilton <gracechamilt@gmail.com>       Wed, Jul 11, 2018 at 9:51 AM
To: kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office

KDRPP & KKC SDEIS Comment

The SDEIS makes very clear statements about the devastating impact of this pumping project and the recommendation of the bureau shows that they are not being open to data or facts that go against their foregone conclusion that draining Lake Kachess is the way to solve future droughts.

There are sustainable alternatives that have not been explored in favor of this “easy” answer of putting a straw into a pristine glacial lake. Not only are these alternatives sustainable, but more likely to actually solve the problems that we are looking to solve and better serve everyone that this touches.

We need to work harder and commit to economically viable and ecologically responsible approaches with ALL stakeholders. The impacts described are severe, irreversible, and ineffective.

Thank you,

Grace Hamilton
631-512-1145
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess.

Alternative #1, No Action is the only acceptable alternative.

Thanks,

Sophie Harris
Club Administrator & Head Coach G08 Green

Cascade FC
Select & Premier program for SnVYSA
425-241-0149

Follow us on Twitter & Instagram @cfc_cascadefc
Facebook page: https://www.facebook.com/cascadefc
The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.
Dear Ms McKinley,

Attached please find my comments on the KKC/KDRPP SDEIS. I am also including my March 10, 2015, comments on the DEIS just in case you lost the original.

Ed Henderson

2 attachments

KKC-KDRPP SDEIS Comments.docx 150K

KKCKDRPP DEIS Comments.docx 139K
Edward M. Henderson, Jr.
407 Smith Street
Seattle, Washington 98109
edhenderson57@comcast.net
(206) 283-6497

March 10, 2015

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058
Via Email to: kkbt@usbr.gov

RE: Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC), Comments on Draft Environmental Impact Statement (DEIS).

Dear Ms. McKinley:

This DEIS should be withdrawn. It is incomplete, inadequate and premature. It fails to provide alternatives to and details of the proposed projects that would allow sufficient evaluation of the environment impacts. While the Bureau of Reclamation and Department of Ecology are crafting a more comprehensive DEIS, please consider the following.

I am familiar with the Final Programmatic Environmental Impact Statement (FPEIS) for the Yakima River Basin Integrated Water Resource Management Plan (The Integrated Plan or IP). In the FPEIS for the Integrated Plan the impacts of many basin wide issues are glossed over to be “dealt with later in project specific EIS’s.” This transparent attempt to lose these issues between the Tier 1 programmatic FPEIS for the Integrated Plan and the ‘Tier 2 project DEIS’s is disingenuous and unacceptable. Therefore the scope of this Environmental Impact Statement (EIS) must be broad enough to address these basin wide impacts and not be limited to only local, site-specific impacts. This EIS must deal with all impacts in the context of the Yakima River Basin Integrated Plan and fully consider the cumulative effects on the entire Yakima River Basin by all the elements of the Integrated Plan. This DEIS for the KDRPP & KKC fails to do that.

By failing to provide a reasonable Conservation Alternative this DEIS violates the requirements of NEPA to consider appropriate alternatives to the proposed action.

The National Environmental Policy Act (NEPA) of 1969 states, in part, as follows:

“SEC. 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall— . . . (D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;”

The DEIS for these projects must present a conservation alternative to meet the Purpose and Need stated for public examination and comment.
A comprehensive and mandatory conservation program in the Yakima River Basin could provide the same amount, 200,000 acre-feet, of water to the junior water right irrigators as the proposed KKC and KDRPP projects. This water would be available without either the environmental impacts or financial cost of the proposed construction project.

Why aren’t fish passage structures at lakes Kachess and Keechelus included in the DEIS?

The first of the Integrated Plan’s seven elements is the restoration of fish passages at reservoirs. This DEIS recognizes that anadromous fish, salmon, were present in natural glacial lakes Keechelus and Kachess prior to construction of irrigation control structures, dams and spillways, in the early twentieth century. See Section 3.6 Fish page 3-55/56:

The historical lakes and tributaries of the upper Yakima basin formerly supported anadromous spring Chinook, summer steelhead, coho, and sockeye salmon as well as resident bull trout. However, the construction of dams and irrigation storage reservoirs has precluded anadromous fish access to over 70 miles of productive, historically available habitat within the basin. Kachess and Keechelus dams represent passage barriers for returning anadromous fish, and no anadromous fish species are present in either reservoir or in tributaries upstream of the dams (Haring, 2001).

The construction plans presented in this DEIS for both the KKC and KDRPP are rudimentary and conceptual only. It is therefore impossible to evaluate the environmental impacts that construction of these projects will have. When withdrawing and rewriting this DEIS please address the following questions:

- Section 2.2 Alternatives Development Process on page 2-2 cites feasibility studies of the KKC & KDRPP projects to be finalized in 2015. Isn’t it premature to propose these projects before completing studies as to whether or not they are even feasible? When will these studies be finalized and available?
- Alternatives 2A & 2B (KDRPP) and 3A & 3B (KKC) all estimate excavation in excess of 100,000 cubic yards of spoil. Where will this spoil be dumped and how will it be transported to the disposal site?
- If Alternative 2A, the eastside pumping station is selected, over 100,000 cubic yards of fill material will be required to bury the 13 foot diameter discharge pipe in a ditch to insure that it doesn’t float. If the spoil excavated from this ditch, at the bottom of Lake Kachess, proves to be unsuitable for fill material, where will suitable material be acquired and how will it be transported to the site?
- What is the size (horsepower) of the pumps to be used in either Alternative 2A or 2B?
- When will the final location and alignment of the proposed tunnels in Alternatives 3A & 3B be determined?
- Both Alternative 3A & 3B envision a discharge structure and energy dissipating spillway structure on the shore of Lake Kachess. Below the stilling basin there would be a riprap apron down into the lake. To what elevation will this apron extend? What is the estimated quantity of riprap required for this apron?
- For Alternate 3B - KKC South Tunnel Alignment in section 2.7.1.2 on page 2-48 the tunnel from the I-90 Exit 62 portal to the Lake Kachess portal is shown as rising from elevation 2260 to 2360. How will this water, 400cfs, be persuaded to flow 100 feet uphill?
The cost for construction and 100 years of operation of all four alternatives is given in Tables 2-13 and 2-14 on pages 2-54 and 2-55. In all four cases this amounts to multiple hundreds of millions of dollars. What are the direct economic benefits of this expenditure of public money?

In Chapter 4 Environmental Consequences, section 4.3.6.2 Operation [of the KKC North Tunnel Alignment Facilities] in the section on water supply on page 4-33 states that:

Hydrologic modeling indicates Alternative 3A – KKC North Tunnel Alignment would provide a very small (less than 1 percent) improvement in water supply for proratable water users during drought years. Table 4-11 summarizes the expected change in prorating percentage. Water supply would remain well below the 70 percent of entitlement goal. Therefore, KKC would not have a significant benefit to water supply.

It further states on page 4-34 that: Kachess Reservoir levels would remain within current operating ranges and no significant effect on water resources would occur.

Why should multiple hundreds of millions of dollars be spent on the KKC for a paltry drop-in-the-bucket of no significant benefit to water supply? Note: Alternate 3B – South Tunnel Alignment will provide the same insignificant benefit to water supply.

The Bull Trout Enhancement (BTE) projects are appended, Appendix C, to both the KKC & KDRPP projects and are made integral to those projects. Why isn’t the BTE presented as a stand-alone project? All five of the physical projects listed are required now under the current operations, i.e. the summer draw down for irrigation from both Kachess and Keechelus Lakes, and will be needed for any and all of the Alternatives including the No Action Alternative in the future. Why isn’t a program proposed for the Kachess River cascade between Little (upper) Kachess Lake and Kachess Lake, which will be exposed when the KDRPP goes into operation and pumps water out of Lake Kachess below the current low pool elevation of 2190’?

When the KDRPP goes into operation and lowers the pool level in Lake Kachess below elevation 2190’, the natural spillway elevation, the only outflow from Lake Kachess will be by water pumped over the dam. How will anadromous fish be able to migrate up the restored reservoir fish passage?

Once again I urge you to withdraw this totally inadequate and embarrassingly pitiful DEIS. Go back to your drawing boards and produce a document that meets the statutory requirements of the NEPA and SEPA to provide reasonable alternatives and more nearly complete construction plans that allow for a realistic comparison and evaluation.

Thank you for the opportunity to comment on the DEIS for this project and to make recommendations for issues to be addressed. Please notify me when a revised DEIS and the Final EIS is published.

Sincerely,

/S/ Ed Henderson

Edward M. Henderson, Jr.
cc: North Cascades Conservation Council ESC, Brock Evans
    WA State Representative, Reuven Carlyle FOBL, Chris Maykut
    Sierra Club, David Ortman
RE: Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-
Kachess Reservoir Conveyance (KKC), Comments on Supplemental Draft Environmental
Impact Statement (SDEIS).

Dear Ms. McKinley:

On March 10, 2015, I submitted extensive comments on the DEIS for the KKC/KDRPP. While
neither the Bureau of Reclamation, nor the Department of Ecology have answered or responded
to my comments or those of anyone else, a “Supplemental” DEIS (SDEIS) is issued. I am
assuming that all statements and information presented in the original DEIS remain operative
unless revised, superseded or deleted by the SDEIS. My comments on the SDEIS are
predicated on that assumption. My comments on the original DEIS in my letter of March 10,
2015, remain germane. I await answers to the questions raised in this letter and in 2015.

This SDEIS should be withdrawn. It is incomplete, inadequate and premature. It fails to
provide alternatives to and details of the proposed projects that would allow sufficient
evaluation of the environment impacts. While the Bureau of Reclamation and Department of
Ecology are crafting a more comprehensive DEIS, please consider the following.

I am familiar with the Final Programmatic Environmental Impact Statement (FPEIS) for the
In the FPEIS for the Integrated Plan the impacts of many basin wide issues are glossed over to
be “dealt with later in project specific EIS’s.” and then they are not! This transparent attempt to
lose these issues between the Tier 1 programmatic FPEIS for the Integrated Plan and the Tier 2
project DEIS’s is disingenuous and unacceptable. Therefore the scope of this Environmental
Impact Statement (EIS) must be broad enough to address these basin wide impacts and not be
limited to only local, site-specific impacts. This EIS must deal with all impacts in the context of
the Yakima River Basin Integrated Plan and fully consider the cumulative effects on the entire
Yakima River Basin by all the elements of the Integrated Plan. Both the DEIS, January 2015,
and this SDEIS for the KDRPP & KKC fail to do that.

The SDEIS lacks any clear statement of Purpose and Need. One must revert to the DEIS to find
that the Purpose of this project is to provide drought relief irrigation water to the junior water
right holders and to enhance Bull Trout survivability. The only Purpose stated in the SDEIS is to find some entity, either the Bureau of Reclamation, the Department of Ecology, the Roza Irrigation District or others to undertake one or more of the projects and the Need is to find financing. Such groping around is not reassuring.

By failing to provide a reasonable Conservation Alternative this SDEIS violates the requirements of NEPA to consider appropriate alternatives to the proposed action.

The National Environmental Policy Act (NEPA) of 1969 states, in part, as follows:

“SEC. 102. The Congress authorizes and directs that, to the fullest extent possible: (1) the policies, regulations, and public laws of the United States shall be interpreted and administered in accordance with the policies set forth in this Act, and (2) all agencies of the Federal Government shall— . . .

(D) study, develop, and describe appropriate alternatives to recommended courses of action in any proposal which involves unresolved conflicts concerning alternative uses of available resources;”

Both the DEIS and this SDEIS for these projects must present a conservation alternative to meet the Purpose and Need stated for public examination and comment.

A comprehensive and mandatory conservation program in the Yakima River Basin could provide the same amount, 200,000 acre-feet, of water to the junior water right irrigators as the proposed KKC and KDRPP projects. This water would be available without either the environmental impacts or financial cost of the proposed construction project.

The first of the Integrated Plan’s seven elements is the restoration of fish passages at reservoirs. The DEIS recognized that anadromous fish, salmon, were present in natural glacial lakes Keechelus and Kachess prior to construction of irrigation control structures, dams and spillways, in the early twentieth century. See Section 3.6 Fish page 3-55/56:

*The historical lakes and tributaries of the upper Yakima basin formerly supported anadromous spring Chinook, summer steelhead, coho, and sockeye salmon as well as resident bull trout. However, the construction of dams and irrigation storage reservoirs has precluded anadromous fish access to over 70 miles of productive, historically available habitat within the basin. Kachess and Keechelus dams represent passage barriers for returning anadromous fish, and no anadromous fish species are present in either reservoir or in tributaries upstream of the dams (Haring, 2001).*

Why aren’t fish passage structures at Lakes Kachess and Keechelus included in both the DEIS and SDEIS?

Multiple times in the SDEIS it is recognized that in subsequent non-drought years following a drought year and a drawdown of some or all of the 200,000 acre-feet of water from the inactive storage below elevation 2190 feet in Lake Kachess, it will be necessary to pump water out of the inactive storage to meet normal flow obligations. (See section 2.3.3 Typical Annual Operations, page 2-17 and others.) And yet the SDEIS presents no plan to refill the inactive storage.

When the drought relief pumping plant withdraws an additional 200,000 acre-feet from Lake Kachess, lowering the lake level 80 feet below the gravity spillway, how and when will the
water be replaced? Lake Kachess normally receives 213,398 acre-feet of water annually from the catchment basin. (See table 3-1, page 3-8 of the 2012 FPEIS, for the Integrated Plan) This water is allocated to various water right holders. So when additional water is withdrawn for drought relief, there will be a deficit of much as 413,398 acre-feet. Should the next year be an average year, there will only be 213,398 acre-feet of precipitation in the catchment basin to replace the deficit. It will be necessary to run the pumps to deliver most of the normal allocation from the lake below the level of the gravity spillway. After the drought of 2001 when Lake Kachess was drawn down to normal low pool at the level of the gravity spillway, it took eight years to again reach full pool elevation. And that was without drawing down another 80 feet by pumping out 200,000 acre-feet from the inactive storage. Do Reclamation and Ecology have any plans to managing the water resources in the entire Yakima River Basin to replace this deficit? The SDEIS doesn’t mention them. Will the junior water right holders be allocated less than 100% of their allocation in order to “repay” the 200,000 acre-feet they borrowed during the drought? The SDEIS doesn’t say.

The construction plans presented in this SDEIS for both the KKC and KDRPP are rudimentary and conceptual only. It is therefore impossible to evaluate the environmental impacts that construction of these projects will have. When withdrawing and rewriting this DEIS please address the following questions:

- In the DEIS Section 2.2 Alternatives Development Process on page 2-2 cites feasibility studies of the KKC & KDRPP projects to be finalized in 2015. Was that study ever completed? And if so why aren’t it and the conclusions reached cited in the SDEIS?
- All the construction alternatives require excavation and disposal of considerable spoil. A potential disposal area in the old Lake Kachess Reservoir Spillway is identified in section 2.3.2.8 Temporary Construction Facilities, Spoil Disposal Area on page 2-15, however no provisions are made for alternate disposal sites should the proposed site be unusable. A vague statement that an offsite locale will be found somewhere within 12 miles is offered. That’s an area of 450 square miles. This hardly represents an action for which the impacts can be evaluated. A positive site(s) must be identified along with the proposed route(s) for transporting the spoil.
- If Alternative 2 or 5A, the eastside pumping station is selected, over 70,000 cubic yards of fill material will be required to bury the 11.33 foot diameter discharge pipe in a ditch to insure that it doesn’t float, section 2.3.1.3 Pipeline, page 2-10. If the spoil excavated from this ditch, at the bottom of Lake Kachess, proves to be unsuitable for fill material, where will suitable material be acquired and how will it be transported to the site?
- When will the final location and alignment of the proposed tunnel in the KKC be determined?
- In the DEIS, the KKC envisions a discharge structure and energy dissipating spillway structure on the shore of Lake Kachess. Below the stilling basin there would be a riprap apron down into the lake. To what elevation will this apron extend? What is the estimated quantity of riprap required for this apron?

The cost for construction and 100 years of operation of all six alternatives is given in Tables 2-5 and 2-6 on pages 2-59 and 2-60. In all cases this amounts to multiple hundreds of millions of dollars. What are the direct economic benefits of this expenditure of public money?
In the DEIS in Chapter 4 Environmental Consequences, section 4.3.6.2 Operation [of the KKC North Tunnel Alignment Facilities] in the section on water supply on page 4-33 states that:

*Hydrologic modeling indicates Alternative 3A – KKC North Tunnel Alignment would provide a very small (less than 1 percent) improvement in water supply for proratable water users during drought years. Table 4-11 summarizes the expected change in prorationing percentage. Water supply would remain well below the 70 percent of entitlement goal. Therefore, KKC would not have a significant benefit to water supply.*

It further states on page 4-34 that: *Kachess Reservoir levels would remain within current operating ranges and no significant effect on water resources would occur.*

Assuming that this remains true, why should multiple hundreds of millions of dollars be spent on the KKC for a paltry drop-in-the-bucket of no significant benefit to water supply?

In the DEIS the Bull Trout Enhancement (BTE) projects are appended, Appendix C, to both the KKC & KDRPP projects and were made integral to those projects. Now the SDEIS proposes a Volitional Bull Trout Passage. (See Section 1.5.3 Changes to BTE from DEIS, page 1-13.) A conceptual design and an estimated budget of $23 million is provided, but this project is not include in the SDEIS Alternatives. Before any pumping plant can operate, drawing the level of lower Lake Kachess below elevation 2190 feet and exposing the Shelf and the Narrows, provisions must be made to protect the Bull Trout. The SDEIS does not do that. Who will be responsible for financing and constructing the Volitional Bull Trout Passage?

When the KDRPP goes into operation and lowers the pool level in Lake Kachess below elevation 2190’, the natural spillway elevation, the only outflow from Lake Kachess will be by water pumped up over the dam. How will anadromous fish be able to migrate up the restored reservoir fish passage and then down into the lowered lake?

Once again I urge you to withdraw this totally inadequate and embarrassingly pitiful SDEIS. As a tax payer I am incensed that the Bureau and Ecology have taken three years and spent God knows how much money to produce this sloppy, unprofessional piece of trash! Go back to your drawing boards and produce a document that meets the statutory requirements of the NEPA and SEPA to provide reasonable alternatives and more nearly complete construction plans that allow for a realistic comparison and evaluation.

Thank you for the opportunity to comment on the SDEIS for this project and to make recommendations for issues to be addressed. Please notify me when a revised DEIS and the Final EIS are published.

Sincerely,

/\S/ Ed Henderson

Edward M. Henderson, Jr.
cc: North Cascades Conservation Council ESC, Brock Evans
    WA State Senator, Reuven Carlyle FOBL, Chris Maykut
    Sierra Club, David Ortman

March 2019
SDEIS-CR-662
Dear Ms. McKinley,

I am writing to express my comments that I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No action" is acceptable to me.

My family uses this lake recreationally, and the impact is unacceptable for me as a member of the general public.

Please let me know if you need further information.

Thank you for your consideration.

Brooke Hendricks
25905 NE 27th Dr
Redmond WA 98053
Hi there,

About a week ago I learned about the plan to use water in Kachess to supply farms in the Yakima area.

My hope is that the voices of tribal leaders have been centered in this discussion and that an eye is kept on doing the most good for species throughout the region. Moreover, before such a drastic plan goes into effect I would hope that the agricultural interests involved have taken steps to implement the most water efficient industry practices.

My fear is that the plan is poorly conceived and unfair to many stakeholders.

In addition, I read that this process is several years old now; at the same time I’ve heard from several people in just the last few days who are just now learning of the plan. For whatever reason, people who have a stake in this did not know. So, at minimum, extending the comment period sounds warranted.

Sincerely,
Jon Howland
3021 23rd Ave S Seattle

Sent from my iPhone
Irinel Susan <irinel_susan@yahoo.com>  
To: kkbt@usbr.gov  

Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058  

RE: Kachess and Keechelus SDEIS  

Dear Ms. McKinley:  

Please accept my comment regarding the KDRPP SDEIS:  

Alternative 1 No Action: I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No Action" is acceptable.  

Thank you,  
Irinel Susan  

11009 178th CT NE Redmond WA 98052
To Candace McKinley,
Please read and respond to my feedback on the Lake Kachess SDEIS.
Thank you,
Brad Jonas

Lake Kachess_response to SDEIS.docx
Let's be real. There are really only two alternatives that the 2018 SDEIS has considered, not five. The other 3 are just different locations of the pump to make it look like you have submitted multiple alternatives: The two are do nothing or install pumps on a natural lake to drain it for the benefit of a just a few irrigators, which have no senior water rights.

Please answer the following questions/concerns:

? Why did it not include any other alternatives such as relining the delivery ditches, building other reservoirs in vacant valleys near Yakima, and other state of the art alternatives?

? Why was taking water from the Columbia River not considered?

? The original DEIS indicated that the KDRPP and the KKC tunnel project would a single action. Why did that get eliminated for all but one alternative in the SDEIS?

? Will the KKC be implemented before any pumps are installed on Lake Kachess? If not, WHY? I think we all know if the pumps get installed first the tunnel will never be built, this is the same tactic retail stores use to get customers to come into their stores, its called “Lost Leader.”

? Why not just implement the KKC tunnel on its own? To me this would make a lot of sense. During drought years it would help fill Lake Kachess quicker. I’ve personally seen Lake Kachess take 3-4 years to refill after drought years or construction drainage. If the KKC tunnel would
have been installed back then it could have possibly shorted the fill time of Lake Kachess by a year. This would have helped the farmers and the counties recreational income, not to mention make a lot of outdoor recreational folks happy. There would be no impact to Lake Keechelus.

? As for Alternative 4, floating pumping plant where is the study results which show the impacts to fish and other aquatic creatures due to the noise and vibration that will be distributed through the water?

? I don’t see how you even got to this stage without a proper study of noise impacts to the surrounding wildlife, aquatic creatures and the residences. If there is a completed study please publish it so we can all understand the impacts.

? Why not add an alternative to dredge the Western end of Lake Keechelus? The western end of the lake is usually dry every year by mid to late August, if not earlier

? How will you meet the requirement to consider a range of reasonable alternatives which is required by NEPA?

Campground and other recreational activities:

As I stated in my background 5 generations of my family have been camping at Lake Kachess. My first trip was July 9th 1955. I’ve learned that approximately 25000 people visit the campground every year due to it being one of the largest and most beautiful campgrounds so close to Seattle. Besides campers there are thousands of people that visit the lake as a day trip for a picnic, kayaking, boating (I learned to water ski on this lake), and hiking. They charge you $10 just to use the day use area and boat launch. Two things have an impact on the number of campers.

- **The first is the lake level.** When the lake is low not as many campers visit the campground.
- **The second is outdoor campfires** (in the campground fire pits). When the fire hazard is high they implement a burning ban, even at the campground. Many campers cancel their reservations if a burning ban goes on. When you draw down the lake another 80’ and it takes years to refill, if it ever does refill, the fire hazard will be extremely high due to all the foliage/forests being so dry or dead. Again this will greatly impact the recreational revenue for Kittitas County.

Please answer the following questions/concerns:

? If you draw the lake down another 80 feet have you studied the impact on the recreational income of this area? Im not talking just about the first year but it will take at least 8+ years to refill, if it refills at all. This seems it would be a huge financial impact on the county.

? Is Kittitas county represented in this study and are aware of the lost revenue for potentially years?

? Will Roza be responsible for this revenue loss or is BOR? It would be their doing.

? Please describe to me how you have contacted the general public as to what the impact will be to the campground? Will you let them know who will be benefiting from the lake drainage (a few Roza farmers)?

? I didn’t see any real data in the SDEIS as to what the impact will be to the forests, Please provide me a document or link of that study.

? Who will be responsible for injuries at the campground/lake area due to the extremely steep banks/cliffs? The Forest Service or the Bureau of Reclamation?

? Who will be responsible for fencing off the areas of danger during these times?

? What analysis of the lake Geography has been done to suggest extending any boat launches on Lake Kachess?

I just don’t understand how the Bureau of Reclamation would allow just a few greedy farmers to impact the lives of thousands of people.
Increased forest vulnerability and Fire Hazard. This is one of the most important impacts! The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. I think we can all agree that removing hundreds of thousands acres feet of water from a natural lake (yes by then you will be tapping way into the natural lake) for possibly years or even decades the surrounding forest will be extremely impacted and very acceptable to fires. Erosion will begin on the mountain sides and sediment will flow down into the lake eventually partially filling the lake creating less “storage”. The fresh water clams will disappear (yes there are clams in that lake, I can provide you with pictures), fish will die, wildlife will leave the area, people will stop paying property taxes and give up their properties. All of this because a few Roza farmers want to make more money.

The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD. Under the guise of addressing the potential of global warming, this proposal fails to adequately address another element of global warming – that of added fire risk. In fact, this plan exacerbates that fire risk.

Please answer the following concerns:

? Given that the SDEIS identifies damage to the natural environment will be caused by the proposed action, what responsibility will those who approve and execute on this plan have for those ongoing damages?

? If there is a significant wildfire in the area that it exacerbated by a KDRPP-FPP draw down and cannot be adequately battled due to the unavailability of Kachess water for firefighting, who will be responsible for the damage and certain public outrage to follow?

? Why have all the meeting requests from the Snoqualmie Pass Fire and Rescue agency been ignored?

? Is fire hazard not as important to the BoR as is the Roza farms?

? Do you agree or disagree that destroying our forests for generations to come is less of a concern as some farmers losing income on their annual crops? Are the forests less valuable than a farmers crops?

Water Rights and future grabs: We have senior water rights up at the Kachess Village area. The Roza farmers have Junior water rights. Please answer the following concerns:

? Please explain to me how an area with Junior water rights (such as the Roza farmers) have the right to possibly take water from Senior water right areas?

? So this SDEIS basically states that you will be able to buy cheaper land due to Junior rights but still be able to take water from senior right areas? This is setting precedence. These Farmers knew what they were buying into when they purchased the land and started farming. They also should know there are limitations to resources and they need to farm within their means. Don’t make the general public suffer because of their ignorance and greed.
What is to stop them from wanting more water in the future?
If Roza and the special interest politicians get their way and drain the lake what is to stop them from just using the water to expand their farming and not just during droughts?
Would BoR want to move the bump to a deeper part of Lake Kachess?
What is to stop BoR for going after other Mountain lakes such as pumping Snow Lake down into Keechelus, Rachael Lake into Kachess, or Cooper Lake into Lake Cle Elum? And the list could go on. You are setting a precedence allowing/helping Roza acquire this water.
Explain to me how you will control Roza’s use of the water and what the consequences are if they break the rules?

Impact to Private Wells: Per the SDEIS it states that lowering the lake level will have a negative impact on private wells. Some wells would be “dewatered”. And your remedy is to monitor and mitigate. This statement really means you have not done a thorough study and have no idea what will really happen. If lowering the lake does impact the local aquifers you could impact not only the Lake Kachess area but also all of the Easton area that rely on these aquifers for their wells. This is like the Special Odessa Subarea Study that the BOR did back in 2012 which shows the aquifers in the Odessa area are declining which is putting the farmer’s ability to irrigate at risk.
Please answer the following questions:
Who will be responsible for the mitigation costs for these private wells? BoR or Roza?
Who will be responsible for the mitigation costs if drawing down this lake does impact the aquifers that support the Easton area?
Where do I find the detailed studies that have been performed and by whom?
Again explain to me what right does BoR or Roza have to take water from senior water rights holders?
Please provide a detailed action plan for the well-dewatering mitigation in a supplemental SDEIS.

Lake Refill cycle times: As I have stated I have seen this lake at its lowest at least 3 different times where it took between 2-4 years to refill. This was back in the 70’s, 80’s, and 90’s prior to all this “global warming” warnings. Documented in the DEIS and the SDEIS there seems to be a huge discrepancy. The DEIS states that without the KKC Lake Kachess could take 20 years to refill. This obviously didn’t bode well with the Roza Farmers and seems to be changed in the SDEIS to reflect a 2-5 year refill process. Seems a bit fishy.
Please answer the following questions/concerns:
Why is there such a difference between the two reports? Please send me the detailed studies (Hydrology) that were done for both the 2015 DEIS and the 2018 SDEIS.
How can the public be expected to make informed comments with such seemingly inconsistent hydrology predictions? Can either report be relied upon?

Bull Trout: Now this is interesting. Bull trout is on the endangered species list. They are the only Trout that is native to these lakes. Signs are posted at the Lake Kachess Boat Launches stating that if you catch one you have to release it because it is on the endangered species list. Yet if this passes and the lake is drained many or all of the Bull trout could die and eventually be nonexistent in Lake Kachess.
The SDEIS shows a volitional passage to allow the bull trout to migrate between little and big Lake Kachess during draw down periods. When the lake is 140 feet down there will be a significant cliff on the north end of the big lake where the narrows is. I can’t understand how anyone could build a “fish passage” without significant investment and maintenance.
Please answer the following questions/concerns:
Can you send me the detailed study on how this “volitional passage” will be constructed based on the lake being down 140 vertical feet for possibly years at a time?

**Mitigation for reduced property values**

- Why does the SDEIS not address any mitigation for reductions in private property values effected by this proposed action?
- Will mitigation be provided for property owners whose property values are reduced by this action?
- How will any mitigation be calculated?
- If the parties do not agree on the mitigation amount, how will any disputes be resolved?
- Who will pay any mitigation?

**Drought definition:**

- Who determines the definition of a drought?
- Who will manage/monitor the usage of these pumps?
- Will there be a neutral third party to monitor the managers in order to make sure the water isn’t being pumped out during now drought years and to whom?
- Will there be a penalty for those who abuse the use of these pumps?

**In Conclusion:**

It appears that the modeling used or lack of is very inadequate. There are many admissions that modeling is inaccurate or incomplete. This SDEIS truly appears to be written with bias in favor of a few special interest groups/politicians whom are more concerned with their profits than the potential huge environmental impact this will have. Seems there could be many conflicts of interest to be challenged if this is to move forward. It just boggles my mind thinking how it has got this far. You are talking about farmers who knew what they were investing in when they started or purchased their farms. These are farmers with Junior water rights. Water is a critical resource and should be used wisely. These farmers need to quit expanding and need to realize there will be years with droughts and they could lose crops/income. That has always been a risk for farmers. But now they want to destroy one of this states most beautiful recreational areas used by thousands just to cover their own greed and ignorance. We need to understand who their customers are (wineries, breweries, etc).

Millions of public dollars have been spent trying to push this forward; the taxpayers need to understand what they are paying for and what they will get from it.

This is a natural glacial Lake. Only the top 30 feet are manmade according the BoR’s website. Today’s children have very limited outdoor resources such as Lake Kachess to go explore. I hate to see one more thing taken away for the youngsters in this great state.

Thank you for your time and I look forward to your responses.

Sincerely,

Brad Jonas

1309 224th PL NE
Sammamish, Wa
98074
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia- Cascades Area Office  

KDRPP & KKC SDEIS Comment

The SDEIS makes very clear statements about the devastating impact of this pumping project and the recommendation of the bureau shows that they are not being open to data or facts that go against their foregone conclusion that draining Lake Kachess is the way to solve future droughts.

There are sustainable alternatives that have not been explored in favor of this “easy” answer of putting a straw into a pristine glacial lake. Not only are these alternatives sustainable, but more likely to actually solve the problems that we are looking to solve and better serve everyone that this touches.

We need to work harder and commit to economically viable and ecologically responsible approaches with ALL stakeholders. The impacts described are severe, irreversible, and ineffective.

Thank you,

Jessica Kast
Dear Ms. Candace McKinley,

Please save Lake Kachess, we love the beauty of this lake and hope our boys will be able to enjoy it for years to come. We'd hate for it to become a mud pit.

I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.
As a small farmer who understood the rosa had secondary water rights, I have based my operation on the ability to adjust the amount of crops I support depending on the water available. I will be hurt by more expensive water, and I am opposed to this expansion. I also think it is unfair to the property owners near the lake as I will lower their property value. If the rosa wants to make a two tier level for charging for water, those who get the extra water pay extra, and those who accept what percentage is prorated as in the past pay the base rate, then it would be fair.
Now I take off my small farmer hat and put on my scientist hat. I am a working scientist with Masters in Soils and PhD in Forestry. This pumping of extra water from the lake is an old school idea, and does not take into account the new technologies that make for more cost effective ways to supplement irrigation water. The water shortage should be addressed with more localized storage of water in the elevated areas above the canal delivery system. As building dams is not cost effective, the water should be stored as ice where the water is frozen in the winter when cold temperatures are available to freeze water, and unused water is flowing in the rivers. The ice is maintained by large solar panel covers that both shade the ice and provide power as need to keep the ice frozen. This system becomes a power producer when the electricity is not need to maintain freezing temperatures under the solar panel structure. The solar panel field is build provide shade, insulation and to rise and fall as the ice field height changes.

I know this is a simplistic description and the true benefits of this approach can only be explained by covering a lot of different technological advances in several different energy related fields and describing the unique environment provided by the Cascade mountains and associated rain shadow. I am currently working up the methodology and required integration of a multifield description that will address the methodologies and technologies required to make this work and turn the investment required to increase irrigation water availability to a less costly or even money producing endeavor.

Randy Kirkham PhD
Hi Candice,

I have some serious concerns about the government's plan to drain the natural Lake Kachess. Most importantly, if we are willing to continue draining lakes on a practice that has been proven to be uneconomical and environmentally damaging, how far are we willing to go before we are just out of water in the cascades? It sounds silly and potentially impossible, but in our world, it also seems inevitable.

Why do we NOT expect the corporate farmers in Kittitas Valley to pay for their increased water usage during drought while the taxpayers are holding the burden?

How many of the crops grown in the Kittitas Valley and Yakima River Basin are drought resistant??

What percentage of the crops grown in the Kittitas and Yakima Valley Basin are sold locally in the United States vs shipped overseas??

If (WHEN) this plan to supply farms with water from Lake Kachess doesn't work, what are the subsequent lakes that the farming lobby will pursue draining and the government will approve??

Instead of spending taxpayer money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies in farming, and water markets during drought years.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess should not be built.

I look forward to your response.

Best,

Sarah Kitchell

--
Sarah Kitchell
206.963.8822
sckitchell@gmail.com
I recently learned Kittitas County is requiring sprinklers in new-build homes on rural wooded lots as part of the new fire prevention measure. The only way around the install of sprinklers is to ensure standing trees are a particular distance from the residence and that the trees left standing must have their branches ten feet from the nearest tree. This is an almost impossibility as Lake Kachess homes are basically built into the mountains, which would almost certainly cause them to adhere to installing expensive sprinkler systems. Since this will be the case, if the lake (which is currently drained more than sixty feet) is drained another 80 feet, where will these new sprinkler installed homes get their water if there is an encroaching fire in order to save them. Taking additional water from the lake while this new requirement goes into effect doesn’t make sense to me.

Sandy Knauft
Knauff@comcast.net

Sent from my iPhone
I am writing to you to register my strong concern about — and my opposition to — the plan to drain Lake Kachess. I urge you to seriously consider the substantial flaws of the plan under consideration. Sincerely

Billie Z Lawson  Full-time Resident  PO Box 202, Snoqualmie Pass Wa.
I am writing concerning the proposed plans to take water from Lake kachess. I currently live in Virginia, but I am originally from the Pacific Northwest. I have been to the Lake Kachess area, and I am aware of the impact that this would have on the National Forest, the residents, and fish and wildlife in the area. I am asking that you preserve the lake as it is and not carry out your proposed plan. I am aware that there are many proposals for conservation, crop selection and other measures that would preserve the lake and work to meet people’s needs. Please research and implement these other options and do not take water from Lake kachess.

Thank you.

Sincerely,

Leanne Lewis
The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.
Dear Candace,

Our family is in very strong opposition to this proposition. Draining this pristine, Pleistocene era lake that was formed by glaciers (it is not a reservoir!) would be like killing the goose who lays the golden eggs. The lake likely would take years, if ever, to refill, and then what? The hugely expensive pump would sit in a mud puddle, the farmers wouldn’t get the water they were promised and would be paying an absurd price for in the first place? Please, the only option to consider is NOT going forward with this project at all. We simply cannot afford it, monetarily, morally and environmentally.

Thank you,

Stacie Loftus

24815 230th Way SE

Maple Valley, WA 98038

Sent from Mail for Windows 10
Hello,

I support Alternative 1 - No Action. I think that Lake Kachess should not be drained below the original natural lake level. I think that would be detrimental to the natural aquatic environment. I think that water should be pumped from the dammed Columbia River to the nearby Yakima River Basin. I think that water from the Columbia River should be pumped from behind either Wanapum Dam or Priest Rapids Dam.

Sincerely,

Andrew Craig Magnuson
P.O. Box 2495
Forks, WA 98331

Home Phone: (360) 374-5468
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

RE: **Kachess and Keechelus DEIS**

Dear Ms. McKinley:

I am submitting both comments specific to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13\textsuperscript{th}, 2018 and also those comments by The Alpine Lakes Protection Society, The Sierra Club, The Wise Use Movement and The North Cascades Conservation Council which were made about the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Draft Environmental Impact Statement (DEIS), dated January 9, 2015. All comments are submitted under both NEPA and SEPA.

**Comments**

1) **Alternative 1 No Action**  We oppose all active alternatives of the KDRPP and KKC projects. Only
Alternative 1, “No Action” is acceptable.

2) **The Yakima Plan programmatic FEIS failed to provide a range of alternatives**—just the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

3) **Failure to comply with NEPA requirement for consideration of alternatives.** The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different
alternatives, they are in fact one alternative...extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

We have previously noted this deficiency in the 2015 DEIS, and repeat it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be " tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

We ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given...including data, references, and review procedures...for excluding each alternative.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.
1) **Involve all affected native tribes** The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and will they be brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final DEIS and/or ROD? Also please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

2) **Impact on Campers at Lake Kachess** The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend...June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

3) **Objectivity vs “Suggestion”** Executive Summary, page ES-v The SDEIS asserts the presence of a “value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a "suggestion", brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,” including the methods, data, and conclusions implied by the inadequate and confusing term “suggestions.”

1) **Funding ambiguity requires another SDEIS** Page ES-viii The SDEIS states the Bureau of
Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FP. Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what action (fund, design, construct, operate, etc.). These are not “details” to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

2) **Change in Scope  Page ES-viii** The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to citizens' understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

3) **Impact on private wells  Page ES-xi** The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.
Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated.

4) **Lack of communication to the affected public**  
   The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement most affected individuals come from the Seattle area, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

5) **Misrepresentation of Lake Kachess**  
   The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake…[joining]…Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires
modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7.

6) **Who will be responsible for costs, implementation and operation?**

   **Chapter 1, Table 1-11 on page 1-11** This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate…etc….the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. We ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP-FPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

7) **Teanaway Community Forest**  **Chapter 1, Section 1.8.2 on Page 1-18** The terms and conditions of the purchase of the Teanaway Property (TCF) is misrepresented with regard to its relationship to KDRPP-FPP and does so in a way that introduces extreme bias in favor of the project proponents. Page 1-18 indicates 214,000 acre-feet of additional water supply must be in place by 2025, and if not the Board of Natural Resources is authorized to transfer the TCF to the common school trust and manage it for the beneficiaries of the trust.

   The proponents of KDRPP-FPP make public representations that this means, unless their project is implemented, the TCF will be sold, clear-cut for timber revenue, and the property lost forever for recreation purposes. Simply stated, that is not true. The terms of the TCF do not require the property be reverted to the educational trust; that is only one alternative provided among many. **(See RCW 90.38.130 Authorization to purchase land---management and disposal of land)** Other options include continued management of the property for recreation, maintaining wildlife habitat, implementing conservation projects, and other beneficial purposes.

   In fact, the only obligation is that a report be submitted indicating what progress has been achieved toward the milestone and requiring submission of a new plan if the milestone is not achieved. This can continue until the year 2045. It further states the milestone can be achieved through any of a combination of methods: conservation, improved management techniques, water marketing strategies, storage, and others. In fact, the report is required to state how much “net increase in available water” (the correct term, not “additional water supply” as stated in the SDEIS which implies all milestone water must be from storage). To date, the SDEIS claims 124,131 acre-feet of net increase in water due to conservation, and in the past has claimed as much as 300,000 acre-feet in future conservation savings. This would more than fulfill the 214,000 acre-feet milestone, were the planned conservation projects fully implemented.

   Finally, **if** the very unlikely possibility of a reversion to trust fund management and clearcutting is selectively highlighted in the SDEIS, **then** the far more likely alternatives should be given equal space. After a decade of public recreation use, with untold thousands of new citizen-recreationists advocating for the Teanaway as a new resource, and an army of volunteer citizens and organizations upgrading the Teanaway, the public backlash against clearcutting would be overwhelming. With its misrepresentation of the Teanaway Purchase, the SDEIS has veered into a political speculation that is both inappropriate and inaccurate. However, given that SDEIS
has now opened the door, in a subsequent SDEIS it must clarify, correct, and accurately inform the public of what is, and is not, required and implied by the Teanaway Purchase. We ask that this be done not only in a future SDEIS, but in all communication about the relationship between Teanaway and KDRPP-FPP, or any other element of YBIP. In addition, we asked that a notification of clarification be immediately issued stating that based on current and future water conservation savings, it is anticipated that the obligations under RCW 90.38.130 will be met with no additional water needed from the YBIP projects.

8) **Accurate Cost Estimate Chapter 2, Sections 2.7** The statement of budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The “estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the “proposed option” it will be the focus of this comment (however these comments apply equally to the other alternatives). An “estimate” that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.

<table>
<thead>
<tr>
<th>Low Estimate</th>
<th>Projected Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000</td>
<td>282,000,000</td>
<td>423,000,000</td>
</tr>
</tbody>
</table>

as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitational Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented
in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

1) **Accurate view of exposed shoreline Chapter 2, Section 2.10** Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS (Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

2) **Bull Trout Chapter 2, Section 2.10 and elsewhere in the SDEIS** The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump… and therefore the channel…will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year… when the water will be needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the passageway to
Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

We ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements?

3) **USFWS BiOp** It is known that the USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts. That BiOp is not expected to be published until sometime in the fall of 2018. We request that another SDEIS be produced after said BiOp is published as it could impact the entire watershed including the necessity for the projects named in the current SDEIS for Kachess.

4) **Increased forest vulnerability and Fire Hazard.** The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD.

5) **Impact to private property** The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences...etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily number 300 homesites, far more than would be inferred from the term “several.” The systematic bias against
representing impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. We ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

6) **Impact to private property** BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn't notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view…but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts…” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!

The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.
It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. We demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.

7) **Impact on Senior Water Rights**  How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? We request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments.

8) **Drought Definition**  Who will define the 70% of prorated water? What unbiased, non-irrigation district, party will make that determination? Page 2-6 of the SDEIS says, “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.” Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)? Why would the pump be used in following years “as the reservoir refills to a level above the existing gravity outlet?” Would that not prevent or delay refill?

9) **New Water Rights**  Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan. How will new water rights be issued? To whom?

10) **Water Conservation and Market Reallocation**  Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.

11) **Noise**  Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA. What is the expected noise level in dBA at 100 feet from the pumps? At 1000 feet? Will the pumps be running 24/7 once they start running?

12) **KKC tunnel material**  115,000 cubic yards of KKC tunnel excavated material comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off. Where will the 115,000 cubic yards of KKC tunnel material be deposited? What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?
13) **Turbidity**  P2-68 notes all action alternatives will result in localized short-term exceedance of turbidity standard. Define the degree of turbidity exceedance and the effect it will have on native fish populations.

14) **Permanent Habitat Loss**  P2-71 notes permanent habitat loss with the preferred alternative. Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species.

15) **Decreased Recreation Desirability**  P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ” Quantify the economic impact of the decreased recreation desirability. Under what authority are established SIL/VOQ permitted to be violated?

16) **Purchase of private property**  P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot. There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased? These additional costs should be included in the SDEIS Alternatives. A revised SDEIS is warranted.

17) **Water Impairment**  P3-29, 3-45: both Keechelus and Kachess are listed as “category 5” water impairment because of PCB contamination. In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination. Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

18) **Water Filtering**  How will the water from Keechelus be moved to Kachess? What kind of filtration system will be installed to prevent any I-90 pollutants in Lake Keechelus from being transferred to Lake Kachess? If any hydraulic equipment is used, how will any PAH be kept from entering Lake Kachess?

19) **Lake Drainage during construction**  The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

Additionally Please answer the following.

When Senior water users take all their water, then Roza takes the water they are planning to remove from Lake Kachess during a drought. The data I have seen says it is...
possible it may take years to refill the Lake. What happens when?

1. There is no water the following year for the senior water rights users?

2. The Kachess river doesn’t flow due to lake not having enough water?

3. What is the impact on the Federally protected Bull trout population of this lake?

4. On a low water year, if they tunnel from Lake Keechelus to Lake Kachess and remove the water from Lake Keechelus and upper Yakima river goes dry? What happens to the trout? Salmon?

5. What happens when the Yakima Indian Nations have no water for their hatcheries due to low water in the river.

6. Will Lake Easton still have water in it in drought years, or years after the drought when the Lakes in question aren’t refilled?

7. Will Lake Easton State Park have to close because of lack of water in the lake?

8. Will the National Forest Service Campgrounds on Lake Kachess have to be shut down?

9. What will be the financial impact of lack of campers and boaters in the Easton/ Kachess areas?

10. What is the economic impact on the upper and lower Kittitas county if the Senior water rights users don’t have water available because the lake hasn’t refilled? Who is going to take responsibility for these impacts?

11. Most of the wells in the upper county will be above the level of the lake once Roza steals the water, Once these wells go dry including my own who will be held accountable for hundreds of homes no longer habitable? Who will be held responsible for this?

12. Who will cover the costs of potentially hundreds of lawsuits when wells go dry and businesses fail due to empty lakes?

13. In 2015 when the project was anticipated to cost $58 million and it didn’t make financial sense and now its estimated to be over $400 million it works? This is a boondoggle of the highest kind! Please explain how the everyday small farmers can afford this expense?

14. What will be the noise impact of diesel generators on the lake? To the wildlife? To the residents? To the recreational users?

15. What will be the ecological impact when diesel spills occur on the lake? Fish wildlife in the Lake? In the River?

16. With less water in the 2 lakes and realistically in the aquifer the fire danger in the surrounding areas is very likely to increase. What is the plan to mitigate increased fire risk/danger?
Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Please Respond with answers back to me at

Joe Mallory
P.O. Box 523
Easton, WA 98925
Hi there,
My family has lived in the upper county including Easton WA for over 4 generations! Draining lake Kachess has never been a topic and seems ridiculous now! How can this be ok!? Having a toxic diesel pump in the lake is not ok! The fish including silvers, lingcod and more would suffer! Ecosystems, deer, elk, big horn sheep, ducks, and more would be at stake! How often would the lake be drained? Where would this pump be located? Have you contacted the town of Easton, or Kittitas county, if this is ok? Where is the money coming from to do this? Who is paying for it? Little Kachess is a natural lake, would that be destroyed!? Where is the water going?
Answers will need to be given! A town meeting with your board needs to be scheduled asap!
Warm regards,
Ashley Mankus
Life time resident
EASTON, WA
Cathie McShane
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA  98901-2058

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS. The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Cathie McShane
131 wood house loop
Ellensburg Wa 98926
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Please leave Lake Kachess alone.

William Misocky
4270 Kachess Lake Rd
Easton, WA 98925
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

Kachess and Keechelus SDEIS

Dear Ms. McKinley:

Please accept my comment regarding the KDRPP SDEIS:

Alternative 1 No Action: I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No Action" is acceptable.

Thank you,

Anca Moldoveanu
2730 232nd St SE
Bothell, WA 98021
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058  

We are categorically opposed to pumping Kachess Lake below the natural lake level.

Property values have plummeted since this discussion was announced. Until recently, we owned as much as 176 acres, comprising approximately 2/3 miles of lakefront. We have lost hundreds of thousands of dollars in the sale of two parcels on the east side of the lake. We own two more, and have witnessed a severe decline in interest due to the uncertainty of future lake levels. We own senior water rights on all properties, these rights date prior to 1890.

We initially purchased our first parcel in 1993, at the time, the B of R assured us the lake would never drop below the natural lake level. I still have that documentation.

The Final EIS provides no dollar mitigation for land values and wells affected by lowered lake levels.

How we are to be compensated the financial hit we are taking as a result of this disastrous plan?

We look forward to your immediate response to this correspondence.
Brian Murphy
Murphy at Loch Kachess LLC
240 Kachess Lane
PO Box 463
Easton WA 98925

3121 Broadway East
Seattle WA 98102
206.799.2293
The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.

Amy Stevenson-Ness
Covington, WA
The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Thank you.

Steven Ness
Covington, WA. 98042

Sent from my iPhone
To Whom It May Concern,

My parents are 50% cabin owners on the east side of Lake Kachess and our family has had this property for four generations. We hold a senior water right - our cabin is served by a newly constructed well. Members of my family spend their summers at the cabin, including my in-laws, aunt and uncle, and cousins. Our property and our quality of life stand to be affected by the plan. I have a number of concerns and questions about the Kachess Drought Relief Pumping Plant proposals that I would like the agency to address:

1. How much water would be made available to the downstream farms via the KDRPP, compared to how much could be available through the adoption of drip irrigation systems and other water conservation methods?

2. What would be the cost of drip irrigation systems sufficient to provide the same amount of water to the farms as the KDRPP? Please include in this analysis the dollar value of Lake Kachess' recreational value and the value of the bull trout population.

3. How much dust would be generated by wind hitting the dry lakebed when the lake would be drawn down in drought years? What would be the health effects of that dust to cabin owners? Our family includes people who suffer from asthma and allergies. Would there be compensation for medical expenses and nights when we would not be able to stay at the cabin due to dust? If so, what amount of compensation would be offered for medical expenses and nights when the cabin was uninhabitable?

4. What is the explanation for the senior water rights of our family being overruled by the junior water rights of the interests downstream? Would our family be compensated for the taking of those rights, and if so, in what amount?

5. What decibel levels would the pump generate, and for how many hours per drought year?

6. What protections are contemplated for the fossil bed on the southwestern shore of the lake?

7. What is the plan for disposal of PCB-contaminated soil from the project, and how much will that disposal cost?

Our cabin and the lake mean the world to me. I look forward to receiving a response to these questions.
Thank you,

Katherine Newman

Sent from my iPhone
Ms. McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia- Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Plus a real concern is the loss of property value associated with this project and how the property owners will be compensated.

Thank you,

Wes and Debbie Nye  
170 Alpine Lane P.O. Box 702  
Easton, WA 98925
Dear Ms. McKinley:

I am submitting both comments specific to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018 and also those comments by The Alpine Lakes Protection Society, The Sierra Club, The Wise Use Movement and The North Cascades Conservation Council which were made about the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Draft Environmental Impact Statement (DEIS), dated January 9, 2015. All comments are submitted under both NEPA and SEPA.

I support Alternative 1 with no action and oppose all active alternatives of the KDRPP and KKC projects. My reasoning is due to the fact that there were not enough range of alternatives explored and believe that the Yakima Plan FEIS failed to provide a reasonable amount thereof. The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

I ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess...
March 2019

Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. I ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given…including data, references, and review procedures…for excluding each alternative. The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and I therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and why are they not brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final DEIS and/or ROD? Also please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend…June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

The SDEIS states the Bureau of Reclamation will “fund…some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens…as well as Roza farmers…of their likely obligations for financial support of the KDRPP-FP. Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what action (fund, design, construct, operate, etc.). These are not “details” to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.”
failures ("dewatering") will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. I ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry? The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated? What accurate and defined methods have been used to determine loss of property values in the immediate area? How will property owners be compensated for such a loss?

Misrepresentation of Lake Kachess Chapter 1, Section 1.2 The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as "dead storage" and "inactive pool" be eliminated. The correct term should be either "Lake Kachess" or "Big Kachess Lake". There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7. When driving either East or West on I-90, the sign states "Lake Kachess" and not "Reservoir Kachess".

I have a very hard time understanding how this process can be put on the table to benefit private interests at the expense of others as well as the general public. Therefore, the only rational and fair decision is to choose no action.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released. Thank you for considering and acting on these comments.

Sincerely,
Kurt Opel
371 Kachess River RD
Easton, WA 98925
425-678-5800
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

--

Ms JJ Owens-Fountain
50centfreedom2@gmail.com
Hello,

I am writing to ask you to please stop the process that would lead to the draining of Lake Kachess. There are so many economic and environmental reasons this is a poor idea. Some specific questions include:

- In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination.
- As a homeowner on the lake, I’d like to see the plan for buying the currently waterfront property that will have a severely impacted property resale value. What is the county prepared to offer to buy the existing land from homeowners?
- Loss of habitat for wildlife, including endangered species. What is the detailed plan to relocate and/or otherwise protect these animals?
- We and our neighbors just spent years and thousands of dollars getting the required permits and processes to install a shared well. If the water table is lowered, what is the county/state prepared to offer in mitigations to compensate land owners for loss of use of their wells, essentially making the homes unlivable with no water? Additionally, I have senior water rights for my well. According to the SDEIS, my well will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater my well which has senior water rights?
- Lake Kachess is a significant outdoor recreation economic contributor. What is the plan for recovering this revenue source?

I look forward to these specific answers and improved transparency in the process, along with additional public meetings for all those affected to be able to be part of the conversation.

Regards,

Kathryn Pizzo

Homeowner on Lake Kachess
Sent from my iPad

Begin forwarded message:

**From:** danplouse@yahoo.com  
**Date:** July 11, 2018 at 2:32:51 PM PDT  
**To:** kkbt@usbr.gov  
**Subject:** KDRPP & KKC SDEIS (Lake Kachess)

Attention, Candace McKinley, Environmental Program Manager.

Dear Bureau of Reclamation,

This letter is about Kachess Lake and Reservoir. My understanding of the reasoning behind the proposed pumping and/or piping of the Lake is to gain more access to the Lake’s water supply. There might be an alternative way to increase the Lake’s water supply.

Would it be possible to excavate the lower end (south east end) of the Lake? During autumn the lower end of the Lake is a reservoir of stumps, sand, rock and mud, not much water is left. If the lower end were excavated perhaps the increased water storage capacity might offset or minimize the need to pump and/or pipe the Lake. The excavated materials could be used to build up the shoreline and reclaim the old logging roads on the north side of the Lake. The stumps could be processed in a stump grinder. New habitat could be installed for the fish.

All the excavating could be “off-road”, eliminating any traffic concerns.

Excavating may be a solution which adequately increases the amount of usable water in the Lake or Reservoir, enhances the fish habitat and preserves the natural beauty of the Lake.

Sincerely,

Dan Plouse

Easton, Wa

Sent from my iPad
Baraka Poulin <bpoulin1@gmail.com>  
To: kkbt@usbr.gov  
Cc: Bruce Poulin <brucepoulin3@yahoo.com>

Candace,

I request Alternative #1: no action.

It continues to appear that along with many other issues, this project lacks a substantive cost/benefit analysis and justification for implementation.

As I have not heard any response or learned further information to affirm why this project makes sense- I urge the agency to take no action.

Thank you.

Baraka Poulin

From: Baraka Poulin [mailto:bpoulin1@gmail.com]  
Sent: Monday, June 4, 2018 4:19 PM  
To: kkbt@usbr.gov  
Cc: 'Bruce Poulin' <brucepoulin3@yahoo.com>  
Subject: Kachess irrigation - comments

Hi,
I reviewed the Kachess Drought Relief Pumping Plant Supplemental Draft Environmental impact statement dated April 2018 and would like to offer the following questions and observations.

Observations:

- Power cost looks like an order of magnitude to low. 260kW average? Are there backup calculations I could review?
- Both the construction and operating CO2 emissions are incredibly large. The EPA’s social cost of carbon should be applied to this lifetime value (8000 tons/yr * $50/ton) as part of the life cycle cost. Although below significance thresholds, this is NOT in-line with state goals.
- $450M is an tremendously expensive burden for taxpayers to bear with the benefit going to only a select few individuals during infrequent drought years. This study needs to show the estimated cost per gallon, the number of people directly impacted, and the alternative cost (i.e., not planting year)- I suspect it may be less expensive to leave the field fallow and pay a distribution to the farmer.
- With lake drawdown decreasing rim stability – what is the estimated cost if implementing the proposed erosion control measures (what are these measures?)

My general concern is lack of cost/benefit quantification and analysis.

I look forward to your feedback.

Thanks.

Baraka Poulin

WA State Professional Engineer #51231

206.445.2037
Hi Mrs. McKinley,

I have some questions about the upcoming plans to drain the beautiful natural Lake Kachess. This is a terrible plan, lacking transparency, and it pains me that such negligence is happening in the great state of Washington.

What are the plans to support residents and property owners who have property on lake Kachess if the natural wells are unable to supply running water to the families living and visiting there?

How do you expect this to impact visitors to the Kachess campground and surrounding hiking trails?

What is the plan to support the Lake Kachess fire department if the wells aren't supplying running water?

What research has been completed and shared with the taxpayers that confirms draining the lake will (1) effectively and long-term support drought prevention for farms in the area and (2) that the lake will ever recover from being drained past it's natural/original height??

I look forward to your responses.

Best,

Stuart Quinn & Sarah Kitchell
Good afternoon,
I am writing today to inform you of my opposition to the proposed floating pump in lake Kachess for additional drainage of water in times of drought. This plan has many many cons to the small pro of water shipment, and will devastate the lake and lake environment that exists today. Please take this into consideration.
-Heidi Huynh
Please find attached my response to the SDEIS.

Please confirm receipt of delivery.

Thanks,

John Reeves

SDEIS Response Final JSR 7.11.18.pdf
1046K
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA  98901-2058
Via email: kkbt@usbr.gov

Re:  SUBJECT:  Comments submitted in response to Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus-to-Kachess Conveyance (KKC) Projects Supplemental Draft Environmental Impact Statement

Please accept this comment in response to the Supplemental Draft Environmental Impact Statement (SDEIS) comment period for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Projects. This comment letter is in addition to prior comments and incorporates the comments of others.

I am OPPOSED to the implementation of any of the alternatives (other than “no action”) under the SDEIS.

Please consider, although not a legal or environmental expert, I have spent more time at Lake Kachess than any consultant, any Bureau of Reclamation employee, and any Washington State Department of Ecology Employees. I make this comment not to discredit work by these people, rather to emphasize my understanding of the intricacies of Lake Kachess. I apologize in advance of any comments that may be taken personally. This issue is not only a personal issue to me, it is also a responsibility issue as a Steward of Lake Kachess and its ecosystem. I make these comments and submissions as an individual and do not represent any group although I will advocate for the inclusion of certain groups. The work of addressing water needs across various stakeholders is a tough. No disrespect is intended. I look forward to working with these agencies to develop real solutions to meet needs.

The Bureau of Reclamation and Department of Ecology (the “Agencies”) have failed to adequately comply with regulatory requirements. It has not disclosed the impacts to affected environments, quantified those impacts or disclosed any mitigation strategies.

The Agencies have failed to consider reasonable alternatives and instead have attempted to simply implement a plan developed by conflicted and interested parties to the exclusion of all others.

The Agencies have not only failed to notify impacted parties, they have failed identify the authority under which they will take private property in-order to provide private uses to third parties.

The DEIS and SDEIS must either be redrafted and resubmitted with the appropriate research, data and disclosures or the “no action” alternative selected.

I ask that you acknowledge receipt of these comments at the earliest opportunity. Please enter these comments and my opposition to the KKC/KDRPP Projects into the public record.
To: (via e-mail)
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
191 7 Marsh Road
Yakima, WA 98901-2058
Phone: 509-575-5848, ext. 603
Fax: 509-454-5650
Email: kkbt@usbr.gov

COMMENTS / CONCERNS / QUESTIONS

PROJECT NAME

The name Kachess Drought Relief Pumping Plant is a misnomer. This is not about drought relief. Drought Relief is keeping vegetation alive in a drought, Crop Insurance (USDA) and Federal Dust Bowl Era programs. The title is misleading and meant to distract the public's understanding. This is about maintaining agriculture's profits at the expense of natural resources through a drought period. Water Districts could build their own in-district water storage facilities.

- Why are options of onsite storage facilities or Water District Reservoirs on their own land that they can control in times of drought need not addressed?
- How will the title Drought Relief be properly addressed in the EIS?

MISSION STATEMENTS
Mission Statements

The U.S. Department of the Interior protects America’s natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The mission of the Department of Ecology is to protect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations.

The claim is the Yakama Nation is on board. Putting them in a position of having to pick and chose what they will allow, when they should have all their salmon runs returned to ALL lakes. Other tribal considerations should be taken in account as well and not force them into a corner and them claim a plan is integrated.

- How is draining a natural lake honoring the “cultures and tribal communities”?
- Is this just another example of government forcing native cultures into a situation where they have no choice?

“Protect water and related resources in an environmentally and economically sound manner in the interest of the American Public”

Packaging the KKC and KDRPP with other projects is not an economically sound manner. Alone both projects have a negative Net Present Value.

- How is a pumping a natural alpine lake to expose earth that has never seen the light of day protecting water resources in an environmentally sound manner?

“enhance Washington’s environment and promote the wise management of our air, land, and water for the benefit of current and future generations.”

- Will the emissions from the diesel operated plant be completely calculated and displayed?
- Will the Methane Gas release of never exposed lakebed be researched and displayed?
- How is draining a naturally formed alpine lake wise management?
- Will the negative Net Present Values be clearly explained?
- Please explain how these and other issues meet the promoted mission statements of the three departments.
NOTIFICATION CONFUSION

It is inherent to notify citizens of projects such as this. The general-public does not clearly understand the process. I met several citizens in the town of Easton that were confused by the notification process, what little there was. This is a SUPPLIMENTAL DEIS. Most citizens were of the belief this project went away. Citizens in general do not clearly understand the DEIS process let alone a supplement. Not only is it inherent to notify citizens, it is necessary to do so in a manner that citizens can understand. 90-day notice to respond to a 900-page document is a giant task for most citizens; 60-day notice if they chose to attend the informational meetings in Cle Elum or Ellensburg. If they attended those meetings they were greeted with outdated poster boards and representatives from Bureau of Reclamation and Ecology that were standoffish and defensive of the plan. There was a US BR Kachess Reservoir (Lake) Bull Trout Passage Report issued in May 2016, so clearly the process continued after the DEIS and Roza backing out of the Temporary Pumping Plant plan. The SDEIS clearly states Roza Irrigation has remained in direct contact with BoR and Ecology OCR.

- Why were citizens not kept abreast of developments as this process continued behind closed doors?
- Why were stakeholders not contacted with developments prior to release of the SDEIS?
- Why were citizens that clearly opposed on record as opposing the DEIS not contacted prior to the April 2018 release?
- How will better communication methods be utilized in future correspondence with citizens?

IRRIGATION SYSTEMS AND INFRASTRUCTURE NOT ADDRESSED

There is no mention of the delivery method of this water once it reaches the Water District. Most water district infrastructure date back to just after the Great Depression and 1950’s.

- How will conservation of this valuable resource (water) be addressed once it leaves the Natural Lake? *(Water taken below approximately 2200’-2223’ is from the natural lake)*
Capacitors in the irrigation system are not addressed in the SDEIS. Irrigation is most effective in the early AM, irrigation ditches run 24/7. A properly constructed ditch, with no leaks, and with gates could house millions of gallons of water to be used in drought relief and allow for water to be better utilized at the proper time of day.

- How will more efficient use of the natural resource water be addressed in the EIS?
- Will improvements, redesign and construction of the irrigation system(s) be considered as an alternative to draining a natural resource?
- Will there be requirement for fixing the ditches?
- Will gate systems within the ditch be required for better utilizing and storing water?
- Will on site mini lakes and small reservoirs within the irrigation districts delivery system be addressed?
- Will utilizing the water for Evaporative Cooling be outlawed for water transmitted from this project?

WATER NEEDS IN ACRE FEET / STATED ACCOMPLISHMENTS BY THE OFFICE OF THE COLUMBIA RIVER

The Washington State Department of Ecology is named in the SDEIS. The Office of the Columbia River is the department named on the SDEIS. In 2005 the OCR was charged with “aggressively seek out new water supplies.” With a maximum drawdown of 239,000-acre feet and an annual refill average of 210,000-acre feet, Kachess is already a deficit watershed. In the December 3, 2016 “Powers Report” / “Department of Ecology Office of the Columbia River: The Last Ten Years (Prepared for the Sierra Club), it is noted the OCR reported it had developed 396,000-acre feet of water. The additional 200,000-acre feet of Kachess water would be necessary to meet that stated accomplishment.

200,000-acre feet is clearly an arbitrary number. So much so the .75’ adjustment was added to the schematic profile between the DEIS and SDEIS. This implies the number is driven only by promises made by OCR and overstatements of “developed water” by OCR. There is no evidence that this is the magical number that the lake can sustain. The calculations in the 1910-1913 dam construction are more appropriate of designing a reservoir over a natural lake by having similar numbers of annual refill of approximately 210,00-acre feet with a reservoir that can produce 239,000-acre feet.

At face value the objective of 200,000AF seems to be clearly a result of stated accomplishments and not any way related to the best use of resources for citizens of the State of Washington.

- Why is 200,000-acre feet the amount of water desired for this project?
- Does 439,000-acre feet (the additional 200,000-acre feet plus the original 239,000-acre feet) best suit Kachess Lake water source availability?
- How is taking water from a lake well below its natural pre-dam levels finding new water supplies?
- How is pumping water from a lake below it’s ability to recharge ‘developing water’?
• How will the lake re-fill with these numbers? *(The SDEIS uses historical numbers to predict future levels, no account is made for the additional ‘drought relief’/ additional draw by Roza and/or other Junior Water Rights Holders)*
• Are there expectations of greater precipitation in climate forecast models?
• How can a 439,000-acre foot ‘reservoir’ in a 210,000-acre foot watershed meet the criteria of sustainability?

This plan depicts “creating” 200,000-acre feet of water. 200,000 additional acre feet will not be available on a year to year basis. Access to the 200,000-acre feet may develop a greater fudge factor on a year by year basis, understood.

• What is the additional number of acre feet needed for “drought relief” on an annual basis?

Since Roza Irrigation District implies they will fund this project:

• What is the annual drought relief (with responsible planting) that Roza Irrigation needs? *(This number would be well below 50,000-acre feet, below 30,000-acre feet per Roza Irrigation’s own internal documents. *(Water Transfer Market Overview Paper 7-8-16.pdf))*
CONFUSING DISPLAYS AND LACK OF & INCONSISTENT BATHYMETRY

SDEIS Low Pool Elevation

CleElum Public Meeting Pool Elevation

There has been little consistency in data presented. The visual in the SDEIS depicts two islands, while the visual presented at the public meeting in CleElum does not. The Public Meeting Visual is clearly taken from the DEIS. Many people rely on visual communication as not everyone can read an entire 800+ page document. Lack of consistency in the visuals can only mean incompetence, laziness, or an outright maneuver to deceive and confuse. Officials perpetuating this plan should notice these inconsistencies especially if they are chosen to face the public at public meetings and answer questions.

- Which is correct?
- How will consistent data be included in the EIS?
- Why was it not important enough to produce an up to date visual for the public?
- How can we expect the leaders at a management level of this plan (in it’s various agencies) fully understand the details if they cannot notice simple inconsistencies such as the displays above?
• Will a new set of DEIS and/or SDEIS be necessary to eliminate the confusion made by continual presentations of moving targets?

There is no bathymetric data displayed in the SDEIS. The Bureau of Reclamation and Department of Ecology clearly have access to this data as displayed in the May 2016 “Kachess Reservoir Bull Trout Appraisal Report”.

• Why was full bathymetric data not shared in the DEIS and SDEIS?
• Why was Bathymetry used in the May 2016 Bull Trout Appraisal Report and not in the 2018 SDEIS?
• Will Bathymetric data be shared in the FEIS?
• How will erosion of the islands be addressed in the FEIS?
• Are there even islands at the low pool level?
• How will intermediate islands (that become peninsulas at lower levels as they are exposed) be erosion controlled as lake levels drop?
VARIATIONS IN HYDRAULIC PROFILES:

SDEIS

Schematic Hydraulic Profile Showing Original Natural Lakes, Existing Kachess Dam and Reservoir, and Proposed KDRPP Drawdown

DEIS ....and Poster Board at Cle Elum Public Meeting May 2018

Schematic Hydraulic Profile Showing Inactive Pool, Natural Lakes, Existing Kachess Dam & Reservoir, and Proposed KDRPP Drawdown

USBR Kachess Reservoir (Lake) Bull Trout Passage Report May 2016
Schematic Hydraulic Profile Showing Inactive Pool, Natural Lakes, Existing Kachess Dam & Reservoir, and Proposed KDRPP Drawdown

Figure 9-6. Schematic hydraulic profile showing the inactive pool, natural lakes, existing Kachess Dam and Reservoir, and the proposed Kachess Drought Relief Power Plant (KDRPP) drawdown.
The least accurate of these profiles is the most recent! Repeat, the least accurate is the most recent in the SDEIS. Little Lake Kachess has dropped to a level of 2210, a full 10' below the stated narrows level of 2220' which may not even be accurate. This high-water mark of Kachess Natural Lake is depicted as 2192.75. Historical records and previous schematic profiles show the height of the original lake 2220', 2223’ per the DETAIL on the “Julia Long” USBR document. These errors are just one example of many throughout the document. The use of outdated materials for public meetings only adds an exclamation point to the confusion.

I have concentrated on this one piece of confusion and it has detracted from time I could have spent on other sections. I choose these diagrams to show a track record of sloppy work. (Apologies, but it needs to be said.)

- Is this an effort to rush a project and not fully vet the information presented?
- Is the public expected to proof-read such an important document?

Dam construction by Bureau of Reclamation began in 1910 and completed in 1912. The lake could not have reached 2262’ until 1912 or 1913. Calling the lake post 1910 level makes one think the preparers of this document do not even have a clear understanding of the history of the lake.

- How can they be expected to produce quality documentation with so little understanding?

The addition of .75’ between the 2015 and 2016 diagrams, while a more precise description (if accurate), can only be to achieve the 200,000AF above the 2210’ level. It is quite clear 200,000 is the target number with no regard for the ‘wise use’ of natural resources so long as the arbitrary target is met. There are numerous other inconsistencies with these and other documents in the SDEIS.

- How can the public fully digest and respond to this massive project when the target is constantly moving?
- Is it necessary, due to all the errors, to scrap all issued documents and produce a new DEIS the public can properly respond to?
- Why do the diagrams, even though not to scale, over-exaggerate the section of Kachess River flooded north of Little Kachess in all profiles?
- What steps will be taken to make sure document preparers are properly trained and updated on the history and factual elevations when preparing the FEIS?
- How can the writers better understand the lake before preparing the FEIS?
- Were these documents outsourced?
- If the documents were outsourced who prepared them and how were they funded?

- Why was it not important enough to produce current visuals directly form the SDEIS for use at public meetings?
- Was the use of outdated visuals purposeful or just a mistake?

ENVIRONMENTAL JUSTICE
The counties of Kittitas, Benton, and Yakima were included in the SDEIS. Many property owners at Kachess, Easton, Hyak, and Snoqualmie Pass are residents of King, Pierce, Snohomish, and other counties not included in the SDEIS Environmental Justice. The proof is in the addresses of the few notification letters that were sent to property owners many if not most were mailed outside of the 3 counties noted in the environmental justice section. I personally have spent much time of every year of my 49 years of life at Lake Kachess, all as a King County resident, I am not the only one with a similar story.

- Will King County residents at Snoqualmie Pass be included in Environmental Justice?
- Will King, Pierce, Snohomish, and other counties of property owner stakeholders and campground user stakeholders be included in Environmental Justice?

King County is just to the west of Keechelus and it is quite possible the Snoqualmie Pass Aquifer crosses the county line of Kittitas and King Counties as it sits below the crest of the Cascade Range at Snoqualmie Pass. Manipulation of the Keechelus watershed will very likely affect the Snoqualmie Pass Aquifer.

- Will the Snoqualmie Pass Aquifer / Water Table be addressed in the FEIS?
- Will King County be included in Environmental Justice?

ENVIRONMENTAL CONCERNS
BULL TROUT – PROTECTED SPECIES

In May 2016 the USBR issued the USBR Bull Trout Appraisal Report. There was no opportunity for participation by any Kachess stakeholders. There was no opportunity for participation of Easton residents and outdoors-people. We are the ones that spend the most time at this lake and understand it’s intricacies the best. We are the people that observe Box Canyon Creek, the Narrows, and the Lake the most in their various stages year-round. We are left to assume this may have been an effort of secrecy to keep working the plan without our knowledge. At minimum it was a giant missed opportunity to develop a better understanding of a lake one can not get from a desk in Ellensburg or Yakima. The term Bull Trout Enhancement clearly does not apply here. The lake is currently stopped from being lowered below 2199.5’ due to Bull Trout Passage concerns. Construction of a “roughened channel” or other ideas below 2199.5’ are clearly about grabbing more water and not about Enhancement. Construction of such apparatuses can clearly not be done until the lake is lowered and the damage is done. Any reference to Bull Trout Enhancement or BTE is clearly mis-leading, perhaps intentionally. There is a lack of Salmon recovery efforts noted in the SDEIS. Salmon frye and juvinnille Salmon are know food sources for Bull Trout.

- How will stakeholders, local-residents, and outdoorspeople be better utilized in the FEIS and other fish passage studies regarding Bull Trout and other species?
- How can lowering the lake below 2199.5’ even be associated with the term Bull Trout Enhancement?
Will inclusion of this species be addressed in the FEIS?
Will the Xerces Society who has record of this observation be contacted?
Additional Mussel questions after next section pertinent to this species above

FRESHWATER MUSSELS –

Freshwater mussels are an “Species of Greatest Conservation Need” to the Washington State Department of Fish and Wildlife. There is much mystery surrounding these creatures and these animals are ‘very sensitive to environmental changes’. They are transported in host fish, which may possibly include Bull Trout. Their impact on the overall ecosystem and specifically the Endangered Bull Trout should not be underestimated as mussels provide many benefits to water quality and other native species.

72% percent of North American freshwater mussels are either extinct or imperiled, meaning that they are one of the most at-risk groups of animals in the United States.

Native freshwater mussels have both ecological and cultural significance. Mussels can greatly improve water quality by filtering out pollutants, to the benefit of both humans and aquatic ecosystems. Freshwater mussels also provide benefits to native fish by increasing the visibility and availability of food for fish. These animals can be very sensitive to changes to habitat and water quality and have the potential for use as water quality indicator species. Freshwater mussels have been historically important sources of food, tools, and other implements for many Native American tribes in North America. Mussels have been harvested by Native Americans in the interior Columbia Basin for the last 10,000 years, and mussels are still important to tribes today. ~ https://xerces.org/western-freshwater-mussels/

WESTERN PEARLSHELL (Margaritifera falcata) NEAR THREATENED (IUCN Red List)
The Western Pearlshell has been observed “east of Kachess Lake”. Anything observed east of Kachess Lake is clearly a tributary to Kachess Lake, because over Kachess Ridge the description would be west of Lake CleElum or near Cooper Lake. The Western Pearlshell is Near Threatened with a decreasing population trend. It also uses species of salmon and trout as hosts, and it is possible they use the endangered Bull Trout as a host fish.

Will inclusion of this species be addressed in the FEIS?
Will the Xerces Society who has record of this observation be contacted?
Additional Mussel questions after next section pertinent to this species above
WESTERN FLOATER (Anodonta kennerlyi)

The Western Floater is observed in sand beds of Lake Kachess as the water recedes. Their existence ends as the sand turns to clay beds as the water continues to recede in its current ‘reservoir’ status (which is actually below the pre-1903 original crib dam level). Since the Mussels will be decimated as the water recedes they will no longer play a role in filtering the water in Kachess. Freshwater mussels also play an important role in the food chain. Because some species of floaters use salmon and trout for host fish, it is possible they use the endangered Bull Trout as a host fish and that the freshwater mussel in return plays a part in the food sources and other life features of the Bull Trout. Rotting freshwater mussels will pose an olfactory nuisance and add to the methane gas release.

- What mitigation is planned for cleaning up all the dead and rotting freshwater mussels?
- How will the decimation of this animal impact the Kachess ecosystem?
- How will the methane gas release of rotting mussels be considered, calculated, and mitigated?
- What assurances are there that this animal does not play a vital role in the life span of Bull Trout?
- What understanding is there in regard to freshwater mussels on Bull Trout and other species?
- Will the massive reduction to extirpation of freshwater mussels be included in the environmental impact as it pertains to the ecosystem and specific species such as Bull Trout?
- Will the Xerces Society, Confederated Tribes of the Umatilla Reservation, and other freshwater mussel experts be consulted prior to completion of the FEIS?
- Since the species travels in host fish and the Umatilla Nation is downstream of Kachess, will the Confederated Tribes of the Umatilla Reservation’s “culture” be “honored” as per the Department of Interior’s Mission Statement?

SHORELINE EXPOSURE OF ISLANDS AND SHORELINES

Shoreline erosion is more destructive in years of concurrent low pools (never reaching 2262’), shorelines are clearly affected by historical visual inspection.

- Has the erosion effect been adjusted for the known circumstance of concurrent/multiple years never reaching ‘full pool’?
- How will erosion of islands be addressed in the FEIS?
- How will property owners be financially supported by further erosion due to subsequent years of not reaching a full pool?

VISUAL IMPACT AND NOISE OF PUMP AND FACILITIES UNDERSTATED IN THE SDEIS

The sight at certain distance and color is only considered. The shock of such a machine in an otherwise natural looking environment is understated. There is no reference to the buoy and “do not enter” zone. Noise generation of pumps only considered with no consideration of power generation noise.
• How will the shock value of an industrial machine in a mountain lake environment be minimized?
• What safety zone and buoys will be needed, and will they be addressed as additional visual pollution?
• What no fly zones for drones will be extended?
• What additional areas will no longer be available to boaters and other water activities?
• How will the noise crested by diesel powered electrical plants be included in the FEIS?
• Will power generation Noise be added to pump operation noise?
• Will noise and other environmental factors of recurring diesel fuel deliveries be addressed in the FEIS?
• How will noise of fuel deliveries be addressed?
• Will the dust suppression of fuel deliveries be addressed?
• How will Carbon emissions of diesel exhaust be considered?

WILDLIFE CONNECTIVITY AND UNKNOWN (NOT OBSERVED) SPECIES

At great extent the Washington State Department of Transportation is constructing Wildlife Overpass on Interstate 90 (approx. milepost 60-61). The ecosystems of Keechelus and Kachess both stand to be affected by the proposed KKC and KDRP projects. The KKC seems to pass very near to this obviously environmentally important piece. Animals will likely be affected by a man made underground river/tunnel (vibrations, noise) and another construction project just as animals try and learn a new path to safely improve wildlife habitat connectivity.

Consideration of other species such as wolves, marmots, wolverines, owls, goats, and other unknown recovery species. Species have been found to inhabit ecosystems long be for they are ever officially ‘observed’?

• Will every effort been made to assure even unidentified creatures that multiple projects have tried to enhance habitat for in the Cascade Range be made in the FEIS?
• Have non-observed species known or desired to be repopulating the Cascade Range been considered? How will they be considered?

THE NARROWS

There is a distinct possibility the elevation change at the narrows will greatly change

• What is being done to mitigate further erosion of the narrows and the subsequent lowering of Little Kachess Lake’s low pool elevation?
• How will all the sediment of this erosion be addressed?

TRAFFIC

• What consideration will be made as to employee, service vehicles, fuel deliveries, etc. associated with the pumping plant?
• How will Kittitas County be compensated for increased traffic on their roads?
NATIVE TRIBE CONCERNS

It is my personal belief the Yakama Tribe cannot be happy about this proposed plan and views it as a compromise at best. Forcing the Yakama Nation to think in terms of the “Greater Good” at the expense of their heritage is not honoring a native culture. The Confederated Tribes of The Umatilla Nations downstream are very concerned about freshwater mussels. Snoqualmie Tribe claims to have “run to Snoqualmie Pass”. It has come to my attention the has been a promise to return salmon to all the lakes in the Yakima Reservoir system and a treaty pre-dating the dams assure salmon in the lakes. A treaty between US Government and Puget Sound Tribes in 1885 protects their right to hunt and gather on “open and unclaimed lands” of which nearly everyone consider National Forest Land as open Land.

Is this just another compromise by the Yakama Nation?

How does compromise honor a native culture?

Will concerns other nations / tribes throughout the northwest be addressed and taken into consideration in the FEIS?

Will other nations / tribes in the Puget Sound Tribal Treaty and Northwest be informed of this project prior to the FEIS?

Will Northwest Treaty Tribes be informed of further environmental damage to Keechelus and Kachess ecosystems and public lands?

USE OF PHOTOSHOP AND PURPOSEFUL PHOTOGRAPHIC CONFUSION

The SDEIS includes multiple images manipulated by Photoshop or other editing techniques. The high-water mark (red line) on figure 4-2 is clearly highlighted by extended the brown shoreline of the lake at a lower level. The brown area has clearly been used to cover existing timber. This makes the look like something it is not. This brown area treatment was not applied to Upper Lake Kachess. The word Kachess Lake are still slightly visible with the words Kachess Reservoir have been clearly replaced. Tiny Swamp Lake has not been edited and is further proof of this manipulation. Upper Lake Kachess is a no wake zone and considered by many to be an environmentally sensitive area. Its tributaries lead right up to the protected Alpine Lakes Wilderness area. There are no pictures of upper Lake Kachess in the SDEIS. There is one small photo of Box Canyon Creek. There a no photos of Lake Kachess looking north into snowcapped mountains. This is deceiving to the public.
Why is it necessary to deceive the public in such an important document?

How will shorelines be properly depicted in the FEIS?

Will documents such as aerial photos and be presented in their original format without the use of photoshop in the FEIS?

Will there be a balance of photos depicting the entire lake system and not just the dam area wasteland created by the Bureau of Reclamation 1910-1913?

What assurances will be made to the public that the problems of propaganda and manipulated images and information when the FEIS is released?

WHO OWNS THE WATER

Lakes in Washington State are owned by the public. Kachess Reservoir was constructed ontop of Kachess Natural Lake and some are below its natural outlet. All water drawn below 2220-2223’ is from the original natural lake. Portions of natural lake are already being utilized in the reclamation process.

Who has the right to this water below 2220’/2223’?

Who currently has the right to water below the current 2192.75’ gravity outlet works?

How will rights to water below 2192.75’ be obtained and allocated?

Is there any current dispute over water taken from the levels 2220’ through 2192.75’?

How will future disputes over rights to water at various levels be addressed?

What will be the court setting for such in lake water “ownership” disputes? (in the opinion of BoR and Ecology separately please)
OVER FARMING

The Roza Water District specifically has irresponsibly replaced crops with drought intolerant crops such as apples, grapes, and hops (62% per Roza White Paper document). Most products are not food sustenance needs. Portraying this project as food needs is inaccurate. An appropriate term might be Economical Opportunity Agriculture. With natural resources at play the consideration of planting techniques and choices of a water district should be considered before just giving them more water. The problem of Drought Relief was self-imposed by the farmers themselves when they chose to plant these riskier crops that can produce higher profits. This plan seems to reward reckless plant choice.

- How will plant choices and drought tolerant crop mixes be accounted for in the FEIS?
- With so much at stake, should limits be placed on the amount of drought intolerant species planted in specific water districts?

ODD FEDERAL PURCHASES, TRANSFERS, AND CLOSURES

For sale signs still appear on trees at the south end of the lake where property has already been acquired by the federal government (Forest Service, sub department of USDA). Save Lake Kachess signs in this area were removed and the ‘for sale’ signs clearly remain. Kittitas County records show that property has already been purchased by the Forest Service (Federal Government). The State Park was transferred to the National Forest Service two years ago and failed to be open for Memorial Day weekend 2018. The park did not open the next weekend as well. As a large park one would think it would be at the top of the list for tree felling work. This gives the impression proponents consider this a done deal.

- Why is there no disclosure of Federal Ownership of the southeast end property in the SDEIS?
- Why was the State Park transferred to the Forest Service?
- Why was the state park transferred to the Forest Service in 2018?
- Why was the park closed until June 9, 2018?

EVAPORATIVE COOLING

Irrigation is watering of crops. It has come to attention Apple Orchards are using water to temperature control their crops to keep their fruit below 88 (+/-) degrees by over-spraying entire orchards to drop the air temperature: Evaporative Cooling.

- Will all the water from the KDRPP be used for irrigation (and in-stream flow)?
- Will using the natural resource water for purposes of climate control / evaporative cooling be outlawed in the EIS?
- What restrictions will be placed on participating water districts to insure sustainable practices and responsible planting?
SDEIS PROBLEMS

The number of mistakes and lack of information nears egregious and makes it look as if the public is expected to do the work that a properly written SDEIS should have included. The word Draft may be an overstatement.

- How was the SDEIS Funded?
- Who Funded the SDEIS?
- Who wrote the SDEIS?
- Please name the Consultants that contributed or wrote in full the SDEIS?
- Will a new DEIS and/or SDEIS be required?

CLOSING COMMENT:

I am opposed to allowing public resources to be given to private individuals in the name of economic (agriculture) development. Only the alternative NO ACTION is acceptable. Any alternatives other than NO Action are impractical solutions in today’s modern world.

Under the NEPA and SEP processes I request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

I look forward to seeing responses to these comments.

Respectfully,

John Reeves
Citizen of Washington State and Lifelong Steward of Lake Kachess
PO Box 33
Fall City, WA  98024
(425) 395-6123
johnscottreeves@live.com
Ms. McKinley,

I am writing today to express my opposition to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

I grew up on Lake Kachess. Our family enjoyed boating, camping and hiking through the nature it provides. These activities are something that I want my two children be able to experience too. Lake Kachess is important to me and my family in immeasurable ways. Even taking my family out of the equation, the potential negative impact on the environment should be a big enough deterrent. Unnecessarily pulling excessive amounts of water from the lake will negatively impact it in irreparable ways, especially if dropping it below its historic natural level.

Please take my and many others opposition into consideration. I reiterate, Alternative #1, No Action is the only acceptable alternative.

Thank you for your time,

Angelina Rodstrom
Inna Roshchuk <sunnyface0214@icloud.com>  
To: kkbt@usbr.gov  

Tue, Jul 10, 2018 at 10:53 PM

I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative!!!
I am a concerned citizen opposed to draining Lake Kachess.

Section 3.9.3 of the KDRPP and KKC SEIS has a short section on bull trout, but virtually no information on Box Canyon Creek. I have reviewed recent photographic evidence where Box Canyon Creek disappears into the mud flats created by the existing draw down of Lake Kachess. This evidence can be made available for your review upon request.

The same evidence also shows efforts by Washington Department of Fish and Wildlife (WDFW) to create an artificial channel from Little Kachess Lake to Box Canyon Creek by the use of plastic and straw bales, which have been scattered and allowed to enter the water. This would appear to be a discharge of pollutants (straw and plastic) into Lake Kachess. Did the WDFW obtain a National Pollutant Discharge Elimination System (NPDES) permit or a Department of Ecology 401 Water Quality Certification, or a Shoreline Management Act Substantial Development Permit for this project?

Sincerely,

Delaney Ryan
July 10, 2018

Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley:

We are submitting comments on the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13, 2018.

Attached are prior comments by Alpine Lakes Protection Society, Sierra Club, Wise Use Movement and North Cascades Conservation Council and a letter by the Kittitas County Fire District #8 about the KDRPP and KKC initial Draft
Environmental Impact Statement (DEIS), dated January 9, 2015. These comments and concerns are hereby included in our 2018 comments.

All comments are submitted under both NEPA and SEPA.

Comments

1) Alternative 1 No Action We oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

2) The Yakima Plan programmatic FEIS failed to provide a range of alternatives. The only alternatives presented were the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

3) Failure to comply with NEPA requirement for consideration of alternatives. The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess
could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they are in fact one alternative...extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

We have previously noted this deficiency in the 2015 DEIS, and repeat it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

We ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA
guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given...including data, references, and review procedures...for excluding each alternative.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

4) **Involve all affected native tribes** The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and they be brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final EIS and/or ROD? Also, please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

5) **Impact on Campers at Lake Kachess** The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend...June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure
are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

6) **Impossible to Evaluate** The SDEIS presents four construction projects, the tunnel and three different pumping plants. The plans shown are very rudimentary and conceptual only. The locations are only general, indicating that little or no on-site investigation or detailed design has been carried out. In these circumstances it is impossible to evaluate what if any environmental impacts may result from the construction and subsequent operation of the proposed facilities. Please provide detailed designs for both the KDRPP and KKC in a subsequent SDEIS.

7) **Water Deficit and Water Rights Mitigation** When the pumping plant withdraws an additional 200,000 acre-feet from Lake Kachess, lowering the lake level 80 feet below the gravity spillway, how and when will the water be replaced? Lake Kachess normally receives 213,398 acre-feet of water from the catchment basin. This water is allocated to various water right holders. So, when additional water is withdrawn for drought relief there will be a deficit of as much as 413,398 acre-feet. Should the next year be an average year, there will only be 213,398 acre-feet of precipitation in the catchment basin to replace the deficit. It will be necessary to run the pumps to deliver most of the normal allocation from the lake below the level of the gravity spillway. After the drought of 2001 when Lake Kachess was drawn down to normal low pool at the level of the gravity spillway, it took eight years to again reach full pool elevation. And that was without drawing down another 80 feet by pumping out 200,000 acre-feet from the natural lake (inaccurately named inactive storage). Do Reclamation and Ecology have any plans on managing the water resources in the entire Yakima River Basin to replace this deficit? The SDEIS doesn’t mention them. Will the junior water right holder be allocated less than 100% of their allocation in order to “repay” the 200,000 acre-feet they borrowed during the drought? The SDEIS doesn’t say. A subsequent SDEIS is required to provide detailed answers to these questions.

8) **Objectivity vs “Suggestion”** Executive Summary, page ES-v The SDEIS asserts the presence of a “value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a “suggestion”, brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,’ including the methods, data, and conclusions implied by the inadequate and confusing term “suggestions.”

9) **Funding ambiguity requires another SDEIS** Page ES-viii and Page 1.11 Page 1-11, Table 1-1, indicates the Role and Responsibility of
the Department of Ecology, as an agency of the State of Washington is to provide "potential funding of the selected alternatives." This apparently refers to the passage of Senate Bill 2SSB(5367) Sec. 11 (1)(a) in 2013 which indicates the State of Washington will pay up to one-half of the project costs from additional tax or revenue resources that would have to be identified at a future time. The SDEIS implies the Department of Ecology will fund the project from its annual budget. That is not correct; it is clear any funding of the project will require Washington State taxpayers to come up with not more than 50% of the plan from funds that have neither been identified or appropriated. The statement should read “Washington taxpayers may be required to fund not more than 50% of the plan from funds not currently available.” The preface to the SDEIS states the Department’s purpose is to protect and preserve the environment. To suggest it now has a “purpose” to spend unappropriated funds is hyperbole, at best, and deception at worst. We ask that the statement be corrected, to indicate that Washington State taxpayers are not currently obligated to pay for any part of the plan, but may in the future be obligated to fund up to 50% of the plan.

Also, the Dept of Ecology has for the past 10 years, continuing in the current biennial budget, been expending funds for design, review, promotion, communication, and development of the YBIP, primarily under contract with BoR. Since 2015, or before, substantial state funds have been expended on the KDRPP-FPP. We ask that these funds be included in any representation of the costs of KDRPP-FPP. Any representation of the cost of KDRPP-FPP, without these tax funds included, understates the true costs of this project to taxpayers and participating entities.

With regard to funding of the yet-to-be-selected alternative, Table 1-1 further confuses the matter by indicating it is a Role and Responsibility of the Bureau of Reclamation to provide potential funding of the selected alternative. There is no reference to a legislative or executive action that would make this statement true. If there is a commitment by the federal government, in the form of either authorized or appropriated funds, to make this statement true, it must be included in the SDEIS. We ask that any passed...not contemplated, pending, or speculative...federal, state, or regulation that commits federal funding through the Bureau of Reclamation be identified in a subsequent SDEIS.

To further confuse the matter, Page 1-11 states: "For full implementation of the selected alternative, Roza proposes to fund, design, construct, operate, and maintain a pumping plant at Kachess Reservoir.” There is no legally binding legislative, contractual, public statement, or other documentation that would prove this statement to be true. We ask that whatever obligatory
documentation from Roza that exists be provided to allow citizens to assess the legitimacy of this statement, and that this be provided in a future SDEIS.

In summary, the funding of the "selected alternative" is a collection of speculative obligations that may or may not commit State of Washington citizens, Roza farmers, and/or U.S. citizens to all or a portion of the selected alternative. This confusion and obfuscation is unacceptable. We ask that the actual amounts of funding obligation by all entities be revealed for public review, and this be provided in a future SDEIS.

10) Change in Scope  

The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to citizens’ understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

11) Impact on private wells  

The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final EIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FEIS or ROD.
Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated.

12) **Lack of communication to the affected public**  
The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement that most affected individuals come from the Seattle area, it is clear the NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. A subsequent SDEIS must be published with accompanying public comment period and the public informed. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

13) **Misrepresentation of Lake Kachess**  
Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a
misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7.

14) **Who will be responsible for costs, implementation and operation?**

**Chapter 1, Table 1**

Chapter 1, Table 1 on page 1-11 This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate…etc.…the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final EIS and/or ROD be issued. We ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP-FPP be issued.

The statement should make clear that 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

15) **Misrepresentation about the Teanaway Community Forest**

**Chapter 1, Section 1.8.2 on Page 1-18** The terms and conditions of the purchase of the Teanaway Property (TCF) is misrepresented with regard to its relationship to KDRPP-FPP and does so in a way that introduces extreme bias in favor of the project proponents. Page 1-18 indicates 214,000 acre-feet of additional water supply must be in place by 2025, and if not the Board of Natural Resources is authorized to transfer the TCF to the common school trust and manage it for the beneficiaries of the trust.

The proponents of KDRPP-FPP make public representations that this means, unless their project is implemented, the TCF will be sold, clear-cut for timber revenue, and the property lost forever for recreation purposes. Simply stated,
that is not true. The terms of the TCF do not require the property be reverted
to the educational trust; that is only one alternative provided among many. 
(See RCW 90.38.130 Authorization to purchase land---management and 
disposal of land) Other options include continued management of the 
property for recreation, maintaining wildlife habitat, implementing 
conservation projects, and other beneficial purposes.

In fact, the only obligation is that a report be submitted indicating what 
progress has been achieved toward the milestone and requiring submission 
of a new plan if the milestone is not achieved. This can continue until the 
year 2045. It further states the milestone can be achieved through any of a 
combination of methods: conservation, improved management techniques, 
water marketing strategies, storage, and others. In fact, the report is 
required to state how much “net increase in available water” (the correct term, 
not “additional water supply” as stated in the SDEIS which implies all 
milestone water must be from storage). To date, the SDEIS claims 124,131 
acre-feet of net increase in water due to conservation, and in the past has 
claimed as much as 300,000 acre-feet in future conservation savings. This 
would more than fulfill the 214,000 acre-feet milestone, were the planned 
conservation projects fully implemented.

Finally, if the very unlikely possibility of a reversion to trust fund management 
and clearcutting is selectively highlighted in the SDEIS, then the far more 
likely alternatives should be given equal space. After a decade of public 
recreation use, with untold thousands of new citizen-recreationists advocating 
for the Teanaway as a new resource, and an army of volunteer citizens and 
organizations upgrading the Teanaway, the public backlash against 
clearcutting would be overwhelming. With its misrepresentation of the 
Teanaway Purchase, the SDEIS has veered into a political speculation that is 
both inappropriate and inaccurate. However, given that SDEIS has now 
opened the door, in a subsequent SDEIS it must clarify, correct, and 
accurately inform the public of what is, and is not, required and implied by the 
Teanaway Purchase. We ask that this be done not only in a future SDEIS, 
but in all communication about the relationship between Teanaway and 
KDRPP-FPP, or any other element of YBIP. In addition, we asked that a 
notification of clarification be immediately issued stating that based on current 
and future water conservation savings, it is anticipated that the obligations 
under RCW 90.38.130 will be met with no additional water needed from the 
YBIP projects.

16) Accurate Cost Estimate Chapter 2, Sections 2.7 The statement of 
budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The 
“estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 
4 is the “proposed option” it will be the focus of this comment (however these 
comments apply equally to the other alternatives). An “estimate” that has a
variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.

<table>
<thead>
<tr>
<th>Low Estimate</th>
<th>Projected Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000</td>
<td>282,000,000</td>
<td>423,000,000</td>
</tr>
</tbody>
</table>

as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final EIS and/or ROD is released.

17) **Accurate view of exposed shoreline Chapter 2, Section 2.10**

Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS
(Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other techniques, but as mud or silt consistent with aerial pictures.

An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

18) **Fish Passage** The Yakima Plan envisions seven components for improvements in the Yakima River basin. The SDEIS ignores two very relevant ones: Reservoir Fish Passage and Enhanced Water Conservation. The initial DEIS in 2015 recognized that anadromous fish (salmon) were present in natural glacial lakes Keechelus and Kachess prior to construction of irrigation control structures, dams and spillways, in the early twentieth century. Why aren’t there any plans for enhanced fish passage at either Lake Kachess or Lake Keechelus included in either the DEIS or the SDEIS?

When Fish Passage is finally provided for Lake Kachess and the inactive storage water is pumped out, lowering the lake level behind the dam, how will the migrating salmon coming up the fish passage get down to the lower lake level?

19) **Bull Trout** Chapter 2, Section 2.10 and elsewhere in the SDEIS The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump…and therefore the channel…will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not
included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

We ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final EIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements?

20) **USFWS BiOp** It is known that the USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts. That BiOp is not expected
to be published until sometime in the fall of 2018. We request that another SDEIS be produced after said BiOp is published as it could impact the entire watershed including the necessity for the projects named in the current SDEIS for Kachess.

21) **Increased forest vulnerability and Fire Hazard.** The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final EIS or ROD.

22) **Impact to private property** The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences... etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily numbers 300 homesites, far more than would be inferred from the term “several.” The systematic bias against representing impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. We ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.
23) **Impact to private property.** BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn’t notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view…but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts…” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!

The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows:
“while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. We demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final EIS or ROD is issued.

24) **Impact on Senior Water Rights**  How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? We request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments.

25) **Drought Definition**  Who will define the 70% of prorated water? What unbiased, independent, non-irrigation-district expert or organization will make that determination? Page 2-6 of the SDEIS says, “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.” Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)? Why would the pump be used in following years “as the reservoir refills to a level above the existing gravity outlet?” Would that not prevent or delay refill?

26) **New Water Rights**  Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan. How will new water rights be issued? To whom?

27) **Water Conservation and Market Reallocation**  Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market
reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.

28) **Noise** Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA. What is the expected noise level in dBA at 100 feet from the pumps? At 1000 feet? Will the pumps be running 24/7 once they start running?

29) **KKC tunnel material** 115,000 cubic yards of KKC tunnel excavated material comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off. Where will the 115,000 cubic yards of KKC tunnel material be deposited? What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?

30) **Turbidity** P2-68 notes all action alternatives will result in localized short-term exceedance of turbidity standard. Define the degree of turbidity exceedance and the effect it will have on native fish populations

31) **Permanent Habitat Loss** P2-71 notes permanent habitat loss with the preferred alternative. Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species.

32) **Decreased Recreation Desirability** P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ” Quantify the economic impact of the decreased recreation desirability. Under what authority are established SIL/VOQ permitted to be violated?

33) **Purchase of private property** P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot. There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased? These additional costs should be included in the SDEIS Alternatives. A revised SDEIS is warranted.

34) **Water Impairment** P3-29, 3-45: both Kechelus and Kachess are listed as “category 5” water impairment because of PCB contamination. In the 2015 DEIS, only Kechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination. Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?
35) Water Filtering  How will the water from Keechelus be moved to Kachess? What kind of filtration system will be installed to prevent any I-90 pollutants in Lake Keechelus from being transferred to Lake Kachess? If any hydraulic equipment is used, how will any PAH be kept from entering Lake Kachess?

36) Lake Drainage during construction  The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Kachess Community Association
*Christine Johnson*, President
Christine@WREServices.com
40 Mountain View Lane
Easton, WA 98925

East Kachess Homeowner's Association
*Gordon Brandt*, President
6100 Kachess Dam Road
Easton WA  98925

Kachess Ridge Maintenance Association
*Terry Montoya*, President
terry.montoya@comcast.net
PO Box 93
Easton WA 98925
Friends of Bumping Lake
Chris Maykut, President
chris@friendsofbumpinglake.org

North Cascades Conservation Council
Tom Hammond, President
ncccinfo@northcascades.org

Alpine Lakes Protection Society
Rick McGuire, President
alpinelakes.info@gmail.com

Center for Environmental Law & Policy (CELP)
Trish Rolfe, Executor Director,
trolfe@celp.org
85 S Washington St., Suite 301
Seattle, WA 98104

Snoqualmie Pass Fire and Rescue, Board of Commissioners
William J. Powers, President
bpowers@snoqualmiepassfirerescue.org
1211 State Route 906
Snoqualmie Pass, Kittitas County, WA 98068-0099

Yakima Coalition
Co-Chairs Ann Lewis, Bill Campbell, and Chris Maykut
Ann Lewis, roniaspamonia@gmail.com
86-157th Ave SE, Bellevue, WA 98008
Bill Campbell, bill_campbell@unc.edu
31 Brookside Ct., Easton, WA 98925
Chris Maykut,
chris@friendsofbumpinglake.org

Cindy and Dan Ryynanen
42 Mountain View Lane
Easton, WA 98925

Attachments

cc: elected officials
The amount of environmental problems that WILL... not may... **will** come out of draining this lake is extensive. Not to mention the minor effects it has on every homeowner in this area economically. Having a lake access home myself that is a major role in having this place. Now I understand this is a small lake but the whole point people are fighting draining the lake even more is because there is no natural counterbalance for the lakes water levels. This lake is enjoyed by many people every summer by people and animals alike. Without the lake there will be no habitat left for the fish that inhabit it currently. Now of course there’s that tube system that has been proposed in the past but to put it bluntly is the worst option there is. These fish have been living here for years. There are other methods that are easily applicable for the farmers that need this water. For example, watering at night instead of in the heat of the day or using drip irrigation instead of those other systems that are horribly inefficient. Or here’s the real kicker.... not try growing crops where they can’t natually be sustained like in a desert.... I know, crazy right? Not growing plants that need excessive amounts of water in the middle of a desert.... who would’ve thought? The point is there are many other options besides destroying the beautiful ecosystem that has thrived here for centuries. Protect these beautiful pieces of nature that we can live in harmony with instead of leaving it a wasteland as soon as you pump the lake the proposed additional amount. Maybe instead of looking at the profit of what the pumping system will get you this year get outside and come down and look at what you will destroy if this goes through which I pray will never happen.

Regards,
Kaitlyn Seguin
Dear Ms. McKinley:

We are submitting both comments specific to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018 and also those comments by The Alpine Lakes Protection Society, The Sierra Club, The Wise Use Movement and The North Cascades Conservation Council which were made about the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Draft Environmental Impact Statement (DEIS), dated January 9, 2015. All comments are submitted under both NEPA and SEPA.

Comments

1. **Alternative 1 No Action** We oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

2. **The Yakima Plan programmatic FEIS failed to provide a range of alternatives**—just the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

3. **Failure to comply with NEPA requirement for consideration of alternatives**. The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with
regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they are in fact one alternative…extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

We have previously noted this deficiency in the 2015 DEIS, and repeat it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as
required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

We ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given...including data, references, and review procedures...for excluding each alternative.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

4. **Involve all affected native tribes** The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and they be brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final DEIS and/or ROD? Also please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

5. **Impact on Campers at Lake Kachess** The impact on 23,000 annual visitors and 11,000 annual boaters at
USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend…June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

6. Objectivity vs “Suggestion” Executive Summary, page ES-v The SDEIS asserts the presence of a “value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a “suggestion”, brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,” including the methods, data, and conclusions implied by the inadequate and confusing term “suggestions.”

7. Funding ambiguity requires another SDEIS Page ES-viii The SDEIS states the Bureau of Reclamation will “fund…some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens…as well as Roza farmers…of their likely obligations for financial support of the KDRPP-FP. Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what action (fund, design, construct, operate, etc.). These are not “details” to be clarified at a later
time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

8. **Change in Scope Page ES-viii** The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to citizens’ understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

9. **Impact on private wells Page ES-xi** The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Rozairigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other
justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated.

10. Lack of communication to the affected public Page ES-xiii The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement most affected individuals come from the Seattle area, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

11. Misrepresentation of Lake Kachess Chapter 1, Section 1.2 The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake…[joining]…Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should
be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7.

12. **Who will be responsible for costs, implementation and operation?** Chapter 1, Table 1-11 on page 1-11 This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate… etc.…the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. We ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP-FPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

13. **Teanaway Community Forest** Chapter 1, Section 1.8.2 on Page 1-18 The terms and conditions of the purchase of the Teanaway Property (TCF) is misrepresented with regard to its relationship to KDRPP-FPP and does so in a way that introduces extreme bias in favor of the project proponents. Page 1-18 indicates 214,000 acre-feet of additional water supply must be in place by 2025, and if not the Board of Natural Resources is authorized to transfer the TCF to the common school trust and manage it for the beneficiaries of the trust.

The proponents of KDRPP-FPP make public representations that this means, unless their project is implemented, the TCF will be sold, clear-cut for timber revenue, and the property lost forever for recreation purposes. Simply stated, that is not true. The terms of the TCF do not require the property be reverted to the educational trust; that is only one alternative provided among many. *(See RCW 90.38.130 Authorization to purchase land---management and disposal of land)* Other options include continued management of the property for recreation, maintaining wildlife habitat, implementing conservation projects, and other beneficial purposes.

In fact, the only obligation is that a report be submitted indicating what progress has been achieved toward the milestone and requiring submission of a new plan if the milestone is not
achieved. This can continue until the year 2045. It further states the milestone can be achieved through any of a combination of methods: conservation, improved management techniques, water marketing strategies, storage, and others. In fact, the report is required to state how much “net increase in available water” (the correct term, not “additional water supply” as stated in the SDEIS which implies all milestone water must be from storage). To date, the SDEIS claims 124,131 acre-feet of net increase in water due to conservation, and in the past has claimed as much as 300,000 acre-feet in future conservation savings. This would more than fulfill the 214,000 acre-feet milestone, were the planned conservation projects fully implemented.

Finally, if the very unlikely possibility of a reversion to trust fund management and clearcutting is selectively highlighted in the SDEIS, then the far more likely alternatives should be given equal space. After a decade of public recreation use, with untold thousands of new citizen-recreationists advocating for the Teanaway as a new resource, and an army of volunteer citizens and organizations upgrading the Teanaway, the public backlash against clearcutting would be overwhelming. With its misrepresentation of the Teanaway Purchase, the SDEIS has veered into a political speculation that is both inappropriate and inaccurate. However, given that SDEIS has now opened the door, in a subsequent SDEIS it must clarify, correct, and accurately inform the public of what is, and is not, required and implied by the Teanaway Purchase. We ask that this be done not only in a future SDEIS, but in all communication about the relationship between Teanaway and KDRPP-FPP, or any other element of YBIP. In addition, we asked that a notification of clarification be immediately issued stating that based on current and future water conservation savings, it is anticipated that the obligations under RCW 90.38.130 will be met with no additional water needed from the YBIP projects.

14. **Accurate Cost Estimate Chapter 2, Sections 2.7** The statement of budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The “estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the “proposed option” it will be the focus of this comment (however these comments apply equally to the other alternatives). An “estimate” that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.

<table>
<thead>
<tr>
<th>Low Estimate</th>
<th>Projected Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000</td>
<td>282,000,000</td>
<td>423,000,000</td>
</tr>
</tbody>
</table>

as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will
be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

15. **Accurate view of exposed shoreline Chapter 2, Section 2.10** Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS (Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

Sincerely,
Kaitlyn Seguin
Ms. McKinley:

Attached please find my comments on the SDEIS for the Kachess Drought Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance.

Thank you,

Jeanne Sheldon

425.869-1945

18810 NE 150th Ct

Woodinville WA 98072

Response to K Projects SDEIS.pdf

135K
Introduction: Thank you for the opportunity to provide comment on the 2018 K Projects DEIS. My remarks below do not pretend to be comprehensive, but it covers several potential environmental impacts I consider serious. Thank you also for your commitment to ensure that the spirit of the federal and state laws designed to
protect people, wildlife, property and the environment from the impact of deleterious side effects of ill-conceived projects is met with full fidelity.

One thing that I’ve been able to learn as I’ve discussed the proposed plan for the lake with many people, both local and distant is that responses are both visceral and horrified. The devastation that would cause to the ancient natural lake is clear. This is not about a few hundred landowners who are “concerned about their view” as some have characterized it, it is about people feeling appalled by the lack of will to sustain a beautiful natural lake for the enjoyment of our children and their children. The second thing that I’ve learned is that just about no one who has a recreational interest in the lake or the outdoor recreation economy it provides for, knows about the K Projects. People from Seattle, Bellevue, Redmond, Issaquah, Snoqualmie, Easton and Cle Elum who are emotionally and often economically attached to the lake (and have been for generations), have never heard about the plan. The reaction is often disbelief: it is too outrageous to be possible.

I don’t think that the people that have been working through the plan for decades are bad or evil people. I think they have just been so immersed in viewing the lake as nothing more than a vast pool of inactive storage that needs to be converted that they have forgotten to really look hard at the natural beauty and rich, varied habitat of the lake. They’ve stopped listening to the concerns as more than just a nuisance and an obstacle to fight their way through. Others, from the Yākama Nation, to a variety of small environmental groups, probably winced at some point, then decided that the lake was a sacrifice that they had to do to get some of the other important and valuable wins in the plans. Everyone needs to stop and realize that if this is actual implemented, there is no going back or pretending that any sustainable good will come out of it. The only supportable option in the SDEIS is Alternative 1 – No Action. The profound risk of irreversible damage to the human and natural community that surround the lake, the stunning lack of genuine mitigation in the SDEIS – including no real cost analysis of mitigations – and the lack of consideration or serious investment in the options presented by the Water Research Council in their scathing analysis of the YBIP make the other options unacceptable.

The official name is “Kachess Lake”: That name was decided upon by the Board on Geographic Names in 1893 and reaffirmed in 1964. It is inappropriate for a government agency to use a different name than the official USGS appellation. It suggests an ulterior motive, which is to obfuscate the plan to remove natural lake water to be wastefully transported in open rivers and often unlined canals to a different part of the state over 100 miles away. A reservoir comprises water impounded by a dam. The entire Kachess reservoir which sits on top of Kachess Lake impounds more natural lake water as well as the pool raise from the dam. Kachess Reservoir is already made available for irrigation in its entirety!

Destruction of one of the most popular campgrounds in the state: On the occasion of the 1984 opening of the new Lake Kachess boat ramp, Roger Skistad of the Cle Elum Forest Ranger District told the Ellensburg Daily Record that the boat ramp was expected to make the park even more popular (it was already one of the most heavily used Forest Service campsites in the Northwest) because the ramp could be used even when the lake is at its lowest level and that, “If the lake can be lowered even more, the Forest Service hopes to install concrete planks to extend the launching facility even farther into the water.” Please advise, if this mitigation is still under consideration, what are the associated costs and risks. Is it even remotely feasible? And does it save any recreational use if only Little Kachess is available from the campground? Construction of an east shore boat ramp is poorly defined. There will need to be substantial parking on location, too – the map look inadequate (11,000 boaters a year!). Will there need to be more imminent domain land acquisition? For a boat ramp and required
parking? There is no discussion of the construction impact of that boat launch but grading to a ramp of less than 15 degrees, wide enough to keep driving a vehicle and trailer in reverse safe for the entire length of the drawdown (plus 4 or 5 feet) on the steepest side of the lake is non-trivial. How will that be maintained and stabilized? What about mitigation of the private boat ramps and the docks left floating on long stretches of mud flats?

In the same newspaper article, Skistad also described the selective cutting of hollowed out trees to preserve “the character of the area”. Given the likelihood of tree loss from dewatering and disease and the Forest Service’s commitment at the time to keeping the character of the area, has the Forest Service simply abandon any hope of that goal? If they have, where do they expect that high volume of campers to go instead? What preparations are being made for those properties? What is the anticipated economic effect of that dislocation? Mitigation? Why have the plans never been communicated to the millions of people who have camped and boated on Lake Kachess. What plans are there to correct that oversight while there is still opportunity for feedback? Why is notification of the campers planned for far too late to participate in the process?

Earlier engineering study found the floating pump option to be impractical: The floating pump option was “deemed to be an impractical alternative for Lake Kachess” in an earlier engineering study prepared by HDR Engineering, Inc. in March 2011 (USBR, Yakima River Basin Study: Lake Kachess Inactive Storage Technical Memorandum). What caused the attempt to fail on Cle Elum Lake and what suddenly made it a preferred choice? What is the fallback when it fails in operation? Because construction will be draining of the lake to prepare for the system, environment damage will occur regardless of whether it is available for Roza farmers. Who pays for correcting that and where is the plan for that?

Volitional bull trout channel: While it is of entertaining to talk about fish volition, a subject not covered in my biology classes, why is this mitigation planned for the years after completing the works. Wouldn’t you want to have it when the drawdown begins? And if there is any expectation at all this would do any good, why is the bull trout enhancement programs elsewhere in Yakima Valley even included in this report? It is not acceptable mitigation to extirpate one community of an endangered species by augmented with a genetically distinct other community of the same species in another location. This is no more than expedient sleight of hand.

Socio-economic impacts discussion does not include outdoor recreation economy: Anecdotally, I’ve learned that the tourism/outdoor recreation that comes into Easton and Cle Elum is an import factor in the local economy. The impact of similar tradeoffs in areas such as Bear’s Ear show that it has been consistently undervalued and misunderstood by the government agencies involved. What are the impacts of substantial losses in recreation opportunities in the county?

Recreational use of the lake and surrounds would not only be limited by less boating opportunity. Tree loss would make the campsites less attractive and less shaded. It is not just “some seasons” that the camping opportunities would be diminished. Hiking, which is very popular on both sides of the lake could become less safe, particularly on the east side of the lake, where, in many places, the very steep sides of the exposed lake bed would increase risk of falls, or rock instability. Are trails going to be examined? Reworked? What about roads and even driveways?

Property value impacts are not unknowable: There have been at least two sets of opinions provided (though one is flawed by artificial limits set of what could be considered). This is absolutely knowable and a study with agreed-upon, commonly accepted methods must be a part of any such study. The text suggests that the issues are
entirely around view and ability to reach the water for recreation (again, undervalued in the discussion), but do not include the impact to property values when wells are dewatered, surrounding trees and wildlife are lost and fire fighting capabilities have been severely compromised. Since this involves a fundamental constitutional issue around taking property from a private citizen or concern to benefit another private citizen or concern, it deserves a far more studied answer.

Impacts of turbidity caused by pumping: The surface quality is discussed and that government standards would be exceeded on a fairly regular basis. What are all the effects of that turbidity? Will the dam outlet and channel need more frequent clearing because the pumping needs to be occurring right until the point when the water reaches the outlet? Would that increase dependence on pumping?

Mitigations common to all alternatives: Most mitigations as described are wholly unacceptable! “Using best practices” as mitigation? Come on, as if not using them was really an option? “Monitor and mitigate” – I don’t even know what that means since you have attached no agencies, roles, schedules or costs to it. These do not meet SEPA or NEPA standards. And are there not things you would cause that are unmitigable? The lake geology is exceptionally varied because of earthquake folding, volcanic activities and the impact of glaciers. Are you really going to catch a rockslide or avalanche before it happens, including ones that could affect safety both on the lake and downstream from it? Those are entirely too hand-wavy to have any meaning.

The most serious flaw in all but the no action alternative: In multiple places, the document refers to “the need for action” because of changing climate conditions. The entire program has been sold on the premise that the available water will not meet the needs of the existing water rights holders in the Yakima Basin under future climate conditions. That means that all the analyses of drawdown years and forecasting of the frequency that the pump would be needed are fundamentally flawed because they are based on select ranges of historical data. Surely you have realized already that the proposed actions could easily yield far less benefit and with losses far greater than forecasted within your documents. When you say that action is necessary because of climate change, but do not account for climate change in your modeling, that is called, “Talking out of both sides of your mouth.” You must fix that. Such circumstances could well create risks for even the most senior water rights holders and financial risk for Roza which have, as proratable water right holders undeservedly taken water they were not entitled to. Action that leads to disaster, both environmental and financial is far worse than no action. This is a very costly mistake. Farmers may recover, but the lake – yes lake, not reservoir - never will. Your reservoir is working fine and already yielding 239,000 acre-feet of water in the worst years. Do the fish passage and restoration work – that is a debt you’ve long owed – but leave the ancient and beautiful lake alone.

Learning from history: When engineers planned for the dam, they calculated the dam height and the lowest level below the dam they could build it and dredge out a channel to the outlet. They had two criteria: the engineering complexity and the available water run-off from the 63 square mile watershed, which averaged 209,000 acre-feet per year in the preceding few years. Accordingly, they constructed it precisely to yield 210,000 acre-feet of active storage. In 1936, that yield was increased to 236,000 acre-feet by raising the spillway for flood control, which allowed the capture of more water in very wet years. That science has not changed in the past 110 years, but the climate is changing, so somehow someone thinks that it is a very good idea to take 439,000 acre-feet because there is less water available.

Those ancestors also developed an approach that allowed farmers to plan appropriately by knowing that their water supply was proratable. That system needs updating to improve barrier-free transfers and exchanges and,
absolutely, the water containment and irrigation practices continue to be updated, but please engage the engineering and science know-how that was well understood and applied in 1909 and stop encouraging people to imagining there is magic water available. It won’t be there when the dependence is most established, and you will be in the center of that controversy.

Respectfully yours,

Jeanne Sheldon

7/11/2018
Dear Ms. McKinley,

My family's place away from home is Lake Kachess and I have been going to this beautiful lake for over 30 years. It breaks my heart to think that it could possibly be drained beyond recognition.

Section 3.9.3 of the KDRPP and KKC SEIS has a short section on bull trout, but virtually no information on Box Canyon Creek. Attached is a photo taken on October 18, 2018, where Box Canyon Creek disappears into the mud flats created by the existing draw down of Lake Kachess.

It also shows efforts by Washington Department of Fish and Wildlife (WDFW) to create an artificial channel from Little Kachess Lake to Box Canyon Creek by the use of plastic and straw bales, which have been scattered and allowed to enter the water.

This would appear to be a discharge of pollutants (straw and plastic) into Lake Kachess. Did the WDFW obtain a National Pollutant Discharge Elimination System (NPDES) permit or a Department of Ecology 401 Water Quality Certification, or a Shoreline Management Act Substantial Development Permit for this project?

Thanks in advance for your attention to this.

Jessica Siegel
1628 9th Ave W.
Seattle, WA 98119
Dear Ms. McKinley,

At this time I, as a concerned taxpayer, cannot support the Kachess Drought Relief Pumping Plant. As outlined in my attached comments the data does not support spending $500 million in taxpayer dollars for such an insignificant benefit.

Please consider these comments on any future decisions for this project.

Regards,

Stephen

KDRPP public comments - Stephen Simmons.pdf

350K
Dear Ms. McKinley,

The Kachess Drought Relief Pumping Plant (KDRPP) is not a public benefit and must not be enacted, either by the Bureau of Reclamation and Department of Ecology, or by the Proratable Entities interested in implementing it. It is inconsistent with adopted plans, does not comply with NEPA requirements, the analysis is based on missing data and questionable assumptions, proposed mitigation is lacking, groundwater impacts could be detrimental to property owners and public recreationists, there are insignificant agricultural impacts given the negative recreation and environmental impacts, lake habitat for fish is negatively impacted, and it could potentially increase the fire susceptibility of the area while decreasing the ability of emergency responders to fight fires. It also radically changes the use of the Yakima Project, which has been managed for over 100 years as a system for all users and instead essentially earmarks one reservoir for one irrigation district.

Inconsistency with Mission and Adopted Plans

Comprehensive planning within the State of Washington requires that all plans and projects be consistent with adopted policies; KDRPP does not appear to meet that test in several regards, including contrasting with the mission of the proposing agencies.

The opening page of the DSEIS cites the missions of the US Department of the Interior, the Bureau of Reclamation, and the state Department of Ecology. While all agencies have mission facets that can compete with one another, making mission-project consistency a balancing act, this project does not fit with the adopted missions more than it does.

- Though the US Department of the Interior is directed to “supply the energy to power our future,” this part of the mission is tertiary to protecting natural resources, which KDRPP does not do. Instead, it denigrates a natural environment in order to provide economic benefit to a small group.

- Reclamation is directed to “manage, develop and protect water” and clearly KDRPP fits within that purview. However, Reclamation must also do this work “in an environmentally and economically sound manner,” which is not descriptive of the proposed project.
This project is most inconsistent with the state Department of Ecology’s mission to “protect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations.” Undertaking KDRPP has significant negative environmental and recreational impacts which are not consistent with Ecology’s mission.

The DSEIS states in Section 4.3.3 that “Alternative 1 No Action does not meet the purposes of the Proposed Action because it does not address water supply for proratable irrigators or instream flow conditions in the upper Yakima River basin” (pg 4-21). Later, in Section 4.24 (pg 4-349) the DSEIS suggests that the proposed project meets several of the Integrated Plan’s goals when, in fact, it does not. The noted goals include:

- Provide opportunities for comprehensive watershed protection, ecological restoration and enhancement, addressing instream flows, aquatic habitat, and fish passage

This plan does not provide “comprehensive watershed protection” and instead increases the vulnerability of an entire watershed to wildfire risks by lowering groundwater levels and reducing access to surface water for emergency responders. No ecological restoration or enhancement is provided other than improving a minority of instream flows analyzed; negative impacts are projected for aquatic habitat in the lakes and for fish passage as well.

- Improve water supply reliability during drought years for agricultural and municipal needs

While KDRPP does provide some benefit in drought years, it is insignificant when the adverse climate change scenario is modeled. A 3% gain in water is hardly worth the monetary costs, nor the negative environmental and recreational impacts that could permanently occur.

- Improve the ability of water managers to respond and adapt to potential climate change effects

As noted above, potential climate change effects would severely limit the benefit provided by KDRPP.

- Contribute to the vitality of the regional economy and sustain the riverine environment

Again, while there are some instream flow objectives that would be met, not all flow targets would benefit and some are projected to worsen. KDRPP does not meet the established economic indicator threshold of 1% and ignores the negative impacts to what is likely a large sector of the economy: recreation.

Further, KDRPP is inconsistent with several adopted plans at both the County and Federal levels.

- Kittitas County Shoreline Master Program (SMP): Lakes Keechelus and Kachess are designated as lakes of statewide significance under the State Shoreline Management Act. The Kittitas County SMP designates the shoreline of both lakes as “conservancy shoreline environment,” which requires “maintaining the natural character of the shoreline area” (Section 3.15, pg 3-161). The development of any of the pumping facilities would be in conflict with this requirement as they would significantly alter the character of Lake Kachess.
The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, and those other alternatives which are eliminated from detailed study must be described with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 DSEIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

Ecology Upper Kittitas County Groundwater Rule (WAC 173-529A): Section 3.5.1 notes that Ecology in 2011 placed a moratorium on the development of new unmitigated groundwater withdrawals in upper areas of Kittitas County (pg 3-53). On its face, it does not seem that a project that could further deplete groundwater resources in this area could possibly be consistent with this rule. How is KDRPP compatible with this rule?

Forest Service Criteria, 1990 Wenatchee National Land and Resource Management Plan for Lake Kachess: The USFS has designated Lake Kachess as land allocation Developed Recreation (RE-1) Retention VQO, Scenic Travel 1 and 2 Retention VQO, and Partial Retention VQO. As stated in section 3.10.4, “The USFS considers visual quality to be one of the most important resources to be protected under this land allocation” (pg 3-127). Due to the changes in pool levels that would make the lake a less dominant element on the landscape, the proposed project is not consistent with these Forest Service criteria.

Failure to Comply with NEPA Requirements
The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they are in fact one alternative: extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

This fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Yakima Plan Programmatic EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Yakima Plan Programmatic EIS and do it correctly. I ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

I ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Lake Kachess pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups.” I ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given – including data, references, and review procedures – for excluding each alternative. The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and I therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

In addition, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. The SDEIS documents negative impact on...
recreational activity and acknowledges most affected individuals come from the Seattle area. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

In all subsequent communications with the public, the misrepresentation of Lake Kachess must be corrected. The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake [joining] Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, as the reservoir water (stated on page 1-1 to be the water over the natural lake) is already spoken for. Thus, every drop of water to be pumped by KDRPP will come from the natural lake, Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. I ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by Reclamation; below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. I ask that this confusion and misrepresentation stop, and accurate terminology be used that informs, rather than confuses, the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as on Page 1-7.

Modeling/Data Analysis Questions

A number of admissions within the DSEIS cast doubt on the accuracy and usefulness of the modeling used in the analysis and even note aspects of the project that were not included in modeling or evaluation. Data and analysis that are outright missing from this document include:

- Section 3.7: no formal wetland delineations or plant surveys were conducted for this analysis. Please explain why these were not conducted.
- Section 4.4.2 (pg 4-81): “Lake Keechelus was not included in drought operations surface temperature modeling completed by PSU” and “Extended or multi-year drought, or refill conditions were not included in the PSU water temperature model and potential effects of these conditions are not quantified.” Please explain why these aspects were not modeled and what the implication is on the modeling that was completed.
- Section 4.4.7.2 (pg 4-98): water temperature effects and their impacts on the Little Kachess basin from the inflow from Keechelus (through KKC) are unknown, indicating that this aspect of the project was also not modeled. Please explain why this was not modeled.
- Section 4.6.4 (Pg 4-129): “Additional hydrodynamic modeling is needed to precisely estimate reductions in zooplankton abundance...” Please explain why this study was not completed.
Section 4.10: SketchUp (or similar) renderings of all proposed facilities to aid in adequate visual quality analyses are absent. Enough details are provided regarding building mass and location, and amount and location of vegetation to be cleared to provide these basic models as evidence in this document. Please explain why these models were not developed, or if developed not shared with the public.

Section 4.21: The socioeconomic analysis does not analyze the No Action alternative for economic impacts. This glaring lack of data makes it impossible to compare the predicted economic impacts of the alternatives. Please explain why not all alternatives were modeled with IMPLAN software and how the public is expected to make sufficient comparisons between the alternatives without this analysis.

Section 4.21: The socioeconomic analysis also does not describe the impacts of the project to the recreation economy of the four-county region. Despite noting in Section 3.14 that “visitors to the lakes are an important part of the economy of upper Kittitas County” (pg 3-147), the economic analysis does not account for the recreation industry or even describe it as a piece of the whole 4-county regional economy. Please explain why this economic sector is missing from the analysis, or which sector it is a part of if it is considered part of a larger sector, and how the public is expected to fully understand the economic impacts of the project without an analysis of this sector.

One of the fish habitat “benefits” noted in the DSEIS is reduced water temperature in Lake Kachess due to reduced shallow water areas that would be warmed along the shoreline. The acknowledgement that modeling of prolonged droughts that could result in multiyear drawdowns of the Lake raises questions about the accuracy of this identified “benefit” and is among other questions raised by admissions within the DSEIS:

Section 4.3.7 (pg 4-60) discusses differences that are “likely due to reservoir balancing in the modeling that may not occur during actual operation” but no explanation is given about how actual operation may differ from what is reflected in the modeling. Are these differences based on assumptions built into the model that are not accurate or is “reservoir balancing” too complex to accurately capture in a model? Please better explain this statement to either acknowledge deficiencies in the model or the highly variable nature of reservoir operation.

Water temperature in Lake Kachess is predicted to decrease with drawdowns, but Section 4.6.4 notes “there is uncertainty around whether prolonged droughts... could cause warming.” Is this uncertainty related to the fact that multi-year and prolonged droughts were not modeled? What is the level of uncertainty? Why were prolonged droughts not included in the modeling?

A discrepancy is found in Section 4.7.4 (pg 4-156) which states that it could take 2-8 years for Lake Kachess to return to normal operating levels, as opposed to all other sections of the document which refer to a 2-5 year refill period. Why are two refill periods identified, and which is more accurate? With the predicted increase in frequency of droughts, how was the refill period determined?

In addition, there are some aspects of the analysis which are not explained adequately, such as:
How is target pool elevation determined? If Keechelus does not meet its “target pool elevation” in some years following drought pumping of Kachess, how much longer would it take for Kachess to refill, assuming KKC is implemented?

Construction methods and plans are fairly detailed for all aspects of the proposed project except for the Volitional Bull Trout Passage Improvements. Why is there no detailed construction data for this element of the project?

KDRPP was originally proposed to allow pumping of 50,000 acre-feet of water from Lake Kachess but this number has increased to 200,000 acre-feet. What instigated this significant change in the amount of water to be pumped?

The SDEIS asserts the presence of a "value analysis study that suggested the feasibility of a floating pumping plant." The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a "suggestion," brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the "suggestions," including the methods, data, and conclusions implied by the inadequate and confusing term "suggestions."

The SDEIS states Reclamation will "fund... some or all, or authorize Roza to fund" the KDRPP. This statement inadequately informs Washington citizens, as well as Roza farmers, of their likely obligations for financial support of KDRPP. Please provide the legal, legislative, and/or other basis for stating that Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how "all or some" will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (Reclamation, Ecology, Roza, or other) will be responsible for what action (fund, design, construct, operate, etc.). These are not "details" to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

SDEIS Table 1-1 (pg 1-11) indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate... etc.... the selected alternative.” This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and Reclamation representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. I ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

The SDEIS states that the KDRPP-FPP is the “proposed action” and that Reclamation and Ecology have not identified a "preferred alternative." This represents a major departure from the previous
DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a "single action and cannot be separated." The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are "acceptable" in 2018. This explanation should also serve to inform citizens as to why no "preferred alternative" is provided. This explanation is critical to citizens' understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. Reclamation must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

- The statement of budget (Pg 2-59) for KDRPP is incomplete and under-valued. The "estimated costs" for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the "proposed option" it will be the focus of this comment (however these comments apply equally to the other alternatives). An "estimate" that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for Alternative 4. Because the estimate is not a measure of central tendency (i.e., neither mean, median, nor mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; as opposed to showing a single estimate of $282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a "low" or "high" correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the Alternative 4 budget should present a $423,000,000 base.

In all cases, the mitigation costs must be included. For some reason, the required Bull Trout Volitional Passage is stated in the text (Pg 2-60) to cost $23,000,000 (preliminary estimate) but is not included in the stated project costs. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for Alternative 4.
In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. I request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

- Section 4.13.4.2 notes that noise from operation of the pumping plant is “anticipated” to fall within a certain range. The construction noise analysis is relatively detailed compared to the analysis of operations. Why is noise data from similar projects not cited or used as a proxy for this analysis? Additionally, the noise analysis notes that the closest noise sensitive receptors would not be affected but does not detail what these receptors are. What are the closest noise sensitive receptors, and where are they located?

- Section 4.15 notes that KDRPP would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” What regulatory guarantees are in place to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed? This is a relevant question given the fact that the original 1902 legislation authorized the Tieton and Sunnyside divisions of the Yakima Basin (Section 1.8.1), but others have been added over time. How will Reclamation prevent other new agricultural uses from demanding additional water from this project which were not originally intended?

Further, it is not even clear that limiting agriculture to existing uses is truly intended. Table 1-2 (pg 1-20) notes that Ecology will “issue water rights as necessary.” How will new water rights be issued and to whom? How is this in keeping with “not increase(ing) the amount of irrigated land?” Section 4.21 notes that the model allows for identification of agricultural activity that “could” occur (pg 4-319), which seems to allow the door to be open for more or intensified agricultural uses.

- Section 4.21 suggests that the Volitional Bull Trout Passage Improvements are expected to have positive economic benefits (pg 4-324). In what way would these improvements have economic impacts? What additional detail is needed about these improvements to estimate their economic impact?

Completely missing from the SDEIS (perhaps best located in Section 4.23 Health and Safety) is an analysis of the impact of the project on the fire susceptibility of the surrounding area and the ability of emergency responders to utilize water from Lake Kachess to fight fires that occur. Local fire departments make use of water from Lake Kachess to fight fires in the area; how have these organizations been involved in this process and what mitigation is proposed to address this potential issue?

Finally, the depiction of Lake Kachess after drawdown of 80’ is inaccurate. The SDEIS (Pg 2-66) indicates the 80’ drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. I ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched,” “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note;
residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

Mitigation

Mitigation measures proposed in the SDEIS are severely lacking. While detailed mitigation methods are proposed related to the construction of the proposed facilities, few definitive mitigation methods are proposed for the negative impacts stemming from the operation of the proposed facilities. Those sections missing proposed operational mitigation methods include:

- **4.2.5.2**: (pg. 4-9) Erosion control measures would be implemented prior to implementation of the project “if erosion is identified as a problem.” Isn’t an EIS the opportunity to identify erosion as a problem? If not identified as a problem at this stage, when would it be identified prior to implementation of the project? What types of erosion control measures would be implemented?

- **4.5.4**: (pg 4-106) A well monitoring program is proposed to be implemented to analyze groundwater levels associated with drawdown but no “appropriate mitigation strategies” are identified for implementation. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. I ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

- **4.6.10**: (pg 4-148) A water quality monitoring program is proposed to be implemented to document changes in water temperature but no subsequent mitigation is proposed to address water quality impacts to fish. Please explain how this monitoring program would be implemented and how Ecology would address impacts to fish based on the data collected.

- **4.13**: Noise mitigation only addresses construction, not operation of the project. Please explain what types of noise mitigation would be implemented to address noise from the operation of KDRPP.

- **4.14**: A myriad of negative impacts on recreation are identified but no mitigation is proposed, other than a boat launch on the opposite end of the lake from the campground. Will alternative recreation sites for activities other than boating or fishing be provided elsewhere? How else will recreation impacts be mitigated?

At the very least, mitigation strategies utilized by other agencies on similar projects with similar effects could be listed as examples of what Reclamation and Ecology might implement, should any future negative effects occur.

As detailed above, Section 4.15 notes that the project would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” I ask that specific regulatory restrictions be put in place as mitigation for this project to ensure that no additional
agricultural uses or intensifications are allowed after this project is constructed. Without these measures, Reclamation could not prevent other new, or intensifications of existing, agricultural uses from demanding additional water from this project. Please describe the regulations that would be enacted and include the specific codes to be amended.

Section 4.23 notes steep slopes would be a potential safety hazard to the public and proposes a communication strategy with the public and lake users regarding the hazards and safety measures. Who is liable for injuries sustained by users due to the steep slopes caused by operation of KDRPP? Further, Section 4.2.4.2 notes that slope instability could result “where relatively steep or unstable areas are exposed” (pg 4-7) and that instability could be caused by “rapid drawdown, heavy or steady rain, a rain-on-snow event, and earthquake shaking.” While Reclamation proposes to refrain from rapid drawdowns, it is noted that rain-on-snow events could become more common in the future thus increasing the risk of exposed slope stability. How will this negative impact be mitigated?

Groundwater Impacts

Impacts to groundwater in the area could be severe to private property owners, public recreation sites, and wildlife and vegetation. Only 6 of the approximately 107 wells in the area were monitored; please describe how this number and their location is representative. The fact that the only 2 privately owned wells to be monitored were added after the 2015 EIS was published suggests that groundwater analysis is lacking.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells could run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza Irrigation District can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

Both sections 3.5 and 4.5 indicate that “groundwater levels near the lake are influenced by lake elevations, especially during the dry time of the year when very little recharge is occurring and groundwater elevations are dropping because of discharge from the aquifer” (pg 3-57). Section 4.5.2 notes that well operations could be interrupted due to additional drawdowns, including the well supporting the USFS Kachess Campground (pg. 4-105/6). What the document does not indicate is the effect of lowered groundwater levels on vegetation in the area. Lowered groundwater levels would presumably dry out significant amounts of vegetation, further increasing wildfire risks in the area. Wildfire risks have increased significantly in all Western states over the last decade, and the costs—both to fight the fires and the economic costs incurred by those damaged by fires—have significantly increased as well. To undertake a public works project that increases those risks is negligent.

The vegetation and wetlands (pg 2-70) and densely forested watershed (pg 3-98) will, according to the SDEIS, suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due
to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, Reclamation has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. I demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, Reclamation and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. I ask that this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD.

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria will these effects be calculated?

Insignificant Agricultural Benefits

For the overall cost of the project and the number and degree of negative impacts to the environment, wildlife and recreation, KDRPP does not even appear to address the need of Roza district water users to a significant degree. Under Alternative 1: No Action, proration occurs in 15 out of 90 years; under any of the action alternatives, proration occurs in 13 out of 90 years, a benefit of only 2 years. The document suggests that completing multiple additional projects would necessary to provide a meaningful improvement to proratable water users (Section 4.3.2, pg 4-19). The likelihood of securing permits and funding for the full list of projects needed to provide meaningful improvement is extremely low given the state of state and federal budgets. Undertaking KDRPP, and risking permanent drawdown of this lake, is not in the public’s best interest or the best use of taxpayer money.

At best, under the historical modeling, the action alternatives would “improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years” (Section 4.3.2, pg 4-19). However, agricultural demand for irrigation water is projected to increase due to climate change, at the same time that “natural runoff and streamflow in the system would decrease by 50% or more in some months when compared with the historic scenario; therefore irrigation demands and instream flow targets would have to be met by releasing larger amounts of water from the existing lakes. Currently, there are many years when the lakes are not capable of meeting these demands” (Section 3.12.3.4 Climate Change, Changes in Water Supply, pg. 3-138). Additionally, prolonged or multi-year droughts are expected to occur more frequently in the future (odds of a drought increase from 17% to 49% in any given year, according to Section 4.21.4, pg 4-329), and modeling under the adverse climate change scenario shows only a 3% improvement in proratable water delivery (pg 4-251). Further, the analysis finds that “the improvement under (the Action Alternatives) would be less in the third year of a multiyear drought because some of the inactive storage in Lake Kachess would be used in the first one or two years of drought, leaving less for a third year of drought” (Section 4.3.2, pg 4-19).

Section 3.21 notes that “agriculture is the third largest sector at the four-county scale” and accounts for approximately 11% of the four-county economy. No analysis is provided of the economic impact of the
No Action alternative, only the conjecture that the impact of reduced prorated water supplies “could be greater than 1 percent of the agricultural sector output” (pg 4-323). Without this information, it is difficult to make a meaningful comparison between the economic impacts of the No Action and action alternatives. However, a comparison is not necessarily valuable given that Section 4.21.4 states that “the average annual impacts during operation on output, personal income, and employment are well below the 1 percent threshold for the impact indicators at the four-county regional level” (pg 4-325). If the economic benefit is projected to not meet the identified threshold of significance, why are Reclamation and Ecology considering implementing a project that could cost over $225M to construct (including interest, for the preferred alternative, though costs increase to $675M should another alternative be chosen) and $25M a year to operate, not accounting for potential cost increases of 30-50 percent?

In addition to providing only a negligible improvement in water deliveries under the adverse scenario (3% improvement), permanent risks to the lake and the surrounding wildlife and vegetation significantly worsen: “The predicted changes in snowpack and runoff associated with climate change would alter KDRPP operations by producing larger and more frequent drawdowns, and would more frequently result in years when Lake Kachess fails to refill” (Section 4.12.3, pg 4-238). “Compared with Alternative 1 under the adverse scenario, the mean lake level would be approximately 42’ lower over the period of record, and 20-90’ lower in drought years” (Section 4.12.5, pg 4-248). This is a significant difference that could lead to long-term impacts to groundwater levels, recreation opportunities, fish and wildlife habitat, and fire susceptibility of the region.

Recreation Impacts

Recreation was specifically authorized as an additional purpose of the Yakima Project in Section 1205 of YRBWEP in 1994, but it does not appear that any recreation organizations have been involved in the development of this plan, other than USFS. What outreach was made to recreation organizations, or users (such as the estimated 23,000 annual users of the Lake Kachess Campground), to provide notice of this proposal? The DSEIS notes that a communication strategy related to the project is called for in the future, but why has one not been undertaken to educate and seek input on the project during the development stage? The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users, many with families that have been camping there for generations (such as my own), will be contacted and the timeline for this process.

Due to its proximity to the greater Seattle area, Lake Kachess is an invaluable recreation location; 3.61 million people in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area are within a roughly one-to-two hour drive of the camping, hiking, boating, fishing and other general opportunities to appreciate nature offered at this lake. Section 3.14 notes that “population increases have increased demand for recreation and the campground is routinely full... Kachess has a higher number of recreational visitors than Keechelus or Cle Elum Lakes...” (pg 3-147) The Cle Elum Ranger District is the busiest in the area and
its campgrounds tend to be completely booked on summer weekends... The Kachess Campground is the most popular in the district... (pg 3-149).” In addition, this section notes that dispersed recreation at informal camp locations along the lake is common in the summer when the campground is full.

Despite this increasing need, and the positive economic benefit it has for Kittitas County, this project could reduce recreation opportunities in the area by:

- Potentially impacting well operations at the campground and privately owned residences along the lake to a degree that these sites are unusable;

- Increasing the distance from the campground and residential areas along the west shore to the water line from 400’ at the current maximum drawdown to 1,500’ (over ¾ mile) at the proposed maximum drawdown. Section 4.10.4.2 (pg 4-215) notes that “In most areas, the reservoir pool would recede approximately 200 additional feet under the maximum drawdown condition...”;

- In addition to increasing the distance between users and the shoreline, the slope of the shoreline near some recreation areas would be hazardous to humans (and presumably animals attempting to access the lake for water) at 20-30 degrees near the campground and private development on the west side of the lake, and 20-40 or 40-60 degrees on the east side. These steep slopes also pose risks to boaters using the lake (Section 4.23, pg 4-343); and

- These reductions in recreation opportunities would then increase pressure at other nearby recreation sites such as Lake Cle Elum or Lake Easton.

Section 4.14 Recreation identifies two impact indicators for recreation: “loss of fishing access or reduction of fishing opportunities that exceeds current seasonal loss of use due to existing drawdown conditions; reduction of usability of recreation due to construction activities or the receding of the shoreline more than 100’ from the recreation site or with a slope greater than 20 degrees” (pg 4-275). The action alternatives have “major impacts on recreation” (pg 4-277) when evaluated by these indicators. Mitigation proposed for the first impact indicator is a new boat launch on the East shore, which could be usable at all lake levels; no mitigation is proposed for the second impact indicator. This boat launch would be on the opposite shore (east vs. west) and lake end (south vs. north) of the lake from the campground: what is the drive distance and time from the campground to the proposed boat launch? How is this acceptable mitigation for campers? Would it really even be usable by them, or only by day visitors intending solely on boating? Due to the steep slopes, how would any boaters access developed recreation sites? What mitigation is offered for the “reduction of usability of recreation?”

Assuming that recreation (including camping, hiking, fishing, boating, day trips and the presence of secondary homeowners who conduct personal business in the area) is as negatively impacted as noted in the DSEIS, what are the economic impacts to Kittitas County and the four-county region as a whole? Section 3.21 notes that “the service industry is responsible for the most employment at the state and four-county scales and is roughly double the next largest sector” (pg 3-178); is recreation included as part of the service industry or does it stand on its own? State wide, outdoor recreation is a $26.2B industry, which provides for 201,000 jobs, generates $7.6B in wages and salaries, and produces $2.3B annually in state and local tax revenue; surely a fair share of that is going to this four-county region. This
part of the economy is ignored in Section 4.21 Socioeconomics but deserves consideration or, at the very least, acknowledgement.

Negative Fish Impacts

While there are some positive benefits to KDRPP and KKC related to meeting desirable stream flows on certain river reaches during some parts of the year, the overall impact to stream flow is not positive. Further, the DSEIS notes that fish would need ten consecutive years of positive conditions in these reaches in order to boost their numbers to those projected in Section 4.6.7 (pg 4-147); given the climate predictions for the future, achieving ten consecutive years of positive conditions is highly unlikely, especially given that winter and spring flows are unlikely to meet targets, so the benefits of KDRPP for stream flows are even less significant. Section 4.6.2 notes that under all Action Alternatives, “increases in annual instream flows, and in July-August instream flows during drought years in the Easton Reach, would decrease the quantity of rearing habitat available to spring Chinook and rainbow trout subyearlings, resulting in a negative impact to these species during drought years” (pg 4-117). So although the same section notes that instream flows would be benefited in the spring, flows later in the year would be negatively impacted, which may negate the earlier benefits. The same situation is described for the Keechelus Reach: that instream summer flows are projected to be met more often, but winter and spring flows are negatively impacted; without meeting instream flows throughout the year, what benefit is it to these fish populations to meet flow targets only occasionally, and particularly when so many additional negative impacts would occur for these species in Lake Kachess?

Fish, including Bull Trout and salmon in Lake Kachess would be negatively impacted by all Action Alternatives in several ways, including increased turbidity (pg 4-117), decreased hydraulic residence time, lower minimum lake levels, reduction of shoreline vegetation, degraded thermal refugia for predator and prey species (pg 4-116), disturbances to fish near the pumps, and increased risk of entrainment in the facility (Table 4-79, pg 4-115). As noted above, the water temperature modeling is inadequate, so the potential benefit of lowered water temperature is questionable, as the DSEIS notes in several sections that water temperatures may increase due to prolonged or multi-year droughts. Taken together, these impacts result in a reduction of available prey within the lake, more overlap between predator and prey species, reduced feeding efficiency of predators that visually locate prey, and reduction in habitat complexity. Section 3.6.2.1 notes that “Kokanee in Lake Kachess exhibit slow growth and small size at age compared to other lake populations and the population is at risk of a feed and growth bottleneck in summer” (pg 3-74); KDRPP puts this population at further risk. Prior to the construction of the Kachess Dam, Lake Kachess supported a variety of anadromous species that no longer have access to the lake (pg 3-66); KDRPP would put those species left in the lake at further risk of survival.

Section 3.2.3 notes that “around the rim of Lake Kachess, 31 creeks flow into the lake from the uplands. Twenty-two creeks flow into the Little Kachess basin” (pg 3-7). Section 4.3.10 (pg 4-77) specifically notes that bull trout would be adversely affected by the loss of access to upstream tributaries. How will connectivity to these creeks be mitigated when the lake is 80’ lower and up to 1,500’ farther away from their current connection points?
The only negative impact that is proposed to be mitigated by this project is the loss of connection between Little and Big Kachess Lakes: the Volitional Bull Trout Passage Improvement would be constructed. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed; this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage. Purporting that this “improves surface water connectivity” is a misstatement – it replaces a naturally functioning connection that this project completely destroys. No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Further, there is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo- and geo-receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage; the length, slope, and other characteristics of the passage will not deter Bull Trout passage; the returning redds will be able to find the entry point of the volitional passage; and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population. I ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are), and mitigating with improved populations elsewhere. Page 1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives meet these legal requirements?

Yakima Project is a System

The Yakima Project includes five major storage reservoirs that provide irrigation water to six districts, as well as flood control, instream flow requirements, and municipal uses. As is clearly stated in Section 1.2.1 Yakima Project (emphasis added): “Reclamation manages these storage reservoirs as a system, and does not designate any one reservoir or storage space to a specific irrigation district.” How does
allowing one particular district to build and operate this project on one particular reservoir meet the objective of managing these reservoirs as a system? To a taxpaying, recreating citizen, it appears to be a taking of a public good for the economic development of private entities, which undertook a risky business venture attempting to start or maintain a farm in a district without Senior water rights.

How will those with senior water rights to the existing 239,000 acre-feet of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? I request this be further studied, possible impacts of the SDEIS action alternatives communicated to those senior water rights holders, and another public comment period opened for their comments.

Besides not providing a significant amount of water in drought years, this water is likely to be wasted due to the condition of the irrigation canals used by Roza. The district’s canal system is 97 miles long, and 67 miles of these canals are unlined, open air, earthen ditches built in the Yakima desert. In a 2016 Capital Press article, Roza representatives state that water seepage in these earthen ditches “is lessened by fast flowing water creating a hard pan of silt on the canal bottom.” However, during drought, when the water has slowed considerably, this layer of silt is broken up and dispersed, causing the canals to leak. Before undertaking any projects that would take additional water from reservoirs, all of these canals must be improved with concrete or plastic liners to prevent water waste. I ask that the efficiencies gained by improving these canals be analyzed, and the results shared with the public for review and comment.

The fact that only one of the six irrigation districts has expressed genuine interest in this project suggests that it is for the benefit of the few and not the whole. Rather than implement a costly public works project with significant negative environmental and public impacts, perhaps a more systemic solution could be found that creates appropriate incentives for all water users to use water sustainably. Section 1.2.3 notes that a Market Reallocation effort is a part of the Integrated Plan. This would reallocate “water resources through a ‘water market’ or ‘water bank’ where water rights would be bought, sold or leased on a temporary or permanent basis to improve water supply and instream flow conditions.” Such a solution would create incentives for all water districts, not just those that are proratable users, to invest in water conservation methods that allow water to be used more wisely. Given the fact that KDRPP cannot meet the projected need (and falls far short of meeting that need given climate change assumptions), implementing a water market reallocation first makes much more sense. If such a reallocation were highly successful, it might negate the “need” for KDRPP or any of the other public works projects proposed as part of the Integrated Plan.

Additional storage for water that is currently “wasted” could also be effective in meeting some of the need without causing permanent, or long-term, negative environmental and recreational impacts. Section 4.3.7 notes that “in most years, Reclamation spills water from Lake Keechelus because it cannot store all of the runoff from its watershed” (pg 4-49). Section 3.12.2.1 notes that “snowpack is considered the ‘sixth reservoir’ in the Yakima River basin... (but that) only about 30% of the average annual total natural runoff above the Parker stream gage can be stored in the current Yakima River basin reservoirs” (pg 3-134). Winter flows in the Yakima River area high and are projected to increase. Are there alternative storage options for this water that is currently not put to use later in the season?
when demand is high? Aside from an additional reservoir, could water be stored on farms in cisterns for use on demand? Are there other out of the box ideas that could be considered that might offer greater flexibility with less cost? Please explain how these alternatives have been considered in this process, the degree to which they meet the need of project proponents, their cost, and why they are not included as alternatives in this document.

Cumulative Impacts

After reading the entirety of this DSEIS, it is extremely difficult to understand how the project proponents can assert that there would be “ongoing beneficial effect” for vegetation, and “no cumulative impacts” to surface water, reservoir elevation, ESA-listed fish, or land use. The following are excerpts from the DSEIS describing the level of Lake Kachess under Alternative 2 (which is representative of all Action Alternatives) as compared to Alternative 1, emphasis added (Section 4.3.4, pg 4-23 and 4-25):

- ...levels would be lower than those under Alternative 1 in 44 years out of 90 years modeled. In 31 of the 44 years, Alternative 2 had a lower Lake Kachess level than Alternative 1 for every day of the year... both when Reclamation operates KDRPP in drought years and in years following droughts when the lake is refilling to its normal operating levels.

- Lake Kachess would be below the level at which the two lake basins become separated (elevation 2,220) in 76 out of 90 years modeled, and increase of 3 years from Alternative 1. The mean duration would be 154 days per year, an increase of 76 days per year compared with Alternative 1. ... The duration would increase during all months under Alternative 2; under Alternative 1, the separation of the lake basins occurs from Sept to March.

The DSEIS claims, almost consistently, that Lake Kachess would refill in 2-5 years following a drought, however, this is based on “the historical record of droughts.” Even without accounting for the adverse climate change scenario, more recent historical records suggest that it is unlikely the lake would refill within 2-5 years (emphasis added):

During multiyear drought conditions such as those in 1992-1994, Reclamation would draw the lake down as much as 80’ below the existing outlet elevation. Following a multiyear drought comparable to that of 1992-1994, lake levels would recover to normal operating levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the lake would be drawn down to 50’ below the existing outlet elevation. Full recovery would not have been achieved until 2008, because of a series of dry years (2003 & 2004) and a subsequent drought (in 2005). During the 2005 drought year, the lake level would be 40’ below the existing outlet elevation. (pg 4-25)

Given that the adverse climate change scenario predicts that droughts are nearly three times more likely in any given year, it is reasonable to conclude that following a significant drawdown, Lake Kachess might never refill completely. This is most certainly a “cumulative impact,” not only to surface water, reservoir elevation, fish, and land use, but more generally to the recreating public or those that value the environment in its own right. Please explain how the conclusion of “no cumulative impact” was reached.
Beyond the environmental and recreational impacts of concern above, the construction, maintenance and operating costs are also a significant cumulative impact to the public. Although the Proratable Entities claim to intend to undertake and pay for the project themselves, there is dissention among their ranks with some members foreseeing an inability to pay for the water resulting from the project, and presumably all of the associated project construction and operating costs. As disclosed in the DSEIS, construction costs could range from $225M-$675M (depending on the selected alternative) and operating costs could be as high as $25M annually. Construction cost estimates for the project alternatives could increase by 30-50% (depending on project alternative), and inflation is not accounted for in the annual maintenance and operation estimates. This is an unacceptable cost to add to taxpayer burden at the same time that recreation opportunities are taken from the public.

Overall, the benefits associated with the small amount of water provided do not outweigh the significant negative environmental and recreational impacts. I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Respectfully Submitted,

Stephen Simmons
Ms. McKinley - Please find attached my comments regarding the Kachess and Keechelus SDEIS. I would appreciate it if you would acknowledge receipt.

Regards.

Kelly Snow
Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

I am submitting both comments specific to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13\textsuperscript{th}, 2018. All comments are submitted under both NEPA and SEPA.

Comments

**Alternative 1 No Action** -- I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

**Impact to private property** -- Comments provided by myself and others to the prior DEIS expressed serious concerns regarding the likely impact of the proposed project on our property values. I was very disappointed to see that those concerns were not substantively addressed in the updated SDEIS, which expressly states its intent to respond to these concerns. The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected. “Several” seems to be a purposeful misrepresentation to understate the extent of the number of properties that would be impacted and is indeed misleading to any reader of this study when trying to evaluate the impact of the proposed project. Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This amounts to approximately 300 homesites – nobody would equate this to “several.” The systematic bias in the presentation of the impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. I ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam Road and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

**Quantification of the impact to private property values** -- The SDEIS makes an unsupported reference to a study that showed a negative impact of 5-10\% on private properties. However, the document does not include the study, and therefore does not allow a reader to understand the key assumptions, scope or methods. This is unacceptable and completely inconsistent with the
purpose of this analysis. To minimize the expected impact without support is again a clear bias in the preparation of this document.

Even this unsupported number appears to be a gross understatement of the expected impact on valuation. The homes and communities around Lake Kachess are not built there arbitrarily – they were built there because of the lake. This is reflected in higher current values, as noted in this SDEIS. While lake views (which will be severely impacted by this proposal) certainly impact home values, proximity to the lake (even for those properties without view) also significantly enhances home values as such proximity provides access to boating, fishing, hiking, picnicking, and other water-related activities – all of which will be significantly curtailed or eliminated for years after a draw down. All proposed pumping alternatives are expected to severely impact lake access for all uses, and therefore will have significant negative impact on the values of all properties in proximity to the lake – with or without a view. Additionally, the lake serves as a water source for firefighting, which results in lower insurance rates than would otherwise apply without such proximity. It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. I demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.

Despite the unsupported reference in the SDEIS to the negative impact of property values, the document states that the impact on property values can’t be determined. Not only is this contradictory, but the notion is absurd. An entire profession exists for the express purpose of making such estimates. Every county assessor in the country performs such exercises on a daily basis. The omission of a comprehensive, supported and reviewed analysis is a glaring omission of one of the most obvious impacts of the proposed project and requires rectification. Please execute such a study, performed under the accepted standards of the valuation profession, and provide in an updated SDEIS for comment and response prior to a Final EIS or ROD.

Finally, while acknowledging the negative impact of the proposed project on property values, the SDEIS includes no plan for mitigation of impact. What is the mitigation plan? Given that all of the additional water that is proposed to be pumped by the proposed project would come from the naturally occurring lake (Big Kachess) it is not reasonable that a property owner would have an expectation that they would bear the cost of such a proposal. I demand that you update your analysis to identify, in detail, the mitigation plan for the negative impact on property values including planned funding for such mitigation and provide in an updated SDEIS for comment and response prior to a Final EIS or ROD.

**Erosion** — The SDEIS includes numerous references to the expectation of increased erosion as a result of the various pumping alternatives. However, the SDEIS includes no analysis of the specifics of such erosion, particularly private property within the created zone of instability.
expected after the proposed maximum drawdown. The study also does not evaluate the impact on erosion in proximity to streams, where newly exposed slope below the current minimum lake level would be subject to continuous undercutting and enhanced erosion - my home is in such an area. The newly exposed slope after a drawdown below the historic minimum would be highly vulnerable to erosion as the proximate material is lightly compacted – even more so with a stream running through it the newly exposed embankment. The current embankment is stable, but would seek a new stable slope in response to the proposed draw down. A comprehensive analysis could establish the likely area of impact and thus frame the scope of required mitigation. If mitigation is not undertaken prior to occurrence of the expected increased erosion, property will be damaged despite the advanced expectation of such damage occurring as a direct result of the pumping plan (as noted in this SDEIS). I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD.

**Impact on private wells** -- The SDEIS states that wells in proximity of Lake Kachess may be “dewatered” as a result of the various pumping alternatives and the resulting lowered lake levels. The included data from a small number of monitoring wells in proximity to Lake Kachess supports this expectation as the well levels clearly demonstrate correlation with the rise and fall with the lake level – including those wells where the water level is typically above the lake level. However, the SDEIS does not include any advance mitigation plan for this expected impact on residential wells. Prediction of a significant negative impact to wells as a direct result of the pumping alternatives while not addressing planned mitigation to prevent such impact is not consistent with the purpose of this SDEIS. The notion that residents would lose their residential water supply for an indefinite period of time with no mitigation plan in place is unconscionable. “Monitor and mitigate” is not acceptable for residents that will find their home without potable water.

A comprehensive strategy composed of proven techniques that can be implemented immediately upon need, is required prior to a Final DEIS and/or ROD. What is the mitigation plan? I demand that a comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

**Fire Suppression** -- As has been noted in comments to the prior DEIS, the proposed pumping alternatives present significant negative impacts on both fire risk and fire suppression.

The SDEIS notes that the surrounding shoreline will be dewatered as a result of the proposed pumping alternatives. This significantly reduced lake level will result in this dewatering persisting for years, while the lake refills. This will subject the shoreline trees and vegetation to a reduced ground water condition never experienced in the history of the lake, and likely result in significant die-off. Such dead vegetation will ultimately present an increase in fire risk (as well as an increase in erosion as this slope stabilizing vegetation is eliminated). I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be
described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD.

Additionally, the BoR has been made aware that the lake is the designated second source for firefighting within the Lake Kachess Village HOA. The proposed additional 80 foot reduction in lake level would render the lake inaccessible for firefighting purposes due to the topography of the shoreline as well as the muddy composition of the newly exposed shoreline (e.g. fire equipment could not get there). The SDEIS provides no mitigation for elimination of firefighting water, including the economic impact to homeowners due to resulting decrease in home values and increase in home insurance rates as a result. Increasing the risk to homeowners without mitigation is unacceptable and a glaring omission for the SDEIS. I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD. Such plan should address not only the mitigation of the fire suppression impact of the lake, but mitigation of any financial impact impacted residents would be expected to incur as a result of an implemented pumping plan.

The Yakima Plan programmatic FEIS failed to provide a range of alternatives —just the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us/me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Kelly L. Snow
3500 Via Kachess Rd
Easton, WA 98925
(NO MAIL DELIVERY AT THIS ADDRESS)

MAILING ADDRESS
Kelly Snow
10625 NE 16th Street
Bellevue, WA 98004
To Whom it may concern.

I do not support the projects, to Lower lake levels add pumping stations or water tunnels between or in the lakes. I own property in Gold creek valley, and pay taxes in Kittitas county.

The Yakima agricultural water district needs to improve its antiquated supply system before it just adds more water.

Thanks,
Craig Stemley
Hello,

I am writing to express options regarding the proposition to drain Kachess Lake. I am opposed to any of the Kachess SDEIS active alternatives (2-5): a pumping plant and/or pipeline at Lake Kachess.

It makes zero sense to me that on drought years conservation efforts aren’t enforced. Conserve don’t drain.

Thank you,

Ashley Stroup
509 W. Raye St.
Seattle, Wa 98119

XXX Kachess Lake Rd.
Easton, Wa 98925
Tax ID: 951102
[EXTERNAL] Comment on Lake Kachess

1 message

starrtavenner88 <starrtavenner88@comcast.net> Wed, Jul 11, 2018 at 2:13 PM
To: kkbt@usbr.gov

I am a land developer, conservationist, voter and political activist. I would like to strongly voice my opposition to the proposed plan to drain Lake Kachess and use it for further irrigation.

Starr Tavenner
PO Box 1048
 Issaquah, WA 98027

PO Box 571
Nine Mile Falls, WA 99026
Dear Ms. McKinley,

I am opposed to any of the Kachess SDEIS active alternatives (2-5), the pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Efforts should be put into more sensible alternatives.

Alternatives could and should include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

These Lake Kachess projects should be last resort options, if considered at all.

Sincerely,

Joel Thomas

PO Box 624

Easton, WA 98925

Sent from Mail for Windows 10
Dear Ms. McKinley,

The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

As a homeowner in the Alpental community and frequent hiker and skier in the area, I do not want to see this pristine area damaged by water removal.

Best regards,

Emily Tidball
[EXTERNAL] Re: YBSA COMMENTS KDRPP & KKC SDEIS

1 message

Duane Unland <duane.unland@gmail.com> Wed, Jul 11, 2018 at 8:29 AM
To: Charlie de La Chapelle <charliedela@gmail.com>
Cc: kkbt@usbr.gov, Sid Morrison <MrSidWMorrison@aol.com>, Chuck Klarich <klarichcj@charter.net>, "Tom Carpenter, Jr." <tom@carpenterranches.com>, Larry Vinsonhaler <larryvinsonhaler@msn.com>, Larry Johnson <ok_larry@msn.com>, Bob Hall <bhall@bobhallauto.com>, Bob Tuck <salmon1242@fairpoint.net>, Dan Martinez <martinezlivestock@wildblue.net>, Glenn Rice <algkrice@aol.com>, Natalie Martinkus <natb02@gmail.com>

I think this looks pretty good! Perhaps you should forward to Dave W.... see what he has to say.
Duane

On Wed, Jul 11, 2018 at 5:45 AM, Charlie de La Chapelle <charliedela@gmail.com> wrote:

Good morning
Thank you for the opportunity to provide questions on the KDRPP & KKC SDEIS
These are the written questions submitted on behalf of YBSA by Charlie de La Chapelle.
charliedela@gmail.com

1. **Who pays how much and when.**
We have seen the projection ranging from $150M to $450M when mitigation is included. A breakdown of capital costs, O&M, mitigation and interest. It should be divided by 72,000 acres to get per acre cost if Roza is to pay 100%. And would Roza be expected to pay 100% of K-to-K pipeline too?
This information needs to be quickly disseminated to their growers so decisions can be made and contracts signed ASAP.
Also, I don't see the estimated pumping cost in the event the dead storage is needed to fulfil the obligation to supply senior water contracts over the period of record. Are we further correct that should that event occur, Roza growers would receive no water from the project but would incur the full pumping bill? How can they be expected to pay if they receive no water to grow their crops? Lenders will want to know too.

2. **Performance of the project.**
Can we ask for an analysis of how well the project performs over the period of record with the UW assumption for climate change, relative to the 70% target goal?
We are especially interested in the back to back drought years.

3. **Salmonid restoration.**
Can we ask for a comparative analysis of the project on instream flows below Parker.
We are concerned about the impacts to flow volumes, temperatures, predation and survival of the Sockeye runs in the lower 100 miles. We also think some of the studies cited for survival are over 50 years old and need to be updated with more current data. The quick analysis comparing the Sockeye mortality of 2015 and 2017 need to be addressed!

4. **Pumped storage.**
As costs climb ever upward we need to investigate additional sources of revenue generation. One of the possibilities of the K-to-K pipeline is to incorporate pumped storage to take advantage of the imbalance between power supplies and power demand to store solar and wind surpluses. Even if the possibilities are marginal or negative we should be learning what modifications can be made to offer values that other sectors will pay to have. Can we ask for analysis of profit potential of a pumped storage project on the k-to-k pipeline, complete with limiting factor analysis.

5. Value
Initially three irrigation entities of the Yakima Project were identified as needing a supplemental water supply in drought years. However, if the costs are beyond their ability to pay how are these needs to be met?

Thanks for your attention.
The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built. Instead, of spending money on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

I own two lots in Kachess Village. This will ruin our lake, potentially damage our domestic water supplies, is an irresponsible waste of money, and proposes to use federal money and resources for the benefit of private enterprise.

Respectfully,

Scott A. Walker / Vice President
swalker@therushcompanies.com
c (253) 224-6844
Statement of Confidentiality: The contents of this e-mail message and any attachments are confidential and are intended solely for addressee. This transmission is sent in trust, for the sole purpose of delivery to the intended recipient. If you have received this transmission in error, any use, reproduction or dissemination of this transmission is strictly prohibited. If you are not the intended recipient, please immediately notify the sender by reply e-mail or phone and delete this message and its attachments, if any.
In addition to the many concerns and questions you have received regarding the SDEIS for the YBIP plan I have a few simple ones.

1) The existing 3 dams have been in use for over 100 years helping to provide water to the Yakima basin and Kittitas Valley for domestic use and irrigation. Why now is additional water needed given that due to climate change the rainfall will increase 9% in the Northwest? If the proposed alternative is implemented will additional land be put into irrigation?

2) Why not raise the levels of Lake Keechelus and Lake Kachess as is planned for Lake Cle Elum?
3) Has the possibility of using water from the Columbia river been studied? Is so can you direct me to a copy?

4) Has building a dam North of I90 near Hyak, and creating a "Gold Creek" reservoir been looked at? It could capture the runoff you say Lake Keechelus cannot hold. Surely would be cheaper than drilling a tunnel between Lake Keechelus and lake Kachess.


6) Pumping water out of the existing Lake Kachess would cause irreversible damage and my family is totally opposed to that prospect. Your solution is to pump up to 200,000 a/f of water from the existing lake then hope for that water to be replaced plus the additional 239,000 a/f in the following year. How many years has the Kachess watershed produced 439,000 a/f of water? Ever? Once pumped you are now in the same situation you are in now. 200,000 a/f pumped, 200,000? a/f flow in, 200,000 a/f pumped. . . . It would take 6 years of normal 239,000 a/f per year to fill up. A second drought in that 6 years and you start over. Once pumped you only get what comes next year. Makes no sense to me.

Sincerely,

The family of
Mike and Madeline Aiken
220 Mountain View lane
Lake Kachess, WA
My family has owned a cabin on the east side of Lake Kachess for four generations. We hold a senior water right - our cabin is served by a newly constructed well. Members of my family spend their summers at the cabin, including my parents and my children, ages 7 and 3. Our property and our quality of life stand to be affected by the plan. I have 5 concerns and questions about the Kachess Drought Relief Pumping Plant proposals that I would like the agency to address:

1. A major concern is how our cabin will receive water once our well is dewatered, as forecast by the impact statement. "Mitigation" measures are mentioned, but there are no specifics that I can see on what these might involve. Will a new well be necessary or will our existing well be deepened? What will the timeline for this work be, and how can we be certain that we will not be deprived of water for some undetermined period, once the drought relief process is initiated?

2. Moreover, I am confused about the legal and ethical decision that is being made. If we hold senior water rights, why would any measure be considered that would violate, even temporarily, that senior right on behalf of a junior right holder in the valley? This does not seem entirely fair or legal - some clarification should be in the impact statement itself, but I could not find it. The diversion of water rights from a senior holder to a junior holder seems like a taking. If we are deprived of water for some period, will there be compensation of some sort?

3. I'm also worried about the plan to refill Kachess with water from Keechelus. Is the Keechelus water of similar quality? Apparently PCB levels are high in Keechelus, and I think it needs to be conclusively shown that the proposal would not spread higher PCB levels from one lake to another (and then into the valley).

4. Fourthly, as an avid (catch and release) trout fisherman, I am concerned about all aquatic species in the lake, including the protected Bull Trout, and I have been told that the plan would involve killing off some percentage of the population in Little Kachess. What percentage of the current population is expected to be killed and what measures are being taken to minimize this loss?

5. Lastly, I understand that the new plan involves building a boat launch accessed via Kachess Dam Road. This will result in significant traffic on that road, but there are no plans that I can see to improve the road. What steps will be taken to insure that this added traffic does not cause safety issues or environmental issues in that area of Kachess's shoreline? It seems like there should be a plan in place to improve the road and provide adequate infrastructure and facilities, comparable to those currently at the campground on the opposite side.

Thank you for your time - I look forward to your reply.
Sincerely,
Mike Benediktsson
Cabin Owner
Good Afternoon. I hope you had a nice 4th of July. I am just writing/emailing for the record, a question I have for Candace McKinley: In the event that Lake Kachess is drawn down to a level that would deem our water supply to be “dewatered” “dried up” or “no longer available”, can you tell me if we: 1. Would be allowed to drill another, deeper well? | And 2. Who would be accountable for any monetary damages to my families’ property if we no longer had water to our home or if it were “red tagged”? 

And No........our property does not have a view of Lake Kachess!

I am opposed to any of the Kachess SDEIS alternatives 2-5 and would only support Alternative # 1 at this time: No Action

Finally, as a person with a college degree in Business-Finance, I am a little surprised and confused by the “proposed Alternative #4” which has an enormous amount of variance from the projected cost of $282MM. wouldn’t it be appropriate to revise the presentation so the average prudent person or average farmer could understand what this may actually cost, and who will actually pay for it? I’m just asking if you could release the actual numerical values of the ranges of variance......oh, and of course, who would pay for all of this.

My father (cc’d above) and I both thank you for your time today.

Christopher W. Black CRPC®

First Vice President – Investment Officer
Wells Fargo Advisors | 1201 3rd Avenue, Suite 3500 | Seattle, WA 98101
Tel 206-344-6513 | Toll-Free 800-426-8790 | Fax 206-344-6698
Email chris.black@wellsfargoadvisors.com

Website: https://home.wellsfargoadvisors.com/chris.black

To stop receiving marketing emails from:
• An individual Wells Fargo Advisors financial advisor: Reply to one of his/her emails and type “Remove” in the subject line.
• Wells Fargo and its affiliates click here

Neither of these actions will affect delivery of important service messages regarding your accounts that we may need to send you or preferences you may have previously set for other email services.

See our electronic communications policies for additional information.

Wells Fargo Advisors is a trade name used by Wells Fargo Clearing Services, LLC, Member SIPC, a registered broker-dealer and non-bank affiliate of Wells Fargo & Company, 1 North Jefferson, St. Louis, MO 63103

This email may be an advertisement for products and services.
Salutations,

I am writing to express my extreme opposition to the proposed plan as stated in the subject line above. I hope I don't need to belabor the very good points that have been made already, including the huge negative impact for the environment and the ill-logic of yet another short-term solution to the perennial water shortage for the Kittitas & Yakima valleys.

I cannot state strongly enough that Kachess Lake and surrounding ecosystem should NOT be subject to this ill-conceived proposal.

I would like to have the following answered:

What other solutions have the farmers/ranchers/orchardists come up with (or at least TRIED to come up with) in all these years for irrigation? I frequently visit the Kittitas Valley for recreation and I often see irrigation systems "watering the air" in full sunlight. Is this really the best solution? If not, WHY haven't other methods been tried?

I appreciate your kind attention to this matter.

Thank you.

S. Bocek
I am writing this letter to express my concerns regarding the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS).

Many deficiencies have been identified by other groups and individuals regarding the SDEIS. These deficiencies include:

1) Failure to comply with the National Environmental Protection Act (NEPA) regarding a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18].

2) The lack of any plan to mitigate the impacts to 23,000 annual visitors and users of the USFS Lake Kachess Campground.

3) Failure to address the funding ambiguity of the current project plan. The SDEIS states the Bureau of Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FP. Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what
action (fund, design, construct, operate, etc.). These are not “details” to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

4) Impacts on private wells. The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. Some of these wells are held by property owners with senior water rights. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights?

5) I am a home owner in the Lake Kachess Village HOA. The SDEIS does not make any provision for mitigation of the inevitable devaluation of my home. When the lake gets drained, I may not be able to sell my home for even half of its current value. The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences…etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily number 300 homesites, far more than would be inferred from the term “several.” The systematic bias against representing impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. I request an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

Thomas M. Bocek

Property owner of 2900 Via Kachess Rd., Easton WA 98925

tbocek@comcast.net
Comment Letter 427

K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] SAVE THE LAKE
1 message

Austin Burke <austinmarkburke@gmail.com> Mon, Jul 9, 2018 at 8:00 AM
To: kkbt@usbr.gov

I am writing to express my grave concern and opposition to the controversial Yakima River Basin Water Enhancement Project (YRBWEP). This proposal would transfer water from Lake Keechelus and Lake Kachess to junior water rights holders in the Yakima Basin at a cost approaching $1 billion. It would drain 200,000 acre feet of water a year from the two lakes and spill it into the Yakima River, to be taken out by irrigators. To be clear, an acre foot of water is one acre, one foot deep in water. Now imagine one acre of water... 38 miles high! Or think of it as an acre of water the height of 14 Mt. Rainiers! That is the additional amount of water that would be drained from the two lakes.

The devastating impacts of such an act on our environment is hard to imagine. However the Draft Environmental Impact Statement (DEIS) just released on this project acknowledges it will deplete the aquifer, endanger threatened fish species, reduce recreational opportunities for individuals and families, probably cause wells to fail, and permanently destroy a elements of fragile ecosystem enjoyed by thousands of Washingtonians. Despite the clear risks represented by the project, the DEIS only states that it will monitor and attempt to mitigate damages after they occur. This is unacceptable and should be opposed by everyone who cares about protecting our environment for future generations.

But the damage to our environment is not even the worst of this controversial project. A study conducted by distinguished scientists from Washington State University and the University of Washington, at the request of the Washington State Legislature, documented it is not only an environmental disaster, it is an economic disaster. A team of scientists and economists conducted a Benefit-to-Cost analysis of the two projects that are now being considered by the Legislature. They showed conclusively that costs would far exceed benefits. In fact one project would lose $.80 of every taxpayer dollar spent, and the other project would lost $.54 of every taxpayer’s dollar. No private enterprise would consider such a venture, and no public initiative should either. At a time when our State is facing serious challenges with regard to funding critical needs in education and infrastructure, it is unacceptable to waste taxpayer money in such a manner.

And I have some very specific questions:

1. Why do all the studies exclude the historical lake levels (using all information available since 1900)?
2. What are the very specific mitigation plans if the community wells surrounding Lake Kachess are impacted?
3. How will any negatively affected properties be compensated (What agencies will determine the negative impact to property owners? How will they be compensated? Is there a formula?).
4. Why is this project being driven by bureaucrats and junior water rights (outside of Kittitas County) without any regard to a ROI on the outrageous project costs?
In summary, YRBWEP represents an effort by special interests in Yakima Basin to drain water from two pristine lakes, and even worse, to drain dollars from Washington taxpayers for this environmental and economic disaster. In the strongest terms possible, I urge you to oppose the YRBWEP; neither we nor our environment can afford it.

Best regards,

Austin
[EXTERNAL] Lake Kachess

Wende Cadwalader <wendejc@comcast.net>  
To: kkbt@usbr.gov

In favor of the NO ACTION option— no pumping station or pipeline @ Lake Kachess!!!

Wende Cadwalader  
Bellingham WA

Sent from my iPhone
Comment Letter 429

K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] Kachess SDEIS
1 message

KAREN CAMPBELL <kcemail@prodigy.net> Mon, Jul 9, 2018 at 9:00 PM
Reply-To: KAREN CAMPBELL <kcemail@prodigy.net>
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Attn: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058,

Dear Ms McKinley,

I would like to go on record in opposition of any Kachess SDEIS alternative, be it a pumping plant and/or pipeline at Lake Kachess.

There is evidence the Lake may never recover, private wells may run dry, Kittitas County farmers will not benefit, of a negative impact on the environment and fish, a negative impact on fire-fighting efforts in upper Kittitas, property values will be reduced, recreational activity for a popular campground will be negatively impacted, and the list goes on.

I, along with residents of Kittitas County and the State of Washington would ask how this project can be supported when there is conflicting data and it will allow only one special interest group, the Roza Irrigation District, to receive any benefit from public water.

Public trust is at a all time low in this country and this flawed project only serves to feed that distrust.

Karen Campbell
31 Brookside Court
Easton, WA 98925
509-656-0220
Property owner and taxpayer in Kittitas County since 1977.
I feel that it would be money and time well spent if the existing irrigation systems were upgraded. There is so much water lost. If the systems were upgraded/improved, then there would be plenty of water in the dams as they are.

Thank you.

Debbie Cernick
[EXTERNAL] Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance

1 message

Michael Coan <coan66@gmail.com> Tue, Jul 10, 2018 at 9:25 PM
To: kkbt@usbr.gov

Dear Ms. McKinley,

I and many in the state of Washington are opposed to the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County.

The study is flawed and the data and assumptions are not accurate. For example, the science of the Yakima basin plan as it relates to the refill rates of Lake Kachess are flawed. A study by Washington State University confirms this fact.

Questions:

- Why is the Bureau of Reclamation and the Washington State Department of Ecology focused on sourcing new water sources instead of water conservation?

- Many industries and farmers nationwide are implementing water conservation and water efficiency methods to increase their water supply, why doesn't the Bureau of Reclamation and the Washington State Department of Ecology promote water conservation and water efficiencies as the first option for the Yakima River Basin?

Instead of spending money on uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years.

Please note my disapproval of this plan to lower Lake Kachess. I specifically oppose the Kachess SDEIS active alternatives 2-5 and support only Alternative #1 of the Kachess SDEIS -- no action.

Thank you,'
Michael Coan'

La Canada, CA'

206-313-2773'
Hello,

I have lived in Western Washington all of my life, and many of my finest memories have been in the snoqualmie pass area. Now, at 38, with a 10 year old daughter, she is also enjoying skiing at Alpental and camping at Lake Kachess. Lake Kachess is truly a special place - it's rare that you can get to such a peaceful, gorgeous, and large mountain lake an hour from a major city. Literally millions of people are a short drive away from this place. I have memories here ranging from watching the Perseid showers in August, to taking my daughter kayaking. One drought year with the KDRPP would tear away the possibility of a child enjoying this place with their family for several of their most formative years. Washington is a beautiful state, with lots of jobs and limitless potential of all kinds. I am strongly opposed to anything that would disturb what our state has at Lake Kachess, and leaving it as it is benefits many more people than it would if this project were executed - not to mention, we wouldn't be spending that money.

Thanks,
-Greg Daly, Seattle
To whom it may concern:

I would like to express my concern with the proposed action to pump additional water from Lake Kachess.

From my review of the project, the cost, and the impact to recreation and the environment outweigh the benefit to farming. Having lived in the Yakima valley from 1959 to 1983 and worked on a small farm and orchard, I am aware of the importance of agricultural water needs. The additional pumping of Lake Kachess cannot be the appropriate answer. Further conservation and land management improvements is a longer term sustainable solution.

I urge your not to vote “yes” for the pumping option.

Respectfully,

Doug Davidson

82 Cascade Key
Bellevue, WA  98006

dougda1959@hotmail.com
206-369-1113 mobile
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Please leave Lake Kachess alone.
Dear Ms. McKinley,

I am writing to voice my opposition to the Kachess Drought Relief Pumping Plant. Not only is this project not in the best interests of Washington taxpayers, it harms the fish and wildlife around Lake Kachess, it harms the local businesses and property values (tax revenues), and it is absolutely not the way we should be thinking about our natural resources here in the beautiful State of Washington.

The information provided in the DEIS and SDEIS is both inaccurate and inconsistent, demonstrating a complete lack of understanding on the part of government agencies about the damage and side effects sure to be caused by this absolutely idiotic plan to add a pumping plant to Lake Kachess.

What programs and points of contact will property owners around the lake have access to if damage is caused to their property due to this plan? Will property owners be financially compensated for damaged wells directly related to the draining of the lake? Who will be responsible to pay such compensation? The US Government? WA State? Roza? Other than "monitoring" wells, what active measures are being taken to mitigate damage to private property?

For an Environmental Impact Statement, hardly any effort was spent stating the adverse impact to the environment. Erosion was completely missing from this document. What kind of erosion damage will the lake suffer from draining it over 100 feet lower than it has ever been drained? How will the 100 year old earthen dam cope with being high and dry for much longer than it ever has before?

What is being done to protect the endangered Bull Trout in Lake Kachess? You can’t claim to be saving the endangered species on Lake Keechelus, but then turn a blind eye to the damage that would be done to Bull Trout in Lake Kachess. There was no definitive answer to this question in the latest SDEIS. There was absolutely no mention of the freshwater clams in Lake Kachess that would also be impacted by this pumping plant. Nor was there any mention of the Lamprey, and many other species of fish that would be affected by this plant.
Additionally, the financial benefit of the KDRPP to the taxpayer is nonexistent. In fact, taxpayers will lose money from this pumping plant, in effect, subsidizing Senior Water Rights assurances given to junior water rights landowners in the Roza irrigation district. These farmers bought their cheaper land knowing that water would be turned off during drought. Instead of planting crops that are more tolerant to drought, like hay, Roza growers have taken a risk by planting thirsty, more profitable crops. This risk is THEIR risk. So, question: What benefits do taxpayers receive? If not financial, then why would this project be publicly-funded, especially since the water is being directed entirely to the private growers in Roza who made risky decisions?

What does Roza intend to do with this water? According to Roza's own documents, they only need 50,000 acre feet of water during drought years. Why do they need such a powerful pumping system, capable of accessing 200,000 acre feet? What assurances do we as taxpayers get that they will not just turn around and sell OUR water to other districts, and keep the profit? Who determines when they turn the pump on? Will they be allowed to turn the pump on if the lake fails to refill after a drought year, and senior water rights landowners around the Yakima valley can't get their gravity-fed water? Would that be considered an official drought?

Why weren't common-sense alternatives included in the SDEIS? Spring runoff collection? Modernization of the irrigation system? What would be the cost of building a 50,000 acre feet reservoir near the Roza dam and why wasn't that studied for feasibility? None of these alternatives were included in the SDEIS, only plans to drain a natural lake. I'm ashamed that 5 different variations of a pump are the only ideas our State could come up with.

Why aren't we talking about getting Salmon back into Lake Kachess, the lake that means “many fish” in Native American? Why, instead of a fish ladder like at Lake Cle Elum, are we getting a pumping plant at Lake Kachess?

Please rethink this proposal. If this pump plan succeeds, I will actively spend the rest of my life advocating for the removal of this absolutely asinine pumping plant. You've spent enough taxpayer money researching this horrible project, it's time to look at real commonsense “Drought Relief” solutions.

Sincerely,

Aaron Dressler
[EXTERNAL] Save Lake Kachess

1 message

Andy Dulin <andy.dulin.b7wc@statefarm.com>  
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

Renaming Lake Kachess to the Kachess Reservoir if classic manipulation.

The Level to which the lake is currently drawn down is the reservoir….. any additional draw down, is simply the draw down of a natural alpine lake….. and is unacceptable.

Repairing and replacing existing Roza delivery ditches, and then monitoring the improvement is water delivery is a much better initial option….. before any other additional projects are considered.

NO one other that a governmental agency could violate laws in the way this project bases its projections.

Andy Dulin
We have had a cabin on Lake Kachess since 1981 and have spent many happy hours water skiing and canoeing in the pristine waters of the lake. Our 3 children who were babies when we built the cabin loved to go “to the lake” and still do as adults with their own children. Many years ago the lake was drained way down and the lake became totally unusable and was pretty ugly looking. I would hate to see that happen again. We were at our cabin this last weekend as were most of our neighbors enjoying the clear waters and warm eastern Washington weather. It is a beautiful lake and judging by the fact that the campground at the lake is full all summer, many others agree. Please do NOT allow the lake to be drained.

Barbara Elder
Too often, we take for granted the beauty of our forests, lakes and nature’s wildernesses and exploit its resource for the benefit of a few while at the detriment of a much larger base users such as campers, fishermen, vacationers, property owners and the resource itself. Placing pumping stations on Lake Kachess is one of these instances.

If the pumps are installed and are used to take Lake Kachess down to the reported levels, doing so cuts off Little Kachess (as it’s referred to) from the rest of the primary body of water, stagnating the water, increasing water temperatures and endangering fish and fish habitat. This is the damage from exploitation.

Lake Kachess was previously modified decades ago to hold additional water for irrigation. Pumping water out of Lake Kachess is not its natural process. Taking the Lake down to new low levels means water will have to be pumped continually until such tome as the Lake recovers to its natural flow process. This will take years. Actually, there’s a belief that pumping Lake Kachess down to its lower level will be a “one-and-done” scenario never recovering because there will never be a reduction in water demand in any future years to support recovery. Lake Kachess is a limited resource. One and done. Please think about this statement. Exploiting a resource to the level of never recovering.

I ask for your support it opposing the installation of pumps in Lake Kachess. It’s not a responsible decision/action to spend one-half billion dollars to effectively pull additional water out of limited resource, damage a resource beyond recovery, thus requiring water be pulled from Lake Kachess by pump rather than its natural process of seasonal snow melt and flow.

Manage our resources by managing demand of usage, not use a resource to its demise.

Thank you for your time and consideration.

Sincerely,

Greg Engberg

Sent from my iPad
[EXTERNAL] Lake Kachess
1 message

Camille Fitzpatrick <camfitzpatrick@gmail.com> Mon, Jul 9, 2018 at 5:07 PM
To: kkbt@usbr.gov

Please do not drain Lake Kachess!!

I have been going to Lake Kachess since I was a child in the 70's and enjoyed swimming in the lake, paddling and I even remember the dock that was in the middle of the lake. We take our family there now for camping and boating and greatly enjoy the beautiful scenery and pristine lake.

There is no need to drain the lake, there is plenty of water available. It will decimate the trout, ruin the campground and the lake itself, one of the natural wonders of our beautiful state.

We strongly encourage you to leave the lake alone!!

Thank you.

Camille Fitzpatrick
13321 47th Pl. W
Mukilteo, WA 98275
I am writing to express my opposition to the proposed Lake Kachess Drought Relief Pumping Plant (KDRPP) that would drain Lake Kachess 80 vertical feet below the dam's current lowest level, or 110 feet below its historic natural level. This would leave the pristine Lake Kachess campgrounds, one of the most beautiful and popular federal campgrounds in the country, a virtual mud-hole, perhaps indefinitely, as the lake may never refill to its natural level. The cabins and year-round homes around the lake could be deemed uninhabitable because well water would be dried up and water for fire protection would be unavailable. One new home owner has already been denied homeowners insurance because they say the area is in an "extreme" fire danger zone because of possible water unavailability.

The cost of this plan has already gone from an initial estimate of $268 million dollars to $444 million dollars and some estimate one billion dollars!! This, of course, is to be paid by the taxpayers of the state. Independent studies have estimated that there will be a negative benefit of these funds, resulting in a loss of $0.90 for every dollar of taxpayer money spent..

Through conservation techniques, new technology and water rights exchange programs, water could become available to the special interest groups in the
Yakima basin at a far less cost. Is another vineyard really worth $1 billion and the demise of pristine Lake Kachess???
Please vote "NO" on this proposal.

Gerald/Norma Golding
12821 SE 2nd St.
Bellevue, WA 98005
(425)455-2199
Carol Guilfoyle <cguilfoyle@gmail.com> Sat, Jul 7, 2018 at 7:47 PM
To: kkbt@usbr.gov

I am opposed to any of the Kachess SDEIS active alternatives (2-5), the pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Please leave Lake Kachess alone.

Carol Guilfoyle
[EXTERNAL] KDRPP and KRKRC SDEIS

1 message

Judy Hallisey <hydrojude@gmail.com>  
To: kkbt@usbr.gov  
Cc: Barry Brunson <mathisfun@mac.com>, Brad <wheezard@gmail.com>, Tiffany Hallisey <rotnella@gmail.com>

Please accept my comments in the attached document.

2 attachments

- Kachess Lake comments to SDEIS.pdf  
  75K
- ATT00001  
  1K
Submitted via email to kkb@usbr.gov on July 11, 2018

Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

My family owns property on Via Kachess Road within the analysis area of the Kachess Drought Relief Pumping Plant (KDRPP). I am a resident of Kittitas County, Washington State and use Lake Kachess for recreation and health purposes. Thus I have standing in this proposal of action against my sense of place. I have reviewed both the DEIS and the SDEIS and found they fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. No alternative considers water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies either separately or in combination of action alternatives to the proposed Kachess Lake pumping plant. These methods and technologies could achieve the purpose and need as stated in the DEIS and SDEIS without impacting Lake Kachess. Close to 70 miles of unlined, open air, earthen ditches carry water from Lake Kachess to Rosa Irrigation District. Why isn’t enclosing and lining these conveyances included in action alternatives or offered as a separate action alternative?

The vegetation and wetlands and densely forested watershed as described in Chapter 3 of the SDEIS will suffer with reduced water levels in Lake Kachess. No where could I find analysis of effects and changes to flows, substrate erosion, and geomorphology of tributary streams. Thus the DEIS and SDEIS analysis of watershed effects is inadequate and does not meet the NEPA requirement of full disclosure of effects. These streams evolved to a natural base level established after the last glacial retreat. Since construction of the dam, the streams have deposited their sediment loads at their deltas in the reservoir. If the lake level is dropped below the natural base level (up to 80 feet!), headcutting in the tributaries will be initiated and begin working upstream to establish new equilibriums. Deposited sediments of the deltas will erode. Stream profiles will downcut and stream substrates will erode. Sediment budgeting will be upset. Downcutting of the stream profiles will result in disconnect of the stream to its hyporheic zone and to the water table. Biodiversity of the streams and their hyporheic zones will be adversely affected. Slope processes of the watershed will be adversely affected. These effects must be analyzed and quantified. As the DEIS and SDEIS currently stand, they do not assure favorable conditions of flows and slope stability as mandated in the Organic Administration Act of 1897.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible...
that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? Please state specific statutes and other justifications where junior water rights override senior water rights. Mitigation for loss of well water is not described beyond monitor and mitigate. Please describe in detail what mitigations will occur. Where is the money for mitigation of loss of senior water rights and well water coming from and where is it included in the costs of the action alternatives?

The SDEIS indicates the Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two Lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. It is a misrepresentation to assert this project involves Kachess Reservoir only and not the Lakes. When Kachess Dam was constructed to provide irrigation water, water distribution through water rights assignment was based on quantities provided by the Reservoir capacity, not including the Lakes capacity. To draw water below the natural Lakes levels will rob every Washington State resident of their right to the water.

The documents indicate approximately 115,000 cubic yards of material KKC tunnel will be excavated during construction of the KKC tunnel. Gravels and other rock types are salable materials and must be accounted for. How will this material be separated and accounted for amongst different mineral estate owners? Where will the 115,000 cubic yards of KKC tunnel material be deposited? There is no mention of effects of load haul on Kachess Lake Road. What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?

I find the DEIS and SDEIS to be inadequate and fail to address NEPA requirements of offering a full range of alternatives and of disclosing effects of the proposed actions. I support the No Action Alternative.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision. Thank you for considering and acting on these comments.

Sincerely,

/s/ Judy E.I. Hallisey
380 Landers Lane
Cle Elum, WA 98922
hydrojude@gmail.com
K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov>

[EXTERNAL] KDRPP & KKC SDEIS Comment
1 message

Alistair Hamilton <alistair.hamilton@gmail.com> Tue, Jul 10, 2018 at 8:47 PM
To: kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office

KDRPP & KKC SDEIS Comment

The SDEIS makes very clear statements about the devastating impact of this pumping project and the recommendation of the bureau shows that they are not being open to data or facts that go against their foregone conclusion that draining Lake Kachess is the way to solve future droughts.

There are sustainable alternatives that have not been explored in favor of this “easy” answer of putting a straw into a pristine glacial lake. We need to work harder and commit to economically viable and ecologically responsible approaches with ALL stakeholders. The impacts described are severe and irreversible.

Thank you,

Alistair Hamilton
425-442-9554
Please DO NOT proceed with the proposed plan to partially drain down Lake Kachess to supply irrigation water to eastern Washington. The impact study does NOT support this project both in terms of cost, environmental impact and effectiveness of the result.

Thank you.

Lorelle Edmonson Hendricks
2439 220th Place NE
Sammamish, WA 98074

425 269-7808
Fwd: [EXTERNAL] KDRPP EIS Comments

1 message

Long, Julia <jlong@usbr.gov> Tue, Jul 10, 2018 at 12:57 PM
To: Karen Dera <kdera@usbr.gov>, "Gregory, James" <James.Gregory@hdrinc.com>, "Teepe, Adam" <Adam.Teepe@hdrinc.com>

Comments from Joel Hubble.

Julia Long
Assistant YRBWEP Manager
Bureau of Reclamation
Columbia Cascades Area Office
1917 Marsh Rd.
Yakima, WA 98901-2058

Ph: 509.575.5848 ext 285
Cell: 509.406.5864
jlong@usbr.gov

---------- Forwarded message ----------
From: Joel Hubble <hubblejdcl@yahoo.com>
Date: Tue, Jul 10, 2018 at 12:51 PM
Subject: [EXTERNAL] KDRPP EIS Comments
To: Julia Long <jlong@usbr.gov>

Julia,

Sorry these comments are not using the BOR approved method using the WORD forms.

1. pg 3-76, 3rd par. should reference table 3-15 not 3-14.

2. pg 3-80, table 3-18. I would think that for the Wapato reach, for summer period that QD < QU, not the reverse (but I could be wrong).

3. pg 4-37, table 4-20 (Rimrock) for Prorated Years-Median. I'm not doubting the results, but wondering operationally why a -61% change?

4. pg 4-129, 1st sentence- "...(2 to 5 years to refill the reservoir)...", I think this phrase should be put into proper context (and it may be in another section, but could be repeated) as to how many times in the period of record it actually takes 2-5 years to fully fill again by the beginning of the next irrigation season. I know it happens, but as I recall it is infrequent.

5. pg 4-129, 3rd par, 1st sentence. strike the word "precisely"...from "...to precisely estimate..."; it sounds contradictory.
6. pg 4-130, 1st par. Consider deleting the first 2 sentences and just state what seems to be the agreed upon conclusion based on the science.

7. pg 4-130, 2nd par. This was one of my pet peeve conclusions that I commented on from the previous draft... so I don't expect it to be modified, but here goes anyway-

To say that shoreline habitat complexity will decrease under KDRPP seems over stated. I agree that the construction footprint will negatively impact it. However, impacts due to the additional drawdown does not seem likely to me. The shoreline is already effected by the annual drawdown and has reach a point of equilibrium. The infrequent additional drawdown below the normal low pool elevation is well below the root zone of the shoreline vegetation; so it's hard for me to see why the drawdown would have an effect. OK, the rant is over... feel better!

Joel
I am opposed to any of the Kachess SDEIS alternatives (2-5). I oppose any construction of a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Acon is the only acceptable alternative.

Thank you,

Jenny Hughart
Newcastle, WA
To Ms. Candace McKinley, Environmental Program Manager.

Dear Ms McKinley,

As I hope you already know, there are many citizens adamantly against the draining of Lake Kachess. I know you will do the right thing and not let this measure go through. I hope you take adequate time to go through all the opposing paperwork and see how much heart, time and energy people have put into saving this beautiful lake. The opposition is clear and well founded that this lake need not be drained.

I implore you to save Lake Kachess!!

—Brandy Jahn, resident Sammamish, WA
PH. 206.601.6923
Dear Ms. McKinley,
Please see my attached comments regarding the KDRPP DSEIS. I look forward to hearing back from you regarding these comments.

Sincerely,
Jayme Jonas

Sent from Windows Mail

KDRPP public comments - Jayme Jonas.pdf
348K
Jayme Jonas  
23402 NE 29th PL  
Sammamish WA 98074  

July 11, 2018  

Bureau of Reclamation, Columbia-Cascades Area Office  
Attention: Candace McKinley, Environmental Program Manager  
1917 Marsh Road  
Yakima, WA 98901-2058  

Submitted by email to kkbt@usbr.gov  

Dear Ms. McKinley,  

I am a life-long recreationist who grew up camping at Lake Kachess; my family has been camping there since the 1950s. I credit this Lake for my love of the outdoors and appreciation of nature. I love that it's giving me the opportunity to pass that love and appreciation on to my children. Its proximity to the rapidly growing population of the Seattle metro area makes it all the more valuable for providing opportunities for urban dwellers to get out into nature and develop that love and appreciation as well. When I first heard of the Kachess Drought Relief Pumping Plant and its basic effects on the lake, my personal reaction was negative—not only because of the negative impacts I assumed would occur to the area around the lake, but also because I disagree in principle with draining a natural lake for private use. However, as a professional comprehensive planner with a Master’s in Urban Planning and a Bachelor’s in Economics, I wanted to be educated about the project and read the entirety of the DSEIS. I expected to be torn between my personal opinion and the professional analysis that presented significant economic benefits for water users, with moderate environmental and recreational consequences that were thoughtfully mitigated. As I read the document, I was impressed instead by how clear it is that this project is not worth any of the costs: monetary, environmental, or recreational. I am not a NIMBY. I am not concerned with property values: real estate is a gamble, and that includes starting a farm in an irrigation district that does not have senior water rights. I am purely concerned with protecting a natural lake, and its aquifer, wildlife and vegetation for all of the people of the state, as opposed to a few looking to financially benefit from its water.  

The Kachess Drought Relief Pumping Plant (KDRPP) is not a public benefit and must not be enacted, either by the Bureau of Reclamation and Department of Ecology, or by the Proratable Entities interested in implementing it. It is inconsistent with adopted plans, does not comply with NEPA requirements, the analysis is based on missing data and questionable assumptions, proposed mitigation is lacking, groundwater impacts could be detrimental to property owners and public recreationists, there are insignificant agricultural impacts given the negative recreation and environmental impacts, lake habitat for fish is negatively impacted, and it could potentially increase the fire susceptibility of the area while decreasing the ability of emergency responders to fight fires. It also radically changes the use of the Yakima Project, which has been managed for over 100 years as a system for all users and instead essentially earmarks one reservoir for one irrigation district.
Inconsistency with Mission and Adopted Plans

Comprehensive planning within the State of Washington requires that all plans and projects be consistent with adopted policies; KDRPP does not appear to meet that test in several regards, including contrasting with the mission of the proposing agencies.

The opening page of the DSEIS cites the missions of the US Department of the Interior, the Bureau of Reclamation, and the state Department of Ecology. While all agencies have mission facets that can compete with one another, making mission-project consistency a balancing act, this project does not fit with the adopted missions more than it does.

- Though the US Department of the Interior is directed to “supply the energy to power our future,” this part of the mission is tertiary to protecting natural resources, which KDRPP does not do. Instead, it denigrates a natural environment in order to provide economic benefit to a small group.

- Reclamation is directed to “manage, develop and protect water” and clearly KDRPP fits within that purview. However, Reclamation must also do this work “in an environmentally and economically sound manner,” which is not descriptive of the proposed project.

- This project is most inconsistent with the state Department of Ecology’s mission to “protect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations.” Undertaking KDRPP has significant negative environmental and recreational impacts which are not consistent with Ecology’s mission.

The DSEIS states in Section 4.3.3 that “Alternative 1 No Action does not meet the purposes of the Proposed Action because it does not address water supply for proratable irrigators or instream flow conditions in the upper Yakima River basin” (pg 4-21). Later, in Section 4.24 (pg 4-349) the DSEIS suggests that the proposed project meets several of the Integrated Plan’s goals when, in fact, it does not. The noted goals include:

- Provide opportunities for comprehensive watershed protection, ecological restoration and enhancement, addressing instream flows, aquatic habitat, and fish passage

  This plan does not provide “comprehensive watershed protection” and instead increases the vulnerability of an entire watershed to wildfire risks by lowering groundwater levels and reducing access to surface water for emergency responders. No ecological restoration or enhancement is provided other than improving a minority of instream flows analyzed; negative impacts are projected for aquatic habitat in the lakes and for fish passage as well.

- Improve water supply reliability during drought years for agricultural and municipal needs

  While KDRPP does provide some benefit in drought years, it is insignificant when the adverse climate change scenario is modeled. A 3% gain in water is hardly worth the monetary costs, nor the negative environmental and recreational impacts that could permanently occur.

- Improve the ability of water managers to respond and adapt to potential climate change effects
As noted above, potential climate change effects would severely limit the benefit provided by KDRPP.

- Contribute to the vitality of the regional economy and sustain the riverine environment

Again, while there are some instream flow objectives that would be met, not all flow targets would benefit and some are projected to worsen. KDRPP does not meet the established economic indicator threshold of 1% and ignores the negative impacts to what is likely a large sector of the economy: recreation.

Further, KDRPP is inconsistent with several adopted plans at both the County and Federal levels.

- Kittitas County Shoreline Master Program (SMP): Lakes Keechelus and Kachess are designated as lakes of statewide significance under the State Shoreline Management Act. The Kittitas County SMP designates the shoreline of both lakes as “conservancy shoreline environment,” which requires “maintaining the natural character of the shoreline area” (Section 3.15, pg 3-161). The development of any of the pumping facilities would be in conflict with this requirement as they would significantly alter the character of Lake Kachess.

Section 3.15 further goes on to state: “Under the draft SMP, the majority of both lakes would be designated as rural conservancy. The purpose of the rural conservancy environment is to protect ecological functions, natural resources, and valuable historic and cultural areas in order to provide for sustained resource use, natural flood plain processes, and recreational activities.” All of these elements of the Lake to be protected would be negatively impacted by KDRPP.

- Ecology Upper Kittitas County Groundwater Rule (WAC 173-529A): Section 3.5.1 notes that Ecology in 2011 placed a moratorium on the development of new unmitigated groundwater withdrawals in upper areas of Kittitas County (pg 3-53). On its face, it does not seem that a project that could further deplete groundwater resources in this area could possibly be consistent with this rule. How is KDRPP compatible with this rule?

- Forest Service Criteria, 1990 Wenatchee National Land and Resource Management Plan for Lake Kachess: The USFS has designated Lake Kachess as land allocation Developed Recreation (RE-1) Retention VQO, Scenic Travel 1 and 2 Retention VQO, and Partial Retention VQO. As stated in section 3.10.4, “The USFS considers visual quality to be one of the most important resources to be protected under this land allocation” (pg 3-127). Due to the changes in pool levels that would make the lake a less dominant element on the landscape, the proposed project is not consistent with these Forest Service criteria.

Failure to Comply with NEPA Requirements

The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, and those other alternatives which are eliminated from detailed study must be described with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.
The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 DSEIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they are in fact one alternative: extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

This fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Yakima Plan Programmatic EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Yakima Plan Programmatic EIS and do it correctly. I ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

I ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Lake Kachess pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of
special interest groups.” I ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given – including data, references, and review procedures – for excluding each alternative. The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and I therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

In addition, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. The SDEIS documents negative impact on recreational activity and acknowledges most affected individuals come from the Seattle area. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

In all subsequent communications with the public, the misrepresentation of Lake Kachess must be corrected. The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake [joining] Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, as the reservoir water (stated on page 1-1 to be the water over the natural lake) is already spoken for. Thus, every drop of water to be pumped by KDRPP will come from the natural lake, Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. I ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by Reclamation; below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. I ask that this confusion and misrepresentation stop, and accurate terminology be used that informs, rather than confuses, the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as on Page 1-7.

**Modeling/Data Analysis Questions**

A number of admissions within the DSEIS cast doubt on the accuracy and usefulness of the modeling used in the analysis and even note aspects of the project that were not included in modeling or evaluation. Data and analysis that are outright missing from this document include:
• Section 3.7: no formal wetland delineations or plant surveys were conducted for this analysis. Please explain why these were not conducted.

• Section 4.4.2 (pg 4-81): “Lake Keechelus was not included in drought operations surface temperature modeling completed by PSU” and “Extended or multi-year drought, or refill conditions were not included in the PSU water temperature model and potential effects of these conditions are not quantified.” Please explain why these aspects were not modeled and what the implication is on the modeling that was completed.

• Section 4.4.7.2 (pg 4-98): water temperature effects and their impacts on the Little Kachess basin from the inflow from Keechelus (through KKC) are unknown, indicating that this aspect of the project was also not modeled. Please explain why this was not modeled.

• Section 4.6.4 (Pg 4-129): “Additional hydrodynamic modeling is needed to precisely estimate reductions in zooplankton abundance…” Please explain why this study was not completed.

• Section 4.10: SketchUp (or similar) renderings of all proposed facilities to aid in adequate visual quality analyses are absent. Enough details are provided regarding building mass and location, and amount and location of vegetation to be cleared to provide these basic models as evidence in this document. Please explain why these models were not developed, or if developed not shared with the public.

• Section 4.21: The socioeconomic analysis does not analyze the No Action alternative for economic impacts. This glaring lack of data makes it impossible to compare the predicted economic impacts of the alternatives. Please explain why not all alternatives were modeled with IMPLAN software and how the public is expected to make sufficient comparisons between the alternatives without this analysis.

• Section 4.21: The socioeconomic analysis also does not describe the impacts of the project to the recreation economy of the four-county region. Despite noting in Section 3.14 that “visitors to the lakes are an important part of the economy of upper Kittitas County” (pg 3-147), the economic analysis does not account for the recreation industry or even describe it as a piece of the whole 4-county regional economy. Please explain why this economic sector is missing from the analysis, or which sector it is a part of if it is considered part of a larger sector, and how the public is expected to fully understand the economic impacts of the project without an analysis of this sector.

One of the fish habitat “benefits” noted in the DSEIS is reduced water temperature in Lake Kachess due to reduced shallow water areas that would be warmed along the shoreline. The acknowledgement that modeling of prolonged droughts that could result in multiyear drawdowns of the Lake raises questions about the accuracy of this identified “benefit” and is among other questions raised by admissions within the DSEIS:

• Section 4.3.7 (pg 4-60) discusses differences that are “likely due to reservoir balancing in the modeling that may not occur during actual operation” but no explanation is given about how actual operation may differ from what is reflected in the modeling. Are these differences based on assumptions built into the model that are not accurate or is “reservoir balancing” too complex to
accurately capture in a model? Please better explain this statement to either acknowledge deficiencies in the model or the highly variable nature of reservoir operation.

- Water temperature in Lake Kachess is predicted to decrease with drawdowns, but Section 4.6.4 notes “there is uncertainty around whether prolonged droughts... could cause warming.” Is this uncertainty related to the fact that multi-year and prolonged droughts were not modeled? What is the level of uncertainty? Why were prolonged droughts not included in the modeling?

- A discrepancy is found in Section 4.7.4 (pg 4-156) which states that it could take 2-8 years for Lake Kachess to return to normal operating levels, as opposed to all other sections of the document which refer to a 2-5 year refill period. Why are two refill periods identified, and which is more accurate? With the predicted increase in frequency of droughts, how was the refill period determined?

In addition, there are some aspects of the analysis which are not explained adequately, such as:

- How is target pool elevation determined? If Keechelus does not meet its “target pool elevation” in some years following drought pumping of Kachess, how much longer would it take for Kachess to refill, assuming KKC is implemented?

- Construction methods and plans are fairly detailed for all aspects of the proposed project except for the Volitional Bull Trout Passage Improvements. Why is there no detailed construction data for this element of the project?

- KDRPP was originally proposed to allow pumping of 50,000 acre-feet of water from Lake Kachess but this number has increased to 200,000 acre-feet. What instigated this significant change in the amount of water to be pumped?

- The SDEIS asserts the presence of a "value analysis study that suggested the feasibility of a floating pumping plant." The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a "suggestion," brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,” including the methods, data, and conclusions implied by the inadequate and confusing term "suggestions."

- The SDEIS states Reclamation will "fund... some or all, or authorize Roza to fund" the KDRPP. This statement inadequately informs Washington citizens, as well as Roza farmers, of their likely obligations for financial support of KDRPP. Please provide the legal, legislative, and/or other basis for stating that Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (Reclamation, Ecology, Roza, or other) will be responsible for what action (fund, design, construct, operate, etc.). These are not "details" to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all
the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

SDEIS Table 1-1 (pg 1-11) indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate... etc... the selected alternative.” This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and Reclamation representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. I ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

- The SDEIS states that the KDRPP-FPP is the "proposed action" and that Reclamation and Ecology have not identified a "preferred alternative." This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a "single action and cannot be separated." The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are "acceptable" in 2018. This explanation should also serve to inform citizens as to why no "preferred alternative" is provided. This explanation is critical to citizens’ understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. Reclamation must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

- The statement of budget (Pg 2-59) for KDRPP is incomplete and under-valued. The "estimated costs" for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the "proposed option" it will be the focus of this comment (however these comments apply equally to the other alternatives). An "estimate" that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for Alternative 4. Because the estimate is not a measure of central tendency (i.e., neither mean, median, nor mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; as opposed to showing a single estimate of $282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a "low" or "high" correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.
Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the Alternative 4 budget should present a $423,000,000 base.

In all cases, the mitigation costs must be included. For some reason, the required Bull Trout Volitional Passage is stated in the text (Pg 2-60) to cost $23,000,000 (preliminary estimate) but is not included in the stated project costs. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for Alternative 4.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. I request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

- Section 4.13.4.2 notes that noise from operation of the pumping plant is “anticipated” to fall within a certain range. The construction noise analysis is relatively detailed compared to the analysis of operations. Why is noise data from similar projects not cited or used as a proxy for this analysis? Additionally, the noise analysis notes that the closest noise sensitive receptors would not be affected but does not detail what these receptors are. What are the closest noise sensitive receptors, and where are they located?

- Section 4.15 notes that KDRPP would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” What regulatory guarantees are in place to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed? This is a relevant question given the fact that the original 1902 legislation authorized the Tieton and Sunnyside divisions of the Yakima Basin (Section 1.8.1), but others have been added over time. How will Reclamation prevent other new agricultural uses from demanding additional water from this project which were not originally intended?

Further, it is not even clear that limiting agriculture to existing uses is truly intended. Table 1-2 (pg 1-20) notes that Ecology will “issue water rights as necessary.” How will new water rights be issued and to whom? How is this in keeping with “not increase(ing) the amount of irrigated land?” Section 4.21 notes that the model allows for identification of agricultural activity that “could” occur (pg 4-319), which seems to allow the door to be open for more or intensified agricultural uses.

- Section 4.21 suggests that the Volitional Bull Trout Passage Improvements are expected to have positive economic benefits (pg 4-324). In what way would these improvements have economic
impacts? What additional detail is needed about these improvements to estimate their economic impact?

Completely missing from the SDEIS (perhaps best located in Section 4.23 Health and Safety) is an analysis of the impact of the project on the fire susceptibility of the surrounding area and the ability of emergency responders to utilize water from Lake Kachess to fight fires that occur. Local fire departments make use of water from Lake Kachess to fight fires in the area; how have these organizations been involved in this process and what mitigation is proposed to address this potential issue?

Finally, the depiction of Lake Kachess after drawdown of 80’ is inaccurate. The SDEIS (Pg 2-66) indicates the 80’ drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. I ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched,” “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

Mitigation

Mitigation measures proposed in the SDEIS are severely lacking. While detailed mitigation methods are proposed related to the construction of the proposed facilities, few definitive mitigation methods are proposed for the negative impacts stemming from the operation of the proposed facilities. Those sections missing proposed operational mitigation methods include:

- 4.2.5.2: (pg. 4-9) Erosion control measures would be implemented prior to implementation of the project “if erosion is identified as a problem.” Isn’t an EIS the opportunity to identify erosion as a problem? If not identified as a problem at this stage, when would it be identified prior to implementation of the project? What types of erosion control measures would be implemented?

- 4.5.4: (pg 4-106) A well monitoring program is proposed to be implemented to analyze groundwater levels associated with drawdown but no “appropriate mitigation strategies” are identified for implementation. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. I ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

- 4.6.10: (pg 4-148) A water quality monitoring program is proposed to be implemented to document changes in water temperature but no subsequent mitigation is proposed to address water quality impacts to fish. Please explain how this monitoring program would be implemented and how Ecology would address impacts to fish based on the data collected.
4.13: Noise mitigation only addresses construction, not operation of the project. Please explain what types of noise mitigation would be implemented to address noise from the operation of KDRPP.

4.14: A myriad of negative impacts on recreation are identified but no mitigation is proposed, other than a boat launch on the opposite end of the lake from the campground. Will alternative recreation sites for activities other than boating or fishing be provided elsewhere? How else will recreation impacts be mitigated?

At the very least, mitigation strategies utilized by other agencies on similar projects with similar effects could be listed as examples of what Reclamation and Ecology might implement, should any future negative effects occur.

As detailed above, Section 4.15 notes that the project would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” I ask that specific regulatory restrictions be put in place as mitigation for this project to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed. Without these measures, Reclamation could not prevent other new, or intensifications of existing, agricultural uses from demanding additional water from this project. Please describe the regulations that would be enacted and include the specific codes to be amended.

Section 4.23 notes steep slopes would be a potential safety hazard to the public and proposes a communication strategy with the public and lake users regarding the hazards and safety measures. Who is liable for injuries sustained by users due to the steep slopes caused by operation of KDRPP? Further, Section 4.2.4.2 notes that slope instability could result “where relatively steep or unstable areas are exposed” (pg 4-7) and that instability could be caused by “rapid drawdown, heavy or steady rain, a rain-on-snow event, and earthquake shaking.” While Reclamation proposes to refrain from rapid drawdowns, it is noted that rain-on-snow events could become more common in the future thus increasing the risk of exposed slope stability. How will this negative impact be mitigated?

Groundwater Impacts

Impacts to groundwater in the area could be severe to private property owners, public recreation sites, and wildlife and vegetation. Only 6 of the approximately 107 wells in the area were monitored; please describe how this number and their location is representative. The fact that the only 2 privately owned wells to be monitored were added after the 2015 EIS was published suggests that groundwater analysis is lacking.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells could run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza Irrigation District can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?
Both sections 3.5 and 4.5 indicate that “groundwater levels near the lake are influenced by lake elevations, especially during the dry time of the year when very little recharge is occurring and groundwater elevations are dropping because of discharge from the aquifer” (pg 3-57). Section 4.5.2 notes that well operations could be interrupted due to additional drawdowns, including the well supporting the USFS Kachess Campground (pg. 4-105/6). What the document does not indicate is the effect of lowered groundwater levels on vegetation in the area. Lowered groundwater levels would presumably dry out significant amounts of vegetation, further increasing wildfire risks in the area.

Wildfire risks have increased significantly in all Western states over the last decade, and the costs—both to fight the fires and the economic costs incurred by those damaged by fires—have significantly increased as well. To undertake a public works project that increases those risks is negligent.

The vegetation and wetlands (pg 2-70) and densely forested watershed (pg 3-98) will, according to the SDEIS, suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, Reclamation has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. I demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, Reclamation and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. I ask that this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD.

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria will these effects be calculated?

Insignificant Agricultural Benefits

For the overall cost of the project and the number and degree of negative impacts to the environment, wildlife and recreation, KDRPP does not even appear to address the need of Roza district water users to a significant degree. Under Alternative 1: No Action, proration occurs in 15 out of 90 years; under any of the action alternatives, proration occurs in 13 out of 90 years, a benefit of only 2 years. The document suggests that completing multiple additional projects would necessary to provide a meaningful improvement to proratable water users (Section 4.3.2, pg 4-19). The likelihood of securing permits and funding for the full list of projects needed to provide meaningful improvement is extremely low given the state of state and federal budgets. Undertaking KDRPP, and risking permanent drawdown of this lake, is not in the public’s best interest or the best use of taxpayer money.
At best, under the historical modeling, the action alternatives would “improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years” (Section 4.3.2, pg 4-19). However, agricultural demand for irrigation water is projected to increase due to climate change, at the same time that “natural runoff and streamflow in the system would decrease by 50% or more in some months when compared with the historic scenario; therefore irrigation demands and instream flow targets would have to be met by releasing larger amounts of water from the existing lakes. Currently, there are many years when the lakes are not capable of meeting these demands” (Section 3.12.3.4 Climate Change, Changes in Water Supply, pg. 3-138). Additionally, prolonged or multi-year droughts are expected to occur more frequently in the future (odds of a drought increase from 17% to 49% in any given year, according to Section 4.21.4, pg 4-329), and modeling under the adverse climate change scenario shows only a 3% improvement in proratable water delivery (pg 4-251). Further, the analysis finds that “the improvement under (the Action Alternatives) would be less in the third year of a multiyear drought because some of the inactive storage in Lake Kachess would be used in the first one or two years of drought, leaving less for a third year of drought” (Section 4.3.2, pg 4-19).

Section 3.21 notes that “agriculture is the third largest sector at the four-county scale” and accounts for approximately 11% of the four-county economy. No analysis is provided of the economic impact of the No Action alternative, only the conjecture that the impact of reduced prorated water supplies “could be greater than 1 percent of the agricultural sector output” (pg 4-323). Without this information, it is difficult to make a meaningful comparison between the economic impacts of the No Action and action alternatives. However, a comparison is not necessarily valuable given that Section 4.21.4 states that “the average annual impacts during operation on output, personal income, and employment are well below the 1 percent threshold for the impact indicators at the four-county regional level” (pg 4-325). If the economic benefit is projected to not meet the identified threshold of significance, why are Reclamation and Ecology considering implementing a project that could cost over $225M to construct (including interest, for the preferred alternative, though costs increase to $675M should another alternative be chosen) and $25M a year to operate, not accounting for potential cost increases of 30-50 percent?

In addition to providing only a negligible improvement in water deliveries under the adverse scenario (3% improvement), permanent risks to the lake and the surrounding wildlife and vegetation significantly worsen: “The predicted changes in snowpack and runoff associated with climate change would alter KDRPP operations by producing larger and more frequent drawdowns, and would more frequently result in years when Lake Kachess fails to refill” (Section 4.12.3, pg 4-238). “Compared with Alternative 1 under the adverse scenario, the mean lake level would be approximately 42’ lower over the period of record, and 20-90’ lower in drought years” (Section 4.12.5, pg 4-248). This is a significant difference that could lead to long-term impacts to groundwater levels, recreation opportunities, fish and wildlife habitat, and fire susceptibility of the region.

Recreation Impacts

Recreation was specifically authorized as an additional purpose of the Yakima Project in Section 1205 of YRBWEP in 1994, but it does not appear that any recreation organizations have been involved in the development of this plan, other than USFS. What outreach was made to recreation organizations, or users (such as the estimated 23,000 annual users of the Lake Kachess Campground), to provide notice of
this proposal? The DSEIS notes that a communication strategy related to the project is called for in the future, but why has one not been undertaken to educate and seek input on the project during the development stage? The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users, many with families that have been camping there for generations (such as my own), will be contacted and the timeline for this process.

Due to its proximity to the greater Seattle area, Lake Kachess is an invaluable recreation location; 3.61 million people in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area are within a roughly one-to-two hour drive of the camping, hiking, boating, fishing and other general opportunities to appreciate nature offered at this lake. Section 3.14 notes that “population increases have increased demand for recreation and the campground is routinely full... Kachess has a higher number of recreational visitors than Keechelus or Cle Elum Lakes... (pg 3-147) The Cle Elum Ranger District is the busiest in the area and its campgrounds tend to be completely booked on summer weekends... The Kachess Campground is the most popular in the district... (pg 3-149).” In addition, this section notes that dispersed recreation at informal camp locations along the lake is common in the summer when the campground is full.

Despite this increasing need, and the positive economic benefit it has for Kittitas County, this project could reduce recreation opportunities in the area by:

- Potentially impacting well operations at the campground and privately owned residences along the lake to a degree that these sites are unusable;

- Increasing the distance from the campground and residential areas along the west shore to the water line from 400’ at the current maximum drawdown to 1,500’ (over ¼ mile) at the proposed maximum drawdown. Section 4.10.4.2 (pg 4-215) notes that “In most areas, the reservoir pool would recede approximately 200 additional feet under the maximum drawdown condition...”;

- In addition to increasing the distance between users and the shoreline, the slope of the shoreline near some recreation areas would be hazardous to humans (and presumably animals attempting to access the lake for water) at 20-30 degrees near the campground and private development on the west side of the lake, and 20-40 or 40-60 degrees on the east side. These steep slopes also pose risks to boaters using the lake (Section 4.23, pg 4-343); and

- These reductions in recreation opportunities would then increase pressure at other nearby recreation sites such as Lake Cle Elum or Lake Easton.

Section 4.14 Recreation identifies two impact indicators for recreation: “loss of fishing access or reduction of fishing opportunities that exceeds current seasonal loss of use due to existing drawdown conditions; reduction of usability of recreation due to construction activities or the receding of the shoreline more than 100’ from the recreation site or with a slope greater than 20 degrees” (pg 4-275). The action alternatives have “major impacts on recreation” (pg 4-277) when evaluated by these
indicators. Mitigation proposed for the first impact indicator is a new boat launch on the East shore, which could be usable at all lake levels; no mitigation is proposed for the second impact indicator. This boat launch would be on the opposite shore (east vs. west) and lake end (south vs. north) of the lake from the campground: what is the drive distance and time from the campground to the proposed boat launch? How is this acceptable mitigation for campers? Would it really even be usable by them, or only by day visitors intending solely on boating? Due to the steep slopes, how would any boaters access developed recreation sites? What mitigation is offered for the “reduction of usability of recreation?”

Assuming that recreation (including camping, hiking, fishing, boating, day trips and the presence of secondary homeowners who conduct personal business in the area) is as negatively impacted as noted in the DSEIS, what are the economic impacts to Kittitas County and the four-county region as a whole? Section 3.21 notes that “the service industry is responsible for the most employment at the state and four-county scales and is roughly double the next largest sector” (pg 3-178); is recreation included as part of the service industry or does it stand on its own? State wide, outdoor recreation is a $26.2B industry, which provides for 201,000 jobs, generates $7.6B in wages and salaries, and produces $2.3B annually in state and local tax revenue; surely a fair share of that is going to this four-county region. This part of the economy is ignored in Section 4.21 Socioeconomics but deserves consideration or, at the very least, acknowledgement.

Negative Fish Impacts

While there are some positive benefits to KDRPP and KKC related to meeting desirable stream flows on certain river reaches during some parts of the year, the overall impact to stream flow is not positive. Further, the DSEIS notes that fish would need ten consecutive years of positive conditions in these reaches in order to boost their numbers to those projected in Section 4.6.7 (pg 4-147); given the climate predictions for the future, achieving ten consecutive years of positive conditions is highly unlikely, especially given that winter and spring flows are unlikely to meet targets, so the benefits of KDRPP for stream flows are even less significant. Section 4.6.2 notes that under all Action Alternatives, “increases in annual instream flows, and in July-August instream flows during drought years in the Easton Reach, would decrease the quantity of rearing habitat available to spring Chinook and rainbow trout subyearlings, resulting in a negative impact to these species during drought years” (pg 4-117). So although the same section notes that instream flows would be benefited in the spring, flows later in the year would be negatively impacted, which may negate the earlier benefits. The same situation is described for the Keechelus Reach: that instream summer flows are projected to be met more often, but winter and spring flows are negatively impacted; without meeting instream flows throughout the year, what benefit is it to these fish populations to meet flow targets only occasionally, and particularly when so many additional negative impacts would occur for these species in Lake Kachess?

Fish, including Bull Trout and salmon in Lake Kachess would be negatively impacted by all Action Alternatives in several ways, including increased turbidity (pg 4-117), decreased hydraulic residence time, lower minimum lake levels, reduction of shoreline vegetation, degraded thermal refugia for predator and prey species (pg 4-116), disturbances to fish near the pumps, and increased risk of entrainment in the facility (Table 4-79, pg 4-115). As noted above, the water temperature modeling is inadequate, so the potential benefit of lowered water temperature is questionable, as the DSEIS notes in several sections that water temperatures may increase due to prolonged or multi-year droughts.
Taken together, these impacts result in a reduction of available prey within the lake, more overlap between predator and prey species, reduced feeding efficiency of predators that visually locate prey, and reduction in habitat complexity. Section 3.6.2.1 notes that “Kokanee in Lake Kachess exhibit slow growth and small size at age compared to other lake populations and the population is at risk of a feed and growth bottleneck in summer” (pg 3-74); KDRPP puts this population at further risk. Prior to the construction of the Kachess Dam, Lake Kachess supported a variety of anadromous species that no longer have access to the lake (pg 3-66); KDRPP would put those species left in the lake at further risk of survival.

Section 3.2.3 notes that “around the rim of Lake Kachess, 31 creeks flow into the lake from the uplands. Twenty-two creeks flow into the Little Kachess basin” (pg 3-7). Section 4.3.10 (pg 4-77) specifically notes that bull trout would be adversely affected by the loss of access to upstream tributaries. How will connectivity to these creeks be mitigated when the lake is 80’ lower and up to 1,500’ farther away from their current connection points?

The only negative impact that is proposed to be mitigated by this project is the loss of connection between Little and Big Kachess Lakes: the Volitional Bull Trout Passage Improvement would be constructed. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed; this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage. Purporting that this “improves surface water connectivity” is a misstatement – it replaces a naturally functioning connection that this project completely destroys. No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Further, there is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo- and geo-receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage; the length, slope, and other characteristics of the passage will not deter Bull Trout passage; the returning redds will be able to find the entry point of the volitional passage; and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population. I ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually...
are), and mitigating with improved populations elsewhere. Page 1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives meet these legal requirements?

Yakima Project is a System

The Yakima Project includes five major storage reservoirs that provide irrigation water to six districts, as well as flood control, instream flow requirements, and municipal uses. As is clearly stated in Section 1.2.1 Yakima Project (emphasis added): “Reclamation manages these storage reservoirs as a system, and does not designate any one reservoir or storage space to a specific irrigation district.” How does allowing one particular district to build and operate this project on one particular reservoir meet the objective of managing these reservoirs as a system? To a taxpaying, recreating citizen, it appears to be a taking of a public good for the economic development of private entities, which undertook a risky business venture attempting to start or maintain a farm in a district without Senior water rights.

How will those with senior water rights to the existing 239,000 acre-feet of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? I request this be further studied, possible impacts of the SDEIS action alternatives communicated to those senior water rights holders, and another public comment period opened for their comments.

Besides not providing a significant amount of water in drought years, this water is likely to be wasted due to the condition of the irrigation canals used by Roza. The district’s canal system is 97 miles long, and 67 miles of these canals are unlined, open air, earthen ditches built in the Yakima desert. In a 2016 Capital Press article, Roza representatives state that water seepage in these earthen ditches “is lessened by fast flowing water creating a hard pan of silt on the canal bottom.” However, during drought, when the water has slowed considerably, this layer of silt is broken up and dispersed, causing the canals to leak. Before undertaking any projects that would take additional water from reservoirs, all of these canals must be improved with concrete or plastic liners to prevent water waste. I ask that the efficiencies gained by improving these canals be analyzed, and the results shared with the public for review and comment.

The fact that only one of the six irrigation districts has expressed genuine interest in this project suggests that it is for the benefit of the few and not the whole. Rather than implement a costly public works project with significant negative environmental and public impacts, perhaps a more systemic solution could be found that creates appropriate incentives for all water users to use water sustainably. Section 1.2.3 notes that a Market Reallocation effort is a part of the Integrated Plan. This would reallocate “water resources through a ‘water market’ or ‘water bank’ where water rights would be bought, sold or leased on a temporary or permanent basis to improve water supply and instream flow conditions.” Such a solution would create incentives for all water districts, not just those that are
proratable users, to invest in water conservation methods that allow water to be used more wisely. Given the fact that KDRPP cannot meet the projected need (and falls far short of meeting that need given climate change assumptions), implementing a water market reallocation first makes much more sense. If such a reallocation were highly successful, it might negate the “need” for KDRPP or any of the other public works projects proposed as part of the Integrated Plan.

Additional storage for water that is currently “wasted” could also be effective in meeting some of the need without causing permanent, or long-term, negative environmental and recreational impacts. Section 4.3.7 notes that “in most years, Reclamation spills water from Lake Keechelus because it cannot store all of the runoff from its watershed” (pg 4-49). Section 3.12.2.1 notes that “snowpack is considered the ‘sixth reservoir’ in the Yakima River basin... (but that) only about 30% of the average annual total natural runoff above the Parker stream gage can be stored in the current Yakima River basin reservoirs” (pg 3-134). Winter flows in the Yakima River area high and are projected to increase. Are there alternative storage options for this water that is currently not put to use later in the season when demand is high? Aside from an additional reservoir, could water be stored on farms in cisterns for use on demand? Are there other out of the box ideas that could be considered that might offer greater flexibility with less cost? Please explain how these alternatives have been considered in this process, the degree to which they meet the need of project proponents, their cost, and why they are not included as alternatives in this document.

Cumulative Impacts

After reading the entirety of this DSEIS, it is extremely difficult to understand how the project proponents can assert that there would be “ongoing beneficial effect” for vegetation, and “no cumulative impacts” to surface water, reservoir elevation, ESA-listed fish, or land use. The following are excerpts from the DSEIS describing the level of Lake Kachess under Alternative 2 (which is representative of all Action Alternatives) as compared to Alternative 1, emphasis added (Section 4.3.4, pg 4-23 and 4-25):

- ...levels would be lower than those under Alternative 1 in 44 years out of 90 years modeled. In 31 of the 44 years, Alternative 2 had a lower Lake Kachess level than Alternative 1 for every day of the year... both when Reclamation operates KDRPP in drought years and in years following droughts when the lake is refilling to its normal operating levels.

- Lake Kachess would be below the level at which the two lake basins become separated (elevation 2,220) in 76 out of 90 years modeled, and increase of 3 years from Alternative 1. The mean duration would be 154 days per year, an increase of 76 days per year compared with Alternative 1. ... The duration would increase during all months under Alternative 2; under Alternative 1, the separation of the lake basins occurs from Sept to March.

The DSEIS claims, almost consistently, that Lake Kachess would refill in 2-5 years following a drought, however, this is based on “the historical record of droughts.” Even without accounting for the adverse climate change scenario, more recent historical records suggest that it is unlikely the lake would refill within 2-5 years (emphasis added):
During multiyear drought conditions such as those in 1992-1994, Reclamation would draw the lake down as much as 80’ below the existing outlet elevation. Following a multiyear drought comparable to that of 1992-1994, lake levels would recover to normal operating levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the lake would be drawn down to 50’ below the existing outlet elevation. Full recovery would not have been achieved until 2008, because of a series of dry years (2003 & 2004) and a subsequent drought (in 2005). During the 2005 drought year, the lake level would be 40’ below the existing outlet elevation. (pg 4-25)

Given that the adverse climate change scenario predicts that droughts are nearly three times more likely in any given year, it is reasonable to conclude that following a significant drawdown, Lake Kachess might never refill completely. This is most certainly a “cumulative impact,” not only to surface water, reservoir elevation, fish, and land use, but more generally to the recreating public or those that value the environment in its own right. Please explain how the conclusion of “no cumulative impact” was reached.

Beyond the environmental and recreational impacts of concern above, the construction, maintenance and operating costs are also a significant cumulative impact to the public. Although the Proratable Entities claim to intend to undertake and pay for the project themselves, there is dissention among their ranks with some members foreseeing an inability to pay for the water resulting from the project, and presumably all of the associated project construction and operating costs. As disclosed in the DSEIS, construction costs could range from $225M-$675M (depending on the selected alternative) and operating costs could be as high as $25M annually. Construction cost estimates for the project alternatives could increase by 30-50% (depending on project alternative), and inflation is not accounted for in the annual maintenance and operation estimates. This is an unacceptable cost to add to taxpayer burden at the same time that recreation opportunities are taken from the public.

Overall, the benefits associated with the small amount of water provided do not outweigh the significant negative environmental and recreational impacts. I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Respectfully Submitted,

Jayme Jonas
[EXTERNAL] concerns re Lake Kachess and KDRPP

1 message

Tina Kelley <tinapetekate@yahoo.com>  
Reply-To: Tina Kelley <tinapetekate@yahoo.com>  
To: "kkbt@usbr.gov" <kkbt@usbr.gov>  

Tue, Jul 10, 2018 at 6:55 PM

To Whom It May Concern,

With my husband, I am a 50% cabin owner on the east side of Lake Kachess and our family has had this property for four generations. We hold a senior water right - our cabin is served by a newly constructed well. Members of my family spend their summers at the cabin, including my in-laws, aunt and uncle, and cousins. Our property and our quality of life stand to be affected by the plan. I have a number of concerns and questions about the Kachess Drought Relief Pumping Plant proposals that I would like the agency to address:

1. How much water would be made available to the downstream farms via the KDRPP, compared to how much could be available through the adoption of drip irrigation systems and other water conservation methods?

2. What would be the cost of drip irrigation systems sufficient to provide the same amount of water to the farms as the KDRPP? Please include in this analysis the dollar value of Lake Kachess’ recreational value and the value of the bull trout population.

3. How much dust would be generated by wind hitting the dry lakebed when the lake would be drawn down in drought years? What would be the health effects of that dust to cabin owners? Our family includes people who suffer from asthma and allergies. Would there be compensation for medical expenses and nights when we would not be able to stay at the cabin due to dust? If so, what amount of compensation would be offered for medical expenses and nights when the cabin was uninhabitable?

4. What is the explanation for the senior water rights of our family being overruled by the junior water rights of the interests downstream? Would our family be compensated for the taking of those rights, and if so, in what amount?

5. What decibel levels would the pump generate, and for how many hours per drought year?

6. What protections are contemplated for the fossil bed on the southwestern shore of the lake?
7. What is the plan for disposal of PCB-contaminated soil from the project, and how much will that disposal cost?

I look forward to receiving a response to these questions.

Thank you,

Elizabeth Kelley

Tina Kelley
author, Abloom & Awry, (CavanKerry Press, April 2017)
on Twitter
on Facebook
on poetry
[EXTERNAL] KDRPP & KKC SDEIS comments

1 message

Carolyn Kitchell <carolyn.kitchell@gmail.com> Tue, Jul 10, 2018 at 11:20 PM

To: kkbt@usbr.gov

July 10, 2018

To the Bureau of Reclamation concerning the KDRPP & KKS SDEIS,

As landowners and tax payers in Kitsap County on Lake Kachess for 28 years, we have several questions:

How are landowners whose wells run dry going to be compensated for loss of water and loss of land values in this plan?  

How will you address the loss of genetic diversity and natural migration of trout?  

What will happen to other wildlife?  

How will you address that the lake water will be unavailable to fight forest fires?  

What water conservation efforts will be imposed downriver in every town before you drain a natural mountain lake? For example, will you limit watering gardens in the summer, washing cars? Will you hand out shower and faucet heads that limit water use?  

Will you require that leaking and water wasting irrigation for farmers be corrected?  

Will you include equal limits on senior and junior water rights owners?  

Will you correct unfair laws and level the playing field between senior and junior water rights?  

Will you work with our universities and worldwide experience to try new methods such as flooding fields in the spring runoffs to replenish aquifers and help crops prosper?  

Should we consider rearranging what crops are grown?  

Maybe ethically we need to consider what we will be getting for what we are destroying? Timothy hay for Japanese horses vs loss of a U.S. mountain lake.
How will you compensate all the people who camp at the public campground and hike, swim and fish the lake?

How will you address the loss of their summer vacation spots?

This is not fiscally sound. The federal government and Washington state should not pay a dime for this plan.

The Yakima River Valley is a desert in July, August, September, which is why they Bureau of Reclamation built the dams on the mountain lakes over 100 years ago and then depleted them below their natural levels. They raised Lake Kachess 50 feet but then they take that and another 50 feet. This system has lasted for 100 years but now the Yakima River Valley has outgrown these needs. Maybe it’s me to have everyone in this valley conserve water.

What will happen when the lakes can no longer replenish the annual drainage?

We do not want a pump station on Lake Kachess. If a pump station is the choice we do not want any of our tax dollars to pay for it. The people who use it should pay for it and the management costs. If you make people pay for it, they will be less likely to squander the resource.

Please send us answers to our questions and a copy of your decision.

Sincerely,
Carolyn & Robert Kitchell
760 Via Kachess Road
Easton, WA 98925

Mailing address:
Drs. Robert & Carolyn Kitchell
233 36th Ave E
Seattle, WA 98112
[EXTERNAL] Input to SDEIS for KDRPP
1 message

dicklanden@aol.com <dicklanden@aol.com> Sat, Jul 7, 2018 at 10:10 AM
To: kkbt@usbr.gov, bocc@co.kittitas.wa.us, laura.osiadacz@co.kittitas.wa.us, obie.obrien@co.kittitas.wa.us

please read and place in the record of proceedings

KachessSaving2018.docx
17K
See bottom lines for Congressman Reichert and Land Commissioner Franz comments

I am a former "Rocket Scientist" who has studied the facts and falsehoods surrounding the SDEIS For the KDRPP/YBIP and find that even I cannot understand the logic and the conclusions drawn by Roza advocates proposing the pumping water plans for Kachess Lake!

Pumping down and ultimately creating permanent damage to one of the areas greatest lakes, Kachess, does not benefit anyone especially the local farmers. Roza spokespersons do not fairly represent the ultimate monetary damage to water users who would be paying unacceptable fees to obtain water that may not even be needed and in subsequent years not having the water because the lake cannot recover. The irrigation district could use their dollars much more effectively by enhanced studies and engaging in better and more advanced water conservation methods. Tube siphoning and open canal transport have no place in efforts to conserve and provide for future water resources.

In addition, who can calculate the environmental impact to the recreational, water sourcing, fire prevention capacities, let alone the damage to the fisheries/trout saving efforts, from noise pollution, and wasted energy consumption.

The proponents say that if difficulties arise that they can be "mitigated"-you cannot recover drained and clogged wells, burned forests, and loss of tax dollars due to real estate devaluations and decreased recreational spending.

The following quotes even show how our elected officials feel about protecting/preserving the area. These are precious resources to thousands of guests, visitors, property owners and, as it stands today, renewable water resources. As a comparison, what Californians wouldn't want to turn back the clock from the mis-use of the Colorado River resource?

I strongly support for the SDEIS to conclude and accept alternative one: NO CHANGES.

Signed: Dick Landen, 22820 148th Ave Se, Kent, WA and 3160 Via Kachess, Easton, WA, July, 2018

1.) Dave Reichert, Newsletter, June, 2018

This week, the House overwhelmingly passed my bipartisan bill, the Mountains to Sound Greenway National Heritage Act (H.R. 1791), to designate the Mountains to Sound Greenway as a National Heritage Area. The spectacular landscape of the Mountains to Sound Greenway encompasses a vibrant mix of small towns, working farms, lush forests, and rugged mountains alongside one of the largest and fastest growing metropolitan areas in the country, tracing along Interstate 90 from Seattle, across the crest of the Cascade Mountains, to Ellensburg in Central Washington. This bill not only promotes this beautiful land, but it also includes important protections for private property owners and tribal communities.

I am proud of the work Rep. Adam Smith and I have done on this bill, and I am grateful for the support of government officials, businesses, outdoor recreation groups, and conservation and heritage organizations, including the Mountains to Sound Greenway Trust and Outdoor Alliance. Now, I urge the Senate to take up this important legislation, so that the Mountains to Sound Greenway receives the full recognition it deserves.

2.) Springtime seems to initiate a sense of excitement, knowing that we're one step closer to warmer weather and long summer days. Here at the department, we're moving full steam ahead to get ready for warmer temperatures, from opening up 17 miles of new mountain bike trail to readying our Vietnam-era helicopters for this year's fire season.

And, with Mother's Day right around the corner, it's a great reminder that each of us can inspire the next generation to be stewards of the outdoors, value public lands, and enjoy all that nature has to offer. As a mother of three boys, I hope you'll join me in celebrating the Washington moms out there this Mother's Day. With much gratitude, Commissioner of Public Lands, Hilary S. Franz, May, 2018

March 2019

SDEIS-CR-877
[EXTERNAL] Kachess Drought Relief Pumping Plant
1 message

Tom Lee <leeth89.tl@gmail.com> Tue, Jul 10, 2018 at 2:07 PM
To: kkbt@usbr.gov

Addressed to Ms. Candace McKinley, Environmental Program Manager of the US Bureau of Reclamation.

Ms. McKinley,

It has come to my attention that the "Kachess Drought Relief Pumping Plant" are plans in place to drain the beautiful Lake Kachess, below its natural level in order to provide additional irrigation to the Roza district of Kittitas county during times of drought.

As an environmentally conscious American and an enthusiastic angler, I am concerned with how this could effect native fish populations as well as public access to the lake itself, being on public lands.

As an Engineer by trade I have looked over the plan overview availability on ecology.wa.gov and have concerns that the issue it seeks to solve would be better served by updating and improving the efficiency of the water transfer infrastructure and dykes between Kachess and the Roza district, in a way that preserves the lake's natural water levels and pristine beauty while still providing irrigation improvements to the water recipients in lower Kittitas county.

Being contained within the boundaries of the Wenatchee-Okanogan National forest, the lake and its surrounding grounds belong to the American people and should be used to serve the peoples needs and desires more heavily considered over the needs of a select few business owners who chose to set up their operation in a drought prone area.

I would like to close by making it clear that I oppose the construction of the "Kachess Drought Relief Pumping Plant".
Dear Ms. McKinley,

In addition to my other comments on the KDRPP and KKC SDEIS give to the recorder at the Cle Elm meeting, I have the following comment:

Section 3.9.3 of the KDRPP and KKC SEIS has a short section on bull trout, but virtually no information on Box Canyon Creek. Attached is a photo taken on October 18, 2018, where Box Canyon Creek disappears into the mud flats created by the existing draw down of Lake Kachess. How will the endanger bull trout survive, thrive and spawn if the KDRPP removes even more water? I request a second SDEIS to thoroughly address the issues of protecting the bull trout from extinction and protecting its spawning grounds, in particular in Box Canyon Creek, to include detailed plans of proven methods.

The photo also shows efforts by Washington Department of Fish and Wildlife (WDFW) to create an artificial channel from Little Kachess Lake to Box Canyon Creek by the use of plastic and straw bales, which have been scattered and allowed to enter the water. This would appear to be a discharge of pollutants (straw and plastic) into Lake Kachess. Did the WDFW obtain a National Pollutant Discharge Elimination System (NPDES) permit or a Department of Ecology 401 Water Quality Certification, or a Shoreline Management Act Substantial Development Permit for this project?

As requested in Cle Elum, I would also like copies of all comments made with respect to the 2018 Kachess SDEIS.

Thank you.

Ann Lewis

roniaspamonia@gmail.com

86 – 157th Ave SE

Bellevue, WA  98008
Dear Ms McKinley,

“I am opposed to any of the Kachess SDEIS active alternatives (2-5); the pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Please leave Lake Kachess alone.”

It seems irresponsible to drain Lake Kachess in time of drought and then refill from Lake Keechelus later until all alternatives including water conservation, water efficiency, and water marketing thoroughly explored.

I have concerns about fire suppression in times of drought for the area if the lake is lowered.
I have concerns about the water quality for fish etc in the water from Lake Keechelus, due to road runoff. Do we want to move that water to Lake Kachess?
I have concerns about how the lowering of the lake will effect the recreational usage in the area and also the neighboring houses and their wells.

Again I support only the first NO ACTION Alternative,
Sincerely.
Elizabeth Modery
16209 NE 2nd street
Bellevue, WA 98008
Re: Lake Kachess

Dear Ms. McKinley:

I strongly disagree with the proposed KDRPP and also KKC projects. No one has any idea of the cost of these programs. There are not even informed guesses.

I no longer own property at Lake Kachess. However, this is a beautiful and natural lake, and I am appalled at what is being proposed. Having observed the lake for about 25+ years, I can say with certainty that one year will not recharge the lake after a drought year. Perhaps three might.

The portion of the lake to be utilized, I think about 60 extra feet, will put the low water mark lower than the lake has ever been, and no one really knows what will happen then. If there is a drought the following year, there will be no water left to draw down. There are drop-offs not that far from shore. If you have cliffs left, there will be no water access for fire protection, and the campground will be closed for good. The fire protection alone is a huge liability.

Somehow the project managers have convinced people that farmers will get more water in a drought year. Well the Indians have first water rights, and if the salmon redds get low, no one gets anything.

Exactly why would a government spend $5 billion on something they may not even use? Or at least, that is what they said at one meeting. Right, we are just going to sit on this for 30 years in case we need it.

Farmers aren’t stupid. I met several young ones at one of the meetings, and all of them told me that the cost of this project would drive them out of business. One said he specifically bought property with a well, and planted what he knew would be prudent to grow because he had junior water rights. This was the same meeting that a KRD official said there was “extreme likelihood” of a drought the following spring. Approximately three days later it snowed heavily and all drought danger was past.

Kachess Lake (not reservoir) is a natural resource of Kittitas County, and I do not know why we would ruin it. I know that once the water is gone, it is not coming back. Just because a bad decision has been made, it does not mean it is set in stone and can never be changed.

I implore you to reconsider this project.

Sincerely,

Lee Mundy
March 2019
Hello Ms. McKinley,

Please find my comments on the Kachess Drought Relief Pumping Plant project attached.

Thank you,
Alyse Nelson

comments_alyse_nelson.pdf
119K
Alyse Nelson  
8061 Sportsman Club Rd NE  
Bainbridge Island, WA 98110  

Bureau of Reclamation, Columbia-Cascades Area Office  
Attention: Candace McKinley, Environmental Program Manager  
1917 Marsh Road  
Yakima, WA 98901-2058  
kkbt@usbr.gov  

Dear Ms. McKinley,  

I have enjoyed recreating at Lake Kachess with family and friends for nearly a decade. It is a beautiful area that is particularly special due to its close distance to dense urban areas of the Puget Sound. Please find my comments on the Kachess Drought Relief Pumping Plant (KDRPP).  

The KDRPP is not a public benefit and must not be enacted, either by the Bureau of Reclamation and Department of Ecology, or by the Proratable Entities interested in implementing it. It is inconsistent with adopted plans, the analysis is based on missing data and questionable assumptions, proposed mitigation is lacking, groundwater impacts could be detrimental to property owners and public recreationists, there are insignificant agricultural impacts given the negative recreation and environmental impacts, lake habitat for fish is negatively impacted, and it could potentially increase the fire susceptibility of the area while decreasing the ability of emergency responders to fight fires. It also radically changes the use of the Yakima Project, which has been managed for over 100 years as a system for all users and instead essentially earmarks one reservoir for one irrigation district.  

Inconsistency with Mission and Adopted Plans  
Comprehensive planning within the State of Washington requires that all plans and projects be consistent with adopted policies; KDRPP does not appear to meet that test in several regards, including contrasting with the mission of the proposing agencies.  

The opening page of the DSEIS cites the missions of the US Department of the Interior, the Bureau of Reclamation, and the state Department of Ecology. While all agencies have mission facets that can compete with one another, making mission-project consistency a balancing act, this project does not fit with the adopted missions more than it does.  

- Though the US Department of the Interior is directed to “supply the energy to power our future,” this part of the mission is tertiary to protecting natural resources, which KDRPP does not do. Instead, it denigrates a natural environment in order to provide economic benefit to a small group.  

- Reclamation is directed to “manage, develop and protect water” and clearly KDRPP fits within that purview. However, Reclamation must also do this work “in an environmentally and economically sound manner,” which is not descriptive of the proposed project.  

- This project is most inconsistent with the state Department of Ecology’s mission to “protect, preserve and enhance Washington’s environment, and promote the wise
management of our air, land and water for the benefit of current and future generations.” Undertaking KDRPP has significant negative environmental and recreational impacts which are not consistent with Ecology’s mission.

The DSEIS states in Section 4.3.3 that “Alternative 1 No Action does not meet the purposes of the Proposed Action because it does not address water supply for proratable irrigators or instream flow conditions in the upper Yakima River basin” (pg 4-21). Later, in Section 4.24 (pg 4-349) the DSEIS suggests that the proposed project meets several of the Integrated Plan’s goals when, in fact, it does not. The noted goals include:

- Provide opportunities for comprehensive watershed protection, ecological restoration and enhancement, addressing instream flows, aquatic habitat, and fish passage

This plan does not provide “comprehensive watershed protection” and instead increases the vulnerability of an entire watershed to wildfire risks by lowering groundwater levels and reducing access to surface water for emergency responders. No ecological restoration or enhancement is provided other than improving a minority of instream flows analyzed; negative impacts are projected for aquatic habitat in the lakes and for fish passage as well.

- Improve water supply reliability during drought years for agricultural and municipal needs

While KDRPP does provide some benefit in drought years, it is insignificant when the adverse climate change scenario is modeled. A 3% gain in water is hardly worth the negative environmental and recreational impacts that could permanently occur.

- Improve the ability of water managers to respond and adapt to potential climate change effects

As noted above, potential climate change effects would severely limit the benefit provided by KDRPP.

- Contribute to the vitality of the regional economy and sustain the riverine environment

As noted above, while there are some instream flow objectives that would be met, not all flow targets would benefit and some are projected to worsen. KDRPP does not meet the established economic indicator threshold of 1% and ignores the negative impacts to what is likely a large sector of the economy: recreation.

Further, KDRPP is inconsistent with several adopted plans at both the County and Federal levels.

- Kittitas County Shoreline Master Program (SMP): Lakes Keechelus and Kachess are designated as lakes of statewide significance under the State Shoreline Management Act. The Kittitas County SMP designates the shoreline of both lakes as “conservancy shoreline environment,” which requires “maintaining the natural character of the shoreline area” (Section 3.15, pg 3-161). The development of any of the pumping facilities would be in conflict with this requirement as they would significantly alter the character of Lake Kachess.

Section 3.15 further goes on to state: “Under the draft SMP, the majority of both lakes would be designated as rural conservancy. The purpose of the rural conservancy
environment is to protect ecological functions, natural resources, and valuable historic and cultural areas in order to provide for sustained resource use, natural flood plain processes, and recreational activities.” All of these elements of the Lake to be protected would be negatively impacted by KDRPP.

- Ecology Upper Kittitas County Groundwater Rule (WAC 173-529A): Section 3.5.1 notes that Ecology in 2011 placed a moratorium on the development of new unmitigated groundwater withdrawals in upper areas of Kittitas County (pg 3-53). On its face, it does not seem that a project that could further deplete groundwater resources in this area could be consistent with this rule. How is KDRPP compatible with this rule?

- Forest Service Criteria, 1990 Wenatchee National Land and Resource Management Plan for Lake Kachess: The USFS has designated Lake Kachess as land allocation Developed Recreation (RE-1) Retention VQO, Scenic Travel 1 and 2 Retention VQO, and Partial Retention VQO. As stated in section 3.10.4, “The USFS considers visual quality to be one of the most important resources to be protected under this land allocation” (pg 3-127). Due to the changes in pool levels that would make the lake a less dominant element on the landscape, the proposed project is not consistent with these Forest Service criteria.

Modeling/Data Analysis Questions

A number of admissions within the DSEIS cast doubt on the accuracy and usefulness of the modeling used in the analysis and even note aspects of the project that were not included in modeling or evaluation. Data and analysis that are outright missing from this document include:

- Section 3.7: no formal wetland delineations or plant surveys were conducted for this analysis.
- Section 4.4.2 (pg 4-81): “Lake Keechelus was not included in drought operations surface temperature modeling completed by PSU” and “Extended or multi-year drought, or refill conditions were not included in the PSU water temperature model and potential effects of these conditions are not quantified.”
- Section 4.4.7.2 (pg 4-98): water temperature effects and their impacts on the Little Kachess basin from the inflow from Keechelus (through KKC) are unknown, indicating that this aspect of the project was also not modeled.
- Section 4.6.4 (Pg 4-129): “Additional hydrodynamic modeling is needed to precisely estimate reductions in zooplankton abundance…”
- Section 4.10: SketchUp (or similar) renderings of all proposed facilities to aid in adequate visual quality analyses are absent. Enough details are provided regarding building mass and location, and amount and location of vegetation to be cleared to provide these basic models as evidence in this document.
- Section 4.21: The socioeconomic analysis does not analyze the No Action alternative for economic impacts. This glaring lack of data makes it impossible to compare the predicted economic impacts of the alternatives.
- Section 4.21: The socioeconomic analysis also does not describe the impacts of the project to the recreation economy of the four-county region. Despite noting in Section 3.14 that “visitors to the lakes are an important part of the economy of upper Kittitas County” (pg
the economic analysis does not account for the recreation industry or even describe it as a piece of the whole 4-county regional economy.

One of the fish habitat “benefits” noted in the DSEIS is reduced water temperature in Lake Kachess due to reduced shallow water areas that would be warmed along the shoreline. The acknowledgement that modeling of prolonged droughts that could result in multiyear drawdowns of the Lake raises questions about the accuracy of this identified “benefit” and is among other questions raised by admissions within the DSEIS:

- Section 4.3.7 (pg 4-60) discusses differences that are “likely due to reservoir balancing in the modeling that may not occur during actual operation” but no explanation is given about how actual operation may differ from what is reflected in the modeling. Are these differences based on assumptions built into the model that are not accurate or is “reservoir balancing” too complex to accurately capture in a model? This statement should be better explained to either acknowledge deficiencies in the model or the highly variable nature of reservoir operation.

- Water temperature in Lake Kachess is predicted to decrease with drawdowns, but Section 4.6.4 notes “there is uncertainty around whether prolonged droughts... could cause warming.” Is this uncertainty related to the fact that multi-year and prolonged droughts were not modeled? What is the level of uncertainty? Why were prolonged droughts not included in the modeling?

- A discrepancy is found in Section 4.7.4 (pg 4-156) which states that it could take 2-8 years for Lake Kachess to return to normal operating levels, as opposed to all other sections of the document which refer to a 2-5 year refill period. With the predicted increase in frequency of droughts, how was the refill period determined?

In addition, there are some aspects of the analysis which are not explained adequately, such as:

- How is target pool elevation determined? If Kechelus does not meet its “target pool elevation” in some years following drought pumping of Kachess, how much longer would it take for Kachess to refill, assuming KKC is implemented?

- Construction methods and plans are fairly detailed for all aspects of the proposed project except for the Volitional Bull Trout Passage Improvements. Why is there no detailed construction data for this element of the project?

- KDRPP was originally proposed to allow pumping of 50,000 acre-feet of water from Lake Kachess but this number has increased to 200,000 acre-feet. What instigated this significant change in the amount of water to be pumped?

- Section 4.13.4.2 notes that noise from operation of the pumping plant is “anticipated” to fall within a certain range. The construction noise analysis is relatively detailed compared to the analysis of operations. Why is noise data from similar projects not cited or used as a proxy for this analysis? Additionally, the noise analysis notes that the closest noise sensitive receptors would not be affected but does not detail what these receptors are. What are the closest noise sensitive receptors, and where are they located?

- Section 4.15 notes that KDRPP would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” What regulatory guarantees are in place to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed? This is a relevant question
given the fact that the original 1902 legislation authorized the Tieton and Sunnyside divisions of the Yakima Basin (Section 1.8.1), but others have been added over time. How will Reclamation prevent other new agricultural uses from demanding additional water from this project which were not originally intended?

Further, it is not even clear that limiting agriculture to existing uses is even intended. Section 4.21 notes that the model allows for identification of agricultural activity that “could” occur (pg 4-319), which seems to allow the door to be open for more or intensified agricultural uses.

- Section 4.21 suggests that the Volitional Bull Trout Passage Improvements are expected to have positive economic benefits (pg 4-324). In what way would these improvements have economic impacts? What additional detail is needed about these improvements to estimate their economic impact?

Completely missing from the SDEIS (perhaps best located in Section 4.23 Health and Safety) is an analysis of the impact of the project on the fire susceptibility of the surrounding area and the ability of emergency responders to utilize water from Lake Kachess to fight fires that occur. Local fire departments make use of water from Lake Kachess to fight fires in the area; how have these organizations been involved in this process and what mitigation is proposed to address this potential issue?

**Mitigation**

Mitigation measures proposed in the SDEIS are severely lacking. While detailed mitigation methods are proposed related to the construction of the proposed facilities, few definitive mitigation methods are proposed for the negative impacts stemming from the operation of the proposed facilities. Those sections missing proposed operational mitigation methods include:

- 4.2.5.2: (pg. 4-9) Erosion control measures would be implemented prior to implementation of the project “if erosion is identified as a problem.” Isn’t an EIS the opportunity to identify erosion as a problem? If not identified as a problem at this stage, when would it be identified prior to implementation of the project? What types of erosion control measures would be implemented?

- 4.5.4: (pg 4-106) A well monitoring program is proposed to be implemented to analyze groundwater levels associated with drawdown but no “appropriate mitigation strategies” are identified for implementation.

- 4.6.10: (pg 4-148) A water quality monitoring program is proposed to be implemented to document changes in water temperature but no subsequent mitigation is proposed to address water quality impacts to fish.

- 4.13: Noise mitigation only addresses construction, not operation of the project.

- 4.14: A myriad of negative impacts on recreation are identified but no mitigation is proposed, other than a boat launch on the opposite end of the lake from the campground. Will alternative recreation sites for activities other than boating or fishing be provided elsewhere?
At the very least, mitigation strategies utilized by other agencies on similar projects with similar effects could be listed as examples of what Reclamation and Ecology might implement, should any future negative effects occur.

As detailed above, Section 4.15 notes that the project would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” Specific regulatory restrictions should be put in place as mitigation for this project to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed. Without these measures, Reclamation could not prevent other new, or intensifications of existing, agricultural uses from demanding additional water from this project.

Section 4.23 notes steep slopes would be a potential safety hazard to the public and proposes a communication strategy with the public and lake users regarding the hazards and safety measures. Who is liable for injuries sustained by users due to the steep slopes caused by Roza’s (or Reclamation’s, in the event Roza cannot pay for construction and continued operation of the facility) operation of KDRPP? Further, Section 4.2.4.2 notes that slope instability could result “where relatively steep or unstable areas are exposed” (pg 4-7) and that instability could be caused by “rapid drawdown, heavy or steady rain, a rain-on-snow event, and earthquake shaking.” While Reclamation proposes to refrain from rapid drawdowns, it is noted that rain-on-snow events could become more common in the future thus increasing the risk of exposed slope stability. How will this negative impact be mitigated?

Groundwater Impacts

Impacts to groundwater in the area could be severe to private property owners, public recreation sites, and wildlife and vegetation. Only 6 of the approximately 107 wells in the area were monitored; is this number and their location representative? The fact that the only 2 privately owned wells to be monitored were added after the 2015 EIS was published suggests that groundwater analysis is lacking.

Both sections 3.5 and 4.5 indicate that “groundwater levels near the lake are influenced by lake elevations, especially during the dry time of the year when very little recharge is occurring and groundwater elevations are dropping because of discharge from the aquifer” (pg 3-57). Section 4.5.2 notes that well operations could be interrupted due to additional drawdowns, including the well supporting the USFS Kachess Campground (pg. 4-105/6). What the document does not indicate is the effect of lowered groundwater levels on vegetation in the area. Lowered groundwater levels would presumably dry out significant amounts of vegetation, further increasing wildfire risks in the area. Wildfire risks have increased significantly in all Western states over the last decade, and the costs—both to fight the fires and the economic costs incurred by those damaged by fires—have significantly increased as well. To undertake a public works project that increases those risks is negligent.

Insignificant Agricultural Benefits

For the overall cost of the project and the number and degree of negative impacts to the environment, wildlife and recreation, KDRPP does not even appear to address the need of Roza district water users to a significant degree. Under Alternative 1: No Action, proration
occurs in 15 out of 90 years; under any of the action alternatives, proration occurs in 13 out of 90 years, a benefit of only 2 years. The document suggests that completing multiple additional projects would necessary to provide a meaningful improvement to proratable water users (Section 4.3.2, pg 4-19). The likelihood of securing permits and funding for the full list of projects needed to provide meaningful improvement is extremely low given the state of state and federal budgets. Undertaking KDRPP, and risking permanent drawdown of this lake, is not in the public’s best interest or the best use of taxpayer money.

At best, under the historical modeling, the action alternatives would “improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years” (Section 4.3.2, pg 4-19). However, agricultural demand for irrigation water is projected to increase due to climate change, at the same time that “natural runoff and streamflow in the system would decrease by 50% or more in some months when compared with the historic scenario; therefore irrigation demands and instream flow targets would have to be met by releasing larger amounts of water from the existing lakes. Currently, there are many years when the lakes are not capable of meeting these demands” (Section 3.12.3.4 Climate Change, Changes in Water Supply, pg. 3-138). Additionally, prolonged or multi-year droughts are expected to occur more frequently in the future (odds of a drought increase from 17% to 49% in any given year, according to Section 4.21.4, pg 4-329), and modeling under the adverse climate change scenario shows only a 3% improvement in proratable water delivery (pg 4-251). Further, the analysis finds that “the improvement under (the Action Alternatives) would be less in the third year of a multiyear drought because some of the inactive storage in Lake Kachess would be used in the first one or two years of drought, leaving less for a third year of drought” (Section 4.3.2, pg 4-19).

Section 3.21 notes that “agriculture is the third largest sector at the four-county scale” and accounts for approximately 11% of the four-county economy. No analysis is provided of the economic impact of the No Action alternative, only the conjecture that the impact of reduced prorated water supplies “could be greater than 1 percent of the agricultural sector output” (pg 4-323). Without this information, it is difficult to make a meaningful comparison between the economic impacts of the No Action and action alternatives. However, a comparison is not necessarily valuable given that Section 4.21.4 states that “the average annual impacts during operation on output, personal income, and employment are well below the 1 percent threshold for the impact indicators at the four-county regional level” (pg 4-325). If the economic benefit is projected to not meet the identified threshold of significance, why are Reclamation and Ecology considering implementing a project that could cost over $225M to construct (including interest, for the preferred alternative, though costs increase to $675M should another alternative be chosen) and $25M a year to operate, not accounting for potential cost increases of 30-50 percent? Clearly, the public benefit is not obvious, nor is the benefit to farmers who would receive water, as in 2015, farmers in the Roza district refused to pay for a similar proposal estimated to cost $85M.

In addition to providing only a negligible improvement in water deliveries under the adverse scenario (3% improvement), permanent risks to the lake and the surrounding wildlife and vegetation significantly worsen: “The predicted changes in snowpack and runoff associated with climate change would alter KDRPP operations by producing larger and more frequent drawdowns, and would more frequently result in years when Lake Kachess fails to refill” (Section 4.12.3, pg 4-238). “Compared with Alternative 1 under the adverse scenario, the mean lake level would be approximately 42’ lower over the period of record, and 20-90’ lower in drought years” (Section 4.12.5, pg 4-248). This is a significant difference that could
lead to long-term impacts to groundwater levels, recreation opportunities, fish and wildlife habitat, and fire susceptibility of the region.

**Recreation Impacts**

Recreation was specifically authorized as an additional purpose of the Yakima Project in Section 1205 of YRBWEP in 1994, but it does not appear that any recreation organizations have been involved in the development of this plan, other than USFS. What outreach was made to recreation organizations, or users (such as the estimated 23,000 annual users of the Lake Kachess Campground), to provide notice of this proposal? The DSEIS notes that a communication strategy related to the project is called for in the future, but why has one not been undertaken to educate and seek input on the project during the development stage?

Due to its proximity to the greater Seattle area, Lake Kachess is an invaluable recreation location; 3.61 million people in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area are within a roughly one-to-two hour drive of the camping, hiking, boating, fishing and other general opportunities to appreciate nature offered at this lake. Section 3.14 notes that “population increases have increased demand for recreation and the campground is routinely full... Kachess has a higher number of recreational visitors than Keechelus or Cle Elum Lakes... (pg 3-147) The Cle Elum Ranger District is the busiest in the area and its campgrounds tend to be completely booked on summer weekends... The Kachess Campground is the most popular in the district... (pg 3-149).” In addition, this section notes that dispersed recreation at informal camp locations along the lake is common in the summer when the campground is full.

Despite this increasing need, and the positive economic benefit it has for Kittitas County, this project could reduce recreation opportunities in the area by:

- Potentially impacting well operations at the campground and privately owned residences along the lake to a degree that these sites are unusable;

- Increasing the distance from the campground and residential areas along the west shore to the water line from 400’ at the current maximum drawdown to 1,500’ (over ¼ mile) at the proposed maximum drawdown. Section 4.10.4.2 (pg 4-215) notes that “In most areas, the reservoir pool would recede approximately 200 additional feet under the maximum drawdown condition...”;

- In addition to increasing the distance between users and the shoreline, the slope of the shoreline near some recreation areas would be hazardous to humans (and presumably animals attempting to access the lake for water) at 20-30 degrees near the campground and private development on the west side of the lake, and 20-40 or 40-60 degrees on the east side. These steep slopes also pose risks to boaters using the lake (Section 4.23, pg 4-343); and

- These reductions in recreation opportunities would then increase pressure at other nearby recreation sites such as Lake Cle Elum or Lake Easton.

Section 4.14 Recreation identifies two impact indicators for recreation: “loss of fishing access or reduction of fishing opportunities that exceeds current seasonal loss of use due to existing drawdown conditions; reduction of usability of recreation due to construction activities or the receding of the shoreline more than 100’ from the recreation site or with a slope greater than
20 degrees” (pg 4-275). The action alternatives have “major impacts on recreation” (pg 4-277) when evaluated by these indicators. Mitigation proposed for the first impact indicator is a new boat launch on the East shore, which could be usable at all lake levels; no mitigation is proposed for the second impact indicator. This boat launch would be on the opposite shore (east vs. west) and lake end (south vs. north) of the lake from the campground: what is the drive distance and time from the campground to the proposed boat launch? How is this acceptable mitigation for campers? Would it really even be usable by them, or only by day visitors intending solely on boating? Due to the steep slopes, how would any boaters access developed recreation sites?

Assuming that recreation (including camping, hiking, fishing, boating, day trips and the presence of secondary homeowners who conduct personal business in the area) is as negatively impacted as noted in the DSEIS, what are the economic impacts to Kittitas County and the four-county region as a whole? Section 3.21 notes that “the service industry is responsible for the most employment at the state and four-county scales and is roughly double the next largest sector” (pg 3-178); is recreation included as part of the service industry or does it stand on its own? State wide, outdoor recreation is a $26.2B industry, which provides for 201,000 jobs, generates $7.6B in wages and salaries, and produces $2.3B annually in state and local tax revenue; surely a fair share of that is going to this four-county region. This part of the economy is ignored in Section 4.21 Socioeconomics but deserves consideration or, at the very least, acknowledgement.

**Negative Fish Impacts**

While there are some positive benefits to KDRPP and KKC related to meeting desirable stream flows on certain river reaches during some parts of the year, the overall impact to stream flow does not seem positive. Further, the DSEIS notes that fish would need ten consecutive years of positive conditions in these reaches in order to boost their numbers to those projected in Section 4.6.7 (pg 4-147); given the climate predictions for the future, achieving ten consecutive years of positive conditions seems highly unlikely, especially given that winter and spring flows are unlikely to meet targets, so the benefits of KDRPP for stream flows are even less significant. Section 4.6.2 notes that under all Action Alternatives, “increases in annual instream flows, and in July-August instream flows during drought years in the Easton Reach, would decrease the quantity of rearing habitat available to spring Chinook and rainbow trout subyearlings, resulting in a negative impact to these species during drought years” (pg 4-117). So although the same section notes that instream flows would be benefited in the spring, flows later in the year would be negatively impacted, which may negate the earlier benefits. The same situation is described for the Keechelus Reach: that instream summer flows are projected to be met more often, but winter and spring flows are negatively impacted; without meeting instream flows throughout the year, what benefit is it to these fish populations to meet flow targets only occasionally, and particularly when so many additional negative impacts would occur for these species in Lake Kachess?

Fish, including Bull Trout and salmon in Lake Kachess would be negatively impacted by all Action Alternatives in several ways, including increased turbidity (pg 4-117), decreased hydraulic residence time, lower minimum lake levels, reduction of shoreline vegetation, degraded thermal refugia for predator and prey species (pg 4-116), disturbances to fish near the pumps, and increased risk of entrainment in the facility (Table 4-79, pg 4-115). As noted above, the water temperature modeling is inadequate, so the potential benefit of lowered water temperature is questionable, as the DSEIS notes in several sections that water
temperatures may increase due to prolonged or multi-year droughts. Taken together, these impacts result in a reduction of available prey within the lake, more overlap between predator and prey species, reduced feeding efficiency of predators that visually locate prey, and reduction in habitat complexity. Section 3.6.2.1 notes that “Kokanee in Lake Kachess exhibit slow growth and small size at age compared to other lake populations and the population is at risk of a feed and growth bottleneck in summer” (pg 3-74); KDRPP puts this population at further risk. Prior to the construction of the Kachess Dam, Lake Kachess supported a variety of anadromous species that no longer have access to the lake (pg 3-66); KDRPP would put those species left in the lake at further risk of survival.

The only negative impact that is proposed to be mitigated by this project is the loss of connection between Little and Big Kachess Basins: the Volitional Bull Trout Passage Improvement would be constructed. Purporting that this “improves surface water connectivity” is a misstatement - it replaces a naturally functioning connection that this project completely destroys. Section 3.2.3 notes that “around the rim of Lake Kachess, 31 creeks flow into the lake from the uplands. Twenty-two creeks flow into the Little Kachess basin” (pg 3-7). Section 4.3.10 (pg 4-77) specifically notes that bull trout would be adversely affected by the loss of access to upstream tributaries. How will connectivity to these creeks be mitigated when the lake is 80’ lower and up to 1,500’ farther away from their current connection points?

**Yakima Project is a System**

The Yakima Project includes five major storage reservoirs that provide irrigation water to six districts, as well as flood control, instream flow requirements, and municipal uses. As is clearly stated in Section 1.2.1 Yakima Project (emphasis added): “Reclamation manages these storage reservoirs as a system, and does not designate any one reservoir or storage space to a specific irrigation district.” How does allowing one particular district to build and operate this project on one particular reservoir meet the objective of managing these reservoirs as a system? To a taxpaying, recreating citizen, it appears to be a taking of a public good for the economic development of private entities, which undertook a risky business venture attempting to start or maintain a farm in a district without Senior, or even Junior, water rights.

Besides not providing a significant amount of water in drought years, this water is likely to be wasted due to the condition of the irrigation canals used by Roza. The district’s canal system is 97 miles long, and 67 miles of these canals are unlined, open air, earthen ditches built in the Yakima desert. In a 2016 Capital Press article, Roza representatives state that water seepage in these earthen ditches “is lessened by fast flowing water creating a hard pan of silt on the canal bottom.” However, during drought, when the water has slowed considerably, this layer of silt is broken up and dispersed, causing the canals to leak. Before undertaking any projects that would take additional water from reservoirs, all of these canals must be improved with concrete or plastic liners to prevent water waste.

The fact that only one of the six irrigation districts has expressed genuine interest in this project suggests that it is for the benefit of the few and not the whole. Rather than implement a costly public works project with significant negative environmental and public impacts, perhaps a more systemic solution could be found that creates appropriate incentives for all water users to use water sustainably. Section 1.2.3 notes that a Market Reallocation effort is a part of the Integrated Plan. This would reallocate “water resources through a
‘water market’ or ‘water bank’ where water rights would be bought, sold or leased on a temporary or permanent basis to improve water supply and instream flow conditions.” Such a solution would create incentives for all water districts, not just those that are prorable users, to invest in water conservation methods that allow water to be used more wisely. Given the fact that KDRPP cannot meet the projected need (and falls far short of meeting that need given climate change assumptions), implementing a water market reallocation first makes more sense. If such a reallocation were highly successful, it might negate the “need” for KDRPP or any of the other public works projects proposed as part of the Integrated Plan.

Additional storage for water that is currently “wasted” could also be effective in meeting some of the need without causing permanent, or long-term, negative environmental and recreational impacts. Section 4.3.7 notes that “in most years, Reclamation spills water from Lake Keechelus because it cannot store all of the runoff from its watershed” (pg 4-49). Section 3.12.2.1 notes that “snowpack is considered the ‘sixth reservoir’ in the Yakima River basin... (but that) only about 30% of the average annual total natural runoff above the Parker stream gage can be stored in the current Yakima River basin reservoirs” (pg 3-134). Winter flows in the Yakima River area high and are projected to increase. Are there alternative storage options for this water that is currently not put to use later in the season when demand is high? Aside from an additional reservoir, could water be stored on farms in cisterns for use on demand? Are there other out of the box ideas that could be considered that might offer greater flexibility with less cost?

Cumulative Impacts

After reading the entirety of this DSEIS, it is extremely difficult to understand how the document can assert that there would be “ongoing beneficial effect” for vegetation, and “no cumulative impacts” to surface water, reservoir elevation, ESA-listed fish, or land use. The following are excerpts from the DSEIS describing the level of Lake Kachess under Alternative 2 as compared to Alternative 1, emphasis added (Section 4.3.4, pg 4-23 and 4-25):

- ...levels would be lower than those under Alternative 1 in 44 years out of 90 years modeled. In 31 of the 44 years, Alternative 2 had a lower Lake Kachess level than Alternative 1 for every day of the year... both when Reclamation operates KDRPP in drought years and in years following droughts when the lake is refilling to its normal operating levels.

- Lake Kachess would be below the level at which the two lake basins become separated (elevation 2,220) in 76 out of 90 years modeled, and increase of 3 years from Alternative 1. The mean duration would be 154 days per year, an increase of 76 days per year compared with Alternative 1. ... The duration would increase during all months under Alternative 2; under Alternative 1, the separation of the lake basins occurs from Sept to March.

The DSEIS claims, almost consistently, that Lake Kachess would refill in 2-5 years following a drought, however, this is based on “the historical record of droughts.” Even without accounting for the adverse climate change scenario, more recent historical records suggest that it is unlikely the lake would refill within 2-5 years (emphasis added):

During multiyear drought conditions such as those in 1992-1994, Reclamation would draw the lake down as much as 80′ below the existing outlet elevation. Following a multiyear drought comparable to that of 1992-1994, lake levels would recover to normal operating
levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the lake would be drawn down to 50’ below the existing outlet elevation. Full recovery would not have been achieved until 2008, because of a series of dry years (2003 & 2004) and a subsequent drought (in 2005). During the 2005 drought year, the lake level would be 40’ below the existing outlet elevation. (pg 4-25)

Given that the adverse climate change scenario predicts that droughts are nearly three times more likely in any given year, it is reasonable to conclude that following a significant drawdown, Lake Kachess might never refill completely. This is most certainly a “cumulative impact,” not only to surface water, reservoir elevation, fish, and land use, but more generally to the recreating public or those that value the environment in its own right.

Beyond the environmental and recreational impacts of concern above, the construction, maintenance and operating costs are also a significant cumulative impact to the public. Although the Proratable Entities claim to intend to undertake and pay for the project themselves, there is dissent among their ranks with some members foreseeing an inability to pay for the water resulting from the project, and presumably all of the associated project costs. As disclosed in the DSEIS, construction costs could range from $225M-$675M (depending on the selected alternative) and operating costs could be as high as $25M annually. Construction cost estimates for the project alternatives could increase by 30-50% (depending on project alternative), and inflation is not accounted for in the annual maintenance and operation estimates. This is an unacceptable cost to add to taxpayer burden at the same time that recreation opportunities are taken from the public.

Overall, the benefits associated with the small amount of water provided do not outweigh the significant negative environmental and recreational impacts. This project must not be implemented.

Respectfully Submitted,

Alyse Nelson
[EXTERNAL] Comments on SDEIS for the Kachess Drought Relief Pumping Plant (KDRPP)

1 message

Pete Newman <newmanpete6@gmail.com>  
To: newman pete <newmanpete6@gmail.com>, kkbt@usbr.gov

To Whom It May Concern,

I am a 50% cabin owner on the east side of Lake Kachess and my family has had this property for four generations. We hold a senior water right - our cabin is served by a newly constructed well. Members of my family spend their summers at the cabin, including my parents and my children, ages 7 and 3. Our property and our quality of life stand to be affected by the plan. I have a number of concerns and questions about the Kachess Drought Relief Pumping Plant proposals that I would like the agency to address:

1. A major concern is how our cabin will receive water once our well is dewatered, as forecast by the impact statement. "Mitigation" measures are mentioned, but there are no specifics that I can see on what these might involve. Will a new well be necessary or will our existing well be deepened? What will the timeline for this work be, and how can we be certain that we will not be deprived of water for some undetermined period, once the drought relief process is initiated? What cost will be covered and what cost will I have to incur if we have to re-drill the well?

2. Moreover, I am confused about the legal and ethical decision that is being made. We hold senior water rights, so why would any measure be considered that would violate, even temporarily, that senior right on behalf of a junior right holder in the valley? This does not seem entirely fair or legal - some clarification should be in the impact statement itself, but I could not find it. The diversion of water rights from a senior holder to a junior holder seems like a taking. If we are deprived of water for some period, will there be compensation of some sort?

3. I have a major concern over possible noise from the water pump. I suffer from tinnitus and am very sensitive to industrial noises, and one of the benefits of having property on the lake is the lack of noise. I need to know what the average decibel volume of the pump will be from my property (we are the cabin closest to the dam on the east side), how long will it run on a daily, weekly and monthly basis, is the pump going to run 24/7 and what the plan is to minimize the noise of the pump?

4. I'm also worried about the plan to refill Kachess with water from Keechelus. Is the Keechelus water of similar quality? Apparently PCB levels are high in Keechelus, and I think it needs to be conclusively shown that the proposal would not spread higher PCB levels from one lake to another (and then into the valley).

5. Fifth, as an avid (catch and release) trout fisherman, I am concerned about all aquatic species in the lake, including the protected Bull Trout, and I have been told that the plan would involve killing off some percentage of the population in Little Kachess. What percentage of the current population is expected to be killed and what measures are being taken to minimize this loss?
6) I’m concerned that the lake level will drop to such an extent that I will no longer be able to boat in the lake, yet my family has recently invested in a float for mooring the boat that is adjusted for current rising and falling water levels, new boating equipment, and improvements to our boat launch. What is the plan to compensate home owners for these improvements when the new lake levels will render boating impossible from existing infrastructure and what will be the resulting impact on my property value as a result?

7. Lastly, I understand that the new plan involves building a boat launch accessed via Kachess Dam Road. This will result in significant traffic on that road, but there are no plans that I can see to improve the road. What steps will be taken to insure that this added traffic does not cause safety issues or environmental issues in that area of Kachess’s shoreline? It seems like there should be a plan in place to improve the road and provide adequate infrastructure and facilities, comparable to those currently at the campground on the opposite side.

I look forward to hearing back from you.

Sincerely,

Peter Newman
Cabin Owner - East Side of Lake Kachees
Hello Kittitas County,
Draining Lake Kachess will not only never allow the lake to refill completely draining aquifers and deeply affecting the wetlands and changing the microclimate in this part of Kittitas.

Bodies of water like reservoirs and lakes and wetlands are known to reduce air and ground temperatures by 2-5 degrees F, in the immediate and surrounding areas. More importantly they also increase the air and ground humidity by 20-40 percent making the microclimate for example around Cle Elum and Ellensburg more stable.

Take that away and the forests become a tinder boxes with raging wildfires as in recent history in California and our own beautiful State. Combined with millions of standing dead trees we will likely see county firefighting budgets go through the roof. Besides these fires are much more dangerous to fight because they burn faster and hotter.
Endangering friends and relatives involved. Combine that with property values dropping and lowered revenues from those and other as yet unforeseen effects and we are looking at the long term budgets of the counties involved.

Talk to the counties in California that had the wildfires around pristine recreational areas. Not only did they emit 1000 times the carbon dioxide of all vehicles in the state. But sent 10,00 times the toxic micro particles from burnt plastics, insulation and home furnishings into the high atmosphere that is now spreading like an expanding band around the globe. Does this have to do with the super heated northern hemisphere this summer?

We must stop this action by secondary water purveyors trying to gain on the primary by blackmailing the poor secondary water rights farmers and doing long term damage to wetlands and pristine areas of our State.

Politicians and administrations come and go but our farms and farmers and our pristine areas, children and grand children who enjoy them stay if we allow them to. We are here for the long haul!

Stop drawing more lakes and start looking at smarter alternatives to water use, sources and conservation. We are not alone in this endeavor.

Respectfully,

Shenton Oh, MD,MBA,CPE

Sent from my iPad
Save LAKE Kachess.  A group of special interest and large irrigators want to drain the natural glacial lake.
The new plan will pump water from the natural lake below the existing dam outlet.  This is not sustainable because the watershed cannot replace the extra water taken.  It will turn the lake into a deep pool of water surrounded mostly by canyon walls.  The lake may never recover, and it will cost tax payers hundreds of millions of dollars to do this!

Pumping out extra water and lowering the lake will:
Severely limit access and recreation opportunities by campers and boaters

A rare accessible alpine lake will be lost

Cost Taxpayers hundreds of millions for a project that will ultimately fail

Make the cost of irrigation water unaffordable for most farmers

Compromise the efforts of local fire districts to suppress forest fires

The water will only benefit a few private irrigators in single water district Roza Irrigation district a district with no senior water rights

Waste of Taxpayer's money for one water district

There are NO benefits to Kittitas County
LAKE Kachess is a LAKE NOT a reservoir

Please Do NOT support the KDRPP or KKC projects.

Thank you, C C Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100 years.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.
What LAKE will be next? When LAKE Kachess isn't enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.

Joann Owens
I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

LAKE Kachess is an ancient glacial lake. Only 40 vertical feet is a man-made reservoir. The dam at LAKE Kachess is properly sized for the water shed above it and has been working for over 100.

Taking a public asset as vital as water to benefit a single water district with no senior water rights is wrong.

LAKE Kachess is one of the most popular campgrounds in the state with over 23,000 visitors and 11,000 boat launches per year.

Recreation, boating, hiking, picnicking, business and commercial access and general enjoyment of the lake will disappear as the water disappears.

What LAKE will be next? When LAKE Kachess isn’t enough for unsustainable agricultural practices?

Say NO TO KDRPP and KKC.
[EXTERNAL] Say NO to KDRPP and KKC

1 message

J P Owens <kachess99@gmail.com> Sun, Jul 8, 2018 at 11:34 AM
To: laura.osiadacz@co.kittitas.wa.us, obie.obrien@co.kittitas.wa.us
Cc: kkbt@usbr.gov

Save LAKE Kachess. A group of special interest and large irrigators want to drain the natural glacial lake.
The new plan will pump water from the natural lake below the existing dam outlet. This is not sustainable because the watershed cannot replace the extra water taken. It will turn the lake into a deep pool of water surrounded mostly by canyon walls. The lake may never recover, and it will cost tax payers hundreds of millions of dollars to do this!

Pumping out extra water and lowering the lake will:
Severely limit access and recreation opportunities by campers and boaters

A rare accessible alpine lake will be lost

Cost Taxpayers hundreds of millions for a project that will ultimately fail

Make the cost of irrigation water unaffordable for most farmers

Compromise the efforts of local fire districts to suppress forest fires

The water will only benefit a few private irrigators in single water district Roza Irrigation district a district with no senior water rights

Waste of Taxpayer's money for one water district

There are NO benefits to Kittitas County
LAKE Kachess is a LAKE NOT a reservoir

Please Do NOT support the KDRPP or KKC projects.

Thank you, J P Owens
Candace – I have serious concerns about the plans to drain or pump water out of Lake Kachess. Please stop it, now!

Some questions that I’d like answers to:

How loud are the pumps?

Who is paying for the pumping project?

How long will it take to replenish the lake to capacity if you pump it?

How does pumping the lake affect the fish in the lake?

Will pumping it close the campground?

Why pump it at all?

What are the peoples’ names behind pumping the Lake? Who wants to pump the lake, essentially?
What efforts are being made to conserve water in Eastern Washington or improve the use of the water already available?

Who will pay for cost over-runs if you do pump?

Please don’t ruin a beautiful lake for some hidden group’s greed.

Thank you for your consideration and I look forward to your responses.

Jeff Parry
(206) 280-4398
Dear Ms. McKinley,

In addition to the SDEIS not defining how it's to be used in conjunction with or in lieu of the DEIS, please consider my comments on the attached file.

Thank you,

Harold Reeves

33455 6th Ave S, Federal Way, WA 98003

(253) 943-4200 Ext. 4026   (253) 943-4026 direct

(206) 240-1649 Mobile   (253) 943-4021 fax

kiewit.com
July 11, 2018

From:

Harold Reeves, on behalf of the family of resident:

REEVES, LYNORA E ETAL (Parcel 467136)
310 FSR 4828 - 124 Easton, WA
17206 SE 142nd St
Renton, WA 98059

To:

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
1917 Marsh Road
Yakima, WA 98901-2058

Delivered via email: kkbt@usbr.gov

Subject: **Comments to Supplemental DRAFT Environmental Impact Statement (SDEIS) for:**
**Kachess Drought Relief Pumping Plant and Keechelus Lake-to-Kachess Lake Conveyance**

Please accept these comments, in response to the SDEIS comment period for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus-to-Kachess Conveyance (KKC) Projects.

I am vehemently opposed to the implementation of any of the alternatives the SDEIS (other than “no action”) under the SDEIS.

This SDEIS, again, failed to adequately comply with regulatory requirements. It has not fully disclosed the impacts to affected environments, quantified those impacts or fully disclosed well-prepared mitigation strategies.

The SDEIS fails to consider reasonable alternatives and instead has attempted to simply implement a plan developed by conflicted and interested parties to the exclusion of all others.

The Bureau of Reclamation and the Department of Ecology (the “Agencies”) have not only failed to notify impacted parties, they have failed to identify the authority under which they will take private property to provide private uses to third parties.

The Agencies have denied the public the ability to participate in the process and ensure the public - as a whole - is served fairly. It is apparent that talks of means to take more water out of Lake Kachess and Lake Keechelus for the benefit of farming have been on-going for at least the last 10 years. It was only through public uproar that the public was first provided an opportunity to respond when the Agencies...
conducted a meeting in Cle Elum on April 4, 2015. In that meeting Kittitas County’s Paul Jewell threatened to “shut down the meeting” at the slightest murmur of opposition from the crowd. Mr. Jewell made it very clear that the “meeting was not required” and that it was purely for the benefit of the Kachess stakeholders and interested public. That oligarchic tone would, unfortunately, be a sign of the way the process would be orchestrated.

After the inadequate 2015 Draft Environmental Impact Statement (DEIS) was proven to be just that, the Agencies went back to work excluding the public from collaborative participation. Just a few months later, we were invited to attend meetings (December 7-9, 2015) in Ellensburg, Cle Elum, and Sunnyside to attend “workshops” for what would then be proposed as an “emergency floating pump station” in Lake Kachess to ready for the upcoming proclaimed summer of 2016 drought. That plan was so flawed, obviously created devoid of public input, and so ill-conceived with respect to estimated costs, that it flamed out, as it should have.

Now, we’ve had our one “opportunity” to collaborate with the Agencies in the May 17 and 17, 2018. However, the advertised question/response format in the April 13, 2018 letter was not followed. Rather, the representative experts’ had booths in cleverly segregated structure and strategically selected presentation material. It was obvious that the meeting was done for show and the presenters demonstrated possessive and defensive response to seemingly each question or comment brought forth by the public.

It is a fact that “workgroups” have been strategizing for at least 10 years regarding the proposed SDEIS methodologies. A public partnership in the process appears to be purposely avoided. A choice was made to exclude the public and just shove it down our throats at a time of the Agencies’ choosing – the perception of which has been perpetuated to this day. Please provide public records that would demonstrate anything otherwise.

The SDEIS is, in many ways, inaccurate and insufficient and must be rejected.

Common themes of concern and objection are:

1. Disingenuous and misleading terms are used to publicly communicate the mission as if for the greater good and environmentally enhancing, particularly to fish rehabilitation – a politically charged concept dear to a growing majority of Americans - to “slip in” the environmentally damaging and economically non-viable KKC & KDRPP projects. Use of the term “reservoir” as opposed to the more appropriate term “Lake” is used in a way that takes the readers’ focus away from the natural status of the areas affected. For example; Lake Kachess is so dear to so many whom have vacationed there, own properties there, visited friends there, or camped there that virtually everyone who has been there at least once raves about its beauty, its natural beauty
2. This plan is not fully thought through and mitigation efforts necessary to make informed decisions in order to avoid regretful and irreparable consequences of completing these projects are unknown. Throughout this submission and its attachments, as well as many other public response communications, you will see that many questions still exist- many unanswered or curiously left without real and measurable mitigation plans.

3. Kachess, Keechelus, and Snoqualmie Pass property owners and users impacts are negligibly considered in this plan – passed off as insignificant with no plan to compensate. It appears the USBR and its partners are willing to sacrifice Lake Kachess in their myopic march to provide more irrigation capacity. One has to wonder why that is? How, in this time of environmental re-enlightenment can that be? That lack of compassion draws into question the motive behind it. It is neither customary nor legal to disregard property owners’ rights to compensation in government property takes or developments affecting property values, well-water depletion, and the taking away a treasured haven of beauty, etc. It is noted that Kachess is surrounded in part by private residents, Keechelus is not. Keechelus is highly visible from Interstate 90, Kachess is not. How might that play in this decision to “sacrifice” Kachess? Tens of thousands use Kachess Campground per year. Why destroy that resource and deny these people a say?

4. Drawing down Kachess another 80 vertical feet will essentially destroy a natural lake – a lake that is not only used by the property owners on or adjacent to the Lake, but by thousands of other people who visit and treasure this area each year. It’s irresponsible to present a plan that neither considers full Bull Trout mitigation methods nor the funding of such and that the proposal (and permits) to install a pump must be contingent upon a fully capable and funded Bull Trout mitigation plan.

5. The very objective of draining the natural Lake Kachess basin goes against the USBR’s stated mission. The following statement taken from the DEIS:

**Mission Statements**

The U.S. Department of the Interior protects America’s natural resources and heritage, honors our cultures and tribal communities, and supplies the energy to power our future.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

The mission of the Department of Ecology is to protect, preserve and enhance Washington’s environment, and promote the wise management of our air, land and water for the benefit of current and future generations.
Additional Comments:

ROZA’s claims that they would not take water out of Kachess but for extreme circumstances. What legal assurances were/would be in place that the project was fully funded by private sources prior to permits being issued?

Cost of pump facility – to construct. No consideration for operation at this point.

Leaking irrigation ditches in ROZA and other irrigation districts – what means of water conservation on the part of the users has/is considered in this proposal?

Individual storage measures not explored or referenced.

Fish passage at Kachess Dam is said to be included in the plan yet there is no information on how that will be done, only a “$23mil” preliminary cost estimate. This is irresponsible.

The name Kachess comes from a Native American term meaning "more fish", in contrast to Keechelus Lake, whose name means "few fish". Fish species native to Kachess also include kokanee salmon, cutthroat trout, and rainbow trout. Why is there no specific plan to rehabilitate Kachess fish survival?

Bull trout: water level of 2,200 fee separates upper and lower Kachess. Below 2,208 fee, the shelf impedes Bull Trout passage. The natural level of the lake pre-damming was about 2230. BoR’s dam created the problem with Bull Trout in the first place. Dropping the lake another 80 vertical feet will almost assure the Bull Trout extinction in Lake Kachess. It’s irresponsible to present a plan that neither considers full Bull Trout mitigation methods nor the funding of such and that the proposal (and permits) to install a pump must be contingent upon a fully capable and funded Bull Trout mitigation plan.

“The lake drawdown will not hurt the bull trout, and if anything, will help them, Jewell said. What hurt the fish in the first place was the creation of the reservoir destroying their habitat. The pumping will return both lakes closer to their natural state, he said.” – HUH
I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.”

Also, why does the SDEIS not make any provision for mitigation of the inevitable devaluation of homes on or near Lake Kachess? As a homeowner, I object to the taking of my property without even addressing these issues.

Sincerely,

Paige and Scott Ryan
Hi Candace,

Please find attached my comments for the KDRPP and KKC SDEIS. Thanks for all of your work on this … it’s a big job.

Best,

Jay

~~~~~~~~~~~~~~~~~~

Jay Schwartz

M 206 369-1326

jays@jayschwartz.net
To: (via e-mail)
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
191 7 Marsh Road
Yakima, WA 98901-2058
Phone: 509-575-5848, ext. 603
Fax: 509-454-5650
Email: kkbt@usbr.gov

Dear Ms. McKinley,

On behalf of myself, my family, and the many people committed to preserving Kachess Lake, I respectfully submit the following public comments regarding the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental DRAFT Environmental Impact Statement.

Thank you for your attention addressing these critical issues.

Respectfully,

Jay Schwartz

781 26th Ave E
Seattle, Washington 98112

Land and home-owner in Section 29 above Kachess Lake
Introduction

For over three years I have been the dog who would not let go of the ankle of those trying to move the YBIP forward without objective and unbiased analysis and transparent and balanced process. I have reviewed literally thousands of pages of data and performed extensive external analysis in an effort to bring fair and trustworthy data and analysis forward.

My approach has focused on three critical issues:

1. How much additional water will the project deliver?
2. How much will the water cost and is this a good economic decision?
3. What impact will it have on Kachess Lake?

Unfortunately, rather than being a willing partner in providing simple answers to these simple questions, BuRec has steadfastly evaded and forestalled accountability to engage thoughtfully and transparently in providing these answers. I have played a game of “cat and mouse” with them now for over three years. Often, I had to find data on my own, force BuRec to review my analysis, and then receive little to no feedback as to how BuRec planned to respond to the significant data integrity and analytic concerns.

Perhaps a few examples would be helpful:

I. Hydrology Data: For three years I have had to force BuRec to provide the Riverware model output data needed to review the “projected” benefits presented in BuRec documents. In 2015, I literally downloaded 90-years of daily Hydromet data to provide my first set of outputs. Eventually, BuRec published the 2016 Phase II Hydrology Technical Memorandum and I used this extensive data set to present a number of meaningful concerns. BuRec then created a Phase III TM and failed to provide the report and left critical data out of the Phase III version that were included in the Phase II report. Then for the SDEIS, BuRec created unpublished hydrology data that were only fully released to me two weeks prior to the due date for SDEIS comments. Given the fact that I have had 4 in-person meetings to review in-depth hydrology data, one would think BuRec would inform me when new data is available. Accordingly, evaluating how much water the project will deliver and assessing the impact on Kachess Lake have consistently been compromised.

II. Conservation Projects: For some reason, BuRec included unplanned, unfunded and unknown conservation projects in all hydrology scenarios in the Phase II TM. While these projects had no tangible concepts or plans, BuRec insisted on including them with the results associated with KDRPP. I complained bitterly about the distortion created by this poor analytical decision. Nonetheless, BuRec proceeded to repeat the same approach in 2017 with the Phase III TM and the scope of the unplanned, unfunded and unknown conservation project increased significantly. They added over 1 million acre-feet of water to the project results. Surprisingly (and for unexplained reasons), the
unpublished SDEIS hydrology data appropriately removed the conservation projects and the ability to more accurately assess the impact of KDRPP is thus enabled.

III. Comparisons to Actual Results: The entire Riverware approach is built on a single model view of history and then re-runs this history assuming specific projects, like the KDRPP, are in place to provide updated alternative results. Unfortunately, no one-model set of assumptions can replicate history across the board. It invariably changes history as human decisions include error and adjustments over time. So while this reliance on a single-model is unavoidable, it needs to be tempered by comparison to actual results to keep the modeled expectations and projections in check with real-world experience. BuRec has consistently refused to compare hydrology projections to the actual real-world yearly results. Sadly, this continues to be a challenge with the data presented in the SDEIS. Fortunately, historical data is available to help address this issue.

As I have extensive analytic experience (Notre Dame Finance degree, Stanford MBA, 15 years of strategy consulting experience with McKinsey, Bain and Lake Partners) and meaningful exposure now after 3+ years of in-depth review of the KDRPP project, the purpose of these comments is to identify and call into question a number of material hydrological and economic deficiencies of the SDEIS. Specifically, I call into question the following:

1. Kachess Outflows vs Actual History
2. TWSA Proration Data
3. Kachess Outflows vs Total ID Diversions
4. Roza Diversions vs Actual
5. KRD Diversions vs Actual
6. Hydrology analysis at water elevation 2199.5
7. Economics

Please note BuRec provided me the detailed Kachess Outflow, Kachess Storage, TWSA details, and ID Delivery data from the SDEIS Riverware model. This data has yet to be released publicly and BuRec reports they are in the process of preparing this data for public access. All of the analysis in these comments is from this BuRec SDEIS data set or from the BuRec Hydromet data for station KAC – Kachess Lake.

Issue 1: Kachess Outflows vs Actual History – the “No-Change” scenario incorrectly reduces Kachess Outflows in drought years, creating a significant error of projected additional water for irrigators with the “KDRPP” scenario.

Without explanation, the Historical SDEIS hydrology analysis artificially reduces Kachess Lake outflows in drought years in the “No Change” scenario. This creates a significant error of the projected additional water for irrigators in the “KDRPP” scenario. As BuRec has widely reported, the average total water year Kachess Outflows are ~213 kAF. As can be seen below and focusing on the 1977-2015 water years, when you break out the historical Kachess
Outflows to drought years and non-drought years, the actual average Kachess Outflow history is for 210.9 kAF in drought years and 212.6 kAF in non-drought years. When focusing on the core irrigation season of April-Sept Kachess Outflows, the actual data shows 183.3 kAF for drought and non-drought years.

When reviewing the SDEIS hydrology data for Kachess Outflows, the model for some reason drops the drought year “No Change” Apr-Sept Kachess Outflows to 149.4 kAF. This removal of 33.4 kAF (18.5%) is unexplained and serves to reduce the baseline for which to compare the benefits of the KDRPP scenario. Interestingly, the non-drought year outflows remain relatively consistent with actual history at 179.3 vs 183.3 kAF (an acceptable 2.2% variance from actual).

The SDEIS then represents the “KDRPP” scenario as a significant increase from the “No Change” scenario of 248.6 vs 149.4 kAF (an increase of 99.3 kAF on average). This is factually incorrect as the irrigators received 183.3 kAF in drought years and the correct increase is 65.4 kAF on average. This is a 51.8% overstatement of benefits to irrigators. Sadly, this data is not presented for review but the claimed benefits are broadly stated in the SDEIS.

Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Kachess Outflow data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?
<table>
<thead>
<tr>
<th>Water Year</th>
<th>Actual - Full WY</th>
<th>Actual - Apr-Sept</th>
<th>&quot;No Change&quot;* Apr-Sept</th>
<th>&quot;No-Change&quot; - to Actual Variance</th>
<th>&quot;KDRPP&quot; - Apr-Sept</th>
<th>&quot;KDRPP&quot; to Actual Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>226.3</td>
<td>193.5</td>
<td>150.4</td>
<td>-33.9</td>
<td>248.6</td>
<td>65.4</td>
</tr>
<tr>
<td>1978</td>
<td>143.5</td>
<td>142.0</td>
<td>154.2</td>
<td>-12.2</td>
<td>106.7</td>
<td>-35.3</td>
</tr>
<tr>
<td>1979</td>
<td>293.8</td>
<td>271.9</td>
<td>180.4</td>
<td>-91.5</td>
<td>112.3</td>
<td>-159.6</td>
</tr>
<tr>
<td>1980</td>
<td>103.6</td>
<td>92.8</td>
<td>152.5</td>
<td>59.7</td>
<td>135.1</td>
<td>42.3</td>
</tr>
<tr>
<td>1981</td>
<td>200.3</td>
<td>188.4</td>
<td>169.8</td>
<td>-18.6</td>
<td>144.3</td>
<td>-44.1</td>
</tr>
<tr>
<td>1982</td>
<td>209.9</td>
<td>199.4</td>
<td>173.1</td>
<td>-26.3</td>
<td>164.4</td>
<td>-35.0</td>
</tr>
<tr>
<td>1983</td>
<td>212.2</td>
<td>191.6</td>
<td>165.7</td>
<td>-25.9</td>
<td>165.7</td>
<td>-25.9</td>
</tr>
<tr>
<td>1984</td>
<td>235.1</td>
<td>212.8</td>
<td>180.3</td>
<td>-32.5</td>
<td>180.3</td>
<td>-32.5</td>
</tr>
<tr>
<td>1985</td>
<td>243.7</td>
<td>230.1</td>
<td>182.7</td>
<td>-47.4</td>
<td>182.7</td>
<td>-47.4</td>
</tr>
<tr>
<td>1986</td>
<td>230.8</td>
<td>221.4</td>
<td>181.9</td>
<td>-39.5</td>
<td>181.9</td>
<td>-39.5</td>
</tr>
<tr>
<td>1987</td>
<td>172.3</td>
<td>163.3</td>
<td>169.8</td>
<td>-6.5</td>
<td>222.4</td>
<td>59.1</td>
</tr>
<tr>
<td>1988</td>
<td>161.0</td>
<td>155.0</td>
<td>153.0</td>
<td>-2.0</td>
<td>166.7</td>
<td>11.7</td>
</tr>
<tr>
<td>1989</td>
<td>144.8</td>
<td>139.3</td>
<td>159.7</td>
<td>20.4</td>
<td>125.9</td>
<td>-13.4</td>
</tr>
<tr>
<td>1990</td>
<td>194.3</td>
<td>160.6</td>
<td>182.4</td>
<td>21.8</td>
<td>154.3</td>
<td>-6.3</td>
</tr>
<tr>
<td>1991</td>
<td>301.9</td>
<td>190.5</td>
<td>199.9</td>
<td>9.4</td>
<td>199.9</td>
<td>9.4</td>
</tr>
<tr>
<td>1992</td>
<td>271.0</td>
<td>226.1</td>
<td>190.7</td>
<td>-35.4</td>
<td>252.8</td>
<td>26.7</td>
</tr>
<tr>
<td>1993</td>
<td>170.2</td>
<td>165.5</td>
<td>152.4</td>
<td>-13.1</td>
<td>242.2</td>
<td>76.7</td>
</tr>
<tr>
<td>1994</td>
<td>140.4</td>
<td>134.6</td>
<td>116.7</td>
<td>-17.9</td>
<td>197.5</td>
<td>62.9</td>
</tr>
<tr>
<td>1995</td>
<td>142.1</td>
<td>138.9</td>
<td>148.2</td>
<td>9.3</td>
<td>101.1</td>
<td>-37.8</td>
</tr>
<tr>
<td>1996</td>
<td>398.1</td>
<td>301.6</td>
<td>207.2</td>
<td>-94.4</td>
<td>142.4</td>
<td>-159.2</td>
</tr>
<tr>
<td>1997</td>
<td>212.5</td>
<td>211.8</td>
<td>246.3</td>
<td>34.5</td>
<td>231.1</td>
<td>19.3</td>
</tr>
<tr>
<td>1998</td>
<td>219.5</td>
<td>178.7</td>
<td>196.6</td>
<td>17.9</td>
<td>196.6</td>
<td>17.9</td>
</tr>
<tr>
<td>1999</td>
<td>241.6</td>
<td>197.7</td>
<td>185.1</td>
<td>-12.6</td>
<td>185.1</td>
<td>-12.6</td>
</tr>
<tr>
<td>2000</td>
<td>234.6</td>
<td>188.4</td>
<td>214.3</td>
<td>25.9</td>
<td>214.3</td>
<td>25.9</td>
</tr>
<tr>
<td>2001</td>
<td>247.9</td>
<td>202.6</td>
<td>127.1</td>
<td>-75.5</td>
<td>279.8</td>
<td>77.2</td>
</tr>
<tr>
<td>2002</td>
<td>138.2</td>
<td>134.5</td>
<td>159.4</td>
<td>24.9</td>
<td>104.2</td>
<td>-30.3</td>
</tr>
<tr>
<td>2003</td>
<td>248.1</td>
<td>206.6</td>
<td>170.2</td>
<td>-36.4</td>
<td>123.8</td>
<td>-82.8</td>
</tr>
<tr>
<td>2004</td>
<td>183.1</td>
<td>158.4</td>
<td>188.0</td>
<td>29.6</td>
<td>175.0</td>
<td>16.6</td>
</tr>
<tr>
<td>2005</td>
<td>203.5</td>
<td>167.5</td>
<td>111.1</td>
<td>-56.4</td>
<td>264.8</td>
<td>97.3</td>
</tr>
<tr>
<td>2006</td>
<td>119.9</td>
<td>112.5</td>
<td>163.2</td>
<td>50.7</td>
<td>107.8</td>
<td>-4.7</td>
</tr>
<tr>
<td>2007</td>
<td>213.8</td>
<td>177.2</td>
<td>183.3</td>
<td>6.1</td>
<td>133.6</td>
<td>-43.6</td>
</tr>
<tr>
<td>2008</td>
<td>182.8</td>
<td>145.6</td>
<td>142.7</td>
<td>-2.9</td>
<td>148.1</td>
<td>2.5</td>
</tr>
<tr>
<td>2009</td>
<td>247.2</td>
<td>207.6</td>
<td>177.3</td>
<td>-30.3</td>
<td>179.5</td>
<td>-28.1</td>
</tr>
<tr>
<td>2010</td>
<td>170.3</td>
<td>131.9</td>
<td>163.6</td>
<td>31.7</td>
<td>163.6</td>
<td>31.7</td>
</tr>
<tr>
<td>2011</td>
<td>260.5</td>
<td>218.7</td>
<td>192.9</td>
<td>-25.8</td>
<td>192.9</td>
<td>-25.8</td>
</tr>
<tr>
<td>2012</td>
<td>226.1</td>
<td>175.7</td>
<td>200.3</td>
<td>24.6</td>
<td>200.3</td>
<td>24.6</td>
</tr>
<tr>
<td>2013</td>
<td>237.9</td>
<td>189.8</td>
<td>185.4</td>
<td>-4.4</td>
<td>185.4</td>
<td>-4.4</td>
</tr>
<tr>
<td>2014</td>
<td>240.6</td>
<td>210.8</td>
<td>199.9</td>
<td>-10.9</td>
<td>199.9</td>
<td>-10.9</td>
</tr>
<tr>
<td>2015</td>
<td>255.4</td>
<td>212.9</td>
<td>176.7</td>
<td>-36.2</td>
<td>230.5</td>
<td>17.6</td>
</tr>
<tr>
<td>Total</td>
<td>8,279.0</td>
<td>7,148.0</td>
<td>6,754.4</td>
<td>-393.6</td>
<td>6,993.9</td>
<td>-154.1</td>
</tr>
<tr>
<td>Average</td>
<td>212.3</td>
<td>183.3</td>
<td>173.2</td>
<td>-10.1</td>
<td>179.3</td>
<td>-4.0</td>
</tr>
</tbody>
</table>
Issue 2: TWSA Proration Data – Due to the above reduction in the “No-Change” scenario, the baseline TWSA data is artificially lowered and the presented Proration data is also incorrectly reduced. This again creates a significant error in the projected TWSA and Proration benefits of the “KDRPP” scenario.

In addition to the above errors in Kachess Lake Outflows, the artificial reduction of the No-Change drought year water supply also distorts the TWSA and Proration projections presented in the SDEIS. As shown below, the Historic No-Change TWSA data significantly reduces the baseline Proration levels to an average of 45.4%. The “KDRPP” scenario then increases the Proration levels up to an average of 59.3% with SDEIS proclaiming increases of nearly 22% when referring to the 21.3% change in 2005.

When compared to the actual Sept 30 Proration levels published by the BuRec (but not provided in detail in the SDEIS), we see the actual baseline average Proration level of 53.3% and thus the overall benefit of “KDRPP” drops to 6.0% on average (a 56% reduction in benefits) with the SDEIS example of 2005 now showing only an 11.5% improvement.

The net effect of this error is like when a retailer increases the price of an item and then puts it “on-sale” back down to a price similar to the original price. The SDEIS artificially reduces the baseline “No-Change” scenario to imply to the public and irrigators a much more significant benefit of KDRPP than is factually true.

Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Proration data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?
- Given the artificial reduction in the “no-change” baseline scenario, should irrigators and the public be informed of the modeled benefits as well as the change from actual benefits? If not, please explain why?
### Table: Historic SDEIS Projections vs Actual Hydromet Data

<table>
<thead>
<tr>
<th>Drought Year</th>
<th>Historic No-Change</th>
<th>Historic KDRPP</th>
<th>KDRPP vs No-Change</th>
<th>Actual BuRec Proration</th>
<th>KDRPP vs Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>42.8%</td>
<td>60.4%</td>
<td>17.6%</td>
<td>70.0%</td>
<td>-9.6%</td>
</tr>
<tr>
<td>1987</td>
<td>62.8%</td>
<td>70.0%</td>
<td>7.2%</td>
<td>68.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>1992</td>
<td>64.3%</td>
<td>64.1%</td>
<td>-0.2%</td>
<td>58.0%</td>
<td>6.1%</td>
</tr>
<tr>
<td>1993</td>
<td>52.5%</td>
<td>70.0%</td>
<td>17.5%</td>
<td>67.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>1994</td>
<td>24.0%</td>
<td>33.4%</td>
<td>9.4%</td>
<td>37.0%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>2001</td>
<td>32.7%</td>
<td>52.7%</td>
<td>20.0%</td>
<td>37.0%</td>
<td>15.7%</td>
</tr>
<tr>
<td>2005</td>
<td>32.2%</td>
<td>53.5%</td>
<td>21.3%</td>
<td>42.0%</td>
<td>11.5%</td>
</tr>
<tr>
<td>2015</td>
<td>51.9%</td>
<td>70.0%</td>
<td>18.1%</td>
<td>47.0%</td>
<td>23.0%</td>
</tr>
<tr>
<td>Average</td>
<td>45.4%</td>
<td>59.3%</td>
<td>13.9%</td>
<td>53.3%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

### Issue 3: Kachess Outflows vs Total ID Diversions

While the SDEIS presents a scenario as “KDRPP Only”, there are clearly other operational changes occurring at the same time. This is made clear by comparing actual Kachess Outflows to the total Irrigation District Diversions whereby the ID Diversion increases are far in excess of the Kachess Outflow increases. Accordingly, there should be an additional alternative scenario that allows for operational changes without any other projects (like KDRPP) and in-excess of the “No Change” scenario. Further, the SDEIS should be more upfront in stating the benefits due to operational changes vs those from KDRPP.

The SDEIS goes to great lengths to model the benefits of multiple participating “Proratable Entities” and formally includes KRD, RID and WIP Irrigation Districts in the SDEIS Irrigation District Diversion analysis. However, under the “KDRPP-only” scenario, the modeled irrigation water benefits far exceed the amount of additional Kachess Outflow water. As shown below, in drought years, Kachess Outflows under “KDRPP” increase by 522.5 kAF of water (above historical actuals) but the projected ID Diversions increase by 966.9 kAF, (84.9% more than Kachess Outflows). Clearly there are other operational parameters at work here but no meaningful data is provided with which to assess these operational changes.

This concern is further compounded when assessing all years from 1977-2015. For the full period, the KDRPP scenario actually reduces total Kachess Outflows (from Actual) by 154.1 kAF yet ID Deliveries increase over this same time frame by 624.4 kAF. The resulting and unexplained variance of 778.5 kAF above and beyond Kachess Outflows represents an important alternative in and of itself and needs much further explanation.

### Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Irrigation District Deliveries data? Why was it not presented in the SDEIS?
• Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?

• Given the significant variance in water delivered outside of KDRPP, why are the operational changes not explained more fully? Why are they not run as an independent alternative in the SDEIS?

<table>
<thead>
<tr>
<th>Water Year</th>
<th>Historical KDRPP Change from Actual Hydromet</th>
<th>Historical KDRPP - KRD Impact</th>
<th>Historical KDRPP - Roza Impact</th>
<th>Historical KDRPP - WIP Impact</th>
<th>Historical - Total ID Impact</th>
<th>Variance kAF</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>105,456</td>
<td>58,752</td>
<td>70,838</td>
<td>66,055</td>
<td>195,645</td>
<td>90,189</td>
<td>85.5%</td>
</tr>
<tr>
<td>1987</td>
<td>59,103</td>
<td>9,006</td>
<td>16,546</td>
<td>15,737</td>
<td>41,289</td>
<td>-17,814</td>
<td>-30.1%</td>
</tr>
<tr>
<td>1992</td>
<td>26,708</td>
<td>-301</td>
<td>-482</td>
<td>-457</td>
<td>-1,240</td>
<td>-27,948</td>
<td>-104.6%</td>
</tr>
<tr>
<td>1993</td>
<td>76,747</td>
<td>28,077</td>
<td>42,504</td>
<td>40,209</td>
<td>110,790</td>
<td>34,043</td>
<td>44.4%</td>
</tr>
<tr>
<td>1994</td>
<td>62,939</td>
<td>38,118</td>
<td>34,259</td>
<td>34,328</td>
<td>106,705</td>
<td>43,766</td>
<td>69.5%</td>
</tr>
<tr>
<td>2001</td>
<td>77,151</td>
<td>72,513</td>
<td>73,053</td>
<td>66,461</td>
<td>212,027</td>
<td>134,876</td>
<td>174.8%</td>
</tr>
<tr>
<td>2005</td>
<td>97,270</td>
<td>74,767</td>
<td>75,314</td>
<td>71,559</td>
<td>221,640</td>
<td>124,370</td>
<td>127.9%</td>
</tr>
<tr>
<td>2015</td>
<td>17,551</td>
<td>26,685</td>
<td>28,614</td>
<td>24,763</td>
<td>80,062</td>
<td>62,511</td>
<td>356.2%</td>
</tr>
<tr>
<td>Drought Years</td>
<td>522,924</td>
<td>307,617</td>
<td>340,646</td>
<td>318,655</td>
<td>966,918</td>
<td>443,994</td>
<td>84.9%</td>
</tr>
<tr>
<td>Non-Drought Years</td>
<td>-677,032</td>
<td>-97,688</td>
<td>-87,502</td>
<td>-157,358</td>
<td>-342,548</td>
<td>334,484</td>
<td>-49.4%</td>
</tr>
<tr>
<td>Total</td>
<td>-154,107</td>
<td>209,929</td>
<td>253,144</td>
<td>161,297</td>
<td>624,370</td>
<td>778,477</td>
<td>-505.2%</td>
</tr>
</tbody>
</table>

**Issue 4: Roza Diversions vs Actual – The SDEIS itself only speaks to irrigation water increases in terms of changes in Proration levels. With the non-public BuRec SDEIS irrigation district diversion data and the historical actual diversion data (also provided by BuRec), an analysis of SDEIS projections vs actual irrigation district diversions is possible. In the case of Roza, the projected KDRPP diversions are scarcely more than the actual water delivered in drought years. This represents a glaring and material misstatement of benefits to irrigators and needs to be addressed.**

As shown below, actual Roza diversions in drought years total 1,697 kAF. The SDEIS “No-Change” baseline scenario suggests Roza water deliveries in the same years would be 1,368 kAF, a decrease from the actual water deliveries of 329 kAF. Diversions under the “KDRPP” SDEIS scenario then increase to 1,709 kAF in drought years and are presented as a material improvement from the “No Change” scenario (an increase of 341 kAF). In fact, the “KDRPP” scenario only delivers a net increase of 12 kAF from the actual deliveries and in many years delivers less water. The failure to provide a comparison to actuals and to present this level of detail to the Roza irrigators is an egregious error.
Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Roza Irrigation District Deliveries data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model as it relates to Roza deliveries?
- As Roza is the current and only committed ID, why should they fund a project that does not deliver any meaningful benefit to them?
Issue 5: KRD Diversions vs Actual – The SDEIS itself only speaks to irrigation water increases in terms of changes in Proration levels. With the non-public BuRec SDEIS irrigation district diversion data and the historical actual diversion data (also provided by BuRec), an analysis of SDEIS projections vs actual irrigation district diversions is possible. In the case of KRD, the projected KDRPP diversions are significantly more than the actual water delivered in drought years. In fact, they are greater than the amounts delivered to Roza, who has 57 kAF more annual water rights than KRD. This seems to be both ill-advised and illegal, with significant litigation risk as well.

As shown below, actual KRD diversions in drought years total 1,419 kAF. The SDEIS “No-Change” baseline scenario suggests KRD water deliveries in the same years would be 1,465 kAF, roughly the same. However, diversions under the “KDRPP” SDEIS scenario increase to 1,773 kAF, a material improvement of over 300 kAF from both actual and “no-change” data. Unfortunately, the diversions for the same years are 74 kAF greater than Roza (1,709 kAF) who has 57 kAF more annual water rights. Further, Roza’s increase over actual deliveries of only 12 kAF will call into significant legal question KRD’s increase of over 300 kAF. The failure to address the KRD vs Roza delivery levels as well as a comparison to actuals and to present this level of detail to the Roza and KRD irrigators is unconscionable.

Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS KRD Irrigation District Deliveries data in comparison to the Roza deliveries? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model as it relates to KRD deliveries?
- As Roza is the current and only committed ID, why should they fund a project that does not deliver any meaningful benefit to them yet provides significant benefits to a currently non-participating ID?
Issue 6: Hydrology analysis at water elevation 2199.5 – Previous Hydrology Technical Memorandum as well as extensive Bull Trout documents make reference to the critical water elevation of 2199.5, below which Bull Trout can no longer migrate up through the Narrows. The SDEIS fails to address this critical water level with any detailed analysis or references.

As the below references from the May 2016 Bull Trout document clearly indicate, assessing the frequency and duration of water levels below 2199.5 are essential for Bull Trout migration. The SDEIS fails to address this water level. It is such an important metric that the BuRec has not lowered the Kachess Lake below this level since 1977, even in the face of 8 droughts. And while the SDEIS addresses several other water level concerns as it relates to Bull Trout, it fails to provide any data or discussion on this most important and not recently violated critical water level.
Questions for the SDEIS:

- Why was data for the 2199.5 water level not presented in detail in the SDEIS?
- How many days and years will the water level be below 2199.5 in all of the historic and climate change scenarios?
- If not already done, can the updated SDEIS data be shared with the public and with the BiOp agencies?

Issue 7: Economics – Simply put, there is no meaningful economic analysis in the SDEIS. It assumes broad econometric analysis is the same as substantial Benefit-Cost or ROI analysis. And it specifically fails to address the question of how much the water will cost and how and where it will be used in a rational economic return on investment approach.

In my prior comments previously submitted for the DEIS process and in my extensive reviews and presentations with the BuRec, I have provided very detailed and specific commentary on the many economic short-comings of the KDRPP project. Those comments are now included again in these comments by reference. Further, they foster the following specific questions:

Questions for the SDEIS:

- What is the life-time cost per Acre Foot of water for the KDRPP project?
- What is the incremental profit of an acre-foot of water per crop type in the Yakima Basin?
- Which crops have a positive Benefit-Cost vs a negative Benefit-Cost?
- For crops with a negative Benefit-Cost, how can the using KDRPP water be justified as a private or public good?
• Given the likely negative Benefit-Cost for a majority of Yakima Basin crops, how can the overall economics of the KDRPP provide any positive economic return? How can the water be used only on crops with a positive Benefit-Cost? How can we enable only those irrigators with a positive Benefit-Cost to pay for and use the water from KDRPP?
To Whom It May Concern,

My family has a property on the east side of Lake Kachess for over 4 generations and I am a part owner.

A newly constructed well serves our cabin and we hold a senior water right. Every summer and often year round, our family is at the cabin: my parents, aunt, uncle, brother, sister in law, cousin, cousin in law and 4 children.

The Kachess Drought Relief Pumping Plant proposals raise a number of concerns about how this could negatively impact our property.

1. Our well will run dry if the lake is pumped down, according to the SDEIS. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater my well which has senior water rights?

2. The SDEIS notes our well on the East side of Lake Kachess will be dewatered. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry, specifically? There is no money for mitigation.

3. Under the proposed alternative, what fraction of the resident endangered Bull Trout population in Lake Kachess will be killed?

4. According to pages 2-6 in the proposal "Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet."

   Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)?

   Why would the pump be used in following years "as the reservoir refills to a level above the existing gravity outlet?" wouldn't that stop or hinder refill?

5. Pages 1-4 say that the integrated plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation).
What is the number of kAf saved by water conservation?
What is the number saved by groundwater storage?
What is the number saved by market reallocation?

6. Table 1-2 on p 1-20 says that ecology will "issue water rights as necessary." We’ve been told repeatedly that no new rights will be generated from this plan.

What is the legal mechanism by which new water rights be issued? To whom?

7. P3-29, 3-45: both Keechelus and Kachess are now listed as "category 5" water impairment because of PCB contamination.

But in the 2015 DEIS, only Keechelus was marked as having PCB contamination. Please release the report which also indicates that Kachess has a similar contamination.

Wouldn't dredging and construction raise sediment containing PCBs?

What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

8. P3-172 indicates Indian sites on Kachess. What is going to happen with the artifacts unearthed during the construction?

Thank you for your attention. I look forward to hearing your reply.

Sincerely,
Livia Newman
Cabin Owner
[EXTERNAL] Kachess Drought Relief Pumping Plant
1 message

Doug Smith <doug@smith.net>  Tue, Jul 10, 2018 at 6:27 AM
To: kkbt@usbr.gov

This project is a boondoggle of the highest order. It appropriates half a Billion dollars of taxpayer money to benefit a few private land owners, who were well aware that they bought land subject to drought, and should have no expectations of a public bailout. Even the DSEIS admits the economic benefits to the agriculture industry ARE NOT THERE (their analysis shows the benefits are less than the threshold they established for a positive impact). Not to mention the negative impact on the fish habitat, ability of fire-fighters to draw water for fighting forest fires, increased susceptibility for fires around the lake, and damage to the great recreational benefits of the lake (which generates tax revenues and tourist dollars). I could go on, but you already know that the right thing to do is to stop this project before it starts.

-Doug Smith
Dear Ms. Candace McKinley,

I am very strongly opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

Sincerely,
Katherine Staberow
Snohomish, WA
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess.

Alternative #1, No Action is the only acceptable alternative. How an idea this ridiculous has gotten this far is unbelievable. Please spend some time at Lake Kachess and you will better understand the gravity of this situation. I am confident that there is another solution to this situation (other than draining Lake Kachess) that is far better for everyone involved, much less costly, and will not destroy this beautiful lake.

Thanks,
John
John P. Starcevich, P.E., G.E.
Vice President/Chief Engineer
Malcolm Drilling Co., Inc.
253-395-3300 Office
206-510-7224 Cell

Malcolm Drilling Company, Inc. is an Affirmative Action/Equal Opportunity Employer
Lynne Thomas <lynnebeckerthomas@gmail.com>                   Tue, Jul 10, 2018 at 12:02 PM

To: "kkbt@usbr.gov" <kkbt@usbr.gov>

Candace McKinley
Environmental Program Manager
Bureau of Reclamation

Dear Ms. McKinley,

I am opposed to any of the Kachess SDEIS active alternatives (2-5), the pumping plant and/or pipeline at Lake Kachess. Only the first, No Action alternative is acceptable. Efforts should be put into more sensible alternatives.

Alternatives could and should include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

These Lake Kachess projects should be last resort options, if considered at all.

Sincerely,

Lynne Thomas
19917 N Wenas Road
Selah, WA  98942

Sent from Mail for Windows 10
Ms. Candace McKinley,

Please find attached a document in MS Word 2013 that contains my comments and questions to the subject document. Do let me know if there are any difficulties opening this document and I will just make a copy in the body of an e-mail.

Thanks,

William F. Vaughn
Vaughn Family Recreational Partnership

2018 SDEIS Comments_WFV_07-09-2018.docx
16K
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley,

The following are just a few comments and questions that I have regarding the reference document.

1) I am opposed to any of the Kachess SDEIS active alternatives (2-5); a pumping plant and/or pipeline at Lake Kachess. Alternative #1, No Action is the only acceptable alternative.

2) With almost no exceptions people buy at Lake Kachess for easy access to the lake for recreational activities. If any of proposed active alternatives (2-5) are put in place it will significantly affect the usability of the lake in a drought year and years that follow where the level of the lake will be significantly low. With the lake rendered at times un-usable for recreation I expect the loss in value for properties and homes there to be substantial. With that in mind what plans are being made to compensate owners if the government proceeds with any of the active alternatives?

3) There are an extreme large number of campers (23,000 annually) and boaters (10,000 annually) (primarily water sports enthusiast) who use the lake. It is largely popular due to its easy access from Seattle and one can easily take a family outing for just a weekend. What are the plans to inform this population of the changes that may take place? What other recreational options will they have if this campground becomes un-usable?

4) This plan seems like a band aid solution. The water from Kachess will support one bad drought year and then we are done, left with a lake and environment that is pretty much devastated. Much of the damage is likely to be permanent. When will there be other real plans that will be acted upon to both conserve resources and utilize a variety water sources such that we will not have to devastate an environment in the process?

Thank you for considering answers to the questions above.

Sincerely,

William F. Vaughn

Vaughn Family Recreational Partnership  
11528 SE 321st PL  
Auburn, WA 98092
[EXTERNAL] Comments on SDEIS

1 message

Wenstrup, John <Wenstrup.John@bcg.com> Sat, Jul 7, 2018 at 8:08 AM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>
Cc: "alexis.wenstrup@gmail.com" <alexis.wenstrup@gmail.com>

Please submit the following questions on my behalf:

1. When Kachess Lake was first dammed in 1912, most believed the lake was glacial in origin. Since, geologists have concluded that Kachess Lake was not carved by glaciers, but instead is caused by seismic activity from a series of major North-South fault lines. In fact, geologists (see Lofgren et al, 1973) have concluded that Kachess Fault runs the length of the lake and is bounded by other major faults (e.g. Kachess Ridge Fault and Thomas Mountain Fault, among others) and folds (Thorp Mountain anticline and Domerie Creek syncline, among others). Of all dams in the Yakima Basin region, Kachess is likely to have the greatest risk of catastrophic failure given both its geological activity and volume of water at maximum fill. While routine periodic checks for dam integrity are currently conducted, has the risk of geologic activity to the existing dam, and thus the risk to downstream populations in Easton, Cle Elum, etc., been thoroughly and appropriately assessed? Given this risk, has a scenario in which the dam is de-commissioned and removed for safety reasons been considered in your design and benefit calculations?

2. The June 11, 2018 Supreme Court tie in State of Washington vs. United States re-affirmed a landmark 9th Circuit Court decision supporting Native American tribal fishing rights and forcing the state to spend $1.9B to improve fish passage (in this case, for salmon passage through inappropriately designed culverts). State Attorney General Bob Ferguson, arguing against the United States and the tribes, suggested that the decision would dramatically shift regulatory power in the Washington. He stated, “Plaintiffs could use the panel's decision to demand the removal of dams and attack a host of other practices.” Has the impact of this new court precedent (e.g. on impact of required instream flows, potential for dam removal, Bull Trout spawning, potential litigation, etc.) been fully understood an incorporated into this study?

3. The planned pumping activity will expose lakebed surfaces (playa) which have been submerged for thousands of years. As the recent ecological disaster at the Salton Sea has shown, airborne particulates, especially PM10 (particulate matter with diameters up to 10 microns) can cause major ecological and health risks including cardiovascular disease, respiratory disease, and mortality (see Frie et al, The Effect of a Receding Saline Lake (The Salton Sea) on Airborne Particulate Matter Composition. Environmental Science & Technology. Has a study been done on the potentially exposed surfaces, the likelihood of airborne particulates (especially given wind and weather dynamics), and the impact on populations in the immediate and downstream areas?
4. Why do your documents continue to refer to Kachess Lake as Kachess Reservoir? Language matters, as does the truth. Kachess is a natural lake with thousands of years of rich history from our Native Tribes to thousands of visitors who have enjoyed its campgrounds, trails, and swimming sites. You are a public agency serving the public and, presumably, attempting to truth rather than the preferences of a small interest group. You should not allow special interest groups to white wash what is occurring here – the devastation of an alpine lake to lower costs for (predominantly) grass and hops farmers who are irrigating scrubland with likely significant ultimate cost to taxpayers.

5. Several irrigation districts have already withheld financial commitment to the K projects given the obviously unappealing economics of the project, risk of further litigation, and increased likelihood of renewed debate around removing the dam given recent seismic concerns and Supreme Court decisions. If only one district (e.g. Roza) were to commit to this project, how would such a narrow consumption profile and funding source impact the economics and risk associated with this project?

John Wenstrup
1823 285th Place NE
Carnation, WA 98014

John Wenstrup
Senior Partner and Managing Director

THE BOSTON CONSULTING GROUP
1201 3rd Avenue, Suite 5400
Seattle, Washington 98101 • United States of America

Mobile +1 415 385 4514
wenstrup.john@bcg.com

Assistant: Haellie Baldwin
Tel. +1 206 858 5123 • baldwin.haellie@bcg.com

Read BCG's latest insights, analysis, and viewpoints at bcgperspectives.com

The Boston Consulting Group, Inc.

This e-mail message may contain confidential and/or privileged information. If you are not an addressee or otherwise authorized to receive this message, you should not use, copy, disclose or take any action based on this e-mail or any information contained in the message. If you have received this material in error, please advise the sender immediately by reply e-mail and delete this
message. We may share your contact details with other BCG entities and our third party service providers. Please see BCG privacy policy https://www.bcg.com/about/privacy-policy.aspx for further information.
Thank you.
[EXTERNAL] Draining Lake Kachess

1 message

Dan Whitney <whitapple1@yahoo.com> Fri, Jul 6, 2018 at 10:49 AM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

There does not seem to be any seriously good reason for draining Lake Kachess. The only reasons I have heard are not well thought out and are more political than anything. When we start making decisions to do something as drastic as Draining the lake so we can "feel good" and turn the clock back to the days of the Indians it is time to put clear thinking people in charge. I honestly cannot believe this is something we are actually debating!

Dan Whitney
Cowiche Wa.
Ms, McKinley,

Attached is a pdf of a letter which I mailed today with my comments on the Supplemental Draft EIS for the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Conveyance (KKC) Projects. Thank you in advance for your consideration of these comments.

Sincerely,

Jerald A Williams

JAW2018SDEISComments.pdf

10469K
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia-Cascades Area Office  
1917 Marsh Road  
Yakima, WA 98901-2058

Ref: Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Conveyance (KKC) Projects

Via email to: kkbt@usbr.gov

Dear Ms. McKinley:

Please accept these comments in response to the Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018 for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Conveyance (KKC) Projects.

1. The KDRPP Pumping Plant Facilities.

The “Economic Analyses of the Proposed Kachess Drought Relief Pumping Plant” document published April 2015 and made available at the public meeting on May 16, 2018, Paragraph 3.2.1 on page 22 states that “The KDRPP would potentially provide agricultural water supply benefits by increasing water availability for proratable users during drought conditions. Proratable users have junior water rights that are satisfied by an equal share among all proratable users, after senior, nonproratable users have received their full allotment (Reclamation and Ecology, 2011)” . The SDEIS on page 4.22, Paragraph 4.3.4.2 states that “The primary purpose of KDRPP is to improve water supply for irrigation districts with proratable entitlements during drought years....”.

It is not clear in the SDEIS if the KDRPP will be sized to provide water for all users (proratable and proratable) or just selected participating entities. It is also not clear who will be paying the initial construction, and operating and maintenance costs.

Pumping water out of Lake Kachess below the natural gravity outlet of the lake would be pumping water from the lake that would normally be available in future
years without pumping. This could have some interesting consequences during the first year and following years of pumping Lake Kachess below its natural gravity outlet during a multiple year drought. Following are a couple of different possible scenarios.

A. KDRPP facility with a capacity to provide water for all users (proratable and nonproratable).

The first paragraph above referenced The Economic Analysis for the project that states “The KDRPP would potentially provide agricultural water supply benefits by increasing water availability for proratable users during drought conditions. Proratable users have junior water rights that are satisfied by an equal share among all proratable users, after senior, nonproratable users have received their full allotment (Reclamation and Ecology, 2011)”. The second quote in the first paragraph above from the SDEIS states “The primary purpose of KDRPP is to improve water supply for irrigation districts with proratable entitlements during drought years....”.

Currently, in a drought year nonproratable users get 100% of their water supplied by gravity, with no pumping required. As stated above, currently the proratable users would be satisfied by an equal share among all proratable users, after senior, nonproratable users have received their full allotment. However, in a drought situation with the KDRPP in place, additional water would start being delivered to the proratable users during the growing season with the anticipation of pumping water from the lake when the level got below the lake’s natural gravity outlet. Once that happened, it would be necessary to pump water for the nonproratable users as well as the proratable users to ensure the non-proratable users receive their full allotment for the year. To ensure that this criterion is met, the pumping faculty would have to be sized to provide water for all users.

Figure 4-3 on page 4-26 of the SDEIS indicates that when two or more drought years occur in a row; it could take two to three years before Lake Kachess could refill to its natural gravity outlet level. This means that possibly for multiple years following the first drought year, it could be necessary to pump every gallon of water (proratable and nonproratable) taken from Lake Kachess (for the entire irrigation season on a twenty-four-hour basis).

Comments - Please provide more detail in the FEIS on the sizing and operation of the KDRPP explaining the following:

- Will the KDRPP be sized to support both proratable and nonproratable users?

- How much of the KDRPP initial cost and operating cost will be paid for by the users? If any costs are paid by the users, will
proratable users pay for the costs of pumping water for nonproratable users in addition to the cost of pumping water for their own use? This seems only fair, since when the level of Lake Kachess is lowered below its natural gravity outlet to benefit the proratable users, it then would make it necessary for the water for the nonproratable users to be pumped also.

B. KDRPP facility with a capacity to provide water for Roza (and potentially other Proratable Entities) only.

In the SDEIS the last paragraph of Section 1.8.1 Federal, page 1-17 states that “If pending Federal legislation is enacted, it would provide statutory authority for Roza (and potentially other Proratable Entities) to fund, design, construct, operate, and maintain the proposed KDRPP facilities. Table 1-1 also states that Roza Irrigation District has the responsibility to fund, design, construct, operate, maintain the selected alternative.

If Roza were the only Entity to fund, design, construct, operate, and maintain the proposed KDRPP facility, does that mean that Roza could construct a facility that meets their needs only (to the exclusion of the nonproratable and non-participating proratable entities)? If that were the case, would it mean that, once Roza had pumped the level of Lake Kachess below the natural gravity outlet of the lake, Roza would be the only entity that would have access to water from Lake Kachess until the lake level rose above the gravity outlet of the lake? Would this mean that during multiple consecutive drought years, when every gallon of water has to be pumped out of Lake Kachess (since Roza had pumped the lake down the previous year), nonproratable and other proratable users could get zero water for the season because the lake level was below the gravity outlet? Depending on the answers to these questions, it looks like a single entity that built the KDRPP, might jump in front of nonproratable and other proratable users (priority wise), when the level of Lake Kachess is below its natural gravity outlet.

Comments - Please provide more detail in the FEIS on the sizing and operation of the KDRPP explaining the following:

- Will the KDRPP be sized to support Roza’s (and potentially other participating entities) requirements only, or will it be sized to support all (both proratable and nonproratable) users?

- If the KDRPP is sized to satisfy Roza’s (and potentially other participating entities) requirements only, does that mean that when the level of the lake is below the natural gravity outlet of the lake, that Roza and the other potential entities are the only ones that will have access to water in Lake Kachess?
• If the KDRPP is sized to satisfy all users, the comments for Scenario A above would apply.

• What happens if not all entities participate in the funding and construction of the KDRPP. How are the nonproratable users guaranteed access to their senior water rights? Will non-participating proratable users forfeit their rights to some or all of their water rights that are supposed to be satisfied by an equal share among all proratable users, after senior (nonproratable) users have received their full allotment? If an entity does not participate in the funding and construction of the KDRPP, does that mean that whenever the level of Lake Kachess is below the natural gravity outlet of the lake they will get zero water from the lake? If that is the case, nonproratable and non-participating proratable entities could possibly get zero water from Lake Kachess for one or more seasons during multiple drought years.

• Clarify user costs for the different options discussed above. If it becomes necessary to pump water from Lake Kachess for nonproratable users to protect their senior water rights as discussed above, will the nonproratable users be asked to share in the costs for a pumping facility whose primary purpose is to improve water supply for proratable users during drought years?

It appears that the only way to ensure that the water is distributed properly between senior (nonproratable) and junior (proratable) water rights users (as described in the first paragraph above) over multiple drought years when a KDRPP is used; is to size the capacity of the KDRPP to supply water for all proratable and nonproratable users. If this is not done, only the entities that have pumping capacity will have access to Lake Kachess water when the level is below the natural gravity outlet of the lake. For a proratable water right user to pump this water from the lake is actually taking water from senior water right users, since that water would have been available the following year by gravity for the senior users if the KDRPP did not exist.

Since some of the options discussed above appear to have the potential for significant legal actions over water rights, please clarify these issues in the FEIS.

2. Impact on private wells.

The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be "dewatered." It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of "monitor and mitigate." The possibility of losing water, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a FEIS. Please provide this comprehensive strategy, its details, costs, and
operational features described in detail, and provide citizens with this information along with an appropriate comment period, prior to issuing a FEIS. Some property owners on the east side of Lake Kachess have senior water rights (purchased through the Department of Ecology's water banking system) for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that proratable water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

3. Misrepresentation of Lake Kachess

In Chapter 1, Section 1.2 the SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BOR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7. And under what authority can BOR tap into the natural lake? Cite the federal or Washington state law which allows draining of the natural lake.

Thank you for your consideration and I look forward to seeing these comments addressed in the EIS.

Sincerely,

Jerald A. Williams
425-747-8103
Email jaw.home@hotmail.com
Hi,

Attached please find my comments for the KDRPP DSEIS.

Respectfully submitted,
Karen Worcester

KDRPP-public-comments.docx
44K
Comment Letter 475

Karen Worcester
217 239th Way SE
Sammamish, WA 98074
July 9, 2018
Bureau of Reclamation, Columbia-Cascades Area Office
Attention: Candace McKinley, Environmental Program Manager
1917 Marsh Road
Yakima, WA 98901-2058
kkbt@usbr.gov
Dear Ms. McKinley,
As a recreationist and professional environmental scientist I am opposed to the Kachess Drought Relief
Pumping Plant.
The Kachess Drought Relief Pumping Plant (KDRPP) is not a public benefit and must not be enacted,
either by the Bureau of Reclamation and Department of Ecology, or by the Proratable Entities interested
in implementing it. It is inconsistent with adopted plans, the analysis is based on missing data and
questionable assumptions, proposed mitigation is lacking, groundwater impacts could be detrimental to
property owners and public recreationists, there are insignificant agricultural impacts given the negative
recreation and environmental impacts, lake habitat for fish is negatively impacted, and it could
potentially increase the fire susceptibility of the area while decreasing the ability of emergency
responders to fight fires. It also radically changes the use of the Yakima Project, which has been
managed for over 100 years as a system for all users and instead essentially earmarks one reservoir for
one irrigation district.

D
1

/ŶĐŽŶƐŝƐƚĞŶĐǇǁŝƚŚDŝƐƐŝŽŶĂŶĚĚŽƉƚĞĚWůĂŶƐ
Comprehensive planning within the State of Washington requires that all plans and projects be
consistent with adopted policies; KDRPP does not appear to meet that test in several regards, including
contrasting with the mission of the proposing agencies.
The opening page of the DSEIS cites the missions of the US Department of the Interior, the Bureau of
Reclamation, and the state Department of Ecology. While all agencies have mission facets that can
compete with one another, making mission-project consistency a balancing act, this project does not fit
with the adopted missions more than it does.

-

x

x

x

D
2

Though the US Department of the Interior is directed to “supply the energy to power our future,”
this part of the mission is tertiary to protecting natural resources, which KDRPP does not do.
Instead, it denigrates a natural environment in order to provide economic benefit to a small group.
Reclamation is directed to “manage, develop and protect water” and clearly KDRPP fits within that
purview. However, Reclamation must also do this work “in an environmentally and economically
sound manner,” which is not descriptive of the proposed project.
This project is most inconsistent with the state Department of Ecology’s mission to “protect,
preserve and enhance Washington’s environment, and promote the wise management of our air,
1

March 2019

SDEIS-CR-950


Undertaking KDRPP has significant negative environmental and recreational impacts which are not consistent with Ecology’s mission.

The DSEIS states in Section 4.3.3 that “Alternative 1 No Action does not meet the purposes of the Proposed Action because it does not address water supply for prorable irrigators or instream flow conditions in the upper Yakima River basin” (pg 4-21). Later, in Section 4.24 (pg 4-349) the DSEIS suggests that the proposed project meets several of the Integrated Plan’s goals when, in fact, it does not. The noted goals include:

- **Provide opportunities for comprehensive watershed protection, ecological restoration and enhancement, addressing instream flows, aquatic habitat, and fish passage**
  
  This plan does not provide “comprehensive watershed protection” and instead increases the vulnerability of an entire watershed to wildfire risks by lowering groundwater levels and reducing access to surface water for emergency responders. No ecological restoration or enhancement is provided other than improving a minority of instream flows analyzed; negative impacts are projected for aquatic habitat in the lakes and for fish passage as well.

- **Improve water supply reliability during drought years for agricultural and municipal needs**
  
  While KDRPP does provide some benefit in drought years, it is insignificant when the adverse climate change scenario is modeled. A 3% gain in water is hardly worth the negative environmental and recreational impacts that could permanently occur.

- **Improve the ability of water managers to respond and adapt to potential climate change effects**
  
  As noted above, potential climate change effects would severely limit the benefit provided by KDRPP.

- **Contribute to the vitality of the regional economy and sustain the riverine environment**
  
  As noted above, while there are some instream flow objectives that would be met, not all flow targets would benefit and some are projected to worsen. KDRPP does not meet the established economic indicator threshold of 1% and ignores the negative impacts to what is likely a large sector of the economy: recreation.

Further, KDRPP is inconsistent with several adopted plans at both the County and Federal levels.

- **Kittitas County Shoreline Master Program (SMP): Lakes Keechelus and Kachess are designated as lakes of statewide significance under the State Shoreline Management Act. The Kittitas County SMP designates the shoreline of both lakes as “conservancy shoreline environment,” which requires “maintaining the natural character of the shoreline area” (Section 3.15, pg 3-161). The development of any of the pumping facilities would be in conflict with this requirement as they would significantly alter the character of Lake Kachess.**

  Section 3.15 further goes on to state: “Under the draft SMP, the majority of both lakes would be designated as rural conservancy. The purpose of the rural conservancy environment is to protect ecological functions, natural resources, and valuable historic and cultural areas in order to provide
for sustained resource use, natural flood plain processes, and recreational activities.” All of these elements of the Lake to be protected would be negatively impacted by KDRPP.

- Ecology Upper Kittitas County Groundwater Rule (WAC 173-529A): Section 3.5.1 notes that Ecology in 2011 placed a moratorium on the development of new unmitigated groundwater withdrawals in upper areas of Kittitas County (pg 3-53). On its face, it does not seem that a project that could further deplete groundwater resources in this area could be consistent with this rule. How is KDRPP compatible with this rule?

- Forest Service Criteria, 1990 Wenatchee National Land and Resource Management Plan for Lake Kachess: The USFS has designated Lake Kachess as land allocation Developed Recreation (RE-1) Retention VQO, Scenic Travel 1 and 2 Retention VQO, and Partial Retention VQO. As stated in section 3.10.4, “The USFS considers visual quality to be one of the most important resources to be protected under this land allocation” (pg 3-127). Due to the changes in pool levels that would make the lake a less dominant element on the landscape, the proposed project is not consistent with these Forest Service criteria.

**Modeling/Data Analysis Questions**

A number of admissions within the DSEIS cast doubt on the accuracy and usefulness of the modeling used in the analysis and even note aspects of the project that were not included in modeling or evaluation. Data and analysis that are outright missing from this document include:

- Section 3.7: no formal wetland delineations or plant surveys were conducted for this analysis.
- Section 4.4.2 (pg 4-81): “Lake Keechelus was not included in drought operations surface temperature modeling completed by PSU” and “Extended or multi-year drought, or refill conditions were not included in the PSU water temperature model and potential effects of these conditions are not quantified.”
- Section 4.4.7.2 (pg 4-98): water temperature effects and their impacts on the Little Kachess basin from the inflow from Keechelus (through KKC) are unknown, indicating that this aspect of the project was also not modeled.
- Section 4.6.4 (Pg 4-129): “Additional hydrodynamic modeling is needed to precisely estimate reductions in zooplankton abundance…”
- Section 4.10: SketchUp (or similar) renderings of all proposed facilities to aid in adequate visual quality analyses are absent. Enough details are provided regarding building mass and location, and amount and location of vegetation to be cleared to provide these basic models as evidence in this document.
- Section 4.21: The socioeconomic analysis does not analyze the No Action alternative for economic impacts. This glaring lack of data makes it impossible to compare the predicted economic impacts of the alternatives.
- Section 4.21: The socioeconomic analysis also does not describe the impacts of the project to the recreation economy of the four-county region. Despite noting in Section 3.14 that “visitors to the lakes are an important part of the economy of upper Kittitas County” (pg 3-147), the economic analysis does not account for the recreation industry or even describe it as a piece of the whole 4-county regional economy.
One of the fish habitat “benefits” noted in the DSEIS is reduced water temperature in Lake Kachess due to reduced shallow water areas that would be warmed along the shoreline. The acknowledgement that modeling of prolonged droughts that could result in multiyear drawdowns of the Lake raises questions about the accuracy of this identified “benefit” and is among other questions raised by admissions within the DSEIS:

- Section 4.3.7 (pg 4-60) discusses differences that are “likely due to reservoir balancing in the modeling that may not occur during actual operation” but no explanation is given about how actual operation may differ from what is reflected in the modeling. Are these differences based on assumptions built into the model that are not accurate or is “reservoir balancing” too complex to accurately capture in a model? This statement should be better explained to either acknowledge deficiencies in the model or the highly variable nature of reservoir operation.

- Water temperature in Lake Kachess is predicted to decrease with drawdowns, but Section 4.6.4 notes “there is uncertainty around whether prolonged droughts... could cause warming.” Is this uncertainty related to the fact that multi-year and prolonged droughts were not modeled? What is the level of uncertainty? Why were prolonged droughts not included in the modeling?

- A discrepancy is found in Section 4.7.4 (pg 4-156) which states that it could take 2-8 years for Lake Kachess to return to normal operating levels, as opposed to all other sections of the document which refer to a 2-5 year refill period. With the predicted increase in frequency of droughts, how was the refill period determined?

In addition, there are some aspects of the analysis which are not explained adequately, such as:

- How is target pool elevation determined? If Keechelus does not meet its “target pool elevation” in some years following drought pumping of Kachess, how much longer would it take for Kachess to refill, assuming KKC is implemented?

- Construction methods and plans are fairly detailed for all aspects of the proposed project except for the Volitional Bull Trout Passage Improvements. Why is there no detailed construction data for this element of the project?

- KDRPP was originally proposed to allow pumping of 50,000 acre-feet of water from Lake Kachess but this number has increased to 200,000 acre-feet. What instigated this significant change in the amount of water to be pumped?

- Section 4.13.4.2 notes that noise from operation of the pumping plant is “anticipated” to fall within a certain range. The construction noise analysis is relatively detailed compared to the analysis of operations. Why is noise data from similar projects not cited or used as a proxy for this analysis? Additionally, the noise analysis notes that the closest noise sensitive receptors would not be affected but does not detail what these receptors are. What are the closest noise sensitive receptors, and where are they located?

- Section 4.15 notes that KDRPP would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” What regulatory guarantees are in place to ensure that no additional agricultural uses or intensifications are allowed after this project is constructed? This is a relevant question given the fact that the original 1902 legislation authorized the Tieton and Sunnyside divisions of the Yakima Basin (Section 1.8.1), but others have been added over time. How will Reclamation prevent other new agricultural uses from demanding additional water from this project which were not originally intended?
Further, it is not even clear that limiting agriculture to existing uses is even intended. Section 4.21 notes that the model allows for identification of agricultural activity that “could” occur (pg 4-319), which seems to allow the door to be open for more or intensified agricultural uses.

- Section 4.21 suggests that the Volitional Bull Trout Passage Improvements are expected to have positive economic benefits (pg 4-324). In what way would these improvements have economic impacts? What additional detail is needed about these improvements to estimate their economic impact?

Completely missing from the SDEIS (perhaps best located in Section 4.23 Health and Safety) is an analysis of the impact of the project on the fire susceptibility of the surrounding area and the ability of emergency responders to utilize water from Lake Kachess to fight fires that occur. Local fire departments make use of water from Lake Kachess to fight fires in the area; how have these organizations been involved in this process and what mitigation is proposed to address this potential issue?

Mitigation

Mitigation measures proposed in the SDEIS are severely lacking. While detailed mitigation methods are proposed related to the construction of the proposed facilities, few definitive mitigation methods are proposed for the negative impacts stemming from the operation of the proposed facilities. Those sections missing proposed operational mitigation methods include:

- 4.2.5.2: (pg. 4-9) Erosion control measures would be implemented prior to implementation of the project “if erosion is identified as a problem.” Isn’t an EIS the opportunity to identify erosion as a problem? If not identified as a problem at this stage, when would it be identified prior to implementation of the project? What types of erosion control measures would be implemented?
- 4.5.4: (pg 4-106) A well monitoring program is proposed to be implemented to analyze groundwater levels associated with drawdown but no “appropriate mitigation strategies” are identified for implementation.
- 4.6.10: (pg 4-148) A water quality monitoring program is proposed to be implemented to document changes in water temperature but no subsequent mitigation is proposed to address water quality impacts to fish.
- 4.13: Noise mitigation only addresses construction, not operation of the project.
- 4.14: A myriad of negative impacts on recreation are identified but no mitigation is proposed, other than a boat launch on the opposite end of the lake from the campground. Will alternative recreation sites for activities other than boating or fishing be provided elsewhere?

At the very least, mitigation strategies utilized by other agencies on similar projects with similar effects could be listed as examples of what Reclamation and Ecology might implement, should any future negative effects occur.

As detailed above, Section 4.15 notes that the project would “not increase the amount of irrigated land, but would help to maintain current levels of production while not ensuring them.” Specific regulatory restrictions should be put in place as mitigation for this project to ensure that no additional agricultural
uses or intensifications are allowed after this project is constructed. Without these measures, Reclamation could not prevent other new, or intensifications of existing, agricultural uses from demanding additional water from this project.

Section 4.23 notes steep slopes would be a potential safety hazard to the public and proposes a communication strategy with the public and lake users regarding the hazards and safety measures. Who is liable for injuries sustained by users due to the steep slopes caused by Roza’s (or Reclamation’s, in the event Roza cannot pay for construction and continued operation of the facility) operation of KDRPP? Further, Section 4.2.4.2 notes that slope instability could result “where relatively steep or unstable areas are exposed” (pg 4-7) and that instability could be caused by “rapid drawdown, heavy or steady rain, a rain-on-snow event, and earthquake shaking.” While Reclamation proposes to refrain from rapid drawdowns, it is noted that rain-on-snow events could become more common in the future thus increasing the risk of exposed slope stability. How will this negative impact be mitigated?

**Groundwater Impacts**

Impacts to groundwater in the area could be severe to private property owners, public recreation sites, and wildlife and vegetation. Only 6 of the approximately 107 wells in the area were monitored; is this number and their location representative? The fact that the only 2 privately owned wells to be monitored were added after the 2015 EIS was published suggests that groundwater analysis is lacking.

Both sections 3.5 and 4.5 indicate that “groundwater levels near the lake are influenced by lake elevations, especially during the dry time of the year when very little recharge is occurring and groundwater elevations are dropping because of discharge from the aquifer” (pg 3-57). Section 4.5.2 notes that well operations could be interrupted due to additional drawdowns, including the well supporting the USFS Kachess Campground (pg. 4-105/6). What the document does not indicate is the effect of lowered groundwater levels on vegetation in the area. Lowered groundwater levels would presumably dry out significant amounts of vegetation, further increasing wildfire risks in the area. Wildfire risks have increased significantly in all Western states over the last decade, and the costs—both to fight the fires and the economic costs incurred by those damaged by fires—have significantly increased as well. To undertake a public works project that increases those risks is negligent.

**Insignificant Agricultural Benefits**

For the overall cost of the project and the number and degree of negative impacts to the environment, wildlife and recreation, KDRPP does not even appear to address the need of Roza district water users to a significant degree. Under Alternative 1: No Action, proration occurs in 15 out of 90 years; under any of the action alternatives, proration occurs in 13 out of 90 years, a benefit of only 2 years. The document suggests that completing multiple additional projects would necessary to provide a meaningful improvement to proratable water users (Section 4.3.2, pg 4-19). The likelihood of securing permits and funding for the full list of projects needed to provide meaningful improvement is extremely low given the state of state and federal budgets. Undertaking KDRPP, and risking permanent drawdown of this lake, is not in the public’s best interest or the best use of taxpayer money.
At best, under the historical modeling, the action alternatives would “improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years” (Section 4.3.2, pg 4-19). However, agricultural demand for irrigation water is projected to increase due to climate change, at the same time that “natural runoff and streamflow in the system would decrease by 50% or more in some months when compared with the historic scenario; therefore irrigation demands and instream flow targets would have to be met by releasing larger amounts of water from the existing lakes. Currently, there are many years when the lakes are not capable of meeting these demands” (Section 3.12.3.4 Climate Change, Changes in Water Supply, pg. 3-138). Additionally, prolonged or multi-year droughts are expected to occur more frequently in the future (odds of a drought increase from 17% to 49% in any given year, according to Section 4.21.4, pg 4-329), and modeling under the adverse climate change scenario shows only a 3% improvement in proratable water delivery (pg 4-251). Further, the analysis finds that “the improvement under (the Action Alternatives) would be less in the third year of a multiyear drought because some of the inactive storage in Lake Kachess would be used in the first one or two years of drought, leaving less for a third year of drought” (Section 4.3.2, pg 4-19).

Section 3.21 notes that “agriculture is the third largest sector at the four-county scale” and accounts for approximately 11% of the four-county economy. No analysis is provided of the economic impact of the No Action alternative, only the conjecture that the impact of reduced prorated water supplies “could be greater than 1 percent of the agricultural sector output” (pg 4-323). Without this information, it is difficult to make a meaningful comparison between the economic impacts of the No Action and action alternatives. However, a comparison is not necessarily valuable given that Section 4.21.4 states that “the average annual impacts during operation on output, personal income, and employment are well below the 1 percent threshold for the impact indicators at the four-county regional level” (pg 4-325). If the economic benefit is projected to not meet the identified threshold of significance, why are Reclamation and Ecology considering implementing a project that could cost over $225M to construct (including interest, for the preferred alternative, though costs increase to $675M should another alternative be chosen) and $25M a year to operate, not accounting for potential cost increases of 30-50 percent? Clearly, the public benefit is not obvious, nor is the benefit to farmers who would receive water, as in 2015, farmers in the Roza district refused to pay for a similar proposal estimated to cost $85M.

In addition to providing only a negligible improvement in water deliveries under the adverse scenario (3% improvement), permanent risks to the lake and the surrounding wildlife and vegetation significantly worsen: “The predicted changes in snowpack and runoff associated with climate change would alter KDRPP operations by producing larger and more frequent drawdowns, and would more frequently result in years when Lake Kachess fails to refill” (Section 4.12.3, pg 4-238). “Compared with Alternative 1 under the adverse scenario, the mean lake level would be approximately 42’ lower over the period of record, and 20-90’ lower in drought years” (Section 4.12.5, pg 4-248). This is a significant difference that could lead to long-term impacts to groundwater levels, recreation opportunities, fish and wildlife habitat, and fire susceptibility of the region.

Recreation Impacts

Recreation was specifically authorized as an additional purpose of the Yakima Project in Section 1205 of YRBWEP in 1994, but it does not appear that any recreation organizations have been involved in the
development of this plan, other than USFS. What outreach was made to recreation organizations, or users (such as the estimated 23,000 annual users of the Lake Kachess Campground), to provide notice of this proposal? The DSEIS notes that a communication strategy related to the project is called for in the future, but why has one not been undertaken to educate and seek input on the project during the development stage?

Due to its proximity to the greater Seattle area, Lake Kachess is an invaluable recreation location; 3.61 million people in the Seattle-Tacoma-Bellevue Metropolitan Statistical Area are within a roughly one-to-two hour drive of the camping, hiking, boating, fishing and other general opportunities to appreciate nature offered at this lake. Section 3.14 notes that “population increases have increased demand for recreation and the campground is routinely full... Kachess has a higher number of recreational visitors than Keechelus or Cle Elum Lakes... (pg 3-147) The Cle Elum Ranger District is the busiest in the area and its campgrounds tend to be completely booked on summer weekends... The Kachess Campground is the most popular in the district... (pg 3-149).” In addition, this section notes that dispersed recreation at informal camp locations along the lake is common in the summer when the campground is full.

Despite this increasing need, and the positive economic benefit it has for Kittitas County, this project could reduce recreation opportunities in the area by:

- Potentially impacting well operations at the campground and privately owned residences along the lake to a degree that these sites are unusable;
- Increasing the distance from the campground and residential areas along the west shore to the water line from 400’ at the current maximum drawdown to 1,500’ (over ¼ mile) at the proposed maximum drawdown. Section 4.10.4.2 (pg 4-215) notes that “In most areas, the reservoir pool would recede approximately 200 additional feet under the maximum drawdown condition...”;
- In addition to increasing the distance between users and the shoreline, the slope of the shoreline near some recreation areas would be hazardous to humans (and presumably animals attempting to access the lake for water) at 20-30 degrees near the campground and private development on the west side of the lake, and 20-40 or 40-60 degrees on the east side. These steep slopes also pose risks to boaters using the lake (Section 4.23, pg 4-343); and
- These reductions in recreation opportunities would then increase pressure at other nearby recreation sites such as Lake Cle Elum or Lake Easton.

Section 4.14 Recreation identifies two impact indicators for recreation: “loss of fishing access or reduction of fishing opportunities that exceeds current seasonal loss of use due to existing drawdown conditions; reduction of usability of recreation due to construction activities or the receding of the shoreline more than 100’ from the recreation site or with a slope greater than 20 degrees” (pg 4-275). The action alternatives have “major impacts on recreation” (pg 4-277) when evaluated by these indicators. Mitigation proposed for the first impact indicator is a new boat launch on the East shore, which could be usable at all lake levels; no mitigation is proposed for the second impact indicator. This boat launch would be on the opposite shore (east vs. west) and lake end (south vs. north) of the lake from the campground: what is the drive distance and time from the campground to the proposed boat launch? How is this acceptable mitigation for campers? Would it really even be usable by them, or only by day visitors intending solely on boating? Due to the steep slopes, how would any boaters access developed recreation sites?
Assuming that recreation (including camping, hiking, fishing, boating, day trips and the presence of secondary homeowners who conduct personal business in the area) is as negatively impacted as noted in the DSEIS, what are the economic impacts to Kittitas County and the four-county region as a whole? Section 3.21 notes that “the service industry is responsible for the most employment at the state and four-county scales and is roughly double the next largest sector” (pg 3-178); is recreation included as part of the service industry or does it stand on its own? State wide, outdoor recreation is a $26.2B industry, which provides for 201,000 jobs, generates $7.6B in wages and salaries, and produces $2.3B annually in state and local tax revenue; surely a fair share of that is going to this four-county region. This part of the economy is ignored in Section 4.21 Socioeconomics but deserves consideration or, at the very least, acknowledgement.

**Negative Fish Impacts**

While there are some positive benefits to KDRPP and KKC related to meeting desirable stream flows on certain river reaches during some parts of the year, the overall impact to stream flow does not seem positive. Further, the DSEIS notes that fish would need ten consecutive years of positive conditions in these reaches in order to boost their numbers to those projected in Section 4.6.7 (pg 4-147); given the climate predictions for the future, achieving ten consecutive years of positive conditions seems highly unlikely, especially given that winter and spring flows are unlikely to meet targets, so the benefits of KDRPP for stream flows are even less significant. Section 4.6.2 notes that under all Action Alternatives, “increases in annual instream flows, and in July-August instream flows during drought years in the Easton Reach, would decrease the quantity of rearing habitat available to spring Chinook and rainbow trout subyearlings, resulting in a negative impact to these species during drought years” (pg 4-117). So although the same section notes that instream flows would be benefited in the spring, flows later in the year would be negatively impacted, which may negate the earlier benefits. The same situation is described for the Keechelus Reach: that instream summer flows are projected to be met more often, but winter and spring flows are negatively impacted; without meeting instream flows throughout the year, what benefit is it to these fish populations to meet flow targets only occasionally, and particularly when so many additional negative impacts would occur for these species in Lake Kachess?

Fish, including Bull Trout and salmon in Lake Kachess would be negatively impacted by all Action Alternatives in several ways, including increased turbidity (pg 4-117), decreased hydraulic residence time, lower minimum lake levels, reduction of shoreline vegetation, degraded thermal refugia for predator and prey species (pg 4-116), disturbances to fish near the pumps, and increased risk of entrainment in the facility (Table 4-79, pg 4-115). As noted above, the water temperature modeling is inadequate, so the potential benefit of lowered water temperature is questionable, as the DSEIS notes in several sections that water temperatures may increase due to prolonged or multi-year droughts. Taken together, these impacts result in a reduction of available prey within the lake, more overlap between predator and prey species, reduced feeding efficiency of predators that visually locate prey, and reduction in habitat complexity. Section 3.6.2.1 notes that “Kokanee in Lake Kachess exhibit slow growth and small size at age compared to other lake populations and the population is at risk of a feed and growth bottleneck in summer” (pg 3-74); KDRPP puts this population at further risk. Prior to the construction of the Kachess Dam, Lake Kachess supported a variety of anadromous species that no
longer have access to the lake (pg 3-66); KDRPP would put those species left in the lake at further risk of survival.

The only negative impact that is proposed to be mitigated by this project is the loss of connection between Little and Big Kachess Basins: the Volitional Bull Trout Passage Improvement would be constructed. Purporting that this “improves surface water connectivity” is a misstatement – it replaces a naturally functioning connection that this project completely destroys. Section 3.2.3 notes that “around the rim of Lake Kachess, 31 creeks flow into the lake from the uplands. Twenty-two creeks flow into the Little Kachess basin” (pg 3-7). Section 4.3.10 (pg 4-77) specifically notes that bull trout would be adversely affected by the loss of access to upstream tributaries. How will connectivity to these creeks be mitigated when the lake is 80’ lower and up to 1,500’ farther away from their current connection points?

Yakima Project is a System

The Yakima Project includes five major storage reservoirs that provide irrigation water to six districts, as well as flood control, instream flow requirements, and municipal uses. As is clearly stated in Section 1.2.1 Yakima Project (emphasis added): “Reclamation manages these storage reservoirs as a system, and does not designate any one reservoir or storage space to a specific irrigation district.” How does allowing one particular district to build and operate this project on one particular reservoir meet the objective of managing these reservoirs as a system? To a taxpaying, recreating citizen, it appears to be a taking of a public good for the economic development of private entities, which undertook a risky business venture attempting to start or maintain a farm in a district without Senior, or even Junior, water rights.

Besides not providing a significant amount of water in drought years, this water is likely to be wasted due to the condition of the irrigation canals used by Roza. The district’s canal system is 97 miles long, and 67 miles of these canals are unlined, open air, earthen ditches built in the Yakima desert. In a 2016 Capital Press article, Roza representatives state that water seepage in these earthen ditches “is lessened by fast flowing water creating a hard pan of silt on the canal bottom.” However, during drought, when the water has slowed considerably, this layer of silt is broken up and dispersed, causing the canals to leak. Before undertaking any projects that would take additional water from reservoirs, all of these canals must be improved with concrete or plastic liners to prevent water waste.

The fact that only one of the six irrigation districts has expressed genuine interest in this project suggests that it is for the benefit of the few and not the whole. Rather than implement a costly public works project with significant negative environmental and public impacts, perhaps a more systemic solution could be found that creates appropriate incentives for all water users to use water sustainably. Section 1.2.3 notes that a Market Reallocation effort is a part of the Integrated Plan. This would reallocate “water resources through a ‘water market’ or ‘water bank’ where water rights would be bought, sold or leased on a temporary or permanent basis to improve water supply and instream flow conditions.” Such a solution would create incentives for all water districts, not just those that are proratable users, to invest in water conservation methods that allow water to be used more wisely. Given the fact that KDRPP cannot meet the projected need (and falls far short of meeting that need given climate change assumptions), implementing a water market reallocation first makes much more
sense. If such a reallocation were highly successful, it might negate the “need” for KDRPP or any of the other public works projects proposed as part of the Integrated Plan.

Additional storage for water that is currently “wasted” could also be effective in meeting some of the need without causing permanent, or long-term, negative environmental and recreational impacts. Section 4.3.7 notes that “in most years, Reclamation spills water from Lake Keechelus because it cannot store all of the runoff from its watershed” (pg 4-49). Section 3.12.2.1 notes that “snowpack is considered the ‘sixth reservoir’ in the Yakima River basin... (but that) only about 30% of the average annual total natural runoff above the Parker stream gage can be stored in the current Yakima River basin reservoirs” (pg 3-134). Winter flows in the Yakima River area high and are projected to increase. Are there alternative storage options for this water that is currently not put to use later in the season when demand is high? Aside from an additional reservoir, could water be stored on farms in cisterns for use on demand? Are there other out of the box ideas that could be considered that might offer greater flexibility with less cost?

**Cumulative Impacts**

After reading the entirety of this DSEIS, it is extremely difficult to understand how the document can assert that there would be “ongoing beneficial effect” for vegetation, and “no cumulative impacts” to surface water, reservoir elevation, ESA-listed fish, or land use. The following are excerpts from the DSEIS describing the level of Lake Kachess under Alternative 2 as compared to Alternative 1, emphasis added (Section 4.3.4, pg 4-23 and 4-25):

- ...levels would be lower than those under Alternative 1 in **44 years** out of 90 years modeled. In 31 of the 44 years, Alternative 2 had a lower Lake Kachess level than Alternative 1 for every day of the year... both when Reclamation operates KDRPP in drought years and in years following droughts when the lake is refilling to its normal operating levels.
- Lake Kachess would be below the level at which the two lake basins become separated (elevation 2,220) in 76 out of 90 years modeled, and increase of 3 years from Alternative 1. The mean duration would be 154 days per year, an increase of 76 days per year compared with Alternative 1. ... The duration would increase during all months under Alternative 2; under Alternative 1, the separation of the lake basins occurs from Sept to March.

The DSEIS claims, almost consistently, that Lake Kachess would refill in 2-5 years following a drought, however, this is based on “the historical record of droughts.” Even without accounting for the adverse climate change scenario, more recent historical records suggest that it is unlikely the lake would refill within 2-5 years (emphasis added):

During multiyear drought conditions such as those in 1992-1994, Reclamation would draw the lake down as much as 80’ below the existing outlet elevation. Following a multiyear drought comparable to that of 1992-1994, lake levels would recover to normal operating levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the lake would be drawn down to 50’ below the existing outlet elevation. **Full recovery would not have been achieved until 2008**, because of a series of dry years (2003 & 2004) and a subsequent drought (in 2005). During the 2005 drought year, the lake level would be 40’ below the existing outlet elevation. (pg 4-25)
Given that the adverse climate change scenario predicts that droughts are nearly three times more likely in any given year, it is reasonable to conclude that following a significant drawdown, Lake Kachess might never refill completely. This is most certainly a “cumulative impact,” not only to surface water, reservoir elevation, fish, and land use, but more generally to the recreating public or those that value the environment in its own right.

Beyond the environmental and recreational impacts of concern above, the construction, maintenance and operating costs are also a significant cumulative impact to the public. Although the Proratable Entities claim to intend to undertake and pay for the project themselves, there is dissention among their ranks with some members foreseeing an inability to pay for the water resulting from the project, and presumably all of the associated project costs. As disclosed in the DSEIS, construction costs could range from $225M-$675M (depending on the selected alternative) and operating costs could be as high as $25M annually. Construction cost estimates for the project alternatives could increase by 30-50% (depending on project alternative), and inflation is not accounted for in the annual maintenance and operation estimates. This is an unacceptable cost to add to taxpayer burden at the same time that recreation opportunities are taken from the public.

Overall, the benefits associated with the small amount of water provided do not outweigh the significant negative environmental and recreational impacts. This project must not be implemented.

Respectfully Submitted,

Karen Worcester
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation Columbia-Cascades Area Office
1917 Marsh Road Yakima, WA 98901-2058

Dear Ms McKinley:

Subject: comments on the "Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance" project proposal

I am writing to you with comments on the proposal to withdraw more water from the Yakima River under the guise of the "Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance" project. I don't believe that this project is necessary or that the alternatives have been adequately explored or explained, that it benefits a modest number of irrigators while depriving the general public of greater benefits if the resources (money and property) were used in other ways, and that expanding irrigated agriculture in the Yakima Basin provides little benefit to the general citizen and taxpayer. Irrigation projects in the Yakima River system have degraded habitat and water quality, and extirpated important native fish species. A century ago this was generally accepted as standard practice, since then public opinion has shifted toward protecting and restoring the environment as the extent and impact of previous degradation has become painfully obvious (e.g. severely reduced salmon fisheries across the Pacific Northwest), unfortunately the Bureau of Reclamation’s priorities seem to be more nineteenth century than twenty first. I believe that remediation of the damage resulting from irrigation should be well under way before any increase in water withdrawal is considered (there is insufficient discussion of whether the existing water rights cover such an increase).

I will also suggest ways to accomplish the goal of more reliable water availability for junior water rights holders and projects which would be precluded by this project which would be of greater benefit to the residents of Washington State.

Necessity: there is no discussion of the continuing waste of water withdrawn from the Yakima River for irrigation. I have included a note on how waste should be defined, identified some of the worst forms of waste in the basin and improvements which could be made. Until the amount of water which could be saved if wasteful practices were significantly reduced and a determination made of whether the water saved would be sufficient to eliminate the need for extra storage before the decision to proceed is made. Ecology’s guidance on water rights is clear that when there is not sufficient water to meet everyone’s water rights the junior water right holders have no claim for additional water beyond their allocation. How does the decision to take extra water from the river (in the following year(s)) conform with this policy?

Remediation: The damage to the fisheries in the Yakima River was gratuitous and disregarded existing legal requirements to provide fish passage at dams. The major reservoirs still lack fish passages, several opportunities to combine fish passage structures with other major construction activities at the dams were not taken. Major projects for irrigation should be put on hold until fish passage facilities have been put in place. There are ongoing efforts to reintroduce species which had been extirpated in the basin, but flow manipulations (aka the FlipFlop) continue to be used to suppress salmon spawning. The use of the river channel in lieu of a canal or pipeline degrades the value of the river channel for rearing of fish and the return of tailwater to the river degrades water quality. Installing a pipeline to convey water from the reservoirs to the irrigation districts, as was proposed for using Columbia River water in the BlackRock project, would allow more natural, although reduced, river flows and create the conditions to eliminate or sharply reduce waste of water and discharge of wastewater containing sediment, nutrients and pesticides into the river. Such a pipeline system would also
provide (seasonal) hydropower and eliminate the need for pumps for advanced irrigation systems. Water delivered to the irrigation districts would be of higher quality (none of the pollutants in the wastewater currently returned to the river) and require less effort to screen out fish and debris (just at the intake at the reservoir). The potential for restoring a healthy river system by removing the irrigation water from the river needs to be seriously evaluated before additional flow modifications are implemented.

Financing: The current irrigation conveyance system has been largely financed by loans from the Federal government, starting over a century ago. Most of the loans have not been repaid, despite (because of?) the very favorable terms, additional loans should not be made until the outstanding loans have been repaid. A general truism is that if you don’t value something you won’t worry about wasting it. The cost of water to irrigators does not include a charge for the value of the water, just the costs of delivering the water (to the extent that those costs are not subsidized by unpaid loans and direct subsidies). The continued waste of water through faulty or improper design of the distribution system and use of inefficient (in terms of delivering water to the crop) irrigation systems is an outrage. At some price, requiring payment for the water withdrawn will result in better practices, there should be a charge for water with the price increasing until the needed reforms have been achieved. The fees for use of water owned by the public should go to the public (government) for public projects; charging for water is little different from selling timber harvested from public lands. The costs of a pipeline to replace the inefficient system of canals, ditches and misuse of the river channel should be paid by the irrigators, but ownership of the pipeline and the hydropower plants be public with profits going to the general fund and local government.

Public Benefit/Expense of irrigated agriculture: The water for irrigation was taken without respect for the existing (indirect but very much essential) users such as those fishing for salmon spawned in the Yakima basin. There appears to have been no reparations (and the descendants of many of those harmed would be hard to identify now a century later but there are some obvious claimants) or restoration of the fisheries directly (and indirectly) extirpated by construction of the irrigation supply system, notably the reservoirs over existing spawning and early rearing lakes for Sockeye Salmon. Shouldn’t there be acknowledgement of the extirpation of Sockeye (there are mentions of the extirpation of Coho, Gray Wolves and Bull Trout) as a result of construction of the dams (and efforts by the Yakama Nation to reintroduce them) in this report?

In recent decades those working in orchards, etc., are no longer citizens, but instead immigrants. The immigrants are reported to include legal (green card holders and H2-A authorized workers) and undocumented (or those using fraudulent documentation – a recent article in the Seattle Times (28 June 2018) reports that orchardists do not use the official site for establishing the immigration status of workers and many are likely are not properly authorized to work in the United States). There are also reports of abuse of immigrant workers (failure to pay for work done, unsafe working conditions, sexual abuse) that continues because the workers are so desperate for the money and afraid of being deported that they fail to report these problems. The irrigators claim that they Americans won’t work in agriculture, this includes the American born children of immigrant farm laborers. My observation of workers on highway construction, roofing, etc. lead me to believe that people are willing to work under challenging conditions (hot, fumes from asphalt) and the issue is one of pay – why work in the fields if the pay at WalMart or the local fast food establishment is comparable, especially if conditions are less onerous, employment is more predictable and there are benefits such as health care. Hiring immigrant labor has a similar impact to sending work overseas to where labor is less expensive – the wages (or in the case of immigrants, a portion of the wages) are not spent in the United States and so aren’t part of the chain of money passing from one worker through a local business (or local outlet) and on to the next worker. The shipment of agricultural products overseas is equivalent to shipping water out of the water short Yakima Basin, where it could otherwise be used by the native fishery or crops consumed in the United States.

Alternative Investments: I have already described how the existing system of canals and using the river channel for conveying water from the reservoirs to the irrigation districts is wasteful of water (leakage and tailwater when withdrawals and flows don’t balance) and the wastage of the gravitational potential energy between the reservoirs and irrigation districts can both be corrected by use of pipelines and distributed hydropower plants.
Kachess and Keechelus Reservoirs appear to be well-placed for use as pumped hydropower storage, using connections similar to those proposed but probably of a different size. This would benefit the general public by evening out the short term fluctuations in solar and wind power as well as accommodating the fluctuations in daily demand from industries which don't operate 24 hours a day and the peak usage periods of households. These two options should be evaluated before committing to using Kachess Reservoir for increased storage capacity and further impacting flows in the upper river.

Future Concerns: As proposed the project would be used only in official drought years (the available water would be less than 70% of the water rights of the junior water rights holders) and in the year(s) following while Kachess Reservoir is refilled, leaving the infrastructure idle for potentially years. With the facilities available I expect that there will be considerable pressure to use the system to supplement irrigation supplies in years when there is less than a full allotment available but above the 70% threshold. Using these reservoirs for pumped hydropower storage would involve daily usage all year, that is a more efficient use of the investment with little or no impact on flows in the river.

For all of the above reasons I believe the proposal should not move forward until the issues I have raised have been satisfactorily addressed: installation of fish passage at the reservoirs, restoration of channel geometry and more natural flows in the river, reducing the waste of water withdrawn and the amount of polluted water returned to the river. The alternative use of the reservoirs for pumped hydropower storage also deserves to be evaluated before the project moves forward.

Thank you for the opportunity to submit these comments.

Sincerely,

[Signature]

Phelps Freeborn
3409 Taylor Way
Yakima, Washington 98902
(509) 454-0871
Water Rights and Beneficial Uses – definitions and a discussion

I have included the sources I cite in the following from informational pages from Ecology and WSU Extension plus a definition in the water rights code on the following pages. All emphasize using water for growing a crop (there are other allowable uses but commercial agriculture is the primary user of water from the reservoirs in the headwaters of the Yakima River system). I did not find the specific agreement between Washington State and the Bureau of Reclamation, which addresses irrigation districts rather than water rights issued to a specific parcel.

From conversations with friends who worked for the Water Rights program within Ecology and farmers with water rights, I believe the following statements are true for individual rights and would have to be modified for irrigation districts, but still the broad principles would apply:

A water right is approved for growing a specific crop (especially applicable to perennial crops such as orchards) or suite of crops which may be grown in rotation (typically annual crops)
The amount of water allowed per acre of a particular crop is defined by studies published by WSU, see Appendix B in sources cited. In the users manual for scheduling irrigation, the use of drip irrigation and the smaller volume of soil wetted is noted; what is not noted is that broadcast irrigation of a crop such as apples will apply water to areas between the root zones of the crop.

A strict definition of beneficial use (which is implicit in the WSU irrigation scheduling program) is that only water which is taken up (typically by the roots) by the target crop is put to beneficial use. Water applied outside of the root zones of the individual plants forming the crop is not beneficially used – it is either taken up by different plants or percolates below the field and out of reach of the crop. Water applied to grass between trees in an orchard can be useful for controlling dust and mud, but this is not beneficial use by the basic definition and this function can be served by applying a mulch.

Each irrigation system has the potential to apply water in areas or amounts beyond the needs of the crop, that is wasted and if returned to the river is also usually polluting:
Water carried in earthen ditches saturates the soil beneath the ditch, which then percolates toward the groundwater below, again not a beneficial use and avoidable by using lined ditches or pipes;
Flood and rill irrigation require saturating the soil in the area nearest the start of irrigation in order to satisfy the needs of the plants at the far end of the area irrigated. Unless the lower end of the field is diked to retain water long enough to infiltrate, water will flow past the crop, that is tailwater. Water is being applied in excess of plant needs at the top of the row and as tailwater.
Sprinkler irrigation applies water to the entire area of a field or orchard, including over areas without roots from the crop (this is especially true for annual crops before reaching maturity), resulting in wasting water. Aerial application (sprinkling) of water results in evaporation which never reaches the field and is also wasted.
Drip Irrigation applies water near the base of the plant, i.e. at the start of the roots, and if properly placed results in less water escaping the crop's roots (the roots don't grow beyond the wetted zone). The use of a plastic mulch to control weeds will also reduce the potential for evaporation from the soil surface.
Driving through the Yakima Basin over the past two decades I have seen more sprinkler systems installed and fewer rill or flood irrigation systems in use. In the Toppenish Valley it appears that the vegetable growers use the combination of drip irrigation and plastic mulch, hopyards also appear to use drip irrigation extensively (the coils of black hose at the ends of rows during the winter), but the orchards use sprinklers and grass cover. Progress in replacing inefficient (especially rill and flood) irrigation has been slow and there are just three references to irrigation efficiency in the proposal, on pages 1-2, 2-2, and 4-352, which are more aspirational than actual progress. There is a challenge in promoting efficiency, irrigators are expected to ‘return’ the water saved by improved application methods to Ecology, which they interpret as taking away their water right, which is a misunderstanding: the water right is only for the amount of water needed to grow the crop on the land to which the water right applies and amount needed is (in principal, but apparently not in practice) defined by the current best practices. Water saved by improved application methods is not allowed to be used to irrigate additional land, this is called water spreading. My understanding is that irrigation districts have the area which may be irrigated (acres not specific fields) as part of their water right. I don’t know the law so that using ‘saved’ water to make up for reduced water availability due to low precipitation seems allowable within an irrigation district.

A water right is the right to withdraw water for private use, within constraints due to water reserved for more senior water rights holders (including Native Americans who hold the most senior rights) and any other restrictions on diversions, such a minimum flows in the river. Replacing the water withdrawn from the ‘dead pool’ of Kachess Reservoir is only effective if it is replaced subsequently. What guarantee is there that water withdrawals when refilling the reservoir (or filling it to capacity, since it does not regularly fill to capacity), will not exceed the existing water right for that year?
Water Rights and Beneficial Uses – Sources

The following are selected quotations from the web page at the head of the quotation (sources cited). Most of these apply specifically to individual water rights rather than for an irrigation district or Bureau of Reclamation, but the general principles of not wasting water still apply to the proposal and projects.


WAC 173-517-030

Definitions.

For the purposes of this chapter, the following definitions apply. If these definitions differ from those in related rules, the definitions presented here shall apply for this chapter:

(3) “Commercial agriculture” means the production of crops for sale, crops intended for widespread distribution (e.g., markets), and nonfood crops such as hay and lavender. Commercial agriculture includes livestock production and livestock grazing. Commercial agriculture does not include crops grown for household consumption (e.g., household vegetable gardens or fruit trees).

https://fortress.wa.gov/ecy/publications/documents/961804-SWR.pdf copied 7 July 2018

Water Rights in Washington

The Department of Ecology (Ecology) manages the state's water resources, working to meet all the varied demands on Washington's public waters.

Q: What is a water right?
A: A water right is a legal authorization to use a certain amount of public water for a beneficial purpose. The water must be applied without waste to uses such as irrigation, domestic water supply and power generation, to name a few.

Q: Does my water right protect me during a drought?
A: No. A water right does not guarantee the availability of water. The degree of reliability depends on your water source and the relative seniority of your water right.

Publication Number: 96-1804-SWR

https://ecology.wa.gov/Water-Shorelines/Water-supply/Water-rights copied 7 July 2018

Water: A public resource

We are responsible for managing the water resources of the state, including issuing the right to use water as well as protecting the instream resources for the benefit of the public. We manage a portfolio of over 230,000 active water right certificates, permits, applications, and claims to help meet the state's many water supply needs. Many of these permits have been in existence since the late 1800s. Before we can issue a water right permit, the proposed use must meet a four-part test:

1. Water must be available (both physically and legally)
2. Water must be used beneficially
3. Water use must be in the public's interest
4. Water use must not impair another existing use
How much money are my water rights worth? Water rights can increase property values 5-10 times. Water can enable the production of agricultural crops worth up to thousands of dollars per acre on land where nothing at all could be profitably grown without it. This production stimulates local economies and industries, produces jobs, and increases the state’s tax revenue. Water not only makes life possible, it makes it enjoyable. Although it is difficult to put a direct dollar/gallon value on it, water is extremely valuable. Please don’t waste it.

Water is held in the empty spaces between soil particles. When these empty spaces are completely filled, the soil is said to be saturated (Figure 5). Excess water will drain out over time until a point where the soil can hold a certain amount of water indefiniely against the downward pull of gravity. This soil water content is the soil’s full point called field capacity (FC) and in this application is measured in inches of water per foot of soil depth. The excess water that drains will move down to lower soil layers. Applying more water than a soil can retain in the plant’s managed root zone results in water loss to deep percolation (DP) or “deep water loss”. Water loss to deep percolation wastes water, pumping energy, and vital plant nutrients that are held in the soil water solution.

How Much Water is the Plant Using?
The amount of water required to grow a crop consists of the water lost to evaporation from a wet soil surface and leaves, and transpiration of water by the plant. Together these are called evapotranspiration (ET) and are also referred to as crop water use. ET is measured in inches of water used per day. The crop evapotranspiration (ETc) is calculated as:

\[
ETc = ET_{r} \times \text{crop water use factor}
\]

where \(ET_{r}\) is the estimated evapotranspiration of a reference surface of full grown alfalfa that is calculated from measured weather data. The weather data used to calculate \(ET_{r}\) include solar radiation, air temperatures, humidity, and wind speed data.

Other Model Assumptions
The following additional assumptions are made by this soil water balance model.

- All water entered as an irrigation amount infiltrates into the soil.
- Water in the plant’s root zone is equally available to the plant regardless of depth.
- The season begins with a full soil profile (at field capacity). This can be modified by using the “Reset/ Correct Soil Water Availability” option on the first day in the Daily Budget table. Plant roots grow into soil at field capacity.
- Water moves quickly into the soil and excess water is lost quickly to deep percolation.
- All rainfall goes towards satisfying the calculated ET demand.

For Drip/Micro, % of Soil Wetted: In many perennial cropping systems under drip or micro irrigation, the entire soil volume is not used. For example a drip irrigation system in a wine grape vineyard may wet a 4 ft width of soil in an 8 ft row spacing. In this case only 50% of the soil is used to store water since the inter-rows remain dry. The soil’s water holding capacity can be reduced by multiplying by this percentage to reflect this.
Appendix B: Crop Defaults Used in the Model. Alternative crops and defaults can be set up for different states or climatic regions. *Crop Development Dates for Crop Coefficient Curve (DOY)*

[I could not align the headers exactly; 'Root Depths' applies to the last two columns; this is only the first portion of the table]

<table>
<thead>
<tr>
<th>Crop Name</th>
<th>Planting &gt; 10% of Field</th>
<th>&gt; 70% Initial Maturati</th>
<th>End of Season</th>
<th>Initial</th>
<th>Full Cover</th>
<th>Final</th>
<th>Starting</th>
<th>Max.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alfalfa</td>
<td>91</td>
<td>122</td>
<td>139</td>
<td>278</td>
<td>0.33</td>
<td>1.07</td>
<td>0.95</td>
<td>4.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>Apples</td>
<td>110</td>
<td>149</td>
<td>244</td>
<td>278</td>
<td>0.39</td>
<td>1.05</td>
<td>0.50</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Apricots</td>
<td>110</td>
<td>149</td>
<td>220</td>
<td>278</td>
<td>0.39</td>
<td>1.10</td>
<td>0.50</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
<tr>
<td>Asparagus</td>
<td>120</td>
<td>214</td>
<td>260</td>
<td>278</td>
<td>0.36</td>
<td>1.00</td>
<td>0.87</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5.0</td>
</tr>
<tr>
<td>Beets (table)</td>
<td>117</td>
<td>195</td>
<td>239</td>
<td>276</td>
<td>0.40</td>
<td>0.88</td>
<td>0.79</td>
<td>0.2</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>2.5</td>
</tr>
<tr>
<td>Blackberries</td>
<td>90</td>
<td>145</td>
<td>190</td>
<td>280</td>
<td>0.25</td>
<td>1.05</td>
<td>0.70</td>
<td>3.5</td>
</tr>
<tr>
<td>Blueberries</td>
<td>85</td>
<td>111</td>
<td>195</td>
<td>225</td>
<td>0.25</td>
<td>1.03</td>
<td>0.90</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>4.0</td>
</tr>
<tr>
<td>Cantaloupe</td>
<td>136</td>
<td>195</td>
<td>229</td>
<td>243</td>
<td>0.42</td>
<td>0.71</td>
<td>0.50</td>
<td>0.5</td>
</tr>
<tr>
<td>Carrots</td>
<td>91</td>
<td>160</td>
<td>220</td>
<td>243</td>
<td>0.70</td>
<td>0.85</td>
<td>0.75</td>
<td>0.2</td>
</tr>
<tr>
<td>Cauliflower</td>
<td>91</td>
<td>160</td>
<td>218</td>
<td>243</td>
<td>0.58</td>
<td>0.87</td>
<td>0.79</td>
<td>0.2</td>
</tr>
<tr>
<td>Celery</td>
<td>127</td>
<td>186</td>
<td>220</td>
<td>253</td>
<td>0.65</td>
<td>0.80</td>
<td>0.80</td>
<td>0.2</td>
</tr>
<tr>
<td>Cherries</td>
<td>110</td>
<td>141</td>
<td>220</td>
<td>278</td>
<td>0.39</td>
<td>1.12</td>
<td>0.50</td>
<td>3.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3.5</td>
</tr>
</tbody>
</table>

[The smaller the numbers in the coefficient columns, the less water that crop requires compared to the reference standard of Alfalfa, I tried to remove rows from the table, but only created empty rows]
Dear Ms. McKinley,

Please see attached letter with comments and questions.

Please note that I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, "No Action" is acceptable.

--

C. Steven Fury
steve@FuryDuarte.com
C. Steven Fury  
1606 148th Avenue S.E.  
Bellevue, WA 98007  
206.437.3343  
steve.fury@gmail.com

Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation / Columbia-Cascades Area Office  
1917 March Road  
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

I own property on Lake Kachess. These are comments to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018 and also those comments by The Alpine Lakes Protection Society, The Sierra Club, The Wise Use Movement and The North Cascades Conservation Council which were made about the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) Draft Environmental Impact Statement (DEIS), dated January 9, 2015. All comments are submitted under both NEPA and SEPA.

Comments

I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

Consideration of all reasonable alternatives. Only the Yakima Basin Integrated Water Management Plan (YBIP) and No Action are considered. How will this be rectified? Why conservation efforts and purchase of water rights and other alternatives considered? The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-
to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS. The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS makes an effort to have these appear to be several different alternatives, they are in fact one alternative...extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies. Why were these not considered? What would a true analysis show if they were?

Others have repeatedly noted this deficiency in the 2015 DEIS, and repeated it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

Water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies should be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. The NEPA process must be followed as required so that all alternatives not considered be listed and a full explanation be given...including data, references, and review procedures...for excluding each alternative. Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

Involvement of Native American tribes. The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and they be brought into the discussion? How will the Snoqualmie Tribe be
contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final DEIS and/or ROD? Also, please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to/below the natural lake level. When I built a logging road on my property adjacent to Lake Kachess, it required inspection by

Lack of communication to the affected public, including campers at Lake Kachess (Page ES-xiii) The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement most affected individuals come from the Seattle area, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

The impact on the thousands of annual visitors and boaters at USFS Lake Kachess Campground will be enormous. The SDEIS indicates the lake could be drawn down 80 feet “as early as June in severe drought years,” the very weekend that the campground typically opens. This means that the campground could not open. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. Why has there been such inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP? The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

Funding ambiguity. The SDEIS states the Bureau of Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FP. Who will, in fact pay for the project and how? Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. How much will who pay? What is the proposed source of the funds? Will I have to pay for a project that I oppose and that will damage my property? The statement that the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what action (fund, design, construct, operate, etc.) further confuses the financing issue. These are not details to be clarified at a later time, but substantively important issues of signal concern to the citizens of the State of Washington and Roza farmers that we all must know in order to provide informed comment. Please
provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

**Change in Scope (Page ES-viii)** The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to citizens’ understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate...etc....the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. Please provide a complete and unambiguous statement of financial obligation of KDRPP-FPP. Who will be responsible for 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs? The SDEIS does not say. That is a gross inadequacy and misrepresentation.

P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot. There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased? These additional costs should be included in the SDEIS Alternatives. A revised SDEIS is warranted.

The mitigation costs must be included when identifying how and by whom funding will be accomplished. The required Bull Trout Volitional Passage is stated in the text to cost $23,000,000 but is not included. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and thus, apparently, ignored. It is thus likely that the financial obligation will exceed $500,000,000.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. Please provide accurate cost estimates and funding mechanisms for review and comment before a Final DEIS and/or ROD is released.

**Impact on private wells (Page ES-xi)** The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” I own water rights to connected with my property that will be severely and negatively affected. It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” How will mitigation be accomplished? Well failures will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and
access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD. How are these costs calculated and included in the overall financing plan?

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

Misrepresentation of Lake Kachess (Chapter 1, Section 1.2) The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake...[joining]...Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. All the water to be pumped by the KDRPP will come from Lake Kachess. It is an intentional misrepresentation to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Lake Kachess. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. This representation must be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP.

Bull Trout The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump...and therefore the channel...will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. The entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective. No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful in preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

Mitigation of the effect on bull trout must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the
passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

The volitional passage design and operation must be updated to address all of these concerns, and that the revised design be available for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD. What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements?

I personally require more than a “conceptual design” of the volitional passage. My property on Lake Kachess is very near to the passage between Little and Big Lake Kachess. It will be severely affected by any volitional passage. How will this impact to my property be mitigated?

Increased forest vulnerability and Fire Hazard. The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. As part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities must engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. A plan must be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD.

Impact to my property The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “substantial numbers of private residences...etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. I own 5 lots on the east side of Lake Kachess on the waterfront that are among the unaffiliated. This easily numbers in excess of 300 homesites, far more than would be inferred from the term “several.” The SDEIS must include an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, would not notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view but not just any view, an “unfiltered view.” The study actually claimed that a view of a full lake...
within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts...” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown.

The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. How will and has BoR engaged the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.

Further, how will the effect on private property and property values be mitigated? Who will pay for it? How will it affect the final overall cost of the project?

Impact on Senior Water Rights How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? Further studies concerning the effect on senior water rights and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives needs to be undertaken and another public comment period be opened for their comments.

New Water Rights Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” How will new water rights be issued? To whom?

KKC tunnel material 115,000 cubic yards of KKC tunnel excavated material comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off. Where will the 115,000 cubic yards of KKC tunnel material be deposited? What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?
I own property to the outlet of the tunnel. How will the effect of the outlet on my property be mitigated? Who will pay?

How will the water from Keechelus be moved to Kachess? What kind of filtration system will be installed to prevent any I-90 pollutants in Lake Keechelus from being transferred to Lake Kachess? If any hydraulic equipment is used, how will any PAH be kept from entering Lake Kachess?

Lake Drainage during construction the description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

Because both the NEPA and SEPA process must be followed, the Bureau of Reclamation and WA Department of Ecology must each provide separate personal responses to the above comments to me and the public.

Please send me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

C. Steven Fury
Questions regarding Lake Kachess Pumping Plan ESI

1. Did Lake Kachess have a Salmon run prior to building the Dam?

2. How many years will be until lake Kachess gets salmon passage?

3. Why are salmon passage plans not addressed in the pumping plan?

4. Have the courts ruled that fish passage should be restored to Lake Cle Elum, Lake Kachess, Lake Cle Elum, Lake Keechelus?

5. How many times is the word “Salmon” used in The Kachess Pumping Plant EIS document. It appears to have been deleted. (out of sight out of mind)

6. It appears that “salmon and chinook” has been carefully deleted. Is this true? I do see the word Bull Trout several times in the Document.

7. Why is there not information about the effect of the Kachess pumping Plant would have on a future fish passage over or around Lake Kachess Dam? Lower lake levels might not work with a fish ladder. This question concerns salmon or chinook, not bull trout.

8. Did the Yakima Nation cut a deal to get a fish ladder at Lake Cle Elum and abandon plans for a fish ladder at Lake Kachess?

9. How many times in the last 10 years has Kittitas County declared a drought?

10. In declared drought years, what was the percentage of water allocations for each drought year? (example, 2004 did they get 65% of their allocated water?)

11. During a declared drought assuming for example irrigators only were getting 65% of their allocation, the proposed pump would only pump 5% more water. Limiting the allocations to 70%?

12. What would the yearly cost be for that 5% water that is pumped, include also the cost for the operating the pump.

13. 5% of the irrigators water allocation is how many acre feet of water.

14. Since the Pumping Plant would only operate in a drought year, could it pump more than 70% of the water allocations?

15. Would it be cheaper to build a new reservoir somewhere else, where there are not historic fish runs?

16. ATV's and trucks and jeeps drive all over the south end of the Lake when the water level is low. But they are not stopped. If the lake is lowered, the problem will be worse. The south end of the lake will turn into a dust pit and when it rains a mud pit for 4x4 vehicles. Nesting areas for birds will be destroyed.
17. Will the forest service install a sign limiting camping to 14 days.

18. Several camp sites exist where campers stay for months and leave garbage and crap all over the place, nothing is done to stop this. What will the forest service to prevent this?

19. A unimproved boat launch is at the southeast end of the lake, but the forest service will not work with land owners to share the cost of maintaining FS Road 4818. The land owners maintain it at their own expense.

20. Is Washington State spending millions of Tax Payers money researching this pumping plan that is doomed to failure. Over costly and Unpractical.

21. What is the cost to build a new reservoir? At a location where it would not have so much a effect on a recreational lake and it’s community and the environment?

22. When will Lake Kachess get salmon passage?

23. When will Lake Keechelus get Salmon passage?

Alan Kirlin
Seattle WA

Questions or comments on the SDEIS will be accepted until July 11, 2018. Comments may be submitted to kkbt@usbr.gov, by mail to the Bureau of Reclamation, Attn: Ms. Candace McKinley, Environmental Program Manager, 1917 Marsh Road, Yakima, WA, 98901; by telephone at (509) 575-5848, ext. 603; or by facsimile to (509) 454-5650.
Ms. McKinley – Please see attached letter regarding the Lake Kachess Floating Pump Plant.

Thank you,

Larry Steele
Home Mortgage Consultant
NMLS ID 583048

Wells Fargo Home Mortgage | 10210 NE POINTS DR, Ste 110 | KIRKLAND, WA 98033
MAC P6440-010
Tel 425-828-2210 | Cell 425-457-2194

Larry.Steele@wellsfargo.com
July 11, 2018

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia- Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

Dear Ms. McKinley

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kachess within the Okanogan-Wenatchee National Forest should not be built now or at any time in the future. These funds should be allocated on more uneconomical and environmentally damaging water projects in the Yakima River Basin, the Bureau of Reclamation and the Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years. Please reconsider the proposition for the sake of all involved.

Thank you.

Larry and Stasia Steele
9801 111th Ave NE
Kirkland, Washington 98033
Jeremy.Vanbeek@wellsfargo.com  <Jeremy.Vanbeek@wellsfargo.com>  Wed, Jul 11, 2018 at 2:33 PM
To: kkbt@usbr.gov

Dear Ms. McKinley,

The proposed floating pumping plant for Lake Kachess and proposed tunnel project between Lake Keechelus and Lake Kechess within the Okanogan-Wenatchee National Forest should NOT be built now or at any time in the future. I love summers at Lake Kachess, and these proposals would be devastating. These funds should be allocated on less economically and environmentally damaging water projects in the Yakima River Basin, the bureau of Reclamation and Washington State Department of Ecology should promote water conservation, water efficiencies and water markets during drought years. Please reconsider the proposition for the sake of ALL involved.

Thank you for your consideration in this matter.

Sincerely,

JEREMY VANBEEK

Mortgage Associate
NMLS ID 1501185

Wells Fargo Home Mortgage | 10210 NE POINTS DR, suite 110 | KIRKLAND, WA 98033
MAC P6440-010
Tel 425-828-2204 | Cell 425-466-5058

Jeremy.Vanbeek@wellsfargo.com

If this email was sent to you as an unsecured message, it is not intended for confidential or sensitive information. If you cannot respond to this e-mail securely, please do not include your social security number, account number, or any other personal or financial information in the content of the email. This may be a promotional email. To discontinue receiving promotional emails from

March 2019
Ms. McKinley:

The attached document has been submitted by Jay Schwartz, describing in detail the numerous errors and omissions of the hydrology analysis embedded in the SDEIS for the Kachess Drought Relief Pumping Plant. On behalf of myself, my family, and the organization I represent, Friends of Lake Kachess, I want to submit and support the Schwartz analysis. Please accept this as a request to address all of the questions raised by Mr. Schwartz in the attached analysis.

Thank you,

Bill Campbell
Friends of Lake Kachess
P.O. Box 613
Easton, WA  98925
To: (via e-mail)
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
191 7 Marsh Road
Yakima, WA 98901-2058
Phone: 509-575-5848, ext. 603
Fax: 509-454-5650
Email: kkbt@usbr.gov

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental DRAFT Environmental Impact Statement

Dear Ms. McKinley,

On behalf of myself, my family, and the many people committed to preserving Kachess Lake, I respectfully submit the following public comments regarding the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement.

Thank you for your attention addressing these critical issues.

Respectfully,

Jay Schwartz

781 26th Ave E
Seattle, Washington 98112

Land and home-owner in Section 29 above Kachess Lake
Introduction

For over three years I have been the dog who would not let go of the ankle of those trying to move the YBIP forward without objective and unbiased analysis and transparent and balanced process. I have reviewed literally thousands of pages of data and performed extensive external analysis in an effort to bring fair and trustworthy data and analysis forward.

My approach has focused on three critical issues:

1. How much additional water will the project deliver?
2. How much will the water cost and is this a good economic decision?
3. What impact will it have on Kachess Lake?

Unfortunately, rather than being a willing partner in providing simple answers to these simple questions, BuRec has steadfastly evaded and forestalled accountability to engage thoughtfully and transparently in providing these answers. I have played a game of “cat and mouse” with them now for over three years. Often, I had to find data on my own, force BuRec to review my analysis, and then receive little to no feedback as to how BuRec planned to respond to the significant data integrity and analytic concerns.

Perhaps a few examples would be helpful:

I. Hydrology Data: For three years I have had to force BuRec to provide the Riverware model output data needed to review the “projected” benefits presented in BuRec documents. In 2015, I literally downloaded 90-years of daily Hydromet data to provide my first set of outputs. Eventually, BuRec published the 2016 Phase II Hydrology Technical Memorandum and I used this extensive data set to present a number of meaningful concerns. BuRec then created a Phase III TM and failed to provide the report and left critical data out of the Phase III version that were included in the Phase II report. Then for the SDEIS, BuRec created unpublished hydrology data that were only fully released to me two weeks prior to the due date for SDEIS comments. Given the fact that I have had 4 in-person meetings to review in-depth hydrology data, one would think BuRec would inform me when new data is available. Accordingly, evaluating how much water the project will deliver and assessing the impact on Kachess Lake have consistently been compromised.

II. Conservation Projects: For some reason, BuRec included unplanned, unfunded and unknown conservation projects in all hydrology scenarios in the Phase II TM. While these projects had no tangible concepts or plans, BuRec insisted on including them with the results associated with KDRPP. I complained bitterly about the distortion created by this poor analytical decision. Nonetheless, BuRec proceeded to repeat the same approach in 2017 with the Phase III TM and the scope of the unplanned, unfunded and unknown conservation project increased significantly. They added over 1 million acre-feet of water to the project results. Surprisingly (and for unexplained reasons), the
unpublished SDEIS hydrology data appropriately removed the conservation projects and the ability to more accurately assess the impact of KDRPP is thus enabled.

III. **Comparisons to Actual Results:** The entire Riverware approach is built on a single model view of history and then re-runs this history assuming specific projects, like the KDRPP, are in place to provide updated alternative results. Unfortunately, no one-model set of assumptions can replicate history across the board. It invariably changes history as human decisions include error and adjustments over time. So while this reliance on a single-model is unavoidable, it needs to be tempered by comparison to actual results to keep the modeled expectations and projections in check with real-world experience. BuRec has consistently refused to compare hydrology projections to the actual real-world yearly results. Sadly, this continues to be a challenge with the data presented in the SDEIS. Fortunately, historical data is available to help address this issue.

As I have extensive analytic experience (Notre Dame Finance degree, Stanford MBA, 15 years of strategy consulting experience with McKinsey, Bain and Lake Partners) and meaningful exposure now after 3+ years of in-depth review of the KDRPP project, the purpose of these comments is to identify and call into question a number of material hydrological and economic deficiencies of the SDEIS. Specifically, I call into question the following:

1. Kachess Outflows vs Actual History
2. TWSA Proration Data
3. Kachess Outflows vs Total ID Diversions
4. Roza Diversions vs Actual
5. KRD Diversions vs Actual
6. Hydrology analysis at water elevation 2199.5
7. Economics

Please note BuRec provided me the detailed Kachess Outflow, Kachess Storage, TWSA details, and ID Delivery data from the SDEIS Riverware model. This data has yet to be released publicly and BuRec reports they are in the process of preparing this data for public access. All of the analysis in these comments is from this BuRec SDEIS data set or from the BuRec Hydromet data for station KAC – Kachess Lake.

**Issue 1: Kachess Outflows vs Actual History – the “No-Change” scenario incorrectly reduces Kachess Outflows in drought years, creating a significant error of projected additional water for irrigators with the “KDRPP” scenario.**

Without explanation, the Historical SDEIS hydrology analysis artificially reduces Kachess Lake outflows in drought years in the “No Change” scenario. This creates a significant error of the projected additional water for irrigators in the “KDRPP” scenario. As BuRec has widely reported, the average total water year Kachess Outflows are ~213 kAF. As can be seen below and focusing on the 1977-2015 water years, when you break out the historical Kachess
Outflows to drought years and non-drought years, the actual average Kachess Outflow history is for 210.9 kAF in drought years and 212.6 kAF in non-drought years. When focusing on the core irrigation season of April-Sept Kachess Outflows, the actual data shows 183.3 kAF for drought and non-drought years.

When reviewing the SDEIS hydrology data for Kachess Outflows, the model for some reason drops the drought year “No Change” Apr-Sept Kachess Outflows to 149.4 kAF. This removal of 33.4 kAF (18.5%) is unexplained and serves to reduce the baseline for which to compare the benefits of the KDRPP scenario. Interestingly, the non-drought year outflows remain relatively consistent with actual history at 179.3 vs 183.3 kAF (an acceptable 2.2% variance from actual).

The SDEIS then represents the “KDRPP” scenario as a significant increase from the “No Change” scenario of 248.6 vs 149.4 kAF (an increase of 99.3 kAF on average). This is factually incorrect as the irrigators received 183.3 kAF in drought years and the correct increase is 65.4 kAF on average. This is a 51.8% overstatement of benefits to irrigators. Sadly, this data is not presented for review but the claimed benefits are broadly stated in the SDEIS.

**Questions for the SDEIS:**

- **Why was this data not presented in detail in the SDEIS?**
- **What calibration analysis was done to ensure the accuracy of the SDEIS Kachess Outflow data? Why was it not presented in the SDEIS?**
- **Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?**
## Actual Hydromet Data Historical SDEIS Projections

<table>
<thead>
<tr>
<th>Water Year</th>
<th>Actual - Full WY</th>
<th>Actual - Apr-Sept</th>
<th>&quot;No Change&quot; - Apr-Sept</th>
<th>&quot;No-Change&quot; to Actual Variance</th>
<th>KDRPP - Apr-Sept</th>
<th>KDRPP to Actual Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>226.3</td>
<td>193.5</td>
<td>150.4</td>
<td>-43.1</td>
<td>209.0</td>
<td>105.5</td>
</tr>
<tr>
<td>1978</td>
<td>143.5</td>
<td>142.0</td>
<td>154.2</td>
<td>12.2</td>
<td>106.7</td>
<td>-35.3</td>
</tr>
<tr>
<td>1979</td>
<td>293.8</td>
<td>271.9</td>
<td>180.4</td>
<td>-91.5</td>
<td>112.3</td>
<td>-159.6</td>
</tr>
<tr>
<td>1980</td>
<td>103.6</td>
<td>92.8</td>
<td>152.5</td>
<td>59.7</td>
<td>135.1</td>
<td>42.3</td>
</tr>
<tr>
<td>1981</td>
<td>200.3</td>
<td>188.4</td>
<td>169.8</td>
<td>-18.6</td>
<td>144.3</td>
<td>-44.1</td>
</tr>
<tr>
<td>1982</td>
<td>209.9</td>
<td>199.4</td>
<td>173.1</td>
<td>-26.3</td>
<td>164.4</td>
<td>-35.0</td>
</tr>
<tr>
<td>1983</td>
<td>212.2</td>
<td>191.6</td>
<td>165.7</td>
<td>-25.9</td>
<td>165.7</td>
<td>-25.9</td>
</tr>
<tr>
<td>1984</td>
<td>235.1</td>
<td>212.8</td>
<td>180.3</td>
<td>-32.5</td>
<td>180.3</td>
<td>-32.5</td>
</tr>
<tr>
<td>1985</td>
<td>243.7</td>
<td>230.1</td>
<td>182.7</td>
<td>-47.4</td>
<td>182.7</td>
<td>-47.4</td>
</tr>
<tr>
<td>1986</td>
<td>230.8</td>
<td>221.4</td>
<td>181.9</td>
<td>-39.5</td>
<td>181.9</td>
<td>-39.5</td>
</tr>
<tr>
<td>1987</td>
<td>172.3</td>
<td>163.3</td>
<td>169.8</td>
<td>-6.5</td>
<td>222.4</td>
<td>59.1</td>
</tr>
<tr>
<td>1988</td>
<td>161.0</td>
<td>155.0</td>
<td>153.0</td>
<td>-2.0</td>
<td>166.7</td>
<td>11.7</td>
</tr>
<tr>
<td>1989</td>
<td>144.8</td>
<td>139.3</td>
<td>159.7</td>
<td>20.4</td>
<td>125.9</td>
<td>-13.4</td>
</tr>
<tr>
<td>1990</td>
<td>194.3</td>
<td>160.6</td>
<td>182.4</td>
<td>21.8</td>
<td>154.3</td>
<td>-6.3</td>
</tr>
<tr>
<td>1991</td>
<td>301.9</td>
<td>190.5</td>
<td>199.9</td>
<td>9.4</td>
<td>199.9</td>
<td>9.4</td>
</tr>
<tr>
<td>1992</td>
<td>271.0</td>
<td>226.1</td>
<td>190.7</td>
<td>-35.4</td>
<td>252.8</td>
<td>26.7</td>
</tr>
<tr>
<td>1993</td>
<td>170.2</td>
<td>165.5</td>
<td>152.4</td>
<td>-13.1</td>
<td>242.2</td>
<td>76.7</td>
</tr>
<tr>
<td>1994</td>
<td>140.4</td>
<td>134.6</td>
<td>116.7</td>
<td>-17.9</td>
<td>197.5</td>
<td>62.9</td>
</tr>
<tr>
<td>1995</td>
<td>142.1</td>
<td>138.9</td>
<td>148.2</td>
<td>9.3</td>
<td>101.1</td>
<td>-37.8</td>
</tr>
<tr>
<td>1996</td>
<td>398.1</td>
<td>301.6</td>
<td>207.2</td>
<td>-94.4</td>
<td>142.4</td>
<td>-159.2</td>
</tr>
<tr>
<td>1997</td>
<td>212.5</td>
<td>211.8</td>
<td>246.3</td>
<td>34.5</td>
<td>231.1</td>
<td>19.3</td>
</tr>
<tr>
<td>1998</td>
<td>219.5</td>
<td>178.7</td>
<td>196.6</td>
<td>17.9</td>
<td>196.6</td>
<td>17.9</td>
</tr>
<tr>
<td>1999</td>
<td>241.6</td>
<td>197.7</td>
<td>185.1</td>
<td>-12.6</td>
<td>185.1</td>
<td>-12.6</td>
</tr>
<tr>
<td>2000</td>
<td>234.6</td>
<td>188.4</td>
<td>214.3</td>
<td>25.9</td>
<td>214.3</td>
<td>25.9</td>
</tr>
<tr>
<td>2001</td>
<td>247.9</td>
<td>202.6</td>
<td>127.1</td>
<td>-75.5</td>
<td>279.8</td>
<td>77.2</td>
</tr>
<tr>
<td>2002</td>
<td>138.2</td>
<td>134.5</td>
<td>159.4</td>
<td>24.9</td>
<td>104.2</td>
<td>-30.3</td>
</tr>
<tr>
<td>2003</td>
<td>248.1</td>
<td>206.6</td>
<td>170.2</td>
<td>-36.4</td>
<td>123.8</td>
<td>-82.8</td>
</tr>
<tr>
<td>2004</td>
<td>183.1</td>
<td>158.4</td>
<td>188.0</td>
<td>29.6</td>
<td>175.0</td>
<td>16.6</td>
</tr>
<tr>
<td>2005</td>
<td>203.5</td>
<td>167.5</td>
<td>111.1</td>
<td>-56.4</td>
<td>264.8</td>
<td>97.3</td>
</tr>
<tr>
<td>2006</td>
<td>119.9</td>
<td>112.5</td>
<td>163.2</td>
<td>50.7</td>
<td>107.8</td>
<td>-4.7</td>
</tr>
<tr>
<td>2007</td>
<td>213.8</td>
<td>177.2</td>
<td>183.3</td>
<td>6.1</td>
<td>133.6</td>
<td>-43.6</td>
</tr>
<tr>
<td>2008</td>
<td>182.8</td>
<td>145.6</td>
<td>142.7</td>
<td>-2.9</td>
<td>148.1</td>
<td>2.5</td>
</tr>
<tr>
<td>2009</td>
<td>247.2</td>
<td>207.6</td>
<td>177.3</td>
<td>-30.3</td>
<td>179.5</td>
<td>-28.1</td>
</tr>
<tr>
<td>2010</td>
<td>170.3</td>
<td>131.9</td>
<td>163.6</td>
<td>31.7</td>
<td>163.6</td>
<td>31.7</td>
</tr>
<tr>
<td>2011</td>
<td>260.5</td>
<td>218.7</td>
<td>192.9</td>
<td>-25.8</td>
<td>192.9</td>
<td>-25.8</td>
</tr>
<tr>
<td>2012</td>
<td>226.1</td>
<td>175.7</td>
<td>200.3</td>
<td>24.6</td>
<td>200.3</td>
<td>24.6</td>
</tr>
<tr>
<td>2013</td>
<td>237.9</td>
<td>189.8</td>
<td>185.4</td>
<td>-4.4</td>
<td>185.4</td>
<td>-4.4</td>
</tr>
<tr>
<td>2014</td>
<td>240.6</td>
<td>210.8</td>
<td>199.9</td>
<td>-10.9</td>
<td>199.9</td>
<td>-10.9</td>
</tr>
<tr>
<td>2015</td>
<td>255.4</td>
<td>212.9</td>
<td>176.7</td>
<td>-36.2</td>
<td>230.5</td>
<td>17.6</td>
</tr>
</tbody>
</table>

Total 8,279.0 7,148.0 6,754.4 -393.6 6,993.9 -154.1
Average 212.3 183.3 173.2 -10.1 179.3 -4.0
Issue 2: TWSA Proration Data – Due to the above reduction in the “No-Change” scenario, the baseline TWSA data is artificially lowered and the presented Proration data is also incorrectly reduced. This again creates a significant error in the projected TWSA and Proration benefits of the “KDRPP” scenario.

In addition to the above errors in Kachess Lake Outflows, the artificial reduction of the No-Change drought year water supply also distorts the TWSA and Proration projections presented in the SDEIS. As shown below, the Historic No-Change TWSA data significantly reduces the baseline Proration levels to an average of 45.4%. The “KDRPP” scenario then increases the Proration levels up to an average of 59.3% with SDEIS proclaiming increases of nearly 22% when referring to the 21.3% change in 2005.

When compared to the actual Sept 30 Proration levels published by the BuRec (but not provided in detail in the SDEIS), we see the actual baseline average Proration level of 53.3% and thus the overall benefit of “KDRPP” drops to 6.0% on average (a 56% reduction in benefits) with the SDEIS example of 2005 now showing only an 11.5% improvement.

The net effect of this error is like when a retailer increases the price of an item and then puts it “on-sale” back down to a price similar to the original price. The SDEIS artificially reduces the baseline “No-Change” scenario to imply to the public and irrigators a much more significant benefit of KDRPP than is factually true.

Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Proration data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?
- Given the artificial reduction in the “no-change” baseline scenario, should irrigators and the public be informed of the modeled benefits as well as the change from actual benefits? If not, please explain why?
### Historic SDEIS Projections vs Actual Hydromet Data

<table>
<thead>
<tr>
<th>Drought Year</th>
<th>Historic No-Change Proration</th>
<th>Historic KDRPP Proration</th>
<th>KDRPP vs No-Change</th>
<th>Actual BuRec Proration Data</th>
<th>KDRPP vs Actual</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>42.8%</td>
<td>60.4%</td>
<td>17.6%</td>
<td>70.0%</td>
<td>-9.6%</td>
</tr>
<tr>
<td>1987</td>
<td>62.8%</td>
<td>70.0%</td>
<td>7.2%</td>
<td>68.0%</td>
<td>2.0%</td>
</tr>
<tr>
<td>1992</td>
<td>64.3%</td>
<td>64.1%</td>
<td>-0.2%</td>
<td>58.0%</td>
<td>6.1%</td>
</tr>
<tr>
<td>1993</td>
<td>52.5%</td>
<td>70.0%</td>
<td>17.5%</td>
<td>67.0%</td>
<td>3.0%</td>
</tr>
<tr>
<td>1994</td>
<td>24.0%</td>
<td>33.4%</td>
<td>9.4%</td>
<td>37.0%</td>
<td>-3.6%</td>
</tr>
<tr>
<td>2001</td>
<td>32.7%</td>
<td>52.7%</td>
<td>20.0%</td>
<td>37.0%</td>
<td>15.7%</td>
</tr>
<tr>
<td>2005</td>
<td>32.2%</td>
<td>53.5%</td>
<td>21.3%</td>
<td>42.0%</td>
<td>11.5%</td>
</tr>
<tr>
<td>2015</td>
<td>51.9%</td>
<td>70.0%</td>
<td>18.1%</td>
<td>47.0%</td>
<td>23.0%</td>
</tr>
<tr>
<td><strong>Average</strong></td>
<td>45.4%</td>
<td>59.3%</td>
<td>13.9%</td>
<td>53.3%</td>
<td>6.0%</td>
</tr>
</tbody>
</table>

### Issue 3: Kachess Outflows vs Total ID Diversions

While the SDEIS presents a scenario as “KDRPP Only”, there are clearly other operational changes occurring at the same time. This is made clear by comparing actual Kachess Outflows to the total Irrigation District Diversions whereby the ID Diversion increases are far in excess of the Kachess Outflow increases. Accordingly, there should be an additional alternative scenario that allows for operational changes without any other projects (like KDRPP) and in-excess of the “No Change” scenario. Further, the SDEIS should be more upfront in stating the benefits due to operational changes vs those from KDRPP.

The SDEIS goes to great lengths to model the benefits of multiple participating “Proratable Entities” and formally includes KRD, RID and WIP Irrigation Districts in the SDEIS Irrigation District Diversion analysis. However, under the “KDRPP-only” scenario, the modeled irrigation water benefits far exceed the amount of additional Kachess Outflow water. As shown below, in drought years, Kachess Outflows under “KDRPP” increase by 522.5 kAF of water (above historical actuals) but the projected ID Diversions increase by 966.9 kAF, (84.9% more than Kachess Outflows). Clearly there are other operational parameters at work here but no meaningful data is provided with which to assess these operational changes.

This concern is further compounded when assessing all years from 1977-2015. For the full period, the KDRPP scenario actually reduces total Kachess Outflows (from Actual) by 154.1 kAF yet ID Deliveries increase over this same time frame by 624.4 kAF. The resulting and unexplained variance of 778.5 kAF above and beyond Kachess Outflows represents an important alternative in and of itself and needs much further explanation.

### Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Irrigation District Deliveries data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model?
- Given the significant variance in water delivered outside of KDRPP, why are the operational changes not explained more fully? Why are they not run as an independent alternative in the SDEIS?

<table>
<thead>
<tr>
<th>Water Year</th>
<th>Historical KDRPP Change from Actual Hydromet</th>
<th>Historical KDRPP - KRD Impact</th>
<th>Historical KDRPP - Roza Impact</th>
<th>Historical KDRPP - WIP Impact</th>
<th>Historical - Total ID Impact</th>
<th>Variance kAF</th>
<th>Variance %</th>
</tr>
</thead>
<tbody>
<tr>
<td>1977</td>
<td>105,456</td>
<td>58,752</td>
<td>70,838</td>
<td>66,055</td>
<td>195,645</td>
<td>90,189</td>
<td>85.5%</td>
</tr>
<tr>
<td>1987</td>
<td>59,103</td>
<td>9,006</td>
<td>16,546</td>
<td>15,737</td>
<td>41,289</td>
<td>-17,814</td>
<td>-30.1%</td>
</tr>
<tr>
<td>1992</td>
<td>26,708</td>
<td>-301</td>
<td>-482</td>
<td>-457</td>
<td>-1,240</td>
<td>-27,948</td>
<td>-104.6%</td>
</tr>
<tr>
<td>1993</td>
<td>76,747</td>
<td>28,077</td>
<td>42,504</td>
<td>40,209</td>
<td>110,790</td>
<td>34,043</td>
<td>44.4%</td>
</tr>
<tr>
<td>1994</td>
<td>62,939</td>
<td>38,118</td>
<td>34,259</td>
<td>34,328</td>
<td>106,705</td>
<td>43,766</td>
<td>69.5%</td>
</tr>
<tr>
<td>2001</td>
<td>77,151</td>
<td>72,513</td>
<td>73,503</td>
<td>66,461</td>
<td>212,027</td>
<td>134,876</td>
<td>174.8%</td>
</tr>
<tr>
<td>2005</td>
<td>97,270</td>
<td>74,767</td>
<td>75,314</td>
<td>71,559</td>
<td>221,640</td>
<td>124,370</td>
<td>127.9%</td>
</tr>
<tr>
<td>2015</td>
<td>17,551</td>
<td>26,685</td>
<td>28,614</td>
<td>24,763</td>
<td>80,062</td>
<td>62,511</td>
<td>356.2%</td>
</tr>
<tr>
<td>Drought Years</td>
<td>522,924</td>
<td>307,617</td>
<td>340,646</td>
<td>318,655</td>
<td>966,918</td>
<td>443,994</td>
<td>84.9%</td>
</tr>
<tr>
<td>Non-Drought Years</td>
<td>-677,032</td>
<td>-97,688</td>
<td>-87,502</td>
<td>-157,358</td>
<td>-342,548</td>
<td>334,484</td>
<td>-49.4%</td>
</tr>
<tr>
<td>Total</td>
<td>-154,107</td>
<td>209,929</td>
<td>253,144</td>
<td>161,297</td>
<td>624,370</td>
<td>778,477</td>
<td>-505.2%</td>
</tr>
</tbody>
</table>

**Issue 4: Roza Diversions vs Actual** – The SDEIS itself only speaks to irrigation water increases in terms of changes in Proration levels. With the non-public BuRec SDEIS irrigation district diversion data and the historical actual diversion data (also provided by BuRec), an analysis of SDEIS projections vs actual irrigation district diversions is possible. In the case of Roza, the projected KDRPP diversions are scarcely more than the actual water delivered in drought years. This represents a glaring and material misstatement of benefits to irrigators and needs to be addressed.

As shown below, actual Roza diversions in drought years total 1,697 kAF. The SDEIS “No-Change” baseline scenario suggests Roza water deliveries in the same years would be 1,368 kAF, a decrease from the actual water deliveries of 329 kAF. Diversions under the “KDRPP” SDEIS scenario then increase to 1,709 kAF in drought years and are presented as a material improvement from the “No Change” scenario (an increase of 341 kAF). In fact, the “KDRPP” scenario only delivers a net increase of 12 kAF from the actual deliveries and in many years delivers less water. The failure to provide a comparison to actuals and to present this level of detail to the Roza irrigators is an egregious error.
Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS Roza Irrigation District Deliveries data? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model as it relates to Roza deliveries?
- As Roza is the current and only committed ID, why should they fund a project that does not deliver any meaningful benefit to them?
Issue 5: KRD Diversions vs Actual – The SDEIS itself only speaks to irrigation water increases in terms of changes in Proration levels. With the non-public BuRec SDEIS irrigation district diversion data and the historical actual diversion data (also provided by BuRec), an analysis of SDEIS projections vs actual irrigation district diversions is possible. In the case of KRD, the projected KDRPP diversions are significantly more than the actual water delivered in drought years. In fact, they are greater than the amounts delivered to Roza, who has 57 kAF more annual water rights than KRD. This seems to be both ill-advised and illegal, with significant litigation risk as well.

As shown below, actual KRD diversions in drought years total 1,419 kAF. The SDEIS “No-Change” baseline scenario suggests KRD water deliveries in the same years would be 1,465 kAF, roughly the same. However, diversions under the “KDRPP” SDEIS scenario increase to 1,773 kAF, a material improvement of over 300 kAF from both actual and “no-change” data. Unfortunately, the diversions for the same years are 74 kAF greater than Roza (1,709 kAF) who has 57 kAF more annual water rights. Further, Roza’s increase over actual deliveries of only 12 kAF will call into significant legal question KRD’s increase of over 300 kAF. The failure to address the KRD vs Roza delivery levels as well as a comparison to actuals and to present this level of detail to the Roza and KRD irrigators is unconscionable.

Questions for the SDEIS:

- Why was this data not presented in detail in the SDEIS?
- What calibration analysis was done to ensure the accuracy of the SDEIS KRD Irrigation District Deliveries data in comparison to the Roza deliveries? Why was it not presented in the SDEIS?
- Why does the SDEIS not present actual historical results as well as results from the SDEIS hydrology model as it relates to KRD deliveries?
- As Roza is the current and only committed ID, why should they fund a project that does not deliver any meaningful benefit to them yet provides significant benefits to a currently non-participating ID?
Issue 6: Hydrology analysis at water elevation 2199.5 – Previous Hydrology Technical Memorandum as well as extensive Bull Trout documents make reference to the critical water elevation of 2199.5, below which Bull Trout can no longer migrate up through the Narrows. The SDEIS fails to address this critical water level with any detailed analysis or references.

As the below references from the May 2016 Bull Trout document clearly indicate, assessing the frequency and duration of water levels below 2199.5 are essential for Bull Trout migration. The SDEIS fails to address this water level. It is such an important metric that the BuRec has not lowered the Kachess Lake below this level since 1977, even in the face of 8 droughts. And while the SDEIS addresses several other water level concerns as it relates to Bull Trout, it fails to provide any data or discussion on this most important and not recently violated critical water level.
Questions for the SDEIS:

- Why was data for the 2199.5 water level not presented in detail in the SDEIS?
- How many days and years will the water level be below 2199.5 in all of the historic and climate change scenarios?
- If not already done, can the updated SDEIS data be shared with the public and with the BiOp agencies?

### Issue 7: Economics – Simply put, there is no meaningful economic analysis in the SDEIS. It assumes broad econometric analysis is the same as substantial Benefit-Cost or ROI analysis. And it specifically fails to address the question of how much the water will cost and how and where it will be used in a rational economic return on investment approach.

In my prior comments previously submitted for the DEIS process and in my extensive reviews and presentations with the BuRec, I have provided very detailed and specific commentary on the many economic short-comings of the KDRPP project. Those comments are now included again in these comments by reference. Further, they foster the following specific questions:

Questions for the SDEIS:

- What is the life-time cost per Acre Foot of water for the KDRPP project?
- What is the incremental profit of an acre-foot of water per crop type in the Yakima Basin?
- Which crops have a positive Benefit-Cost vs a negative Benefit-Cost?
- For crops with a negative Benefit-Cost, how can the using KDRPP water be justified as a private or public good?
Given the likely negative Benefit-Cost for a majority of Yakima Basin crops, how can the overall economics of the KDRPP provide any positive economic return? How can the water be used only on crops with a positive Benefit-Cost? How can we enable only those irrigators with a positive Benefit-Cost to pay for and use the water from KDRPP?
Ms. Candace McKinley  
Environmental Program Manager  
Bureau of Reclamation  
Columbia-Cascades Area Office  
191 7 Marsh Road Yakima, WA 98901-2058  
Phone: 509-575-5848, ext. 603  
Fax: 509-454-5650  
Email: kkbt@usbr.gov

Ms. McKinley:

On behalf of myself, my family, and the organization I represent...Friends of Lake Kachess...I submit and support the attached statement from David Dicks of Tatoosh Law Firm. While the document is some 16 pages long, it succinctly summarizes the Floating Pumping Plant in Lake Kachess: "It is a terrible idea, and it is illegal."

Thank you,

Bill Campbell  
Friends of Lake Kachess  
P.O. Box 613  
Easton, WA 98925

YBIP.SDEIS. Dicks Letter.7.11.2018.pdf  
546K
To: (via e-mail)
Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation
Columbia-Cascades Area Office
191 7 Marsh Road
Yakima, WA 98901-2058
Phone: 509-575-5848, ext. 603
Fax: 509-454-5650
Email: kkbt@usbr.gov

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement

Dear Ms. McKinley,

On behalf of the Kachess Community Association I respectfully submit the following public comments regarding the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement.

Thank you for your attention to this important matter,

David Dicks – JD

Tatoosh Law and Policy Group
318 1st Ave S, Suite 310
Seattle, Washington 98104

On behalf of:

The Kachess Community Association
You can fool all the people some of the time, and some of the people all the time, but you cannot fool all the people all the time. - Abraham Lincoln

Introduction

Although the new SDEIS is a staggering 906 pages it is hopelessly confused and fails conclusively to comply with the procedural and substantive requirements of NEPA and SEPA. It also proposes a project that indisputably violates the Endangered Species Act.

Specifically, the SDEIS has 8 fatal flaws that will be explained in this comment letter:

1. Reclamation and Ecology Should Have Published all Comments and Responses to the 2015 DEIS Before Releasing the 2018 SDEIS

2. The Purpose and Need Section is Internally Contradictory and illegally limits the number of alternatives that are analyzed in the draft. It also inappropriately takes a “public” SDEIS and converts it into “private” proposal by the Roza Irrigation District

3. The Proposed Action is The Only Alternative Other Than the No Action Alternative

4. The Project is Unauthorized by Congress and Ecology Does Not Have Funding to Implement the Project

5. The Alternatives Analysis Is Far Too Limited To Comply With NEPA and SEPA

6. All of the Alternatives Except the No Action Alternative Violate the Endangered Species Act

7. Reclamation’s Failure to Consult under The Endangered Species Act is Illegal

8. The Project Violates Water Law Generally and the Yakima Allocation Specifically

For these reasons - and many others articulated in our prior comments and the comments of others - the SDEIS must be rejected in its current form to comply with NEPA, SEPA, and the Endangered Species Act. We believe that is an impossible task and therefore recommend that the “No Action” alternative be selected.

Introduction

This SDEIS is required under both the National Environmental Policy Act (NEPA) and the Washington State Environmental Policy Act (SEPA). Under both laws agencies considering “actions significantly affecting the quality of the human environment” must prepare and issue
an Environmental Impact Statement (EIS). 42 U.S.C. § 4332(2)(C); *Nw. Envtl. Advocates v. NMFS*, 460 F.3d 1125, 1133 (9th Cir.2006). An EIS:

“Shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1; *Nw. Envtl. Advocates*, 460 F.3d at 1134.

Thus, the EIS is more than a mere “disclosure document.” 40 C.F.R. § 1502.1. Agencies must take a ‘hard look’ at the potential environmental consequences of the proposed action.” *Klamath–Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 993 (9th Cir.2004) (citing *Churchill County v. Norton*, 276 F.3d 1060, 1072 (9th Cir.2001)). By focusing on the environmental effects of the proposed agency action, “NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” *Marsh*, 490 U.S. at 371, 109 S.Ct. 1851 (1989). Reclamation and Ecology are the agencies charged with the meeting these duties and they have failed to meet this burden in this DEIS.¹

In the 2015 DEIS Reclamation and Ecology prepared the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Draft Environmental Impact Statement (DEIS) as a single document. It includes environmental analyses for the both the KKC and KDRP projects. The DEIS was released to the public in January 2015 and described the no-action alternative and five action alternatives. The public comment period ended June 15, 2015.

As we noted in our comments regarding the 2015 DEIS there are were at least seven fatal flaws with that DEIS that rendered it insufficient under NEPA and SEPA. This SDEIS does nothing to resolve these insufficiencies and, in fact, creates many new problems that make the current NEPA/SEPA process even worse. This comment letter explains a series of major substantive and procedural flaws in the SDEIS and poses a series of questions that should have been addressed in the SDEIS. As required by both NEPA and SEPA, and their implementing regulations, we expect both Reclamation and Ecology to provide responses to each of the questions posed in this letter. Importantly, Reclamation and Ecology have still not satisfied this obligation with regard to the 2015 DEIS

While we agree that the Bureau of Reclamation and the Washington State Department of Ecology needed to draft a Supplemental Draft Environmental Impact Statement (SDEIS) this supplement fails to meet even the most basic requirements of NEPA, SEPA, and all of the alternatives proposed in the document (except the “no action” alternative) blatantly violates the Endangered Species Act (ESA) because of their impact on listed Bull Trout and Spotted Owls.

**The New SDEIS**

¹ Washington State’s Environmental Protection Act (SEPA) mirrors NEPA and places the same burden upon Washington State agency actions.
To understand this SDEIS one needs to understand a complex web of related processes and projects. Mr. David Ortman’s comment letter to this SDEIS does an excellent job of articulating the many problems with the historical situation and the multiple conflicting mandates that burden this entire situation. (This letter incorporates his comments by reference). As the SDEIS itself explains:

Following development of the Integrated Plan, Reclamation and Ecology prepared the Integrated Plan FPEIS to assess the environmental effects of implementing the Integrated Plan (Reclamation and Ecology, 20124). The Integrated Plan FPEIS was issued in March 2012. In July 2013, Reclamation published the Record of Decision (2013 Integrated Plan ROD) to implement the Integrated Plan in cooperation with Ecology and other Federal, State, local, and Tribal partners. The selected alternative in the 2013 Integrated Plan ROD implements the Integrated Plan. Projects associated with the seven elements will be implemented in a phased and balanced approach. The Integrated Plan three-phase strategy (10-year increments over 30 years) may combine or implement actions simultaneously. Additional project-level environmental compliance will be completed prior to implementation of specific projects and actions.

The action alternatives examine constructing and operating a pumping plant to access up to 200,000 acre-feet of water in Kachess Reservoir during drought years. Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) is evaluated as a component of the KDRPP alternatives. The KKC involves constructing and operating a gravity flow tunnel from Keechelus Reservoir to Kachess Reservoir and is also a component of the Integrated Plan, but is not being pursued as a standalone project at this time. These projects are part of the Yakima Basin Integrated Water Resources Management Plan (Integrated Plan)." (SEPA Fact Sheet p. 11 of SDEIS)

It is important to distinguish between the Integrated Plan as a political compromise document, and the Supplemental Draft Environmental Impact Statement as an environmental compliance and disclosure document. The Integrated Plan was determined as a politically appropriate synthesis of programs, taking into account the political positions of the state and federal agencies, counties and tribal representatives in the planning process organized by Ecology and Reclamation. There is no legal requirement that all viable alternatives be considered in a political planning process. There is, however, a legal requirement that all viable alternatives be considered in an environmental compliance and disclosure document required by the National Environmental Policy Act.

Previously referred to as the Kachess Reservoir Inactive Storage Project, the proposed Kachess Drought Relief Pumping Plant (KDRPP) could withdraw up to 200,000 acre-feet of lake storage water up to 80 feet below the reservoir’s existing outlet works, which were designed to allow storage and supply of water equal to the average annual watershed precipitation. In other words, the lake was increased in size to store the maximum amount of water available in the watershed. The current “storage” is all the water above the natural level of the lake prior to dam construction. The current proposal would remove water below the natural level of the
lake by up to 80 feet. This means that the proposal would drain much of the original Alpine Lake.

Supposedly, the KDRPP would operate only during a Washington State-declared drought with the goal of providing, when feasible, up to 70 percent water rights to proratable users. The SDEIS now includes a new variation of the KDRPP known as the “KDRPP Floating Pumping Plant” (KDRPP FPP) which was not analyzed or even proposed in the 2015 DEIS. This was proposed by the Roza Irrigation District. Apparently, it was the addition of this new KDRPP FPP (the new Proposed Action) which convinced Reclamation and Ecology that they needed to supplement the 2015 DEIS.

All of the Pumping Plant proposals also could include the addition of Keechelus Reservoir-to-Kachess Reservoir Conveyance project (KKC), which is intended to help refill Lake Kachess in the years following a drought by sending water from Lake Keechelus via tunnel to Lake Kachess. In addition, each of the Pumping Plant alternatives could operate without the KKC (although that would greatly increase the amount of time needed to refill the lake and significantly increase environmental damage). Finally, Reclamation and Ecology have abandoned the formerly proposed South Tunnel Alignment of the KKC because it was impractical and too expensive.

Fatal Flaw # 1 – Reclamation and Ecology Should Have Published all Comments and Responses to the 2015 DEIS Before Releasing the 2018 SDEIS

According to the 2018 SDEIS:

-Reclamation and Ecology have reviewed all comments on the DEIS, developed a new floating pumping plant alternative, collected additional scientific data as necessary, and evaluated new findings. The new alternative and new findings have been documented in the Kachess Drought Relief Pumping Plant and Keechelus Reservoir to Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS) released to the public April 13, 2018. The SDEIS will not contain comment letters received on the DEIS; instead, letters and response to comments from both the DEIS and SDEIS will be in a final environmental impact statement.” ES-xvii

If Reclamation and Ecology have already reviewed all the comments from the previous DEIS why did they fail to release the comments and responses in the almost 3 years since the DEIS comment period closed? This puts the public at a substantial disadvantage to understand the need for and reasoning behind the publication of the SDEIS. The required comment period for this SDEIS is, therefore, flawed because Reclamation and Ecology have vast amounts of information that are not in the public domain. To make matters worse the SDEIS acknowledges that the comments raised issues that led in part to the decision to issue the SDEIS. (ES-xv) At a minimum the agencies should extend the current public comment period and publish the 2015 public comments and responses. This would put the public on semi-equal footing with the decision maker in terms of understanding the implications of the project, the changed
circumstances, and new information (stemming from public comments on the 2015 DEIS) that led to the decision to publish a SDEIS.

*How do the agencies justify their decision not to publish the comments and responses to the 2015 DEIS in this SDEIS?*

**Fatal Flaw # 2 - The Purpose and Need Section is Internally Contradictory**

The Purpose and Need section of an EIS is critical because it frames the entire discussion about the proposed project and leads to potential project alternatives. In this situation there are three Purpose and Need sections for three different “project proponents” and there is only one way to meet all of their goals: Selecting the “Proposed Action” as the “Preferred Alternative”.

**Reclamation’s Purpose and Need**

According to the SDEIS:

*Reclamation’s purpose and need for action is to provide more sustainable water resources for agricultural, municipal, and domestic needs, while also helping to restore ecological functions and the health of the riverine environment in the Yakima River basin.*

*Specifically, Reclamation needs to analyze, implement, and fund as authorized, the site-specific projects identified here in accordance with the 2013 Integrated Plan ROD. Reclamation may fund, design, construct, operate, and maintain some or all of the Proposed Action, if authorized to do so pursuant to Section 4007 of the Water Infrastructure Improvements for the Nation Act or other law which provides similar authorization.*

How can reclamation participate financially in the project is not authorized by Congress? The statement above confirms that Reclamation may only “fund, design, construct, operate, and maintain some or all of the Proposed Action, if authorized to do so pursuant to Section 4007 of the Water Infrastructure Improvements for the Nation Act or other law which provides similar authorization.” How can Reclamation make financial commitments when the necessary authorization does not exist under Federal Law?

How can Reclamation wear both the project proponent hat and the regulatory hat if Congress does not authorize them to act as a project proponent?

The SDEIS further states: “Alternatively, any other project proponent may choose to fund the project independently; in which case, Reclamation then needs to respond to them as applicant and to determine whether to authorize, as necessary, any such entity to design, construct, operate and maintain certain projects, as necessary, related to the two objectives set forth in the Integrated Plan: (1) access water that is currently not accessible in the Kachess Reservoir to improve the water supply and reduce prorationing, and (2) improve water supply flexibility and storage between Kachess and Keechelus reservoirs.”
Ecology’s Purpose and Need

Ecology’s purpose for the action is to participate in the Integrated Plan and fund (not more than 50 percent) of the plan, and promote timely and effective implementation of associated projects in an aggressive pursuit of water supply solutions for instream and out-of-stream uses in the Yakima River basin [Revised Code of Washington (RCW) 90.38.005].

So, Ecology is in a slightly more legitimate position because they do have a State authorization to fund up to 50% of the Integrated Plan. Unfortunately, they do not have not ability to promise funds on their own without acts of both the Governor and the Legislature.

How does Ecology intend to fund the plan?

Why would Ecology fund a project that has no benefit to the ecology of Washington State destroys an alpine lake and violates SEPA, NEPA, and the Endangered Species Act by extirpating listed Bull Trout?

Roza and Proratable Entities’ Purpose and Need

Roza and the Proratable Entities’ purpose for the action is to access up to 200,000 acre-feet of water from Kachess Reservoir during drought years, as they need to improve water supply and reduce prorationing, whenever feasible, and improve flexibility to respond to the uncertainties of climate change. To participate in the Proposed Action, Roza and/or the Proratable Entities would need to seek all necessary authorizations. This document was prepared by Reclamation and Ecology, but Roza and/or other Proratable Entities may adopt this document for their own purposes.

At least this section of the Purpose and Need section is honest. Roza wants the water and they are willing to pay for it. This, however, takes this entire process in a very different direction as apparently this has pivoted from a “public project” led by Reclamation and Ecology to a Roza Irrigation District project hidden behind the veil of public agencies and the Integrated Plan. Reclamation and Ecology participating in a Project Action that is in effect a proposal from Roza to take 200,000 acre-feet of water from an Alpine Lake, draining the lake by 80 feet, causing untold hardships, ruining a major Federal camp ground, extirpating a Threatened species listed under the ESA, etc? How can this be justified?

- We understand why Roza wants this outcome but please explain how that result can possibly be in the public interest?

- It is obvious that the Purpose and Need section is internally contradictory. Ecology has one goal, Reclamation a different goal, and Roza a third. How can they be reconciled?
Legally, this proposal is dead on arrival as an analogous case decided by the 9th Circuit is on point here. In National Parks & Conservation Association v. Bureau of Land Management, 606 F.3d 1058 (9th Cir. 2010) Landowners and conservation group brought suit against the Bureau of Land Management (BLM) over a proposed public-private land swap adjacent to Joshua Tree National Park to allow a private company to build and operate a landfill. The court determined that the BLM’s considerations leading to the land swap were deficient, disallowing the exchange. The case upheld the necessity of a transparent process. The court looked to whether the BLM considered reasonable alternatives to the accepted landfill project. An agency has some discretion in selecting alternatives. However, the alternatives considered cannot be unduly narrow. In this case, the court looked to whether the goals were those of the BLM or those of Kaiser (the landfill developer). The court determined that alternatives other than Kaiser’s landfill should have been reasonably considered in the BLM’s purpose and need statement; however, the statement was so narrowly written it excluded any option other than a landfill. The court affirmed the district court’s decision, stating that the BLM put Kaiser’s needs before the public’s in the determination of purpose and need and failure to consider a reasonable range of alternatives.

This SDEIS is even worse than the situation with BLM above. In this situation there are three Purpose and Need sections for three different “project proponents” and there is only one way to meet all of their goals: Selecting the “Proposed Action” as the “Preferred Alternative”.

As the 9th Circuit wrote this is a clear violation of NEPA:

The BLM’s definition of the project’s purpose will necessarily affect the range of alternatives considered, because when “the purpose is to accomplish one thing, it makes no sense to consider the alternative ways by which another thing might be achieved... Our holdings in Friends and Carmel–By–The–Sea forbid the BLM to define its objectives in unreasonably narrow terms. The BLM may not circumvent this proscription by adopting private interests to draft a narrow purpose and need statement that excludes alternatives that fail to meet specific private objectives, yet that was the result of the process here. The BLM adopted Kaiser’s interests as its own to craft a purpose and need statement so narrowly drawn as to foreordain approval of the land exchange. (P. 1070)

Here Reclamation and Ecology have adopted Roza’s interests in just the same way that the BLM adopted Kaiser’s interest. This was deemed improper by the 9th Circuit and just like in the case above by crafting the purpose and need section so narrowly Reclamation and Ecology “forordain” the selection of the Floating Pumping Plant. This will also be deemed illegal.

Fatal Flaw #3 - The Proposed Action is The Only Alternative Other Than the No Action Alternative

Although the SDEIS claims to evaluate true alternatives it is evident that the only real alternative to no action is the new Floating Pumping Plant which not surprisingly is defined as the “Proposed Action”. This Proposed Action is a new term that was not included in the DEIS.
Although, legally there is a potential distinction between the Proposed Action and what may be selected as the Preferred Alternative, this SDEIS seems to conflate the two terms and reveals that the agencies have already made up their mind that the Floating Pumping Plant is in fact the Preferred Alternative.

According to the SDEIS:

“The Proposed Action for this SDEIS is to fund, design, construct, operate, and maintain a floating pumping plant on Kachess Reservoir in order to recover up to 200,000 acre-feet of inactive water storage from Kachess Reservoir during drought years when prorationing is less than 70 percent supply. This water would otherwise remain in Kachess Reservoir at an elevation below the existing gravity outlet works. The Proposed Action would also include volitional fish passage at the downstream end of the Narrows which is located between the upper and lower Kachess reservoirs. Reclamation and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action.

The Proposed Action implements the Kachess Inactive Storage project identified in the 2012 Integrated Plan FPEIS to provide additional water supply from the Kachess Reservoir during a State-declared drought. Since 2012, the KDRPP has undergone additional refinement and design.

In the DEIS, the KDRPP proposal focused on a shoreline pumping plant with deep tunnel intake. Since then, Roza identified an additional design for the KDRPP proposal. Based upon this, the agencies have decided to include a floating pumping plant as the Proposed Action, and to analyze the shoreline pumping plant design alternatives considered in the DEIS as alternatives. The alternatives considered also include KKC, which was identified in the Integrated Plan FPEIS as the Keechelus-to-Kachess Pipeline. Although the floating pumping plant is the Proposed Action, Reclamation and Ecology have not yet identified a Preferred Alternative. Reclamation would need to issue a ROD documenting the selected alternative and approving the construction of the pumping plant on Kachess Reservoir, over which the agency has jurisdiction. The agency would provide any necessary permits, agreements, or other approvals, review design, oversee construction, coordinate and manage water releases from Kachess Dam and deliveries to downstream users, and possibly enter into water, power, and transmission contracts.

Ecology may need to take actions implementing regulations, participating financially, and issuing permits as required for implementation of the selected alternatives. The changes described above require additional SEPA review in this SDEIS.” (ES-viii)

This is an embarrassing attempt to finesse a superficial distinction. There is no reason that Reclamation and Ecology would have spent three years, vast amounts of money, and added a new Project Proponent (Roza) to study a Proposed Action (proposed by Roza) that they are not going to select as the Preferred Alternative. The Floating Pumping Plant is both the Proposed
Action and the illegally predetermined Preferred Alternative. This is flatly banned by both NEPA and SEPA.

More evidence of the pre-determination can be found in the Purpose and Need section discussed above. This section suddenly includes a new player and a new “Propose and Need for the Action” that was not in the 2015 DEIS and is apparently the basis for this new SDEIS. In this instance the SDEIS does not even attempt to distinguish between the Proposed Action and Preferred Alternative:

Reclamation and Ecology each propose to fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action. Reclamation expects that the ROD would determine which entity would carry out each of these functions. Reclamation, Ecology, and Roza are each referred to herein as a “project proponent” and, collectively, as “project proponents.” ES – viii (Emphasis added)

This is a remarkable paragraph. One the one hand, the Bureau and Ecology claim that they have not selected a Preferred Alternative and on the other they say they each propose to “fund, design, construct, operate, and maintain some or all of the Proposed Action or to authorize Roza to fund, design, construct, operate, and maintain some or all of the Proposed Action.” They continue by stating that the ROD will determine which entity would carry out each of these functions. Finally, they state that Reclamation, Ecology, and Roza are each referred to herein as a “project proponent” and, collectively, as “project proponents.” ES – viii (Emphasis added).

This is clearly predecisional and is a blatant NEPA and SEPA process violation.

Worse still, at a practical level how is it possible to generate and opinion on the project if we do not even know who would “fund, design, construct, operate, and maintain some or all of the Proposed Action”?

Knowing who is in charge of implementing the project is a threshold piece of information and even this is not clarified in the SDEIS. The sheer number of actors, combinations of actions and combinations of a potential funding mosaic make the number of potential results virtually infinite. The point of the SDEIS, and NEPA and SEPA in general, is to define what the environmental consequences from a project are. It is antithetical to the letter and spirit of NEPA and SEPA to provide a hypothetical scenario with a virtually infinite number of possibilities from which the public can only guess at.

Fatal Flaw #4 – Reclamation does not have Authorization from Congress to Implement or Fund The Project and Ecology Does Not Have Funding to Implement the Project

The SDEIS says the ROD will “determine which entity would carry out each function” but Reclamation does not currently have authorization from Congress to fund this project and by
definition has not developed an appropriations strategy? Either their potential commitment is illegal or it simply designed to confuse the public.

Similarly, how can Ecology commit to any of the functions without the funding necessary to carry them out. At best, Ecology would need to request and receive funding from the legislature and governor next year during the 2019 legislative session to receive the necessary funding. Does that mean the FEIS and ROD will not be finalized until Spring of 2019, after the legislative session, assuming Ecology gets funding from the Legislature?

The Bureau and Ecology are not known for making such bold and unauthorized statements. It seems, therefore, far more likely that the real story here is that Roza has agreed in non-public meetings to fund and operate the new floating pumping plant. If this is the case this entire SDEIS should be shelved and a new “private proponent” led Draft EIS should be prepared by Roza.

In effect the SDEIS is simply an entirely new DEIS, poorly disguised as a SDEIS in order to avoid compliance with statutory requirements and deny the public necessary information to evaluate the “new alternative” not previously contemplated. The SDEIS proposes an entirely new alternative not contemplated or researched in the DEIS. The public has no way of evaluating this alternative relative to the prior DEIS as Reclamation and Ecology have intentionally refused to publish or respond to prior comments that led to the issuance of the SDEIS.

The Major Conclusions Section

The major conclusions section of the Executive Summary validates this theory about what this proposal really is: a backdoor effort to build the Floating Pumping Plant. As the SDEIS states:

“Based upon the analysis of impacts to these resources in Chapter 4, major conclusions of the SDEIS are as follows:

- **Change in Water Supply:** Action alternatives would improve water supply to proratable water users by up to 22 percentage points in the worst single-drought years, raising the proration percentage to about 53 percent of entitlement. This would be a substantial benefit to water supply because it would offer substantial progress toward the Integrated Plan’s 70 percent proration goal.

- **Change in Reservoir Levels:** Under all the action alternatives, Reclamation would operate Keechelus Reservoir to help Kachess Reservoir refill following a drought. This action would result in slightly lower mean Keechelus Reservoir pool levels, with a maximum incremental reservoir drawdown of 18 feet in late summer (in 1996) compared to No Action. Under all action alternatives, Kachess Reservoir would be drawn down by as much as 80 feet below existing minimum pool conditions.

*Listed Species:*
• Based on modeled water surface elevations, under Alternatives 2, 3 and 4, there would be an increase in days where Kachess Reservoir water surface elevation would drop below 2,200 feet (the evaluation at which Big and Little Kachess reservoirs separate and begin to affect fish passage, particularly for Bull Trout). These impacts to passage of bull trout would be mitigated by the Volitional Bull Trout Passage Improvements. Alternatives 5A, 5B, and 5C would result in an increase in days of flows in Keechelus Reach of the Yakima River that are suitable for Middle Columbia River steelhead outmigration. All alternatives would result in noise impacts to northern spotted owls, but are not expected to harm or injure northern spotted owls, or impact their habitat.

• Regional Economic Impacts and Benefits: The socioeconomic effects of the action alternatives arising from changes in water supply available for agriculture would be beneficial, resulting in a net gain in regional economic activity relative to No Action.”

So Roza gets the water and the supposed economic benefits and the environment, the community, and the public at large lose. It’s that simple. It is also a terrible idea and illegal.

**Fatal Flaw # 5 – The Alternatives Analysis is Far Too Limited to Comply with NEPA and SEPA**

It gets worse. Under National Environmental Policy Act (NEPA) agencies considering “major Federal actions significantly affecting the quality of the human environment” must prepare and issue an Environmental Impact Statement (EIS). 42 U.S.C. § 4332(2)(C); *Nw. Envtl. Advocates v. NMFS*, 460 F.3d 1125, 1133 (9th Cir.2006). The EIS:

> “shall provide full and fair discussion of significant environmental impacts and shall inform decision makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment.” 40 C.F.R. § 1502.1; *Nw. Envtl. Advocates*, 460 F.3d at 1134.

Thus, the EIS is more than a mere “disclosure document.” 40 C.F.R. § 1502.1. Agencies must take a ‘hard look’ at the potential environmental consequences of the proposed action.” *Klamath–Siskiyou Wildlands Ctr. v. BLM*, 387 F.3d 989, 993 (9th Cir.2004) (citing *Churchill County v. Norton*, 276 F.3d 1060, 1072 (9th Cir.2001)). By focusing on the environmental effects of the proposed agency action, “NEPA ensures that the agency will not act on incomplete information, only to regret its decision after it is too late to correct.” *Marsh*, 490 U.S. at 371, 109 S.Ct. 1851 (1989). Reclamation and Ecology fail to meet this burden in this DEIS.2

In the first landmark NEPA case, *Calvert Cliffs’ Coordinating Committee, Inc. v. Atomic Energy Commission*, the U.S. Court of Appeals for the D.C. Circuit highlighted the importance of these requirements and noted that they seek:

2 Washington State’s Environmental Protection Act (SEPA) mirrors NEPA and places the same burden upon Washington State agency actions.
To ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project (including total abandonment of the project) which would alter the environmental impact and the cost benefit analysis. Only in that fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made. 449 F.2d 1109 (D.C Cir 1971).

The SDEIS purports to evaluate:

Alternative 1 - No Action Alternative

Alternative 2 – KDRPP East Shore Pumping Plant;

Alternative 3 – KDRPP South Pumping Plant;

Alternative 4 - (Proposed Action) – KDRPP Floating Pumping Plant;

Alternative 5A – KDRPP East Shore Pumping Plant with KKC North Tunnel Alignment;

Alternative 5B – KDRPP South Pumping Plant with KKC North Tunnel Alignment;

Alternative 5C – KDRPP Floating Pumping Plant with KKC North Tunnel Alignment.

In reality it only really evaluates the Proposed Action and No Action. In doing so it doesn’t even attempt to meet the legal requirements for an alternatives analysis.

NEPA section 102(2)(C) requires an EIS to discuss “alternatives to the proposed action.” The CEQ, in its implementing regulations, emphasizes alternatives as the “heart” of the EIS. CEQ’s regulations provide detailed directions on the contents of the alternatives discussion in an EIS. Specifically, agencies shall:

(a) Rigorously explore and objectively evaluate all reasonable alternatives, and for alternatives which were eliminated from detailed study, briefly discuss the reasons for their having been eliminated.

(b) Devote substantial treatment to each alternative considered in detail including the proposed action so that reviewers may evaluate their comparative merits.

(c) Include reasonable alternatives not within the jurisdiction of the lead agency.

(d) Include the alternative of no action.
(e) Identify the agency’s preferred alternative or alternatives, if one or more exists, in the draft statement and identify such alternative in the final statement unless another law prohibits the expression of such a preference.

(f) Include appropriate mitigation measures not already included in the proposed action or alternatives.

Another important principle outlined in the CEQ regulations is that all reasonable alternatives must be discussed. This comports with NEPA’s central purpose of fostering informed decision-making. Thus, it is not surprising that many NEPA challenges revolve around whether the agency considered a reasonable range of alternatives, with courts holding that the existence of reasonable but unexamined alternatives renders an EIS inadequate.

Courts also look to the goals, needs, and purposes defined for the project in determining whether the alternatives discussion is reasonable. While giving deference to the agencies, courts are wary when agencies narrowly define the purpose or scope of an action. For example, when considering the scope of reasonable alternatives in an EIS, the Seventh Circuit stated that “[o]ne obvious way for an agency to slip past the strictures of NEPA is to contrive a purpose so slender as to define competing ‘reasonable alternatives’ out of consideration (and even out of existence).”

Courts also look to the complexity of the action in considering whether the amount of detail in the alternatives section is sufficient. Agencies are directed to “present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decisionmaker and the public.” “The touchstone for [a court’s] inquiry is whether an EIS’s selection and discussion of alternatives fosters informed decision-making and informed public participation.” This SDEIS conclusively fails to meet this standard.

SEPA has similar requirements to evaluate alternatives WAC 197-11-442(2) requires Ecology to:

*Discuss impacts and alternatives in the level of detail appropriate to the scope of the nonproject proposal and to the level of planning for the proposal. Alternatives should be emphasized. In particular, agencies are encouraged to describe the proposal in terms of alternative means of accomplishing a stated objective (see WAC 197-11-060(3). Alternatives including the proposed action should be analyzed at roughly comparable level of detail, sufficient to evaluate their comparative merits (this does not require devoting the same number of pages in an EIS to each alternative). [underline added]*

The Washington Supreme Court has found that “The environmental significance of the nonproject action creates the obligation to examine alternatives to the nonproject action. SEPA requires an examination of reasonable alternatives to the nonproject action.” *Citizens Alliance to Protect Our Wetlands v. City of Auburn*, 126 Wn.2d 356, 366 (1995). In *Blair et. al. v. City of Monroe*, CPSMHB 14-3-0006c, Final Decision and Order (Sept. 19, 2014), the Central...
Puget Sound Regional Growth Management Hearings Board considered the scope of review under WAC 197-11-442(4). There the Board found that the City of Monroe had failed to adequately comply with SEPA review requirements (SEPA is to function “as an environmental full disclosure law,” Blair at 22. “[t]he range of alternatives considered in an EIS must be sufficient to permit a reasoned choice.” SWAP v. Okanogan County, 66 Wn. App. 439, 444 (1992).

Thus, both NEPA and the Washington State Environmental Policy Act (SEPA) require consideration of all reasonable alternatives. Under both laws an EIS must include a detailed statement and analysis of all “reasonable alternatives” to the proposed action. This SDEIS fails this test.

Finally, it should be noted that the severely restricted alternatives analysis in both the 2015 DEIS and the 2018 SDEIS stem from the fact that the proposed projects are part of a broader political compromise solution known as the Yakima Basin Integrated Plan (YBIP) developed by the YRBWEP Workgroup (Workgroup). Because of this, it is not surprising that the Reclamation and Ecology did not want to consider other ways to achieve the desired fish enhancements and increases in water storage and flows – those options were not part of the mandate of the YBIP.

Whatever one thinks of the YBIP it is clear that it includes the KKC and KDRPP and does not include other alternatives that could meet the same underlying objectives but were not agreed upon by the Workgroup in the YBIP. Reclamation and Ecology’s inclusion of other public officials and stakeholders interested in and affected by Yakima Basin water shortage problems is perhaps laudable. It does not, however, relieve either agency from complying with the statutory requirements of state and federal law.

They SDEIS takes this predetermination even further by inviting a new proposal by Roza (the floating pumping plant) and names it the “Proposed Action” and includes Roza as a “Project Proponent”. This means that in effect there are only two alternatives the floating pumping plant or no action.

**Key Questions for Reclamation and Ecology**

*Why were more alternatives not considered?*

*Are the alternatives considered actually real alternatives or are Alternative 4 and the no action alternative really the only alternatives?*

*Why wasn’t water conservation explicitly considered as an alternative?*

*Why was Kecheelus not evaluated for a drought relief pumping plant with a canal or pipeline diversion directly from Kecheelus to Easton? This alternative would accomplish the same objectives in a significantly less environmentally harmful and dramatically less costly manner.*
Why were alternative storage locations not considered?

**Fatal Flaw #6 - All of the Alternatives Except the No Action Alternative Violate the Endangered Species Act**

All alternatives except, no action, violate the Endangered Species Act (ESA). As the Supreme Court articulated in the landmark ESA case TVA v. Hill:

> It may seem curious to some that the survival of a relatively small number of three-inch fish among all the countless millions of species extant would require the permanent halting of a virtually completed dam for which Congress has expended more than $100 million. . . . We conclude, however, that the explicit provisions of the Endangered Species Act require precisely that result. “One would be hard pressed to find a statutory provision whose terms were any plainer than those in § 7 of the Endangered Species Act. . . . The language admits of no exceptions. TVA v. Hill

The DEIS admits in multiple locations that the draining of Lake Kachess will lead to the killing of listed Bull Trout. Killing of listed Bull Trout is illegal without an incidental take permit (ITP) which requires a Habitat Conservation Plan (HCP). There has been no discussion of a HCP or ITP in this setting.

As the SDEIS states:

> Based on modeled water surface elevations, under Alternatives 2, 3 and 4, there would be an increase in days where Kachess Reservoir water surface elevation would drop below 2,200 feet (the evaluation at which Big and Little Kachess reservoirs separate and begin to affect fish passage, particularly for Bull Trout). These impacts to passage of bull trout would be mitigated by the Volitional Bull Trout Passage Improvements. Alternatives 5A, 5B, and 5C would result in an increase in days of flows in Keechelus Reach of the Yakima River that are suitable for Middle Columbia River steelhead outmigration. All alternatives would result in noise impacts to northern spotted owls, but are not expected to harm or injure northern spotted owls, or impact their habitat.

This means that the Bull Trout cannot migrate to their spawning grounds which is obviously “take” under the ESA and jeopardizes the species continued existence.

The plan attempts to mitigate for this damage to Bull Trout by proposing an untested and speculative Volitional Fish Passage Project. The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.
In some years (e.g., conditions such as occurred between 2001 – 2008) the pump...and therefore the channel...will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population.

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrrows” and “steep shelf” originated their life cycle.

To make matters worse, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.”

What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the Proposed Alternative and all the action alternatives?

This is simply not how the ESA works. Here we have a known major impact on listed species and an unproven, speculative, and at best limited technological proposal minimize some unknown percentage of the negative impact.

*The No Action Alternative is the only legal alternative and should be selected.*

**Fatal Flaw # 7 Failure to Consult under The Endangered Species Act**

In addition to the massive substantive impacts that will undeniably impact Bull Trout and Spotted Owls, Reclamation has inexplicably disregarded the Federal Agency process mandated under the ESA. Section 7 of the ESA requires federal agencies to consult with either the United States Fish and Wildlife Service or National Marine Fisheries Service to ensure that any action authorized or carried out by the agency is not likely to jeopardize the continued existence of any endangered or threatened species or result in the destruction or adverse modification of critical habitat of the species. ESA § 7, 16 U.S.C. § 1536. This process requires the Services to prepare a biological opinion that includes a finding as to whether the proposed action is likely to jeopardize the continued existence of an endangered or threatened species or its habitat. 50 C.F.R. § 402.14.
Although the current SDEIS acknowledges repeatedly that there will be substantial negative impacts to ESA listed species including Bull Trout and the Northern Spotted Owl (among others) and the habitat of these species, it fails to quantify those impacts adequately. This failure stems from the fact that the Reclamation has not initiated a Section 7 Consultation under the ESA. The SDEIS does state that such a Consultation will occur in the future but the lack of a concrete understanding of the impacts on listed species makes the selection of a preferred alternative arbitrary and capricious. It is exactly of this reason that both the NEPA and ESA regulations encourage simultaneous NEPA review and ESA Section 7 consultations.

In fact, Reclamation’s own NEPA regulations state:

NEPA activities should be coordinated with other environmental requirements so that their requirements are, when possible, met concurrently rather than consecutively. This specifically includes FWCA, CWA, NHPA, ESA, and other environmental review laws and Executive orders. P 3-10, 3-11. (emphasis added).

The NEPA Guidelines state further:

To the fullest extent possible, agencies shall prepare draft environmental impact statements concurrently with and integrated with environmental impact analyses and related surveys and studies required by...the Endangered Species Act....” 40 C.F.R. § 1502.25. (emphasis added).

The “studies” required by section 7 are those needed for consultation on any federal action that may affect ESA-listed species. 16 U.S.C. § 1536(b), (c).

ESA section 7(c) states that the action agency's biological assessment, a precursor to a biological opinion, “may be undertaken as part of a Federal agency's compliance with the requirements of Section 102 of the [NEPA].” 16 U.S.C § 1536(c)(1). Again, what is plainly intended is that the action agency's consultation duties regarding its proposed action may be coordinated with its NEPA review of that action. Similarly, FWS’s regulations regarding section 7 state: “consultation ...procedures under section 7 may be consolidated with interagency cooperation procedures required by other statutes, such as [NEPA].” 50 C.F.R. § 402.06.

Again, Reclamation’s own NEPA regulations state:

Special attention should be given to the integration of NEPA and the ESA. Section 7(a)(2) of the ESA requires consultation with the Service and/or NOAA-NMFS for any Reclamation action which may affect a species federally listed as threatened or endangered (listed species). This consultation process may result in the Service and/or NOAA-NMFS issuing a biological opinion containing actions to be undertaken to avoid jeopardizing a species or to reduce the level of take associated with the proposed action. Reclamation shall, to the fullest extent possible, integrate ESA and NEPA analyses and schedules.” (Bureau of Reclamation’s NEPA Handbook Section 3.15.1) (emphasis added).
The failure to consult is especially troubling because this is the second time that Reclamation has failed to conduct an ESA consultation. The first time came in the Programmatic EIS for the entire YRBIP process. In that document Reclamation stated:

Reclamation has concluded that consultation under Section 7 of the Endangered Species Act is not required at this time because preparation of the PEIS and selection of a preferred alternative would have no effect on listed species in the action area. Reclamation has discussed this conclusion with both the Service and NMFS, and neither agency found any fault with Reclamation’s reasoning which led to the no effect determination. See Appendix G for a summary of the correspondence. Consultation would be conducted for individual projects that may affect listed species or critical habitat and that Reclamation would fund, authorize, and/or carry out under the Integrated Plan in the future.” PEIS 6.2.2.

Reclamation’s failure to consult with USFWS and NOAA is inexcusable and has led to an incomplete evaluation of the true impacts on endangered species and potential mitigation for these impacts.

**Key Questions for Reclamation and Ecology**

*Why wasn’t a Section 7 consultation completed before the DEIS was published?*

*Why wasn’t a Section 7 Consultation completed before the SDEIS was published?*

*How does Reclamation believe it meets its own NEPA regulations or the CEQ regulations regarding threatened and endangered species?*

*How can the NEPA decision maker or the public fully understand the impacts on listed species without input from the ESA expert agencies USFWS and NOAA?*

*Given that Reclamation and the USFWS are both part of the Department of Interior how can the lack of a Section 7 consultation be justified?*

*How can Reclamation contend that there is “no effect on listed species” in the PEIS and then acknowledge there will be significant effects upon listed species and habitat in the SDEIS.*

**Fatal Flaw # 7 – The DEIS repeatedly relies on vague and hypothetical mitigation measures**

One essential ingredient of an EIS is to identify adverse environmental impacts and then discuss the steps that will be taken to mitigate unavoidable adverse environmental consequences. The projects evaluated in the DEIS have numerous environmental consequences that will require extensive mitigation. The requirement that an EIS contain a detailed discussion of possible
mitigation measures flows both from the language of the NEPA and, more expressly, from CEQ's implementing regulations for NEPA.

Implicit in NEPA's demand that an agency prepare a detailed statement on “any adverse environmental effects which cannot be avoided should the proposal be implemented,” 42 U.S.C. § 4332(C)(ii), is an understanding that the EIS will discuss the extent to which adverse effects can be avoided and mitigated for. See D. Mandelker, NEPA Law and Litigation § 10:38 (1984).

The Supreme Court considered the duty to mitigate under NEPA in *Robertson v. Methow Valley Citizens Council* (109 S.Ct. 1835). In that case the plaintiffs challenged a Forest Service permit for a ski resort in a national forest. The Court held that the requirement that an agency discuss mitigation measures is implicit in “NEPA's demand” and CEQ regulations. The omission of a “reasonably complete discussion” of mitigation measures would undermine NEPA's action-forcing functions. Without such a discussion, the Court added, neither the agency nor other interested groups or individuals, could properly evaluate the severity of the adverse effects of the action. That is exactly the problem with this SDEIS.

On January 14, 2011, the White House Council on Environmental Quality (“CEQ”) finalized guidance entitled “Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigated Findings of No Significant Impact.” The guidance is intended to make federal agencies more accountable for mitigation measures that they identify in conducting National Environmental Policy Act (“NEPA”) reviews of proposed actions.

CEQ seeks better implementation of mitigation commitments by making them express, measurable, and viable. According to CEQ, NEPA and decision documents should “carefully specify” any relied-upon mitigation “in terms of measurable performance standards or expected results, so as to establish clear performance expectations.” CEQ also asks agencies to disclose and assess potential funding shortfalls upfront in the NEPA analysis and explore adaptive management or specific mitigation alternatives if the selected mitigation does not succeed.

The proposed mitigation in the SDEIS doesn’t even come close to meeting this standard. The mitigation proposed in the current SDEIS is far too general and hypothetical, and even undermines the mitigation already being implemented by WSDOT under the Interstate 90 FEIS. Therefore, it fails to meet the NEPA/SEPA threshold to provide the decision maker or the public with a full understanding of the environmental consequences of any of the alternatives under consideration and to

As noted above one glaring example centers around Bull Trout, a threatened species in Lake Kachess. The plan calls for reducing the level of the lake by an additional 82.75 vertical feet. This draw down will prevent the fish from spawning in Box Canyon by creating an 82 ft high cliff impediment. Yet, there is no plan to mitigate this loss of habitat and reduction in population of the threatened species. The Gold Creek bull trout are distinct from Lake Kachess Bull Trout.
Over 5 miles, 2 dam structures, and Kecheelus Ridge separate the populations. Therefore, the Gold Creek bull trout mitigation plan cannot affect the Lake Kachess bull trout population.

Therefore, the proposed mitigation plan, which only affects Lake Kecheelus, cannot mitigate this loss. The DEIS alludes to vague considerations for mitigation of bull trout habitat destruction and population decline, but does not provide definitive or even viable proposals with cost estimates, which is particularly important in this case because the harmful effects are so dramatic and potentially impossible to mitigate such as 82’ cliffs in spawning gateways.

In another example, the SDEIS accurately states the Kachess Lake aquifer will be depleted and private wells may be compromised or fail entirely (DEIS 1-19). The only accommodation will be for “…Reclamation to develop appropriate mitigation strategies” if water levels and wells are adversely impacted. This we will figure it out later approach which permeates much of the SDEIS is simply inadequate under NEPA and SEPA and supporting regulations. The DEIS does not provide any indication of what mitigation efforts would be considered or appropriate. It is essential that these mitigation efforts be identified in advance, the likelihood of their need to be implemented also identified in advance, and that these estimates be quantitative, based upon scientific evidence.

**Forest and Wetlands Will Be Impacted**

The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, Reclamation has ignored and rejected these requests. This is a clear violation of the NEPA and SEPA process and renders the current SDEIS incomplete and unacceptable.

**Private Wells Will Be Dewatered**

The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time,
without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required in this SDEIS. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

**Federal Campground Will Be Ruined**

The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend...June 1.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. We ask that the past users of USFS Lake Kachess Campground be pro-actively contacted and informed of the potential impact on Lake Kachess, and that they be provided an opportunity for public comment. It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS correct this failure.

The current SDEIS precludes public comment on specific mitigation measures and by extension does not allow the public or the NEPA/SEPA decision maker to truly understand the implications of the proposed action. That is a violation of SEPA and NEPA. *How can the SDEIS propose to “take” a Federal campground to begin with?*

*How can the USFS allow this without a thorough mitigation plan?*

*Why is the USFS a “cooperating agency” when the action will ruin their own campground.*

**Fatal Flaw # 8 – The Alternatives Violate Water Law Generally and the Yakima Allocation Specifically**

Although the SDEIS acknowledges the proper law regarding rights to water in the Yakima basin it proposes to violate that law directly.

The following water entitlements in the Yakima River basin include senior water rights, proratable water rights, and junior water rights:

- Senior water rights (referred to as nonproratable) existed prior to the development of the Yakima Project, and are served in the order of their priority dates; they have precedence over proratable and junior rights.
• Proratable water rights share the priority date that the United States obtained for the Yakima Project. Proratable entitlements share equal priority, as they have a common priority date, and their water deliveries are subject to proration (reduced proportionately) in years when the water supply is insufficient to meet demand based on the court doctrine of Total Water Supply Available (TWSA). TWSA is estimated by Reclamation annually based on forecasted runoff, forecasted return flows, and storage contents.

• Junior water rights were established after the Yakima Project, and have priority dates after May 10, 1905. When there is insufficient water, the first deliveries to be curtailed are those with junior water rights in the order of their priority dates. (Section 1.2.1)

Many property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down.

How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? The answer: it is not possible as it is flatly illegal.

How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam?

Who will pay to provide senior water rights holders with the water they have a right to?

How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property?

How can the Bureau and Ecology allow a taking of private rights where:

1) the recipient of the taking is a private, not public entity,
2) no condemnation has occurred,
3) no compensation is contemplated
4) owners of the rights have been denied due process?

Conclusion

This project should not happen because it is a bad idea and has massive negative impacts on natural resources and the local community. This project will not happen because it is flatly illegal. As was noted earlier, the draining lake Kachess by 80 feet to supply water to proratable irrigators is a component if the Integrated Plan. The problem is that as part of the Integrated Plan it simply cannot survive the NEPA and SEPA requirements to evaluate a reasonable range of alternatives (not to mention the direct impact on ESA listed species). Essentially, Reclamation and Ecology are caught on the horns of a dilemma. If they do not implement the
Kachess Pumping Plant project they are not implementing the Integrated Plan and if they do attempt to implement the Kachess Pumping Plant project they are violating NEPA, SEPA, and the ESA and are not acting in the public interest.

As was noted earlier, it is important to distinguish between the Integrated Plan as a political compromise document, and the Supplemental Draft Environmental Impact Statement as an environmental compliance and disclosure document. The Integrated Plan was determined as a politically appropriate synthesis of programs, taking into account the political positions of the state and federal agencies, counties and tribal representatives in the planning process organized by Ecology and Reclamation. There is no legal requirement that all viable alternatives be considered in a political planning process. There is, however, a legal requirement that all viable alternatives be considered in an environmental compliance and disclosure document required by the National Environmental Policy Act and Washington State’s Environmental Policy Act.

The advice provided to Reclamation and Ecology by the YRBWEP Workgroup does not supplant the requirement that Reclamation and Ecology themselves consider environmental alternatives when making decisions about major actions significantly affecting the quality of the environment. Reclamation and Ecology may not delegate that decision-making authority to others, or accept a workgroup recommendation without comparing that recommendation against other alternative courses of action. That delegation, however, is exactly what Reclamation and Ecology did in the 2015 DEIS and have done again in this 2018 SDEIS. This level of “predetermination” and failure to independently evaluate reasonable alternatives to the Kachess Pumping Plant Project contained in the Integrated Plan leads to a “black letter law” violation of NEPA and SEPA is fatal to both 2015 DEIS and the 2018 SDEIS.

Ultimately the Kachess Pumping Plant project is doomed because there is no way for it to comply with the most basic provisions of Federal and State environmental laws.
Questions regarding Lake Kachess Pumping Plan ESI

Questions or comments on the SDEIS will be accepted until July 11, 2018. Comments may be submitted to kkbt@usbr.gov, by mail to the Bureau of Reclamation, Attn: Ms. Candace McKinley, Environmental Program Manager, 1917 Marsh Road, Yakima, WA, 98901; by telephone at (509) 575-5848, ext. 603; or by facsimile to (509) 454-5650.

1. Did Lake Kachess have a Salmon run prior to building the Dam?
2. How many years will be until lake Kachess gets salmon passage?
3. Why are salmon passage plans not addressed in the pumping plan?
4. Have the courts ruled that fish passage should be restored to Lake Cle Elum, Lake Kachess, Lake Cle Elum, Lake Keechelus?
5. How many times is the word “Salmon” used in The Kachess Pumping Plant EIS document. It appears to have been deleted. (out of sight out of mind)
6. It appears that “salmon and chinook” has been carefully deleted. Is this true? I do see the word Bull Trout several times in the Document.
7. Why is there not information about the effect of the Kachess pumping Plant would have on a future fish passage over or around Lake Kachess Dam? Lower lake levels might not work with a fish ladder. This question concerns salmon or chinook, not bull trout.
8. Did the Yakima Nation cut a deal to get a fish ladder at Lake Cle Elum and abandon plans for a fish ladder at Lake Kachess?
9. How many times in the last 10 years has Kittitas County declared a drought?
10. In declared drought years, what was the percentage of water allocations for each drought year? (example, 2004 did they get 65% of their allocated water?)
11. During a declared drought assuming for example irrigators only were getting 65% of their allocation, the proposed pump would only pump 5% more water. Limiting the allocations to 70%?
12. What would the yearly cost be for that 5% water that is pumped, include also the cost for the operating the pump.

13. 5% of the irrigators water allocation is how many acre feet of water.

14. Since the Pumping Plant would only operate in a drought year, could it pump more then 70% of the water allocations?

15. Would it be cheaper to build a new reservoir somewhere else, where there are not historic fish runs?

16. ATV’s and trucks and jeeps drive all over the south end of the Lake when the water level is low. But they are not stopped. If the lake is lowered, the problem will be worse. The south end of the lake will turn into a dust pit and when it rains a mud pit for 4x4 vehicles. Nesting areas for birds will be destroyed.

17. Will the forest service install a sign limiting camping to 14 days.

18. Several camp sites exist where campers stay for months and leave garbage and crap all over the place, nothing is done to stop this. What will the forest service to prevent this?

19. A unimproved boat launch is at the southeast end of the lake, but the forest service will not work with land owners to share the cost of maintaining FS Road 4818. The land owners maintain it at their own expense.

20. Is Washington State spending millions of Tax Payers money researching this pumping plan that is doomed to failure. Over costly and Unpractical.

21. What is the cost to build a new reservoir? At a location where it would not have so much a effect on a recreational lake and it’s community and the environment?

22. When will Lake Kachess get salmon passage?

23. When will Lake Keechelus get Salmon passage?

Alan Kirlin

Seattle WA
[EXTERNAL] LAKE Kachess
1 message

Linnet Botkin <Linnet98@hotmail.com>  
To: "kkbt@usbr.gov" <kkbt@usbr.gov>  
Mon, Jul 16, 2018 at 10:59 AM

You have tried a fast one, Lake Kachess is a LAKE not a reservoir leave the lake alone.

Sent from Mail for Windows 10

Linnet Botkin
Ellensburg, WA
Mark B <burkepostoffice@gmail.com>  
To: Uca K2KConvey Bor <sha-uca-k2kconvey@usbr.gov>  

Dear K2KConvey, BOR UCA,

I would like to ask if your below email (specifically listing all individual email addresses & names) is a violation of the Department of the Interior’s Privacy Policy as well as the mandate of the Privacy Act of 1974, which requires that such records be safeguarded in accordance with Privacy Act procedures, and explain why or why not.

If so, this breach should be publicly disclosed and parties who were contacted in this manner should be contacted and told of the error and informed of the measures being taken to prevent this from occurring again.

Kind regards,
Mark

---

Begin forwarded message:

From: "K2KConvey, BOR UCA" <sha-uca-k2kconvey@usbr.gov>  
Subject: SDEIS Comments  
Date: July 13, 2018 at 9:57:47 AM PDT  
To: <dicklanden@aol.com>, <733lee@fairpoint.net>, <dougda1959@hotmail.com>, <Lindap@fvbmt.com>, <kachess99@gmail.com>, <paigecryan@gmail.com>, <jpwens99@yahoo.com>, <mmnesiadotcom@gmail.com>, <Roba@harsch.com>, <wendeljc@comcast.net>, <eamodery@earthlink.net>, <gernor@comcast.net>, <djdiener@comcast.ne>, <rcernick@gmail.com>, <jimbarbelder@gmail.com>, <rrosen326@gmail.com>, Austin Burke <austinmarkburke@gmail.com>, <tpappas@tarragon.com>, <tbocek@comcast.net>, <DMcelIntyre@tarragon.com>, <shenoh@icloud.com>, <JSTARCEVICH@malcolmdrilling.com>, <andy.dulin.b7wc@statefarm.com>, <chris.black@wellsfargoadvisors.com>, <rdietrich@hnw.law>, <kathykearny@comcast.net>, <camfitzpatrick@gmail.com>, <aarondressler@gmail.com>, <groverwfv@comcast.net>, <gkengberg@msn.com>, <smbocek@gmail.com>, <kkemail@prodigy.net>, <keimar@comcast.net>, <doug@smith.net>, Jerry Watts <jerrygwatts@gmail.com>, <pkim481@gmail.com>, <mob201@gmail.com>, <brandyjahn@gmail.com>, <alysesnelson@gmail.com>, <Patty@jordanfour.com>, <angie.armstrong.jt7w@statefarm.com>, <worcester.karen@gmail.com>, Mark B <burkepostoffice@gmail.com>, <Wenstrup.John@bcg.com>, <David.Brown@yakimawa.gov>, <cjguilfoyle@gmail.com>, <whitapple1@yahoo.com>, Jerry Williams <jaw.home@hotmail.com>
Thank you for your comments and questions on the *Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Supplemental Environmental Impact Statement* (SDEIS).

Your comments and questions have been recorded for consideration and attention. We will be collecting comments throughout the 90-day comment period (April 13 through July 11, 2018). After July 11, all comments and questions will be categorized, considered, and responded to in the **Final Environmental Impact Statement**.

Many of your questions and concerns may already be addressed in the SDEIS. You can access this document at [https://www.usbr.gov/pn/programs/eis/kkc/kprojectsdeis2018.pdf](https://www.usbr.gov/pn/programs/eis/kkc/kprojectsdeis2018.pdf)

We appreciate your participation in the comment period. We have recorded your email address, and you will be notified when the **Final Environmental Impact Statement** is released.

Thank you
[EXTERNAL] Re: SDEIS Comments Received by July 11
1 message

Mark B <burkepostoffice@gmail.com> Sun, Jul 15, 2018 at 6:35 AM
To: "K2KConvey, BOR UCA" <sha-uca-k2kconvey@usbr.gov>

Dear K2KConvey,

Unfortunately None of our questions have been answered by the SDEIS. We look forward to your answers.
Kind regards,
Mark Burke

On Jul 14, 2018, at 2:04 PM, K2KConvey, BOR UCA <sha-uca-k2kconvey@usbr.gov> wrote:

Thank you for your comments and questions on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Supplemental Environmental Impact Statement (SDEIS).

Your comments and questions have been recorded for consideration and attention. We will be collecting comments throughout the 90-day comment period (April 13 through July 11, 2018). After July 11, all comments and questions will be categorized, considered, and responded to in the Final Environmental Impact Statement.

Many of your questions and concerns may have already be addressed in the SDEIS. You can access this document at https://www.usbr.gov/pn/programs/eis/kkc/kprojectsdeis2018.pdf

We appreciate your participation in the comment period. We have recorded your email address, and you will be notified when the Final Environmental Impact Statement is released.

Thank you
[EXTERNAL] Draining Lake Kachess
1 message

william chan <mychevy85@yahoo.com> Thu, Jul 19, 2018 at 1:28 PM
To: kkbt@usbr.gov

Love camping at Lake Kachess and draining it will destroy the setting and landscape for fishing and hiking

Sent from my iPad
I'm writing to oppose the project at Lake Kachess. Thank you

Sincerely,

Lyndsey Jarvis
The following are comments on the draft supplemental EIS on the Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance. Please include these comments with responses in any final EIS.

Section 3.21 is a very short section on Socioeconomics. However, there is no information on how Yakima farm workers would benefit from the projects described in the SDEIS? How many documented non-U.S. citizens worked on harvesting crops in each Yakima irrigation district from 2015 through 2017? How many un-documented non-U.S. citizens worked on harvesting crops in each Yakima irrigation district from 2015 through 2017?

How much does a documented non-U.S. citizen farm worker make per hour for each type of harvested crop? How much does an un-documented non-U.S. citizen farm worker make per hour for each type of harvested crop?

How much hourly wage increase would a documented non-U.S. citizen farm worker receive for each type of harvested crop with the proposed floating pumping plant? How much hourly wage increase would an un-documented non-U.S. citizen farm worker received for each type of harvested crop with the proposed floating pumping plant?

What percentage of additional income from the proposed floating pumping plant would go to Yakima irrigation farmers vs. Yakima farm workers?

In addition to the concerns outlined above, due to the adverse environmental impacts from the proposed projects the no-action alternative should be selected.
Thank you.

Ann Marchand
7043 22nd Avenue Northwest
Seattle, WA 98117
Can you please explain to me how increasing the "bucket" will help when the KRD can't even deliver the water that is available today? This is the second year we have been on a restriction due to them being unable to deliver our full allotment.
[EXTERNAL] Save Lake Kachess
1 message

Carolyn <wolfster1@hotmail.com> Fri, Aug 3, 2018 at 10:48 PM
To: "kkbt@usbr.gov" <kkbt@usbr.gov>

I hope it's not too late! Please save Lake Kachess from being drained and causing unintended consequences of further destroying the salmon and ruining the ecosystem. Our federal and state parks are under attack. Once changed, we will never get back the beauty and enjoyment we experience now. Humanity can't only be about money. We need beauty, green space, connection to our forests and other plants and animals.

Please don't drain Kachess Lake!
Carolyn Stalter
(206) 782-8008
98107
To whom it may concern,

Water is a huge issue in the arid West. I do believe that water conservation is the most logical and inexpensive way to provide water for agricultural needs. I lived in Northern California in an area with a climate and farming issues similar to Yakima; except no hope of governmental assistance for water. The farmers have concrete irrigation ditches that get inspected regularly by the local water district and not only do they have smart water and crop use related to the weather patterns, they also create storage ponds on their land. Why on earth are you not forcing farmers and landowners to practice water conservation???? Please think about it. You cannot be serious about needing and using lots of water in a desert when you don't practice water conservation.

Below are some tips provided by the Center for Urban Education about Sustainable Agriculture - easy place to start! I am not sure if you are aware that people work with nature to deal with difficult growing situations. Please don't waste money on a very very expensive pump station and pipe that would hurt the environment surrounding Lake Kachess and attend your focus to smarter solutions to embolden the farmers in the Roza Irrigation District.

Alexis Wenstrup  Carnation, WA

1. Drip Irrigation

Drip irrigation systems deliver water directly to a plant’s roots, reducing the evaporation that happens with spray watering systems. Timers can be used to schedule watering for the cooler parts of the day, further reducing water loss. Properly installed drip irrigation can save up to 80 percent more water than conventional irrigation, and can even contribute to increased crop yields.

2. Capturing and Storing Water

Many farms rely on municipal water or wells (groundwater), while some have built their own ponds to capture and store rainfall for use throughout the year. Properly managed ponds can also create habitat for local wildlife. Marin Roots Farm relies on two ponds
for all of their water needs, helping to minimize their impact on the surrounding watershed.

3. Irrigation Scheduling

Smart water management is not just about how water is delivered but also when, how often, and how much. To avoid under- or overwatering their crops, farmers carefully monitor the weather forecast, as well as soil and plant moisture, and adapt their irrigation schedule to the current conditions. Tory Farms, which uses flood irrigation in their orchards, waters at night to slow down evaporation, allowing water to seep down into the soil and replenish the water table.

4. Drought-Tolerant Crops

Growing crops that are appropriate to the region’s climate is another way that farmers are getting more crop per drop. Crop species that are native to arid regions are naturally drought-tolerant, while other crop varieties have been selected over time for their low water needs. Olives, Armenian cucumbers, tepary beans, and orach are a few of the more drought-tolerant crops you can find in the Ferry Plaza Farmers Market.

5. Dry Farming

California dry farmers don’t irrigate, relying on soil moisture to produce their crops during the dry season. Special tilling practices and careful attention to microclimates are essential. Dry farming tends to enhance flavors, but produces lower yields than irrigated crops. Dirty Girl Produce is known for their dry-farmed Early Girl tomatoes. Wine grapes, olives, potatoes, and apple trees can also be successfully dry farmed in California.

6. Rotational Grazing
Rotational grazing is a process in which livestock are moved between fields to help promote pasture regrowth. Good grazing management increases the fields’ water absorption and decreases water runoff, making pastures more drought-resistant. Increased soil organic matter and better forage cover are also water-saving benefits of rotational grazing.

7. Compost and Mulch

Compost, or decomposed organic matter used as fertilizer, has been found to improve soil structure, increasing its water-holding capacity. Mulch is a material spread on top of the soil to conserve moisture. Mulch made from organic materials such as straw or wood chips will break down into compost, further increasing the soil’s ability to retain water. Farmers may also use black plastic mulch as a soil cover to suppress weeds and reduce evaporation.

8. Cover Crops

Planted to protect soil that would otherwise go bare, cover crops reduce weeds, increase soil fertility and organic matter, and help prevent erosion and compaction. This allows water to more easily penetrate the soil and improves its water-holding capacity. A 2012 survey of 750 farmers conducted by North Central Sustainable Agriculture Research and Education found that fields planted with cover crops were 11 to 14 percent more productive than conventional fields during years of drought. Al Courchesne swears by his use of cover crops for building healthy soil.

9. Conservation Tillage

The Dust Bowl of the 1930s was created by a perfect storm of deep plowing and loss of perennial grasses followed by extreme drought and wind erosion. Conservation tillage uses specialized plows or other implements that partially till the soil but leave at least 30 percent of vegetative crop residue on the surface. Like the use of cover crops, such practices help increase water absorption and reduce evaporation, erosion, and compaction. Date grower Flying Disc Ranch makes the most of their water use in the Coachella desert by using a mix of mulch, compost, and cover crop with no tillage.
In a 30-year farm systems trial, the Rodale Institute found that corn grown in organic fields had 30 percent greater yields than conventional fields in years of drought. In addition to keeping many of the more toxic pesticides out of our waterways, organic methods help retain soil moisture. Healthy soil that is rich in organic matter and microbial life serves as a sponge that delivers moisture to plants. The trial also found that organic fields can recharge groundwater supplies up to 20 percent.
Dear Ms. McKinley:

Please find attached my specific comments regarding Kachess and Keechelus DEIS that was released on April 13, 2018. Thank you for your time.

Sincerely,

Kolea Snow
3500 Via Kachess Road
Easton, WA 98925

SDEIS comment letter (Kolea Snow) FINAL.pdf
105K
Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

I am submitting both comments specific to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018. All comments are submitted under both NEPA and SEPA.

**Comments**

**Alternative 1 No Action** -- I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

**Impact to private property** -- Comments provided by myself and others to the prior DEIS expressed serious concerns regarding the likely impact of the proposed project on our property values. I was very disappointed to see that those concerns were not substantively addressed in the updated SDEIS, which expressly states its intent to respond to these concerns. The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected. “Several” seems to be a purposeful misrepresentation to understate the extent of the number of properties that would be impacted and is indeed misleading to any reader of this study when trying to evaluate the impact of the proposed project. Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Rideanother 20-30, plus numerous unaffiliated residences in the area. This amounts to approximately 300 homesites – nobody would equate this to “several.” The systematic bias in the presentation of the impact on private citizens is displayed on page 4-23, when it excludes any homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake. I ask for an accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam Road and eastern shoreline road, and private residences within 5.0 miles of the shoreline.

**Quantification of the impact to private property values** -- The SDEIS makes an unsupported reference to a study that showed a negative impact of 5-10% on private properties. However, the document does not include the study, and therefore does not allow a reader to understand the key assumptions, scope or methods. This is unacceptable and completely inconsistent with the
purpose of this analysis. To minimize the expected impact without support is again a clear bias in the preparation of this document.

Even this unsupported number appears to be a gross understatement of the expected impact on valuation. The homes and communities around Lake Kachess are not built there arbitrarily – they were built there because of the lake. This is reflected in higher current values, as noted in this SDEIS. While lake views (which will be severely impacted by this proposal) certainly impact home values, proximity to the lake (even for those properties without view) also significantly enhances home values as such proximity provides access to boating, fishing, hiking, picnicking, and other water-related activities – all of which will be significantly curtailed or eliminated for years after a draw down. All proposed pumping alternatives are expected to severely impact lake access for all uses, and therefore will have significant negative impact on the values of all properties in proximity to the lake – with or without a view. Additionally, the lake serves as a water source for firefighting, which results in lower insurance rates than would otherwise apply without such proximity. It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. I demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.

Despite the unsupported reference in the SDEIS to the negative impact of property values, the document states that the impact on property values can’t be determined. Not only is this contradictory, but the notion is absurd. An entire profession exists for the express purpose of making such estimates. Every county assessor in the country performs such exercises on a daily basis. The omission of a comprehensive, supported and reviewed analysis is a glaring omission of one of the most obvious impacts of the proposed project and requires rectification. Please execute such a study, performed under the accepted standards of the valuation profession, and provide in an updated SDEIS for comment and response prior to a Final EIS or ROD.

Finally, while acknowledging the negative impact of the proposed project on property values, the SDEIS includes no plan for mitigation of impact. What is the mitigation plan? Given that all of the additional water that is proposed to be pumped by the proposed project would come from the naturally occurring lake (Big Kachess) it is not reasonable that a property owner would have an expectation that they would bear the cost of such a proposal. I demand that you update your analysis to identify, in detail, the mitigation plan for the negative impact on property values including planned funding for such mitigation and provide in an updated SDEIS for comment and response prior to a Final EIS or ROD.

Erosion — The SDEIS includes numerous references to the expectation of increased erosion as a result of the various pumping alternatives. However, the SDEIS includes no analysis of the specifics of such erosion, particularly private property within the created zone of instability
expected after the proposed maximum drawdown. The study also does not evaluate the impact on erosion in proximity to streams, where newly exposed slope below the current minimum lake level would be subject to continuous undercutting and enhanced erosion - my home is in such an area. The newly exposed slope after a drawdown below the historic minimum would be highly vulnerable to erosion as the proximate material is lightly compacted – even more so with a stream running through it the newly exposed embankment. The current embankment is stable, but would seek a new stable slope in response to the proposed draw down. A comprehensive analysis could establish the likely area of impact and thus frame the scope of required mitigation. If mitigation is not undertaken prior to occurrence of the expected increased erosion, property will be damaged despite the advanced expectation of such damage occurring as a direct result of the pumping plan (as noted in this SDEIS). I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD.

**Impact on private wells** -- The SDEIS states that wells in proximity of Lake Kachess may be “dewatered” as a result of the various pumping alternatives and the resulting lowered lake levels. The included data from a small number of monitoring wells in proximity to Lake Kachess supports this expectation as the well levels clearly demonstrate correlation with the rise and fall with the lake level – including those wells where the water level is typically above the lake level. However, the SDEIS does not include any advance mitigation plan for this expected impact on residential wells. Prediction of a significant negative impact to wells as a direct result of the pumping alternatives while not addressing planned mitigation to prevent such impact is not consistent with the purpose of this SDEIS. The notion that residents would lose their residential water supply for an indefinite period of time with no mitigation plan in place is unconscionable. “Monitor and mitigate” is not acceptable for residents that will find their home without potable water.

A comprehensive strategy composed of proven techniques that can be implemented immediately upon need, is required prior to a Final DEIS and/or ROD. What is the mitigation plan? I demand that a comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD

**Fire Suppression** -- As has been noted in comments to the prior DEIS, the proposed pumping alternatives present significant negative impacts on both fire risk and fire suppression.

The SDEIS notes that the surrounding shoreline will be dewatered as a result of the proposed pumping alternatives. This significantly reduced lake level will result in this dewatering persisting for years, while the lake refills. This will subject the shoreline trees and vegetation to a reduced ground water condition never experienced in the history of the lake, and likely result in significant die-off. Such dead vegetation will ultimately present an increase in fire risk (as well as an increase in erosion as this slope stabilizing vegetation is eliminated). I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be
described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD.

Additionally, the BoR has been made aware that the lake is the designated second source for firefighting within the Lake Kachess Village HOA. The proposed additional 80 foot reduction in lake level would render the lake inaccessible for firefighting purposes due to the topography of the shoreline as well as the muddy composition of the newly exposed shoreline (e.g. fire equipment could not get there). The SDEIS provides no mitigation for elimination of firefighting water, including the economic impact to homeowners due to resulting decrease in home values and increase in home insurance rates as a result. Increasing the risk to homeowners without mitigation is unacceptable and a glaring omission for the SDEIS. I demand that an updated SDEIS include a comprehensive strategy, its details, costs and operational features, be described in detail and citizens be provided with this information along with an appropriate comment period, prior to a Final DEIS or ROD. Such plan should address not only the mitigation of the fire suppression impact of the lake, but mitigation of any financial impact impacted residents would be expected to incur as a result of an implemented pumping plan.

The Yakima Plan programmatic FEIS failed to provide a range of alternatives — just the Yakima Basin Integrated Water Management Plan (YBIP) and No Action. How will this be rectified?

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us/me a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Kolea R. Snow
3500 Via Kachess Rd
Easton, WA 98925
(NO MAIL DELIVERY AT THIS ADDRESS)

MAILING ADDRESS
Kolea R. Snow
10625 NE 16th Street
Bellevue, WA 98004
May 16, 2018

Ms. Candacee McKinney  
Environmental Program Manager  
Bureau of Reclamation  

Lake Kachess Drought Relief DEIS,

After reviewing the Kachess Drought relief pumping plant and Keechelus Reservoir to Kachess Reservoir conveyance a number of questions still have to be answered before a record of decision can be made.

Annually the stored water in Lake Kachess Reservoir is part of the TWA for instream flow for fish and irrigation districts who receive their water from the Yakima River. Once the reservoir has been pumped below the normal gravity flow to the Yakima River and the reservoir doesn’t refill, how much of the water pumped from below the normal gravity flow will be required to provide for the TWA?

Who will pay for the operation and maintenance of the Keechelus-to-Kachess conveyance?

Who will be responsible for the fish passage facility that will allow the bull trout movement from Big Kachess to Little Kachess and back when the lake does not refill?

Who will be responsible for the maintenance of the floating pump in the Lake Kachess during nonuse?

The EIS for Kachess drought relief provides little information on what has to be done before the project will be determined feasible.

How and when will the BOR develop written contract for those entities who will be required to address the environmental requirements?

Has a contract with the U.S. Forest Service been agreed to for the route of the conveyance project between Keechelus and Kachess?

The proposed Kachess pumping plant can only be approved when all affected participants have signed and agreed to operate and pay their share.

Sincerely,

Chuck Klarich  
Zillah, WA
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
- Email with information on how to reference the document online
- Postal Mail with information on how to reference the document online
- Send full printed copy of document in binder by postal mail
- Send electronic copy of document on a CD ROM
- Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

ALL BULLSHIT!

THIS PROJECT IS NOT CONCERNED WITH THE PROPERTY OWNERS' RIGHTS. OUR SPRING WATER RIGHTS ARE BEING DISMISSED.

THE FOREST IS AND AROUND THIS WILDERNESS AREA IS BEING TOTALLY DISMISSED.

ARE YOU GOING TO PAY 142 RESIDENTS FULL PROPERTY VALUE AMOUNTING TO 142 MILLION PLUS. ACCORDING TO ONE OF

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbtt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

Your staff she would then be able to afford the property up there and she would put a trailer on it. Seriously?!!!

So we all need to put trailers on our property next to our homes that have no water.

Here's a thought add more, and on the east side and collect the freight run off and make everyone use water use methods.

The project is purely greed from the irrigation companies. They don't care about our rights or our homes that have been there for years. Some properties has been in families for generations. You are stealing from us!!!
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and e-mail addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

This project is an essential part of the integrated plan. Don’t delay – get it built.

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or e-mail comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

This feasibility study needs to continue longer in order to have greater information gathering. Property value declines for the lake Kachess home owners has not been addressed. Will we have to sue to recover what has been taken? Will new home water picks up be in place before the pumping.

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kbbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)


March 2019
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

- Email with information on how to reference the document online
- Postal Mail with information on how to reference the document online
- Send full printed copy of document in binder by postal mail
- Send electronic copy of document on a CD ROM
- Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

How can you justify draining a natural lake to disrupt the balance of the top 64 feet of reservoir water? Leave our amazing lake alone. Look for another solution, such as pipelines, to help farmers to reduce water loss.

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

**COMMENT FORM**

Kachess Drought Relief Pumping Plant and
Keechelus Reservoir-to-Kachess Reservoir Conveyance
Supplemental Draft Environmental Impact Statement (SDEIS)

<table>
<thead>
<tr>
<th>Name (please print legibly):</th>
<th>Brianna Busby Felix</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization:</td>
<td>Cabin Owner on Baker Lane (Whitham)</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>42983 SE 170th CT</td>
</tr>
<tr>
<td>City, State, and Zip Code:</td>
<td>North Bend, WA 98045</td>
</tr>
<tr>
<td>Telephone:</td>
<td>425 495 0954 E-mail: busbyb@spu-edu</td>
</tr>
</tbody>
</table>

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
- [ ] Email with information on how to reference the document online
- [ ] Postal Mail with information on how to reference the document online
- [x] Send full printed copy of document in binder by postal mail
- [ ] Send electronic copy of document on a CD ROM
- [ ] Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

I do not approve of the pump plant for Lake Kachess. It would completely take away the lake from the public as well as property owners. The lake holds special meaning to me. My late Grandpa and his dad built our family cabin at Lake Kachess in the 1950's. It is more

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). **The 90-day comment period ends July 11, 2018.**
Comments (continued)

than just a lake to me. Lake Kakness is a part of who I am and it would be devastating to see it disappear. Destroying Lake Kakness would not solve the long term problem of the Roza Irrigation District. The cost of this project does not out weigh the benefit. I personally do not see a benefit of this project. Please do not approve this project!!
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☒ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☒ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

Spring fed water system to Lake Kachess community is based upon water levels & all homes will lose water to their homes. Proposed boat launch is too narrow & needs to be wider to support the length. I suggest checking out bullfrog marina at Lake Powell, Utah. Property values will lower, will there be compensation?

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Our property values are being sacrificed, without controls being placed on those in the Yakima Valley. I foresee more water needed because farmers will grow their farms by increasing acreage. They will use a pump. Once a pump goes in, it will always be used.

Want community boat launch paved & lengthened. Want park at the intersection of Little Rouches & Lake Rouches. Paved & lengthened. Having these two boat launches paved & lengthened will help because the proposed plan is reducing property values. This may compensate some of that.

Want proposed boat launch paved & wider (at least 50’, not just 20’). Backing up 600’ is ridiculous. People may roll off the launch. Want paved road & plenty of parking at the proposed boat launch.

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

I would like to know how I will protect myself and others from the and the forest after I have done everything to keep the areas clean and there is not much water left in the lake to pump the water out which fire can continue but if fire can continue for days and

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

night for days to weeks? Will homeowners
and the forest will have enough water supply?
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
- Email with information on how to reference the document online
- Postal Mail with information on how to reference the document online
- Send full printed copy of document in binder by postal mail
- Send electronic copy of document on a CD ROM
- Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

The cost is alleged to now be approximately $650M with no clear guarantee that it will be paid for exclusively by Roza Irrigation District. In addition, the current study does not account for the significant loss of property value to those who live in the vicinity of the lake. Nor does it account for the loss suffered by public who use Lake Kachess campground one of the most popular public campgrounds.

(Use backside of additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

in our state. In addition, I do not see any
mitigation cost factored into the project for devated
private and community wells. Fact is that
the lake is at risk if they take it down the
way they plan to. As a resident since 1981
of the Lake Kashess community, I have seen
the lake go down before to levels such that it takes
many years to recover. This is a huge concern. Also
what about fire safety. Fires have been a significant
concern not only in eastern WA but throughout the
West. Our fire district will be at a loss to deal
with a fire if there is inadequate water in the
lake. Another issue is the terminology used in digging
"Inactive pool" "Reservoir" - Please. The manager
Part of the lake is not the issue. The LAKE however
is. What this project needs is honestly
and transparency. Both are lacking here.


March 2019

SDEIS-CR-1061
**COMMENT FORM**

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS)

<table>
<thead>
<tr>
<th>Name (please print legibly):</th>
<th>MIKE BURNS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization:</td>
<td>HOMEOWNER</td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>6901 OAKMONT AVE SE</td>
</tr>
<tr>
<td>City, State, and Zip Code:</td>
<td>Snoqualmie WA 98065</td>
</tr>
<tr>
<td>Telephone:</td>
<td>425-643-6111</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:MBURNS@DIRECTORSMORTGAGE.NET">MBURNS@DIRECTORSMORTGAGE.NET</a></td>
</tr>
</tbody>
</table>

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

- [ ] Email with information on how to reference the document online
- [ ] Postal Mail with information on how to reference the document online
- [ ] Send full printed copy of document in binder by postal mail
- [ ] Send electronic copy of document on a CD ROM
- [ ] Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

| THIS PROJECT IS NOT THOUGHT OUT TO PROTECT ALL PARTIES. IT MAKES NO FISCAL SENSE. W.S.U. UNIVERSITY PROJECTED A RETURN OF $0.60 ON THE DOLLAR. AS HOMEOWNERS WE WILL SUFFER THIS EVERY SIEZE OF THE WAYS! |

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
My name is John Daugherty and I have owned and enjoyed property on Lake Kachess for more than 30 years. I have many problems with the proposed Lake Kachess pumping project, but will limit this statement to three concerns about the latest DEIS report.

The first has to do with conservation of currently available water. Conservation of water can be achieved in different ways. One way is to use available technology to reduce demand for water. By doing this, many farmers have shown across this state and this country that they can produce substantially more crops using substantially less water. However, the purpose of this project includes helping Yakima to meet “increased crop and municipal demand”, (see p 1-4 of new DEIS). So in a time of climate change where farmers are worried about the availability of water, this proposal addresses their requests for more water instead of helping them make more efficient use of the water they already get.

Another way to conserve water is to do everything one can to avoid losing what one already has. In this vein, it is edifying to visit the Rosa web page, which today shows a number of current projects designed to shore up a leaky irrigation management system. This substandard management of a valuable resource has continued for years after similar problems were first identified. I found no analysis in the DEIS of the water lost each year because of this, nor any major funding to help the district attain reasonable standards for the management of their water.

If we are thinking about spending hundreds of millions and ruining a natural lake to bring new water into a system, shouldn’t we fix the leaks first? How about getting rid of open canals and using pipes where feasible to ensure that there is little if any loss? Or giving matching grants to farmers to help them make use of latest irrigation technology?

At other meetings about this project proposal I have been both inspired and troubled to learn about what farmers do with the water that they get. Once, I heard a farmer testify that by using reasonably available conservation technology, he was able to grow a bumper crop with less than 55% of his normal allocation. After the hearing, I spoke with another farmer who confirmed that he had similar results. So, the question here is, how did we get to the number 70% of normal to justify drought conditions? Although the DEIS purports to explain this, the explanation is insufficient.

Also on p 1-4, I found the following sentence: “In recent years (2001, 2005, and 2015), proratable irrigation entities received 37 percent, 42 percent, and 47 percent respectively of their water supply (Lynch, 2015).” When I read this I thought, if we compare these numbers to 70 percent the deficit is almost shocking. But if we compare them to 55%, the problem appears to be much more manageable.

My second concern has to do with your analysis of the availability of water for this project, or what you refer to as surface water resources.
According to this report, the current Kachess dam system has the capacity to store 239,000 acre feet of water, which can be delivered to the Yakima River on demand. When this water is fully distributed, the water level falls 70 vertical feet from its highest to lowest levels. At its lowest level, the current system cannot deliver any more water to the Yakima River. Of course, pumps could change all that.

In section 3 of chapter 4, this DEIS discusses fluctuations in this water level in various pump/no pump scenarios.

My first concern regarding this analysis addresses your choice of time periods used to draw conclusions about available water. For the most part you use the period from 1926 to 2015, even though the supposed purpose of this integrated plan is to stabilize water availability with the increasing threat of climate change. In the past few years we have already experienced historical highs in days without rain; fish have already died because river water was too warm, and the effects of climate change are predicted to intensify in future years. So why pick what happened 100 years ago to help you model for the future?

I believe the answer is that it makes your data look better. Your model allows you to predict that you can replace the extra water taken in drought years almost all the time.

Figure 4-3 on page 26 provides an interesting case in point. It shows Kachess water levels for the more recent period from 1991 to 2009. Describing what you could do with pumps, you wrote:

“During multiyear drought conditions such as those in 1992 to 1994, Reclamation would draw the reservoir down as much as 80 feet below the existing outlet elevation. Following a multiyear drought comparable to that of 1992 to 1994, reservoir levels would recover to normal operating levels 2 years later when followed by a wet year such as 1996. In a single-year drought, such as occurred in 2001, the reservoir would be drawn down to 50 feet below the existing outlet elevation. Full recovery would not have been achieved until 2008, because of a series of dry years (2003 and 2004) and a subsequent drought (in 2005). During the 2005 drought year, the reservoir level would be 40 feet below the existing outlet elevation. The historical record of droughts indicates Kachess Reservoir would refill in 2 to 5 years following a drought.”

What that paragraph says is that after drawdown in one multi and one single year drought, the system would not have been able to deliver its normal 239,000 acre feet in at least 8 of the following years. For at least 11 of the 19 years in this period, normal drawdown would be impossible.

This paragraph also uses 90-year-old data to estimate that the lake would refill in 2 to 5 years after a drought. My request to you is to defend your use of the 1926-2015 data set. By your own admission in the above paragraph, it would have taken seven years after the drought of 2001.
I strongly object to the proposed Kachess "drought relief" pumping plant. Once drained, the lakes would never recover. Draining and/or lowering the lakes doesn't solve any problem long term. I'd prefer the estimated $500 million go to researching.
Comments (continued)

lower well water levels
lower property values
jeopardize fire department's water availability

a long term solution that would keep both Keechelus and Kachess lakes "natural state" as they exist today.
The farmers won't be able to afford the water and will put them out of business.
The proposed plan would have the smaller farmers subsidizing the larger landowners for 10 years. This isn't right or fair.

Our state's population is growing. Kittitas County's population is booming. People move here for quality of life.
People for generations have gone to these lakes. My grand kids are seventh generation to spend summers at both lakes, hiking, fishing, camping, boating. It's a crime to close these glacial lakes for this proposed plan that destroys much and profits a few.

Please DO NOT Consider

Do NOT Kill these two lakes.

My heart is at Lake Kachess. Please save it. What is the real plan for our water??
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☒ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

I am strongly opposed to the Lake Kachess Drought Relief pumping plant. My Dad, Art Whitham, and my Grandpa, Harold Whitham, built our family cabin when my dad was a teenager. The cabin is still in our family, and we have many special memories there. Lake Kachess is a special place for many people from many different

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

Communities, if Lake Koocanee is drained, it will never be restored. The thought that rain and snowfall will replenish the lake is B.S. The community will lose a beautiful recreational area. People who own property or live on the lake will lose their property value. Draining/lowering the lake does not solve the water irrigation issue long term. I would rather see the cost of the project estimated to be $500 million be applied to research to come up with a long term, permanent water irrigation solution. The cost of the project would put many farmers out of business. The proposed plan would have the smaller farms subsidizing the largest land owners for 10 years. This is not fair, nor is it the right thing to do. This project has been a shit show from the beginning. Please consider stopping this project.
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☑ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

Our neighborhood of Lake Easton Estates has 9 wells that provide water to all the properties within it. (Approx. 50 lots) The concern is that when water from Lake Kachess is pumped down to the proposed additional 80 feet, the well levels will be adversely affected or go completely dry.

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

I have heard the presentation made by Jay Schwartz from the Friends of Lake Kachess Organization. To sum it up, his findings don't agree with the report from the Dept. of Ecology. So who is telling the truth?

If the project does go forward, (I hope it doesn't) I as a property owner I would like a written guarantee that someone (Dept. of Ecology) be responsible for cost impacts associated with loss of drinkable well water.
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
KACHESS DROUGHT RELIEF PUMPING PLANT AND
KEECHELUS RESERVOIR-TO-KACHESS RESERVOIR CONVEYANCE

Taken on Wednesday, May 16, 2018
at the United States Forest Service
803 West Second Street
Cle Elum, Washington 98922

STATEMENTS ON RECORD

COPY

REPORTED BY: MARILYNN S. McMARTIN, RMR, CRR
CCR NO. 2515
<table>
<thead>
<tr>
<th>STATEMENTS ON RECORD OF:</th>
<th>PAGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: MRS. SANDY KNAUFT</td>
<td>4</td>
</tr>
<tr>
<td>MR. GARY F. KNAUFT</td>
<td></td>
</tr>
<tr>
<td>KRMA Residents - 410 Winter Park, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>13729 463rd Avenue SE, North Bend, WA 98045</td>
<td></td>
</tr>
<tr>
<td>(425) 292-0289</td>
<td></td>
</tr>
<tr>
<td>2: MR. MICHAEL AIKEN</td>
<td>6</td>
</tr>
<tr>
<td>MRS. MADELINE AIKEN</td>
<td></td>
</tr>
<tr>
<td>KRMA Residents - 220 Mountain View Lane, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>10020 416th Avenue SE, North Bend, WA 98045</td>
<td></td>
</tr>
<tr>
<td>(425) 417-9195</td>
<td></td>
</tr>
<tr>
<td>3: MR. BRUCE POULIN</td>
<td>8</td>
</tr>
<tr>
<td>KRMA Resident - 200 Mountain Home Lane, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>22143 SE 21st Place, Sammamish, WA 98075</td>
<td></td>
</tr>
<tr>
<td>(425) 890-2878</td>
<td></td>
</tr>
<tr>
<td>4: MS. LUCRETIA ALBULET</td>
<td>9</td>
</tr>
<tr>
<td>KRMA Resident - Crestview Court, #10, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>9709 173rd Court NE, Redmond, WA 98052</td>
<td></td>
</tr>
<tr>
<td>(425) 417-1690</td>
<td></td>
</tr>
<tr>
<td>5: MR. GRANT LEARNED SR.</td>
<td>10</td>
</tr>
<tr>
<td>KRMA Resident - 101 West Second Street, Cle Elum, WA</td>
<td></td>
</tr>
<tr>
<td>P.O. Box 642, Easton, WA 98925</td>
<td></td>
</tr>
<tr>
<td>(206) 683-9201</td>
<td></td>
</tr>
<tr>
<td>6: MR. SCOTT NICHOLSON</td>
<td>11</td>
</tr>
<tr>
<td>MS. GRETCHEL PREST</td>
<td></td>
</tr>
<tr>
<td>KRMA Residents - 2390 via Kachess Road, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>P.O. Box 403, Easton, WA 98925</td>
<td></td>
</tr>
<tr>
<td>(206) 948-6326</td>
<td></td>
</tr>
<tr>
<td>7: MS. BEVERLY FRANKLIN</td>
<td>15</td>
</tr>
<tr>
<td>KRMA Resident - 160 Alpine Lane, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>P.O. Box 412, Easton, WA 98925</td>
<td></td>
</tr>
<tr>
<td>(206) 226-0996</td>
<td></td>
</tr>
<tr>
<td>8: MR. MORRIS HANAN</td>
<td>16</td>
</tr>
<tr>
<td>KRMA Resident - 80 Tranquility Lane, Easton, WA</td>
<td></td>
</tr>
<tr>
<td>400 NW Gilman Boulevard, #2272, Issaquah, WA 98027</td>
<td></td>
</tr>
<tr>
<td>(425) 417-7398</td>
<td></td>
</tr>
<tr>
<td>9: MR. CHARLES KLARICH</td>
<td>18</td>
</tr>
<tr>
<td>1221 Blain Road, Zillah, WA 98953</td>
<td></td>
</tr>
<tr>
<td>(509) 854-1041</td>
<td></td>
</tr>
<tr>
<td>10: MR. BRIAN JOHNSON</td>
<td></td>
</tr>
<tr>
<td>------------------------</td>
<td></td>
</tr>
<tr>
<td>KRMA Resident (Address Not Given)</td>
<td></td>
</tr>
<tr>
<td>P.O. Box 834, Easton, WA 98925</td>
<td></td>
</tr>
<tr>
<td>(206) 571-3864</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>11: MR. ROB AIGNER</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRMA Resident - 60 Brookside Court, Easton, WA</td>
</tr>
<tr>
<td>1601 90th Avenue NE, Clyde Hill, WA 98004</td>
</tr>
<tr>
<td>(425) 974-3200</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>12: MS. ANN LEWIS</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRMA Resident - 260 Forest Service Road 4936, Easton, WA</td>
</tr>
<tr>
<td>86 157th Avenue SE, Bellevue, WA 98008</td>
</tr>
<tr>
<td>(425) 644-1224</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>13: MR. AUREN O'CONNELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRMA Resident - 950 via Kachess Road, Easton, WA</td>
</tr>
<tr>
<td>P.O. Box 837, Easton, WA 98925</td>
</tr>
<tr>
<td>(360) 775-7211</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>14: MR. KYLON GIENGER</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRS. TELIAH GIENGER</td>
</tr>
<tr>
<td>KRMA Residents - 2981 via Kachess Road, Easton, WA</td>
</tr>
<tr>
<td>P.O. Box 788, Easton, WA 98925</td>
</tr>
<tr>
<td>(509) 823-9469</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>15: MS. JUDITH WINDSOR-NEWMAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRMA Resident - 2981 via Kachess Road, Easton, WA</td>
</tr>
<tr>
<td>23020 SE 248th Place, Maple Valley, WA 98038</td>
</tr>
<tr>
<td>(206) 406-7566</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>16: MS. JILL MISOCKY</th>
</tr>
</thead>
<tbody>
<tr>
<td>KRMA Resident - 4270 Kachess Lake Road, Easton, WA</td>
</tr>
<tr>
<td>P.O. Box 820, Easton, WA 98925</td>
</tr>
<tr>
<td>(206) 953-5199</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>17: MR. COLWELL REED</th>
</tr>
</thead>
<tbody>
<tr>
<td>MRS. ROBIN REED</td>
</tr>
<tr>
<td>KRMA Residents - 221 Kachess River Road, Easton, WA</td>
</tr>
<tr>
<td>P.O. Box 652, Easton, WA 98925</td>
</tr>
<tr>
<td>(425) 445-9435</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>18: MS. CONNIE WANECHERK</th>
</tr>
</thead>
<tbody>
<tr>
<td>3071 Nelson Siding Road, Cle Elum, WA 98922</td>
</tr>
<tr>
<td>(509) 656-0263</td>
</tr>
</tbody>
</table>
STATEMENT ON RECORD NO. 1 - 5/16/18

* * *

MRS. KNAUFT: One of my concerns -- I'll start with an easy one first -- how come there was no restitution for the homeowners considered in this plan, the 150 homeowners in this particular plan --

MR. KNAUFT: There was more than that.

MRS. KNAUFT: -- in the village of Lake Kachess?

MR. KNAUFT: There's 250.

MRS. KNAUFT: The second concern is the Lake Kachess Campgrounds is one of the most popular in the state. I did my research, and it brings in $250,000 every year for the state. When the drawdown of the lake happens, which from what I looked at the drawing over there is going to affect the campgrounds, that's a loss of $250,000 a year.

And then the third one, probably the most important -- let's see, how am I going to say this? -- it's my understanding that the large farmers are willing to put up $500,000 to pay for this pumping station. The small farmers, have they been advised that once this is put in place, they are expected to pay annually whether or not they receive water or not right along with the big farmers?

In my opinion, this is nothing but a ploy for the big farmers to phase out the little farmers in the Yakima

AFFILIATED COURT REPORTERS / 1-800-548-2678
www.affiliatedcourtreporters.com
Valley, and also the small farmers I do not believe have been informed that they will have to pay every single year whether or not they receive the water.

So it's unfair to the people around the lake, it's unfair to the small farmers, and it's unfair to the people that use the campgrounds, which will cause a loss in value of our homes, causes farmers to go out of business, the small farmers, and the loss of $250,000 to the state every year.

Those are my primary concerns. I'm not a technical person, so I don't know a lot about this other pumping stuff.

* * * * * *
STATEMENT ON RECORD NO. 2 - 5/16/18

* * *

MRS. AIKEN: We have lived on the lake, on the water for 40 years, and we have seen it go all the way down to its original lake, and it takes five years to fill it up. Now they want to go down another 80 feet, and we really don't think it will ever fill up. It wouldn't be worth it. It's just a one-time shot to irrigate something.

MR. AIKEN: If they take it down another 80 feet, it will never fill up. There's not enough water up there to fill it up. We've lived there for 40 years. We know how much it snows. It snows sometimes more or less, but that's -- in my mind, that's farming, sometimes it rains, sometimes it doesn't, but just pump it out of the lake as a backup.

What they'll do is -- if you want my comments, what they'll do is, about the last 15 years they've only taken it down to the original level once, so that means they've got a lot of reserve.

If they've got that extra 80 feet, they'll take it down all the way, more water, more land, more irrigation, more money for the people -- the companies, not people, in Roza District that raise mostly grapes and hops. We know that 80 percent of the Yakima Valley is grapes and hops. I think they want to put in orchards, but they take water
every year; so . . .

MRS. AIKEN: I don't think that the farmers can pay for this.

MR. AIKEN: No. Water's expensive now.

MRS. AIKEN: They said, "Who's going to pay for it because who's going to use it?" Well, it's a half a billion dollars. How could the farmers pay for that?

* * * * *
MR. POULIN: My concern is I've only seen analysis on average flows. I haven't seen a worst case 5-year analysis. And from what I've seen, I'm worried that a worst case 5-year analysis would make the project nonfinanceable, i.e., there would not be water, and the water that was there would cost way too much to grow crops with. Has a 5-year worst case analysis been completed?
STATEMENT ON RECORD NO. 4 - 5/16/18

* * *

MS. ALBULET: So I have a place there and we absolutely love it, love it, but my biggest concern is about the ecological implications. I mean, I don't feel like any of the material that I've seen tells us what's going to happen long term on this.

And then, I understand it kind of solves the technical problem on short term, right, but for long term, I mean, at least for potential implications that I've seen, I mean, each one taken individually seems to be bad, but when you look at the whole list, you say: Oh, my God. This is going to be, I mean, the fish, the wells.

So that part is still unclear for me. I mean, I don't feel like whoever put together the project really gave a good thought to it. No, it didn't, I mean, for the ecological implications. I feel like, I mean, most of the concerns have not been addressed, right.

So I think my question -- I would like to understand more. So after that initial, you know, when they took that much water from the lake, you know, the level goes down and there is a drought, I mean, right, and we have no water left in the lake, right, and that pump, whatever, cannot function anymore, I'm curious what's happening with the project, what's the plan there.
MR. LEARNED SR.: So I guess what my comment, or whatever you want to call it, is that I have a question on how good a job they did looking at the cost-benefit analysis, because the cost far outweighs the benefit. And I don't think they've looked at that seriously enough, and that's all I have to say for now.

And that pumping plant idea is so off the books, it's unreal. It will ruin Lake Kachess, cost a fortune, and benefit will not be there.
MS. PREST: I am against it because I don't believe that it's -- it's hard to say. Do you want to say something?

MR. NICHOLSON: I'll go.

It seems to me to be a short-term solution to a long-term problem. When they drain the lake down below the natural level of the lake, then they have to pump water up and over the existing dam to provide water for the Yakima River.

Now, in my experience, to do that you either require electric pump or a diesel pump or a diesel generator. And if it takes two, maybe three years to get that water level up to where it can free flow over the dam level, you are talking about running 24/7 one of these pumps, and it's not going to happen. Eventually the pump will fail, and then the water level in the Yakima River is going to drop significantly, depending on the time of year.

Now, they have not addressed property values along the lake or, for that matter, behind the lake, people that use the lake on a daily basis for recreation, fishing, water-skiing, what have you.

They haven't addressed the federal park at the north end of the lake and the numerous people that utilize
that throughout the summer for their summer enjoyment. There have been families going there for generations literally. Now you're talking about dropping that lake 80 additional feet. They won't be able to get to the water from the park.

They have not mentioned one word about the freshwater clams that exist in the south end of the lake at the natural level of the lake. Drop it 80 feet, the freshwater clams will expire, and they are a protected species. Look that up.

There's a lot of -- there's just so many things, let alone the budget, that they have not addressed adequately. They tell you one thing on how much they're projecting this project will cost, and the reality is probably a 200 to 300 percent increase.

I don't believe they've honestly confided in the farmers -- with the farmers in the amount of money it's going to actually cost per acre-foot of water for these farmers, and I really think it's a ploy for large corporations to take over the smaller farms, existing farms, through taxation and charging for this project.

If you have a small farmer with 100 acres and they want to charge you $100 an acre -- or, excuse me, $1,000 per acre, $100,000 is a lot of money for a small farmer.

So it's just so many things that they have not
adequately addressed that it seems like we're being spoon-fed this and then rammed down our throats. I'd like to know how my tax money is going for all of this presentation. I'm totally against the project. It just doesn't add up.

And then if they've looked at the crops that are grown that will benefit from the water, the short-term water this will give, they're barely making a profit now. And if they charge more for the water, any existing profits these farmers are making now are going to go into the red ink.

I don't know what we can do to stop this. The bottom line: See you in court. It's going to be a long-drawn-out court battle if they want to pursue this project.

MS. PREST: It seems to me that there is -- they're focused on the one project, which is Lake Kachess, and they're saying: Well, we're not going to take all of the water from Lake Kachess because we have all these other reservoirs that we're going to be getting water from.

So we're not just taking it from Lake Kachess, but it seems like the only project that they're actually concentrating on is the Lake Kachess, and I can just see it happening that they get this done and they don't do the other project, so what they end up doing is taking all of our water from the lake and just forgetting about all these
other projects.

I think she said there was like four other projects that they are doing in conjunction with this, but they just seem focused on this. Part of it is the conveyance between Keechelus and Kachess, and I know in the initial research that they were doing, they were told that this doesn't work if you don't have that conveyance from Keechelus; that it's just a nonstarter if you don't have the conveyance from Keechelus.

Well, the DOT has said, "You're not cutting across our freeway," so how are they going to do the conveyance from Keechelus? It just seems like a boondoggle, a very expensive boondoggle.
MS. FRANKLIN: My concerns that I don't feel they've addressed properly include the habitat of Lake Kachess; that we have fish, we have bullhead trout, and when they go to draw the water down, my understanding is it will basically dry out the river between upper Kachess and lower Kachess, and I don't think that's been adequately addressed yet.

Oftentimes I hear that one of the reasons besides irrigation is fish habitat, and it seems to me they're just trading one area for another, and I really have to question that.

Another concern I have is our water system. We have a water system that supports our entire community. They've addressed certain wells but they focus only on the wells, and our water system is a water table accumulation system, and there's no conversation about what to do when the water is drawn down to that level.

Again, they claim that they have addressed the wells, but we have hired our own expert who has submitted documents to them showing that that drawdown will affect our water and our water availability, and there's nothing in the proposal that addresses that.
STATEMENT ON RECORD NO. 8 - 5/16/18

* * *

MR. HANAN: My objectives or concerns emanate from I used to work at Washington Public Power Supply System, used to be called WPPSS, and I see a lot of similarities. And I don't know why the Roza Irrigation District -- I don't know how they got the Bureau of Reclamation to put forth such a great effort to get this process so far down the road. I think there must be a lot of money flowing from Roza to someone in the reclamation district to get them to be a proponent of this.

But it smacks much like when Washington Public Power and the PUD commissioners got together and decided that they needed much more power than they generated, so they spent at least 5 to 7 billion dollars on these power plants, only one of which was finished, and, in fact, their revenue -- their energy projections were way out of whack. We never needed that much energy.

So I don't know why the interests of Roza Irrigation District should supersede everybody's interests, the people on the east side and west side of Washington to have a nice place to recreate; the people who live here whose property values will be impacted.

It just seems nothing -- it doesn't add up to me, and I think if we look into it, there might be people at the
Bureau that have been -- that have an interest in this project over and above what's good for the state as a whole. This seems to emanate from the Roza Irrigation District. They're the beneficiaries, and somehow they got the Department of Reclamation to act like this is a big plan for the benefit of wildlife, and so forth and so on.

So I'm not buying it. It's just not the case, and I think the light of day, when it shines on the powers that be, we'll find out why this has gotten so far.

* * * * *

Comment Letter 514
MR. KLARICH: Two questions, just two basic questions: First of all, when will the Bureau of Reclamation sign contracts or agreements with all the entities who are being affected by the Lake Kachess drought project, which includes the conveyance from Keechelus to Kachess?

The second one is what happens, how long before -- how much longer will the Bureau of Reclamation take to come up with a record of decision on this project?
STATEMENT ON RECORD NO. 10 - 5/16/18

* * *

MR. JOHNSON: I have property near Alternative No. 3 pump plant. Any loss in property value will be the responsibility of the State, and I'll make sure of it.

* * * * *
STATEMENT ON RECORD NO. 11 - 5/16/18

* * *

MR. AIGNER: I'm wondering if all of the homework has truly been done, if all of the constituencies that are affected by this decision have been contacted, which will be affected have been contacted.

Have the campers at the state park been contacted?

Are they aware of what will happen to the lake?

What do the fire districts have to say about this decision?

What I'm not seeing is total consensus from all of the constituents around this decision that appears to be moving forward.

Next thing is as a businessperson, I look at the pluses and minuses, and I'm wondering if the costs involved over a long period of time, including operational costs, are actually profitable in relation to what's being delivered.

I love apples. I drink wine. I want that to continue, but I just do not have the feeling that there has been a complete effort to contact everyone with a decision of this magnitude, and we don't have an ability to reverse it.

It feels like a good idea. However, I don't think the long-term ramifications have truly been studied.

That's it.

* * * * *
STATEMENT ON RECORD NO. 12 - 5/16/18

* * *

MS. LEWIS: The two projects at Lake Kachess, the pumping plant and the tunnel between Lake Keechelus and Lake Kachess, make no sense. Once the water is pumped, it won't come back in any reasonable amount of time. Roza District wouldn't pay for a 20-foot drop with a pumping plant in December of 2015 which cost 100 million dollars, so there's no way they would pay for this one that's going to cost several hundred million dollars.

The information has been sadly lacking to the rest of the residents of our state of Washington. It is unjust that we residents of the state of Washington will likely foot the bill through the Bureau of Reclamation or Department of Ecology to pay for something that is devastating our own natural glacially created Lake Kachess, so who's really going to pay for it?

If the K-to-K conveyance, KKC is built, how many dump trucks are going to be going up and down the county road? How is it going to interfere with people trying to use the campground? What is the real cost of everything?

How are you going to protect the endangered bull trout, which are already endangered and will be even further endangered by these projects?

How are you going to keep the pollution of Lake
Keechelus from entering Lake Kachess? What is your filtration system? Is that included in the proposed cost estimate? So much more. Sorry.

How are the irrigators and downstream users going to get their water allocation, the 239,000 acre-feet currently stored by the dam at Kachess? How are they going to get any water once that is totally gone and you're pumping out of the original glacier lake? I'm going to stop so I make sure you understand.

So how are the proponents of the Kachess pumping station going to mitigate those downstream users that are currently allocated the 239,000 acre-feet stored by the existing Kachess Dam? And I want explicit details of how that's going to happen.

In the cost estimates of the two projects, the pumping station and the K-to-K conveyance, the estimates do not include the 23 million dollars -- that may or may not get built -- to help the endangered bull trout. Who's going to pay for that 23 million? Is that conveyance going to get built? Is it going to actually help the endangered bull trout which are already threatened?

I'm repeating myself. Sorry.

I would like a copy of all the statements of records being taken with respect to these two projects, the Kachess Drought Relief Pumping Plant and Keechelus.
Reservoir-to-Kachess Reservoir Conveyance.

* * * * *

STATEMENT ON RECORD

ANN LEWIS, 5/16/18
STATEMENT ON RECORD NO. 13 - 5/16/18

* * *

MR. O'CONNELL: So all I wanted to say is I think before any taxpayer money is used on the project it should pass a voter referendum just because we're talking upwards of 500 million dollars estimated total cost from what I've seen, so I think a project of this size should pass a voter referendum.

That's it.

* * * * *
MRS. GIENGER: So if this were to pass, I would like to see it on a ballot for the public to vote on because, honestly, up until this point, like this is the first time that I've heard about all of this.

And they were saying that there have been multiple, throughout the last few years multiple times for the public to comment, but it wasn't until maybe like a week and-a-half, two weeks ago that I actually heard that there were actually public hearings that we could come and voice our opinion. So I think that it should go to vote for the counties that it will involve.

And I'd like to see like the financials. I haven't seen any of the financials, and I've asked around for the financials of who's going to pay it and how much and where that's going to be all divided, and I haven't seen anything. No one's given any information as to how it will be paid for; so . . .

And I'm opposed. For the record, I am opposed.

MR. GIENGER: I mean, I am not incredibly educated on what's going on -- this is what I was saying over there, trying to learn -- but, I mean, the biggest questions that come to my mind are obviously a large cost. And so who's going to pay for that, and right now it seems
like nobody really wants to.

It seems like the majority of farmers that would use this water for irrigation aren't, are not for the project. And for us, as individuals that live up there, my first concern is our property value and the impact on our well as well; so . . .

I mean, those are the questions I have that I'm over there trying to getting answered eventually.

* * * *
STATEMENT ON RECORD

STATEMENT ON RECORD NO. 15 - 5/16/18

* * *

MS. WINDSOR-NEWMAN: Basically, in a nutshell, I'm concerned about my property value, and I'm also concerned about -- the reason why we bought the house is to use the lake. And if we're not able to put the boat in the lake in our community, which is one of the reasons why we bought into that community -- and we just bought in October. So we bought and now, boom, our value is going down with this whole discussion.

I'm concerned. You know, I just lost a major investment and -- I mean, I didn't lose it but, you know, a lot of my money I put into this property is gone. That's been wasted.

I am also concerned about we have a spring fed well, and I heard that when the water -- it's based on water levels. Will we have water to our homes? And we're already spending a lot of money on that hot water system because it was pretty new in the community, so if we lose water, who's going to pay for us to have to conserve, for us conserving?

If we have to conserve, why -- you know, we're put in a position where we bought in an area that had plenty of water. We should never have a problem with running out of water, and so I don't want to have to be in a position where we're not going to have running water in our home.
The other thing is the amount of time it will take to refill the lake by natural means. It's just not going to fill up quickly as it's being portrayed. It will take multiple years to drain.

And I call it a lake. It's not a reservoir; it's a lake. It always has been called a lake. Yeah, there's a dam at one end, but it's been a lake for a long time, and it should be considered to be called a lake, not a reservoir.

I want to talk about the proposed boat launch that's on the opposite side of the lake that's next to the highway. Apparently it's on a forest road. I haven't seen anything about it being paved. The boat launch itself is 600 feet, 20 feet wide. Now, if you ever back a boat down a 600 feet, only 20 feet wide, you're going to fall off the edge. I really feel that if that's going to be where we're going to have a boat launch, it needs to be widened.

We go to Lake Powell quite a bit. Probably about every couple years we go to Lake Powell, and in Bullfrog Marina in Lake Powell, Utah, they have a boat launch. And I'm not sure how long it is, but it's probably at least 600 feet, because it's by a dam as well. And, actually, it's a true, a true -- they call it Lake Powell, but that is a true lake that was built by a dam. It was a river before. But their boat launch is like at least 100 feet wide.

Now, I'm not talking that we have a 100-feet-wide
boat launch into Lake Kachess but something where you're not
going to fall over, go over the edge of it when you're
backing up 600 feet, so maybe at least 50 feet wide. And
then I expect to have lots of parking for boats and trailers
in that area.

Recapping, my main concern is the rate -- how long
it will take for the lake to refill after it's been drained;
the boat launch, the plan is inadequate; concerned about our
water level of our spring fed water system that we have in
our community.

And I think the last one that I didn't mention
earlier is our value of our homes. The value of our homes
will greatly depreciate -- oh, no. I mentioned that,
because I was saying we just bought and I lost a lot of my
value. I feel I will lose a lot of my value.

And with all of this we're sacrificing but yet
there's no constraints, from my understanding there's no
constraints been put on the farmers in the Yakima Valley.
If they say we're going to get you water, then they get
plenty of water. Naturally, a tendency for anybody to think
is, "Oh, we've got plenty of water. Let's build, make more
acreage of farmland." They need constraints to control it
and then it is not a perpetual problem, and so constraints
need to be placed. So that's it.

* * * * *
STATEMENT ON RECORD NO. 16 - 5/16/18

* * *

MS. MISOCKY: My name is Jill Misocky. I am here in opposition to the water plan, the proposed water plan, for several reasons. We are new to the community -- is it okay if I just talk to you?

We're new to the community, just moved in two Decembers ago, so we just got dropped into -- in the middle of this. Our neighbors have seen this coming for years, and so we're trying, my husband and I are trying to get up to speed about what's going to happen.

We live on the ridge. We don't have lakeside, lakefront property. We don't have a view of the lake, but we're a community that feels really strongly about this.

I feel that this plan to draw down -- the most extreme part of this plan is to draw down this lake to unrecoverable levels. This kind of lake will not recover from this kind of drawdown. I favor, A, the "don't do anything" plan.

The second option would be to draw down responsibly a smaller amount, a small percentage more of what's already drawn down rather than draining the lake, and bank that water for conservation for the future; so during feast years, when it's raining, when we have a high snowpack, draw down water to a reasonable level and bank the water.
elsewhere, bank it in Yakima, bank it in other reservoirs, because this is going to be a short-term gain. The lake will get drawn down within five, six years, and it will never recover.

I also oppose the plan because it's sacrificing so much for so few. When we moved in here, all of our friends and even my dental hygienist tells me: We've been camping at Lake Kachess for years, generations. We take our kids there.

And my dental hygienist from Burien during the summertime comes out and water-skis every weekend. For years they've been doing that, and with the lake drawn down they won't have camping, there won't be any water-skiing, no fish, no fishing, no water boat activities, no hiking.

I'm told that Kachess Lake is -- the campground there is one of the most popular in the state. It's constantly busy. Our first summer after we moved in, we saw starting Thursdays and Fridays camper after camper after camper driving past our house to get to the campsite, and Sunday was the same, everybody leaving, Monday. And so it's constantly busy. It's constantly booked.

So camping, fishing, recreation, there's quite a few homes along the lake that have -- they're lakefront and also lake views. Those properties, the value of those properties will be irreparably damaged.
Even though we don't have a view of the lake -- I think our property is going to be maybe not affected as much as the lakefront or lake view home, but still a lot of people will see our house -- see the area as a value because we do have lake access, so our property values are going to go down.

The water rights of the residents down on the lake are first water rights, if I understand that correctly, and the entity or entities that are proposing this drawdown are secondary water rights. And based on the law, if you have primary water rights that preempts any secondary water rights.

So that's something I just learned this evening, that it seems like this drawdown or the proposal to draw down is illegal, so I'm not sure if that's even been looked into by the board -- by this plan, so that might be something that they'd have to contend with.

So my feeling is that this is a short-term gain sacrificing too much for just a small entity in the Yakima Basin, so I believe a compromise can be reached without sacrificing the lake.

Conservation, maybe rotating crops, having a different second crop instead of a second crop of hay in the summer, which is very water intensive. My family on my mother's side were all farmers and nurserymen so I know a
little bit about it, not a lot; but my uncle used to grow nothing but corn, and when that market fell he adapted to soybeans and so he went corn and soybeans, so he embraced it and adapted and so he was able to thrive.

So I think, and I hope, that the farmers downriver will take another hard look at conservation and maybe rotating in and out different types of crops that aren't so water intensive so they don't need to use so much water in order to make a living. I understand everybody needs water, but you can't sacrifice so much for so few.

I think that's it.

* * * * *
STATEMENT ON RECORD NO. 17 - 5/16/18

* * *

MRS. REED: So we purchased our property three years ago?

MR. REED: Four.

MRS. REED: Four years ago?

MR. REED: We're working on our fourth year.

MRS. REED: Fourth year, from another lady, very nice lady, and we have wells. There are nine wells in our neighborhood.

MR. REED: A neighborhood of about 50 lots.

MRS. REED: About 50 lots.

MR. REED: Yeah.

MRS. REED: So we share the wells. So my concern is with this project going into effect, that's going to drain our wells.

In talking with -- is it Teresa over there? The one in the white shirt and gray pants. I can't think of her name. I was talking with her, and I said: So if our wells go dry, what's going to happen?

She said: Well, if it's a cause of draining of the water, then they would be replacing them. They would be fixing it to where we would be able to get water.

So what I asked for is if this project goes through -- and I hope it doesn't, because I think that...
they're already getting enough water as it is and they don't need to go down 80 more feet -- that as a homeowner, I would appreciate a guaranteed letter in the mail from whatever organization is doing this stating that if our wells go dry due to this project that they will be covering all costs and expenses because --

MR. REED: To replace the water.

MRS. REED: To replace the water, because this project is going to affect a lot of people.

Not only that, my grandson goes across to Lake -- it's a state park, isn't it?

MR. REED: Easton.

MRS. REED: Easton, and swims there. And draining that, you know, they're taking away all the fun recreation for a lot of people, the boating.

People that live on Lake Easton that have waterfront property, a lot of them do here, they get up in the morning and they enjoy going out, sitting on their deck and looking at the water. Who wants to get up and look at --

MR. REED: Rocks.

MRS. REED: -- rocks?

MR. REED: River, lake bottom.

MRS. REED: Yeah. So I don't think -- I know that they want to do this project so that they can get more water to the people that have agriculture and, you know,
growing stuff and that. And I get that totally, but they're not taking into consideration the neighbors and the families and the people that they're affecting on the other side.

Some people grow their own vegetables here. Some people have their own gardens. Some people have swimming pools that they fill up with water. I just think that they're not taking anybody else into consideration and they're just thinking about the people that have the big crops that are making the money. And not only that, they're bringing our property values down which is hurting a lot of people here.

MR. REED: I have another point of view. I listened to a presentation by Jay Schwartz from the Friends of Lake Kachess. He was here in attendance tonight. He's got a published report; that he read the 800-page document that is put out for this project and has a background in consulting and finance and all that kind of stuff, and he put together a presentation and worked the numbers because he's good with numbers. He works numbers. And the numbers from the report and everything don't quite add up to what he got, his answer.

So what we have is two different perspectives and study that come up with two different answers, and what is the real truth? If you've got two that don't agree from the same subject, something needs to be done to find out what
the real truth is for the cost, the amount of water
provided, the impact to everybody.

What he found was that some of the numbers in the
official report, some of the things that were calculated
were based on some things that aren't quite what everybody
believes they should be.

So conflicting reports should suggest that it's
not -- the truth has not been figured out and we need to
drill down to where we get to the real truth, the real cost,
the real impact, and what really is going to come out for
those farmers down in Yakima should this project go through.

His prediction is the water will cost so much that
only the very large agricultural companies could be able to
afford it and the small farmer will not.

MRS. REED: They'll go belly up because of it.

MR. REED: That's a rough summarization. We
can get a link to that report or a copy of it. I can talk
to somebody here to find the link to it. It's on a web
page, I know, and I have a copy of it at home. It is out
there.

MRS. REED: I guess the long picture for me is
they're not taking into consideration the effect that it's
going to have on the people. It's going to have a lot of
effect. And Cle Elum is a booming town right now, and as
soon as all of this stuff, if it goes through -- and I hope
it doesn't -- it's going to go back into the tank again just when it's booming.

MR. REED: Would you like me to try and get you that website?

(PAUSE IN STATEMENT)


MRS. REED: Also, with the area that we live in, we have no fire hydrants, so if we have fires in our area, they have to come with water trucks. And the water trucks get the water from those lakes, so if they drain them too low and there's not enough water to put those fires out, we've all lost everything.

* * * * *

* * * * *
STATEMENT ON RECORD 

STATEMENT ON RECORD NO. 18 - 5/16/18

* * *

MS. WANECHEK: My name is Connie Wanechek. My maiden name is Owens. I am fifth generation to this area. I'm fifth generation to the people that have visited and loved Lake Kachess and Lake Keechelus.

As a family for fifth generation, we have hunted, fished, snowmobiled, skied, snowshoed, swam, boated, hiked, camped, and I have brought my grandchildren to the lakes as my great-great-grandfathers have brought their families. I know the Indian trails. I know where the blazes are on the trees that surround the lakes that showed the Indians how to get where to go. Some of those blazes have been cut down because the mountains were cut down up above Lake Keechelus to accommodate the freeways, the roads to be expanded up by the dam by Keechelus. Our hearts are there. My heart is at Kachess. I can't fathom it being killed. There has to be a better way.

Lake Kachess and Lake Keechelus are places that people go to to recreate. There's hundreds and hundreds of people that come over from Seattle. They come from the east side, the west side. Our communities, Kittitas County, Cle Elum in particular, is in a boom stage. We are a bedroom community of Seattle where people are priced out. They come over here. People for generations like myself...
come over here.

And if you drain that lake, it will never ever be filled again. Home values will go down. Fire departments, water accessibility for fire departments will be nil. They can't qualify to stay. We have forest fires all over the dang place. Last year was a perfect example of that.

Property values would go down.

But most of all, these lakes need to be saved. Take some water out, but leave some in. So what do you expect people to do? They're beautiful pristine glacial lakes. I know that they're reservoirs, but there has to be a better way than to kill and drain these lakes for monetary profit somehow. There has to be a better way to do this.

The lake is the place that I go to. It's not even five minutes from my home. I pray there. That's a place that I heal. That's a place I have memories of spending with my family, my children, my grandchildren.

We have family ashes buried and sprinkled in the lakes, both of them. I've seen families going up to the dam end of Keechelus, and I saw the families. I didn't realize at the time what the ashes was, but there they are. I saw them in the water with 23 single yellow roses. This is silly.

Anyway, there's got to be a better way. You've got to save those lakes for the people that are coming to the
area to go up there to recreate. You don't want to close it off. You don't want the noise from the pumping stations.
You don't want the liability of people. You want people to be able to keep using the lakes.

I don't know what else to say.

* * * * *
CERTIFICATE

STATE OF WASHINGTON) ss.
COUNTY OF YAKIMA )

I, Marilynn S. McMartin, Washington State Certified Court Reporter, pursuant to RCW 5.28.010 authorized to administer oaths and affirmations in and for the State of Washington, hereby certify I reported the foregoing proceedings; said statements being taken before me on the date herein set forth; that said statements were taken by me in shorthand and thereafter under my direction transcribed, and that same is a full, true and correct record of the statements to the best of my ability, prepared pursuant to WAC 308-14-135.

I further certify that I am in no way related to any party or counsel to this matter; nor am I financially interested in the said action or outcome thereof.

Transcribed notes will be destroyed three years from the affixed date unless requested by any party or counsel to retain them.

IN WITNESS WHEREOF, I have hereunto set my hand this 31st day of May, 2018.

Marilynn S. McMartin, RDR, CRR
CCR NO. 2515
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☒ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

I am a homeowner on the East Side of the Lake. We have senior water rights and a well. How can junior water rights supercede mine? If our well runs dry what is the mitigation plan? What is the precedent for taking the 80 feet from the lake that has existed prior to the reservoir? I

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

Understand the right to drain the first 160 feet, that is the reservoir portion. However, where is this ever been done before? Where has an existing lake been drained for water needs? Is this setting an environmentally dangerous precedent? Will you be thinking of draining Lake Washington or Lake Sammamish next?

Has anyone looked at fixing the irrigation canals so that 30% of the water isn’t wasted? Would this 30% be enough to cover the additional needs of the Rosetta district?

Is any mitigation for property owners being considered for decreased property values? Will property taxes be decreased due to the decreased property values?

What will the mitigation be for lost tax revenue to Kittitas County?

Environmentally - There are red headed wood ducks that live in the lake by our property. Has anyone looked at the impact to these ducks? How will the deer & elk get down to the lake to drink?

Will the Bureau of Reclamation or someone be taking care of Road 4818 - I would suspect that the road will need extra care due to the equipment being used on it?
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

Regarding the pumping plant: The cost is estimated to be $195,000,000, that works out to $150,000 for each Roza district farmer, when has any other taxpayer received that kind of benefit – huge cost financially and environmentally to benefit so few.

What about the noise? We currently can hear...

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
a dog barking from across the lake.

I have been a homeowner on Lake Kachess since 1991. I have seen the lake drained clear down to the 60 foot level. We were in a drought period for about 5 years sometime in the 1990’s - THE LAKE NEVER REFILLED COMPLETELY DURING THAT TIME PERIOD - what makes you think you could fill up an additional 80 feet?
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☑ Email with information on how to reference the document online
☑ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

'I have owned a cabin at Lake Kachess for 25 years. I am shocked and disappointed in our elected officials that feel it is appropriate to drain Lake Kachess. My husband and I worked hard to buy our lake property. What will happen when our well runs dry? Will you drain our property from us? The farmers who are taking our water ... what are they having to do to use water more...'
Comments (continued)

efficiently so that our water isn't wasted? Will their wells run dry? Will their property values be decreased?

What about the fish & wildlife? What will happen to them when the lake is drained? I say I am disappointed in Dept of Ecology is an understatement.

I hope you can sleep at night knowing what you are doing to people who live and recreate at Lake Kachess and the financial loss we will all take because of this ridiculous plan.
# Comment Form

**Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS)**

<table>
<thead>
<tr>
<th>Name (please print legibly):</th>
<th>Taylor Hazard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Organization:</td>
<td></td>
</tr>
<tr>
<td>Mailing Address:</td>
<td>24222 88th Pl. West Edmonds, WA 98026</td>
</tr>
<tr>
<td>City, State, and Zip Code:</td>
<td></td>
</tr>
<tr>
<td>Telephone:</td>
<td>303.492.1552</td>
</tr>
<tr>
<td>E-mail:</td>
<td><a href="mailto:Thatward1@gmail.com">Thatward1@gmail.com</a></td>
</tr>
</tbody>
</table>

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

- [ ] Email with information on how to reference the document online
- [ ] Postal Mail with information on how to reference the document online
- [ ] Send full printed copy of document in binder by postal mail
- [ ] Send electronic copy of document on a CD ROM
- [ ] Send printed copy of the Executive Summary (includes CD ROM of full document).

**Please note:** Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

I am submitting the opposition of the KDRPP/KKC in the strongest terms. It will be nothing short of a clear statement of a public resource that is very clearly not in the benefit of all stakeholders. The SDEIS has not properly assessed for the impact on the human population, which will not be able to get used to the lake to spawn. Furthermore...

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

The costs of the Project have not been sufficiently accounted for. At the estimated costs of $1250-1500 million, will ultimately be too expensive to make the additional water affordable for the farmers.

Outside of the blatant disregard for the effect on human users and costs, the KIDRR gives preference to those holding junior water rights over those who hold senior water rights. Tragic.

There also appears to be a disregard for the fact that the lake will likely never recover after a major draw down and this permanently harming the usability of the lake and access.

COMMENT FORM

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance
Supplemental Draft Environmental Impact Statement (SDEIS)

Name (please print legibly): Jeff Parry
Organization: 
Mailing Address: 4535-44th Ave SW, Seattle WA 98116
City, State, and Zip Code: Seattle WA 98116
Telephone: 206-280-4398
E-mail: jeff@parryadvertising.com

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☒ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

Do not pump the lake. It will ruin the lake Bull Trout habitat and isn't financially feasible. Seems like a foolish one and done loss.

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.

March 2019
U.S. Department of the Interior
Bureau of Reclamation
Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS)

Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

It is an absolute shame that these lakes will be drawn down for the reasons that are being discussed. If residents all over the state that use these lakes for fishing and recreation there would be a complete uproar. All WA residents should be informed of this plan.

(Use backside or additional sheets as necessary)

Also - drilling for water in the

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

Residential areas for replacement wells should be done PRIOR to this plan being implemented so that the residences have water ALWAYS.

I am strongly opposed to draining a beautiful alpine lake in order to give water to farmers in the Columbia Basin. They shouldn't be growing crops that require water that needs to come from so far away. This is a huge, expensive project that will affect our property values for years to come. The lake and the entire...
Comments (continued)

ecosystem will suffer long-lasting effects and will never recover! This project is misguided and we homeowners have been left out of the discussion. Our wells will run dry while the yakima farmers water their crops and enjoy our water.
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

These in favor of this project seem to think that Lake Kachess is a mere bucket of water they can take from, one their own water mismanagement and the patterns of weather leave them with less than they need. This is a terrible solution to an unfortunate problem. People must learn to live with the resources their region

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

provides. It is not right to disrupt and destroy a lake ecosystem, all for the profit of those who have claimed a right to someone else's water. Most importantly, the water belongs to the fish and other forms of life in the surrounding area. To disturb this ecosystem is to invite unexpected misfortune.
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):

☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

- Costs to recreational users of Kachess not considered
- Economics of water pricing does not reflect true cost
- Ecology of this lake would be compromised in was not knowable
- In light of reduction in snowfall on average compared to historic norms (global warming), Kachess not likely to recover from prolonged drought

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

- Reduction of property values in vicinity of Kachess Lake not considered.

- Conservation measures for agricultural water use economically make more sense, more "bang for buck".

- Endangered bull trout face more jeopardy if lake drawn down as proposed; it is not known if fish ladders will mitigate the risk.

- Draining a native lake below reservoir levels should never be considered for such a short time benefit.

http://www.usbr.gov/pn/programs/els/kkc/index.html
COMMENT FORM

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance
Supplemental Draft Environmental Impact Statement (SDEIS)

Name (please print legibly): Lance Newman
Organization: Kachess Village Home Owner
Mailing Address: 23020 SE 248th PL
City, State, and Zip Code: Maple Valley WA 98038
Telephone: 206 419 1591 E-mail: newm@699@icloud.com

☐ Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

Reasons to Vote No on SDEIS Pump Plan

1) Roza Irrigation can’t possibly afford the $500 million dollar proposed Pump Station and Conveyance tunnel
2) Wadot will never allow the I-90 shutdowns required for the conveyance tunnel project and blasting

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Comments (continued)

3) Without total Roza funding, Kittitas County Tax payers will have to bear the costs with no benefit to them for lost water.

4) Roza farmers have historically shown they will not bear the costs either.

5) Any of the possible options requiring pumping will result in a massive alteration of the Lake Kachess delicate eco system. This will negatively effect fish runs, water table, community wells, recreation opportunities, forest fire prevention, the forest, home values for Lake Kachess residents.

The proposed SDEIS will be a disaster for Kittitas County residents stripping them of one of their most precious resources that can’t be replaced so that a small group of rich Yakima Growers can expand an agricultural business that ships a large portion of its crops out of country.

Vote No

[Signature]
5/17/18
COMMENT FORM

Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance Supplemental Draft Environmental Impact Statement (SDEIS)

Name (please print legibly): Billie R. Margulis
Organization:
Mailing Address: 609 E. Tacoma
City, State, and Zip Code: Ellensburg, WA 98926
Telephone: 509-929-3054  E-mail: billies@kvalley.com

☐ Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
☐ Email with information on how to reference the document online
☐ Postal Mail with information on how to reference the document online
☐ Send full printed copy of document in binder by postal mail
☐ Send electronic copy of document on a CD ROM
☐ Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

we have senior water rights - if wells are
affected how will this effect our senior water
rights. - Also noise will be an issue - what
is going to be done about that? - who gets the
benefit from this, and who will be paying?

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kkbt@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
Please put me on the mailing list and notify me when the KDRPP/KKC FINAL EIS is released.

I prefer notification by (please check one):
- [X] Email with information on how to reference the document online
- [ ] Postal Mail with information on how to reference the document online
- [ ] Send full printed copy of document in binder by postal mail
- [ ] Send electronic copy of document on a CD ROM
- [ ] Send printed copy of the Executive Summary (includes CD ROM of full document).

Please note: Our practice is to make comments, including names, home addresses, home phone numbers and email addresses of respondents, available for public review. Individual respondents may request that we withhold their names and home addresses, but if you wish us to consider withholding this information you must state this prominently at the beginning of your comments. In addition, you must present a rationale for withholding this information. This rationale must demonstrate that disclosure would constitute a clearly unwarranted invasion of privacy. Unsupported assertions will not meet this burden. In the absence of exceptional, documentable circumstances, this information will be released. We will always make submissions from organizations or businesses, and from individuals identifying themselves as representatives or officials of organizations or businesses, available for public disclosure in their entirety.

Please consider my comments on the KDRPP/KKC SDEIS below:

How will the fire dept at LK Kachess get water to fight fire when the lake is depleted in a DRY season?

(Use backside or additional sheets as necessary)

You may leave your comments in the box provided, mail, fax, or email comments to: Candace McKinley, Environmental Program Manager, Bureau of Reclamation, 1917 Marsh Road, Yakima WA 98901-2058; fax (509-454-5650), email (kktb@usbr.gov), or leave voicemail message (509-575-5848, ext. 603). The 90-day comment period ends July 11, 2018.
STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY
KACHESS DROUGHT RELIEF PUMPING PLANT AND
KEECHELUS RESERVOIR-TO-KACHESS RESERVOIR CONVEYANCE

Taken on Thursday, May 17, 2018
at the Kittitas Valley Event Center
901 East Seventh Avenue
Ellensburg, Washington 98926

STATEMENTS ON RECORD

COPY

REPORTED BY: MARILYNN S. Mc MARTIN, RMR, CRR
CCR NO. 2515
STATEMENTS ON RECORD OF:

1: MR. JAMES MALLON
KRMA Residents - 161 Kachess Lane, Easton, WA
2020 223rd Place NE, Sammamish, WA 98074
(425) 417-8003

2: MR. JEFF PARRY
KRMA Resident - 2951 via Kachess Road, Easton, WA
4535 44th Avenue SW, Seattle, WA 98116
(206) 280-4398

3: MS. JUDITH WINDSOR-NEWMAN
KRMA Resident - 2981 via Kachess Road, Easton, WA
23020 SE 248th Place, Maple Valley, WA 98038
(206) 406-7566
STATEMENT ON RECORD

STATEMENT ON RECORD NO. 1 - 5/17/18

* * *

MR. MALLON: So I have three or four main points. Just the general overall, we've been residents and we've been living on the lake for 30 years. We've enjoyed it from a recreational point of view.

We, you know, absolutely love the lake, but at times -- and they would still use the lake as a reservoir, drain it down 60 feet, so it would be quite low occasionally. Every other summer it would be drained quite low.

And then upon hearing this and the whole plan around it to drain it another 80 feet will literally create cliffs in front of our property. It would make it effectively unusable to even get to the lake.

So just in general overall, I guess I view the holding on to the alpine lakes -- and I view Lake Kachess, even though the Bureau of Land Management or Reclamation view it as a reservoir, we view it as an alpine lake that wildlife visit all the time. And they're not making any more alpine lakes, right?

The state of Washington over the last 20 years has grown from 3 1/2 million to 7 million residents. We need more places to recreate and to enjoy the wilderness and to enjoy nature. And when you literally drain it an additional
80 feet, you make it a big mudhole which causes it not to be used as recreation anymore. It is going to be a stain on the Cascades, and, frankly, that just doesn't go over very well with us. So that generally, the first put is: Oh, my gosh. They're going to destroy a piece of what Washington is known for, right?

Now, I understand from a farmer's perspective and the irrigators that they're looking to grow more crops, and whether it's -- I don't know whether it's going to be for hay or wheat or the fruit areas, but there's also, I would be irate if I found out that that was really supporting the farmers so that they would be able to grow more so that they could then sell more to foreign countries. Whether it's Japan or whether it's Saudi Arabia or whether it's Russia or wherever, they would sell more and more of their crops outside the country, so effectively we are destroying our land and our lakes so that certain folks, certain groups, farmers, could sell their produce globally. And so we're paying the price for a certain group being more economically successful, I would say, so just overall.

The second concern: We live on the lake. We have a well. The Department of Ecology came forward and they tested our well, and in testing our well they said, "Yep, you're going to run dry. If they pull the water out and it drops an additional 80 feet, your well is going to be..."
unusable." So right there, that's an immediate concern, and
we would like to know who's going to pay for that.

We're not going to -- we have a cabin on the side
of the lake, and we're looking to say: Okay. Our value is
going to be -- the value of our cabins are going to be taken
away, and how are we going to be compensated?

Our well, our water, we have a senior water right;
not a junior water right, a senior water right to that
water, and if people reduce, you know, draining the water
down, all of a sudden now we're not going to be able to
utilize our senior water right.

We lose our water, potentially the value of our
cabin goes way down, and so far I have not seen any
discussion about how they would compensate the homeowners
for that that would lose their water. So that's a second
concern.

Then when we heard that as they drain the water
down or even prior to that they would have a pumping station
at the end of the lake, that is going to create -- and that
pumping station is going to run 24 by 7 by 365 days a year.
And as a result, from my perspective, not only, you know, is
there going to be some kind of pollution, even electrical --
maybe they're going to run electrical up there -- but
somewhere it's going to create a significant amount of noise
day in and day out all year long. And being on a lake, that
noise is going to travel all the way up the lake. You just cannot get away from that.

So in addition to our well issues, we're going to have noise issues, and there is no -- I have not seen any discussion about how they would mitigate any kind of noise that would travel up the lake.

So, you know, this -- and then last but not least, access to the lake. We have had access to the lake. It's still a climb down when the lake is drained down 60 feet, but if they drain it an additional 80 feet, 140 feet, it will be literally untenable to reach the lake, not only for ourselves but for wildlife and animals that use that lake. It will be impossible to utilize it. And so from my perspective, our ability to recreate like we have been able to do over the last 30 years will be eliminated.

So overall, we're very upset about this. We find it very sad that this is happening, especially right in the middle of the Cascades that more and more people are using to recreate given the population increases in the state.

I think those are my main points.

* * * * *
STATEMENT ON RECORD NO. 2 - 5/17/18

* * *

MR. PARRY: I am just here to oppose the pumping of Lake Kachess. Just financially it doesn't make sense. I've seen it when the water levels are low, and it takes years and years and years to fill back up to usable levels. I think it's dangerous when it gets low like that. I've hiked out there when the water levels have been very low, and the lake becomes very difficult to use.

And I'm concerned about the bull trout, just the loss of their habitat as an endangered species. I don't think enough thought has been put into actually handling the loss of that fish in that environment.

I don't think I've learned enough about the aspects of mitigating the damage to the environment and the fish and wildlife and the enjoyment of the lake by people like me and state park visitors.

I think it's an awful waste for something that cannot be replenished quickly enough to do it again. I think there's much better solutions. Like, I haven't seen any exploration of other conservatory measures being done instead of a one-time dump the lake water in Eastern Washington and see what happens. I just don't think it's well thought out, and I don't think it's cost-effective.

Thank you. * * * * *
STATEMENT ON RECORD NO. 3 - 5/17/18

* * *

MS. WINDSOR-NEWMAN: I came back with some additional comments so that's why I'm here today.

The reason to vote no on the SDEIS pump plan, Roza Irrigation can't possibly afford the 500 million dollar proposed pump station and conveyance tunnel. That's one.

Number 2, Washington DOT will never allow the I-90 shutdowns required for the conveyance tunnel project and blasting.

Number 3: Without total Roza funding, Kittitas County taxpayers will have to bear the cost with no benefit to them for lost water.

Number 4: Roza farmers have historically shown they will not bear the cost either.

Five: Any of the possible options requiring pumping will result in a massive alteration of the Lake Kachess delicate ecosystem. This will negatively affect fish runs, water table, community wells, recreation opportunities, forest fire prevention, the forest, home values for Lake Kachess residents.

And then, the proposed SDEIS will be a disaster for Kittitas County residents, stripping them of one of their most precious resources that can't be replaced so that a small group of rich Yakima growers can expand an
agricultural business that ships a large portion of its crops out of the country.

Exclamation point, vote no.

* * * * *
CERTIFICATE

STATE OF WASHINGTON
COUNTY OF YAKIMA

I, Marilynn S. McMartin, Washington State Certified Court Reporter, pursuant to RCW 5.28.010 authorized to administer oaths and affirmations in and for the State of Washington, hereby certify I reported the foregoing proceedings; said statements being taken before me on the date herein set forth; that said statements were taken by me in shorthand and thereafter under my direction transcribed, and that same is a full, true and correct record of the statements to the best of my ability, prepared pursuant to WAC 308-14-135.

I further certify that I am in no way related to any party or counsel to this matter; nor am I financially interested in the said action or outcome thereof.

Transcribed notes will be destroyed three years from the affixed date unless requested by any party or counsel to retain them.

IN WITNESS WHEREOF, I have hereunto set my hand this 31st day of May, 2018.

Marilynn S. McMartin, RDR, CRR
CCR NO. 2515
Greetings,

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

--
Ms Christina Orcutt
Skittles.colorful@gmail.com
Submitted via email to kkb@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley:

Please accept these comments/questions regarding the KDRPP SDEIS.

Comments

1. Alternative 1 No Action I oppose all active alternatives of the KDRPP and KKC projects. Only Alternative 1, “No Action” is acceptable.

2. Failure to meet stated objectives. The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document. My questions related to this topic are as follows:
   a. How does the proposed floating pump on Lake Kachess improve the health of the riverine environment?
   b. How does the proposed floating pump on Lake Kachess provide more sustainable water resources for municipal needs?
   c. How does the proposed floating pump on Lake Kachess provide more sustainable water for domestic needs?
   d. This entire statement is misleading to the public. The SDEIS puts forward a plan to drain additional water from Lake Kachess to benefit one singular irrigation district. Any future reports on this matter should accurately describe the purpose.

3. Failure to consider alternatives The DEIS and the SDEIS really only consider two alternatives: drain a natural lake to benefit downstream irrigators with no senior water rights or don’t drain the lake. No other alternatives are considered to meet the irrigation security needs of the Roza Irrigation District farmers. My questions related to this topic are as follows:
   a. Why was water conservation, including repairs to the Roza open trenches not considered or at least integrated into the plan to reduce the additional water needs?
   b. Why was taking water from the Columbia River not considered?
   c. Why wasn’t appropriate crop selection on lands without senior water rights considered?
   d. Why wasn’t advanced water conservation methods considered?
   e. How does this DEIS and SDEIS meet the requirement to consider a range of reasonable alternatives which is required by NEPA?

I ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given...including data, references, and review procedures...for excluding each alternative.
The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and I therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

4. Conflicts of interest and lack of impartiality. It would appear that this entire process to date – from the PEIS, to the DEIS and now the SDEIS have been crafted to push ahead the agenda of the YBIP workgroup rather than take an objective look at the problem and seek out solutions. Many members of this workgroup stand to profit personally from the YBIP and the KDRPP portion of the YBIP. My questions related to this topic are as follows:
   a. Why does the SDEIS only include 2 alternatives – drain Lake Kachess or don’t?
   b. Are there truly no other alternatives that can give farmers without senior water rights any added water security?
   c. Is there NO opportunity to improve the delivery systems or to conserve or to use the water more effectively?

5. Failure to accurately disclose costs. The statement of budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The “estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the “proposed option” it will be the focus of this comment (however these comments apply equally to the other alternatives). An “estimate” that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.

<table>
<thead>
<tr>
<th>Low Estimate</th>
<th>Projected Estimate</th>
<th>High Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>197,400,000</td>
<td>282,000,000</td>
<td>423,000,000</td>
</tr>
</tbody>
</table>

as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget,
and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

6. **Failure to adequately estimate costs**  
   Table 2-5 of the SDEIS quotes a “Field cost” for construction of option 4, the KDRPP-FPP at $150,000,000. This seems like an oddly round number to represent any detailed research into the actual costs of construction. In fact, below table 2-5 please see comment b which states “Alternative 4 costs listed here are based on preliminary engineering and professional judgement”. Please:
   a. Provide any/all detail on how this figure was established  
   b. Explain the term “professional judgement”  
      i. Whose judgement?  
   c. Given that 2.5 years have passed since the DEIS, why was the SDEIS published without more detailed cost information on the Proposed Action alternative?  
   d. Why is option 4 being put forward as the Proposed Action when little seems to be known about the actual cost of this plan?  
   e. How can the public be expected to adequately comment on things such as “based on professional judgement”?  
   f. How can the public adequately comment on a plan for which there seems to be little/no factual support for the purported financial costs of the plan?  
   g. Was option 4 identified as the Proposed Action based, at least in part, by table 2-5’s claim that it is the least expensive active option?  
   The same table estimates the power cost over 100 years at $5,000,000, which equals a mere $5,000 per year. I was personally told by BoR staff at both the Cle Elum and Ellensburg meetings that “Roza farmers will be reluctant to run the pumps any more than absolutely necessary as they aren’t going to get any discounts on the electricity needed and running those pumps is going to be very, very expensive.” These statements seem incongruent with the details of table 2-5, putting both into question and furthering my position that both the SDEIS and the verbal representations by BoR staff are slanted in favor of pushing this project forward rather than honestly evaluating the project on its merits. Regarding the cost of electricity in Table 2-5, please provide:
   a. Complete details on how this estimate of $5,000 per year for electricity was established, including estimates for the frequency and length of pump operations and the electrical demands for each pump while in operation.

7. **Mitigation for reduced property values.**  
   I own and live full time in a home located at 40 Mountain View Lane, Easton, WA 98925. My home sits within 30 feet of the usual high water mark of Lake Kachess. Should the KDRPP be approved and implemented, there is no question that the value of my property will be significantly reduced. My questions related to this topic are as follows:
   a. Why does the SDEIS not address any mitigation for reductions in private property values effected by this proposed action?  
   b. Will mitigation be provided for property owners whose property values are reduced by this action?  
   c. How will any mitigation be calculated?  
   d. If the parties do not agree on the mitigation amount, how will any disputes be resolved?  
   e. Who will pay any mitigation?  
   f. What timeframe will be involved in the mitigation process?  
   g. Because the SDEIS does not address any mitigation for reductions in private property values, what assurances would private property owners have that mitigation would be available?

8. **Impact on Campers and recreational users at Lake Kachess**  
   Despite having the information and ability to do so, the DEIS and SDEIS process failed to notify a large segment of the public who would be effected by this plan. The over 23,000 annual campground visitors and 11,000 annual boaters are entirely unaware of this plan. We have been visiting the campground weekly in an effort to notify these users and have been met with a complete lack of awareness of the proposal. In fact, we have been told we cannot distribute information within the campground to raise awareness on the issue. My questions related to this subject are as follows:
a. Why has no effort been made to communicate with this segment of the public who should have been given an opportunity to participate in the process?

b. When will this group receive communication on the KDRPP proposal?

c. Will they be provided any opportunity to comment or participate in the process?

d. Simply telling them about it after it’s a done deal fails to meet the SDEIS’s public information obligation.

e. Why were no SDEIS public information sessions held West of the Cascades, when it is well known that a large population of the public who live on the West side of the Cascades regularly use Lake Kachess, many for decades or generations.

f. On page ES-Xii, the following suggestions are given to address recreational use of the lake “Extend boat ramps at Kachess Reservoir…if feasible, and construct new east shore ramp that would be available at all reservoir levels. My questions related to this topic are as follows:

i) Would extending boat ramps at Kachess Reservoir include both public and private ramps?

ii) Under what conditions would extending those ramps be feasible or not feasible?

iii) What analysis of the lake geography has been done to suggest is extending any of the ramps for use during a KDRPP-FPP drawdown is truly feasible or not?

iv) Describe the geography of the East shore ramp location and what the slope of the ramp will be during a drawdown. Will it be physically possible to use the ramp or will the slope simply be too steep for practical use as a boat launch?

8. Increased forest vulnerability and Fire Hazard. The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a single drought year, and in multiple years of pump operation dead trees due to lack of water and insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary responsibility for fire and emergency medical services in the Lake Kachess and Lake Keechelus areas. This state agency has repeatedly raised concerns about increased risk due to wildfires, reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water for firefighting), the increased incidence of accidents and injuries due to construction activity, and need for public education and communication strategies necessitated by KDRPP and KKC projects. Despite numerous and repeated expressions of concern and requests to meet with the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and unacceptable. We demand that as part of the NEPA/SEPA process for Lake Keechelus/Lake Kachess project proposals, BoR and other affiliated entities engage leadership of the Snoqualmie Pass Fire and Rescue agency and work together to develop a mutually acceptable plan for mitigating the previously stated concerns. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior to any Final DEIS or ROD. Under the guise of addressing the potential of global warming, this proposal fails to adequately address another element of global warming – that of added fire risk. In fact, this plan exacerbates that fire risk. My questions related to this topic are as follows:

a. Given that the SDEIS identifies damage to the natural environment will be caused by the proposed action, what responsibility will those who approve and execute on this plan have for those ongoing damages?

b. If there is a significant wildfire in the area that it exacerbated by a KDRPP-FPP draw down and cannot be adequately battled due to the unavailability of Kachess water for firefighting, who will be responsible for the damage and certain public outrage to follow?

c. If, as a result of a KDRPP draw down, trees die on my property or on the property of the homeowners association to which I belong, who will pay for the cost of removal of those dead trees?

9. Change in scope. The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicates a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been superseded by new policy. The
SDEIS continues to show substantial impact with long term and irreversible damage. My questions related to this topic are as follows:

a. Summarize the negative impacts of KDRPP which led to the position in the DEIS that the “KDRPP and KKC projects must be considered as a single action and cannot be separated.”
b. Summarize what the specific factors were which caused the change in direction in the SDEIS to now allow for only the KDRPP-FPP to be the proposed action without the inclusion of the KKC refill mechanism.
c. Please cite within what regulation or rules of operation the BofR is permitted to now issues a SDEIS which appears to be a complete departure from a foundational issue identified within the PDEIS and DEIS.
d. Please provide comparative hydrology that clarifies how and why the KDRPP-FPP can now stand alone as a solo project without the KKC refill mechanism. In other words, why was KKC required in 2012 and 2015 but now it’s perfectly acceptable and “proposed” to proceed without KKC, beyond the fact that KKC appears to be far too expensive for the minimal refill water it can produce. The fact the KKC appears to be a failure does not automatically mean that KDRPP-FPP can stand on its own.

10. Refill timing
How long the lake will take to refill is paramount to my concerns about the proposed action. While it may be difficult to precisely predict the refill timing after a KDRPP-FPP draw down, the variations between the DEIS and the SDEIS raise questions as to the accuracy of the hydrology in both reports. The DEIS stated that without the KKC, Lake Kachess would likely not refill for 20 years. Now the SDEIS as much as throws out the KKC and states that after a KDRPP drowndown, Lake Kachess will take two to five years for refill without the benefit of KKC water (although a chart within the SDEIS shows a maximum of eight years to refill vs. five). My questions related to this topic are as follows:

a. Please provide the detailed hydrology that the 2015 DEIS was based on that purposed that the KKC was required as a refill mechanism without which Lake Kachess would like not refill for 20 years.
b. Please explain in detail what changed between 2015 and 2018 that now allows a refill prediction of 2-8 years when the 2015 prediction was 20 years or more.
c. Which report should be relied on? 2015 KKC is required as a part of KDRPP, or 2018 KDRPP doesn’t need KKC and will refill 2-4 times faster than previously predicted?
d. How can the public be expected to make informed comments with such seemingly inconsistent hydrology predictions? Can either report be relied upon?

11. Funding ambiguity requires another SDEIS
The SDEIS states the Bureau of Reclamation will “fund...some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens...as well as Roza farmers...of their likely obligations for financial support of the KDRPP-FPP. At both the Cle Elum and Ellensburg meetings, I was told firmly and directly by BofR staff that “this project will NOT happen unless Roza pays for it.” I was also told that “Roza will pay the costs of all mitigation required.” These statements appears to misrepresent the content of the SDEIS that does not put forward any specifics on how the project will be funded or by whom. Had I relied on that verbal representation, my comments would be based on misinformation being perpetrated, whether intentionally or not, by BofR staff. My questions related to this topic are as follows:

a. Given that the SDEIS does not identify any specific funding source, why are BofR staff making affirmative verbal statements that Roza will pay 100% of the cost of the project.
b. Has the Roza board made any formal commitment to fund the project.
c. When will the ultimate source of funding be determined and by whom?
d. If public funds are utilized to benefit a handful of private businesses in a singular water district, will that district be required to repay those funds?
e. If public funds are used for the project, will the public be offered another comment period or another process by which voters can express if they approve of spending half a billion dollars on a water project that benefits only a select group of private interests?
f. How can the public be expected to adequately comment on the SDEIS without knowledge of whether or not public funds will be utilized. This should be among the topics of an addition
SDEIS, with an appropriate comment period, so that Washington citizens can determine whether or not they want to spend a half a billion dollars to enhance the profits of a few private businesses.

12. **Execution ambiguity** The SDEIS states that it is possible that Roza Irrigation District may be authorized to “fund, design, construct, operate, and maintain some or all of the Proposed Action.” This is another important detail that cannot be pushed to some future, unknown time. In order to provide informed comments, the public needs to understand WHO will be designing, constructing, operating and maintaining such a complicated, untested, dangerous project and what the expertise is of that entity. My questions related to this topic are as follows:
   a. What specific expertise does Roza Irrigation District have that qualifies it to design such a project?
   b. What specific expertise does Roza Irrigation District have that qualifies it to construct such a project?
   c. What specific expertise does Roza Irrigation District have that qualifies it to operate such a project?
   d. What specific expertise does Roza Irrigation District have that qualifies it to maintain such a project?
   e. Specifically, what means will be used to oversee the efforts of the Roza Irrigation district in each of these regards?
   f. Who will fund that cost of such oversight?

13. **Untested engineering?** Page ES-v states “Initially a design for a floating pumping plant….was rejected as a feasible alternative because it was determined at that time that a floating pumping plant could not accommodate the large pumps, motors, power demands, and pipeline sizes needed for the KDRPP capacity requirements.” It would appear from this comment that this may be the first floating pumping plant of its size in existence. It also suggests a significant shift in the understanding of the engineering abilities required for this project to operate successfully. My questions related to this topic are as follows:
   a. Are there any similar floating pumping plants currently in operation in the United States?
      1. If so, are they functioning as intended?
   b. Is KDRPP a “guinnea pig” for floating pump projects?
   c. Specifically, what research, reports, investigation, etc. was assembled that led to this dramatic shift in direction?
   d. What would say the likelihood is that the KDRPP-FPP would succeed from an engineering standpoint? Can this thing actually be built and will it float and work as intended?
   e. How can the public be expected to adequately comment on what appears to be un-proven engineering. It’s one thing to go along with spending a half a billion dollars on a project that is assured of success and quite a different thing to support a half a billion dollars on an unproven technology.

14. **Objectivity vs “Suggestion”** Executive Summary, page ES-v The SDEIS asserts the presence of a “value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a “suggestion”, brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. My questions related to this topic are as follows:
   a. Please provide full descriptions of the “suggestions,” including the methods, data, and conclusions.
   b. Please explain what additional engineering evaluation was conducted in conjunction with the SDEIS that led to the KDRPP-FPP shifting from being “rejected” in 2015 to being “Proposed” in 2018.

15. **Use beyond currently intended/stated purpose.** It is difficult to believe that, once a half a billion dollars are spent (by someone, yet to be determined) on the KDRPP-FPP, that it will sit idle and only
be used as stated in the SDEIS. Page ES-x states “they (Roza) need to improve water supply and reduce prorationing whenever feasible.” My questions related to this subject are as follows:

a. What, specifically, are the criteria that determine the meaning of “whenever feasible”? 

b. What assurances does the public have that use of the KDRPP-FPP pumps will be limited to only years with proratable water below 70%? 

c. If the plant is paid for and operated by Roza, will Roza make the decisions on when to operate the pumps? 

16. Impact on private wells. My home is served by a public “group A” water system located a few hundred feet from the Lake Kachess shoreline with senior water rights dating back to Pre-May 10, 1905. This water system serves water to 162 homes in our community, to our fire hydrants and for fire-fighting. Our community provided comments to the DEIS which included a request for specifics regarding mitigation in the probable event that our well goes dry due to a draw down and subsequent refill period. The SDEIS states clearly that wells in the area are in danger of being “de-watered”. In the 2.5 years since the DEIS, the best the SDEIS can offer in regards to drying up private wells is to “monitor and mitigate” without any specificity as to how a dried up well can be mitigated. My questions related to this topic are as follows:

a. By what right does any entity, whether BoFR, Roza or any other “participating entity” usurp the senior water rights of 162 homeowners (plus others in other communities around Lake Kachess) and take an action that they know will dry up senior water rights wells. Please state specifically what gives the BoFR, Roza or any other entity the right to usurp senior water rights. 

b. How can I, or my neighbors, make informed comments on this SDEIS when have no idea what “monitor and mitigate” might mean? 

c. Why does the SDEIS not provide or even discuss any funding for well-dewatering mitigation? 

d. Who will pay for mitigation? 

e. Please provide a detailed action plan for well-dewatering mitigation in a supplemental SDEIS with appropriate comment period. 

17. Volitional Bull Trout Passage Improvements. From ES-xi, “Volitional Bull Trout Passage Improvements are proposed as a part of the KDRPP…” This statement and others give the impression that the proposed action will improve passage for Bull Trout and perhaps even “enhance” the bull trout population. This is an inaccurate depiction of what will certainly be a significant negative impact on the Lake Kachess bull trout population. 

The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage. 

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump…and therefore the channel…will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective. No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).
Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

We ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under the proposed alternative and all the active alternatives? What fraction of loss is allowable under law and the EPA? How will the active alternatives and the proposed alternative meet these legal requirements?

18. USFWS Biological Opinion It is known that the USFWS is conducting a Biological Opinion on the existing Yakima watershed with respect to the current operation of existing dams and irrigation districts. That BiOp is not expected to be published until sometime in the fall of 2018. We request that another SDEIS be produced after said BiOp is published as it could impact the entire watershed including the necessity for the projects named in the current SDEIS for Kachess. My questions related to this topic are as follows:
   a. Why was the SDEIS prepared and released PRIOR to the USFWS Biological Opinion?
   b. If a true understanding of the impacts of the proposed plan was the intended purpose, would it not have been prudent to wait for the biological opinion of the current system before a true understanding of the impacts of the proposed action can be evaluated?

19. Geology & Stability The existing dam at Lake Kachess is an earthen structure. As such, I have concerns about the stability of that structure due to the added stress on the system caused by long periods of drawdown and refill. Additionally, the SDEIS discusses the steep terrain under the current water line in some areas and suggests that landslides may occur. My questions related to these topics are as follows:
   a. What studies have been done to determine what impact years of low water and drying of the earthen dam will have on its structural integrity.
   b. What topography is available of Lake Kachess below the current low water line?
   c. What studies have been done to determine areas within the lake that are most susceptible to landslides?
   d. How will these potential landslides be mitigated and what impact will they have on the operations of the KDRPP?

20. Accurate view of exposed shoreline Chapter 2, Section 2.10 Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS (Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other
techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.

21. “Wants” are misrepresented as “needs” Page ES-x of the SDEIS states “Roza and the Proratable Entities’ purpose for the action is to access up to 200,000 acre-feet of water from Kachess Reservoir during drought years, as they NEED to improve water supply and reduce prorationing. Farmers in the Roza water district (and other proratable entities should any others decide to participate in the plan) purchased their land knowing full well that it came with only proratable water rights, and that would mean that there would be drought years where they would receive far less water. The price they paid for these lands reflected this water-constrained condition. These same farmers opted to plant crops such as wine grapes and tree fruit, where the financial impact of a drought year is far greater than it would be on annual crops such as vegetables. These are all business decisions made by these farmers with full knowledge of the water limitations in place. Now they want public policy to be amended to better fit with their own business decisions and enhance their profitability without placing any additional restrictions or requirements on them to conserve water or plant crops appropriate in a proratable district.
   a. If implemented would the KDRPP ROD also place any restrictions on farmers in the Roza Irrigation district to stop them from planting thirstier crops?
   b. If implemented would the KDRPP ROD place any restrictions on the trend of replacing annual crops with long term crops such as tree fruit and wine grapes?
   c. If implemented would the KDRPP ROD place any requirements for the repair of the 60+ miles of open, earthen irrigation distribution trenches?
   d. If implemented would the KDRPP ROD place any requirements on farmers for improved water conservation?

22. Misrepresentation of Lake Kachess Kachess Reservoir includes only the top 239,000 acre feet which is currently managed by the BoR and available for downstream users under the existing system. This SDEIS has NOTHING to do with the Kachess Reservoir. It has everything to do with withdrawing a significant amount of water from Lake Kachess, a naturally formed lake. Throughout the SDEIS words such as Kachess Reservoir, Dead Storage, Inactive Pool and the like blatantly misrepresent the intention and potential impacts of the Proposed Action. I demand that all future reports and communications accurately describe this project as an attempt to withdraw 200,000 acre feet of water from Lake Kachess as this is a more factual and less confusing depiction of the project.

23. Impacts on private property The SDEIS consistently under-represents the impact on private residences and property owners. Page 3-155 refers to “several private parcels and homes or cabins” that will be affected, but a better description would be “a substantial numbers of private residences...etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA has 70 homesites, Kachess Ridge has 80 homesites, and East Kachess Ride another 20-30, plus numerous unaffiliated residences in the area. This easily number 300 homesites, far more than would be inferred from the term “several.” Please provide:
   a. An accurate description, in numerical terms, of individuals and homesites affected by the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private residences within 5.0 miles of the shoreline

BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn’t notice the lake had disappeared. The only ones who would be adversely affected would be those people with a
view…but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts…” The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. We demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.

24. **Negative financial impacts to Kittitas County** The implications of negative impact on private property values go beyond the directly affected citizens. A reduction in property values affects the tax base of the county, including schools and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “while effects on property values would most directly affect property owners, the wider community would also experience effects.” In other words, private property owners, fire departments, schools, city and county governments, and others would also be negatively impacted.

25. **Lawsuits and/or other impacts caused by usurping senior water rights** A KDRPP draw down has the probability of resulting in the existing 239,000 acre-ft of water NOT being available in subsequent years for those holding senior water rights.
   a. How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam?
   b. Who will pay to provide senior water rights holders with the water they have a right to?
   c. How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property?
   d. Who will pay to defend the lawsuits that are likely to result from proratable water rights usurping senior rights holders?
   e. Whether or not public funds are used to fund the project, public funds and a public process is being used to put forward the Proposed Action – how can citizens of Washington State expect state agencies NOT to be named in those resulting suits?
   f. We request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments.
I was told verbally by BofR staff at the Cle Elum meeting and told by a lawyer representing the Roza Irrigation District that, if necessary, Roza would forgo ALL Kachess water in order that senior water rights holders receive their water after a draw down.

- Given that the SDEIS’s own data shows a refill period of up to 8 years, what assurances do senior water rights holders have that, even if Roza accepts zero water in a post draw-down year that the water they have a legal right to will exist and be available for them?
- How does a plan that could potentially result in Roza farmers receiving ZERO water in a given year or years in favor of senior water rights holders benefit Roza farmers when compared to the existing proratable system?
- Are Roza farmers aware that this plan may result in years when they receive ZERO Kachess water? Without this knowledge or understanding, how can Roza farmers be expected to make informed comments on the Proposed Action. This VITAL information should be clearly stated in an additional SDEIS and Roza farmers and others provided an opportunity to comment given this important information.

**26. Water Conservation and Market Reallocation**

Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.

**27. Noise**

Only the Proposed Alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA.

- What is the expected noise level in dBA at 100 feet from the pumps?
- At 1000 feet?
- Will the pumps be running 24/7 once they start running?
- What additional action will be taken if the pump operations exceed the maximum permissible environmental noise of 55dBA?
- How does the noise produced by Alternative 4 compare to the noise produced in alternatives 2 or 3?

**28. Permanent Habitat Loss**

P2-71 notes permanent habitat loss with the preferred alternative. Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species.

**29. Decreased Recreation Desirability**

P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ”. Quantify the economic impact of the decreased recreation desirability. Under what authority are established SIL/VOQ permitted to be violated?

**30. Water Impairment**

P3-29, 3-45: both Keechelus and Kachess are listed as “category 5” water impairment because of PCB contamination. In the 2015 DEIS, only Keechelus was noted to have PCB contamination.

- Please release the report which also indicates that Kachess has a similar contamination.
- Would dredging and construction activities not stir up sediment containing PCBs?
- What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

**31. Lake Drainage during construction**

The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). How can this be accomplished minus the pumping plant? Please:

- Describe the mechanics of draining the lake to allow construction.
- What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season?
- What is the effect on the Easton reach of the Yakima river spawning?
32. The taking of a vital public resource to benefit only a few private businesses. Fresh water is quickly becoming one of the most vital and valuable resources on the planet. Allowing this vital public resource to be commandeered to serve, support and enhance the profits of a limited number of private businesses, businesses who had full knowledge of their lands water constraints, is wrong. The BofR and the Department of Ecology, and our elected officials should be looking for ways to preserve and protect this limited natural resource rather than pushing forward an unproven, un-financially justified plan that could destroy the source of this life-giving water. The tens of millions of dollars of public funds that have already been used to push this project ahead is wrong and not in the interest of the public good.

Because both the NEPA and SEPA process must be followed, I request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us me copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

Christine Johnson

Christine Johnson
40 Mountain View Lane
Easton, WA 98925
(NO MAIL DELIVERY AT THIS ADDRESS)

MAILING ADDRESS
Christine Johnson
c/o Raymond Johnson
27810 217th Avenue SE
Maple Valley, WA 98038
[EXTERNAL] 2018 SDEIS comments
1 message

Jerry Watts <jerrygwatts@gmail.com>  Tue, Jul 10, 2018 at 8:17 AM
To: kkbt@usbr.gov
Cc: Jerry Watts <jerrygwatts@gmail.com>

Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus DEIS

Dear Ms. McKinley:

I am submitting these comments to the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) 2018 Supplemental Draft Environmental Impact Statement (SDEIS) released on April 13th, 2018. All comments are submitted under both NEPA and SEPA.

Comments

1) Alternative 1 No Action We oppose all active alternatives of the KDRPP and KKC projects. Only

Alternative 1, “No Action” is acceptable.

2) The Yakima Plan programmatic FEIS failed to provide a range of alternatives—just the Yakima Basin
3) **Failure to comply with NEPA requirement for consideration of alternatives.** The National Environmental Protection Act (NEPA) requires consideration of a reasonable range of alternatives that can accomplish the purpose of the proposed action [40 CFR 1508.18]. Consideration of “reasonable alternatives” means all state-of-the-art alternatives must be rigorously explored and properly evaluated, as well as those other alternatives which are eliminated from detailed study with a brief discussion of the reasons for eliminating them [Section 1502.14]. Of particular concern with regard to the KDRPP-KKC SDEIS, and its predecessor the KDRPP-KKC DEIS, the alternatives must not be slanted to favor the interests of a particular party.

The stated purpose of the DEIS was to “provide more reliable and sustainable water resources for the health of the riverine environmental and for agricultural, municipal, and domestic needs. (Page ES-I, January 2015). The 2018 Supplemental EIS failed to offer a stated purpose and one must presume the 2015 DEIS statement of purpose applies to the 2018 document.

The 2015 DEIS and the 2018 SDEIS fail to meet the explicit NEPA requirement of considering a reasonable range of alternatives that can accomplish the purpose of the proposed action. The 2015 DEIS considered only two alternatives: the Kachess Drought Relief Pumping Plant (KDRPP) with two locations, and the Keechelus-to-Kachess Conveyance (KKC) with two locations. In fact, the DEIS stated these should all be considered part of a single action because they could not be separated. (That is, Lake Kachess could not be drained without a refill mechanism from Lake Keechelus.) In reality, therefore, only one action alternative was considered (pumping plant plus conveyance) vs. no action in the 2015 DEIS.

The 2018 SDEIS continued and compounded this failure. A conveyance tunnel with two locations was considered, and a pumping plant with three locations. While the SDEIS goes to great contortions to try to make these appear to be several different alternatives, they are in fact one alternative…extracting water from a natural lake to benefit downstream special interests.

Compliance with NEPA would require consideration of true alternatives to accomplish the stated purpose of providing more reliable and sustainable water resources. Any reasonable list of alternatives would include serious consideration of water conservation methods, water market strategies, crop mix management (e.g., fallowing), use of technology (ditch lining, micro-irrigation systems, electronic monitoring systems, increased security from water theft), and advanced technology (underground drip systems). In fact, subsequent analysis of YBIP by the Water Research Center of Washington State University has shown that the purpose of YBIP can be achieved at lower cost and with greater effect (i.e., greater net increase in available water) by application of conservation and water market strategies.

We have previously noted this deficiency in the 2015 DEIS, and repeat it for the 2018 SDEIS. Both the DEIS and the SDEIS fail to comply with the NEPA requirement of considering all reasonable alternatives to achieve the stated purpose. In fact, this fatal flaw originates from the
Programmatic EIS released in 2012, which failed to consider all reasonable alternatives and entrenched the problem which was carried forward in the 2015 DEIS and 2018 SDEIS. The 2012 Programmatic Yakima Plan EIS not only failed to consider a range of alternatives, as required by NEPA, it failed to follow federal Program Principals and Guidelines (PPG) in accurately assigning costs and benefits to the arbitrarily narrow list of alternatives. All subsequent NEPA processes and documents have therefore been legally inadequate and the SDEIS cannot be "tiered" to an inadequate PEIS. The only way to rectify this problem is to return to the original Programmatic Yakima Plan EIS and do it correctly. We ask that the NEPA legal requirements be met by re-issuing a NEPA compliant Programmatic EIS, follow that with a NEPA compliant Draft EIS, and proceed in a manner that considers a range of alternatives to the YBIP’s stated purpose.

We ask that water conservation methods, water market strategies, state-of-the-art water management technologies, and crop management strategies be considered separately and in combination to achieve the purpose(s) of YBIP, and, as alternatives to the proposed Kachess Lake pumping plant. It is clear the PEIS, DEIS and SDEIS have been prepared (in violation of NEPA guidance) “slanted to the interest of special interest groups”. We ask, as required in the NEPA process, that all alternatives not considered be listed and a full explanation be given... including data, references, and review procedures...for excluding each alternative.

The process that generated the DEIS and SDEIS of record cannot be relied upon to produce a NEPA compliant document that objectively represents all reasonable alternatives, and we therefore request that an independent, non-biased, non-government, academic entity be engaged to conduct these analyses.

4) **Involve all affected native tribes**  The SDEIS notes the Yakama Nation has historical ties to the Lake Kachess area, and documents historical and cultural heritage connections. The Snoqualmie Tribe also has roots in the Lake Kachess area, and artifacts from that federally recognized tribe have been found along the shoreline of Lake Kachess. How will the Snoqualmie Tribe’s historical and cultural standing be recognized in regard to this project, and they be brought into the discussion? How will the Snoqualmie Tribe be contacted, the potential impact of this project on their culture be explained, and will they be given an opportunity to provide comment prior to a Final DEIS and/or ROD? Also please describe what happens with Native American artifacts unearthed during construction or following activation of pumps and draining to / below the natural lake level.

5) **Impact on Campers at Lake Kachess**  The impact on 23,000 annual visitors and 11,000 annual boaters at USFS Lake Kachess Campground will be devastating. Page 2-6 indicates the lake could be drawn down 80 feet “as early as June in severe drought years.” [NOTE: The campground typically opens on Memorial Day Weekend...June 1st.] In other words, the campground would not open, possibly for a number of years. To date there has been no effort at communicating with the individuals, families, and organizations that use this campground, some with decades of continuous annual use. The possibility of drastically reduced access to this treasured...
recreational facility has never been communicated to its users, let alone the possibility that it would close and not re-open for a year or more. As noted below with respect to ES-xii, we noted the inadequacy of a post hoc communication strategy to inform recreational users of the impact of KDRPP-FPP. The impact on USFS Lake Kachess Campground is but one, but a very important example of the need for a different and better approach. How will the past users of USFS Lake Kachess Campground be contacted and informed of the potential impact on Lake Kachess, and will they be provided an opportunity for public comment? It is clear the current SDEIS has failed to accomplish this essential public information obligation, and that a subsequent SDEIS and full public disclosure are needed to correct this failure. Please provide a written plan as to how the past campground users will be contacted and the timeline for this process.

6) **Objectivity vs “Suggestion”** _Executive Summary, page ES-v_ The SDEIS asserts the presence of a

“value analysis study that suggested the feasibility of a floating pumping plant”. The assertion that a redirection of the previous DEIS, leading to a comprehensive shift in emphasis and removal of conveyance as practical options, would be driven by a “suggestion”, brings into question the objectivity and rigor of either previous or subsequent, or both, analytic methodologies. Please provide full descriptions of the “suggestions,” including the methods, data, and conclusions implied by the inadequate and confusing term “suggestions.”

7) **Funding ambiguity requires another SDEIS** _Page ES-viii_ The SDEIS states the Bureau of Reclamation will “fund…some or all, or authorize Roza to fund” the KDRPP-FPP. This statement inadequately informs Washington citizens…as well as Roza farmers…of their likely obligations for financial support of the KDRPP-FP. Please provide the legal, legislative, and/or other basis for stating Bureau of Reclamation will fund some or all of the project, the conditions under which that funding would occur, the criteria for obligating Washington citizens to finance this project, how “all or some” will be determined, and by whom, and the time frame for securing financing. The issue is further confused in the same page which states the Record of Decision (ROD) will determine which entity (BoR, Dept. Ecol., Roza, etc.) will be responsible for what action (fund, design, construct, operate, etc.). These are not “details” to be clarified at a later time, but substantively important facts that citizens must know in order to provide informed comment. Please provide all the information that is promised for a future ROD, but in a subsequent SDEIS that will be made available to citizens with an appropriate comment period.

8) **Change in Scope** _Page ES-viii_ The SDEIS states that the KDRPP-FPP is the “proposed action” and BoR/Dept. Ecology have not identified a “preferred alternative.” This represents a major departure from the previous DEIS, which indicate a KKC conveyance project and a KDRPP project must be considered as a “single action and cannot be separated.” The logic of that position was that emptying Lake Kachess in an artificial and unprecedented manner, would require a refill mechanism (e.g., KKC). Apparently that logic was incorrect and has been
superseded by new policy. The SDEIS continues to show substantial impact with long term and irreversible damage. Please summarize the negative impacts of KDRPP known in 2012, any differences (positive or negative) in impacts based upon the SDEIS, and explain why the differences are “acceptable” in 2018. This explanation should also serve to inform citizens as to why no “preferred alternative” is provided. This explanation is critical to citizens understanding of the project and their potential financial obligations. It appears, under the meaning of the law, this action essentially removes KKC options, and thereby changes the scope of the original Programmatic DEIS to a different Program. BoR must explain how this change in scope of the program can be accomplished within a no-longer-accurate description of the PDEIS.

9) **Impact on private wells**  Page ES-xi  The negative impact of lowering the water level of Lake Kachess on private wells (ES-xi) is documented, with the conclusion that significant numbers of wells will be “dewatered.” It is unacceptable to tell citizens that their water supply will likely disappear, and then offer a remedy of “monitor and mitigate.” Well failures (“dewatering”) will likely occur in October/November when Lake Kachess is at its lowest level, this is also shortly before snow arrives and access to homesites becomes difficult. The possibility of losing water at this time, without an in-place action plan for making homeowners whole, is unacceptable. A comprehensive strategy composed of proven techniques that can be implemented immediately upon need is required prior to a Final DEIS and/or ROD. We ask that this comprehensive strategy, its details, costs, and operational features, be described in detail, and citizens be provided with this information along with an appropriate comment period, prior to issuing a FDEIS or ROD.

Some property owners on the east side of Lake Kachess have senior water rights for their wells. According to the SDEIS, these wells will run dry if the lake is pumped down. How is it possible that prorated junior water rights holders of the Roza irrigation district can dewater those Kachess wells which have senior water rights? State specific statutes and other justifications. Also, there is no money for mitigation for the loss of well water. What is the process for getting a well drilled deeper, and what is the timeline for getting a well repaired which has run dry?

The hydrology data in the SDEIS does not describe effects on the aquifer below the lake and into the town of Easton. How will draining the lake affect wells downstream of the lake? By what criteria, will these effects be calculated.

10) **Lack of communication to the affected public**  Page ES-xiii  The DEIS states the project will implement a “public communication strategy” to inform recreationists and others of the impacts of the proposed action(s) on USFS campgrounds, fishing, boating, hiking and other activities, and to mitigate the impact. Given that a single USFS campground (Lake Kachess Campground) registers 23,000 people and 11,000 boat launches annually, it should be obvious that this communication strategy should be pro-active, and communicated now, not at an unknown time in the future. Citizens must be informed prior to experiencing impact, in order to
understand the potential impact on individuals and families, and to participate meaningfully in the deliberative process. Given the SDEIS documentation of negative impact on recreational activity, and the acknowledgement most affected individuals come from the Seattle area, it is clear NEPA/SEPA process represented by the SDEIS has failed to involve and inform affected citizens and organizations as required by law. Please develop, describe, distribute for comment, and implement a “public communications strategy” immediately, to reach the thousands of affected parties who have not been recognized or adequately served by the SDEIS. This strategy should include mass communications, well-publicized meetings, and other techniques throughout the Seattle and Puget Sound area.

11) Misrepresentation of Lake Kachess  Chapter 1, Section 1.2  The SDEIS indicates Kachess Reservoir was constructed over a naturally occurring glacial lake…[joining]…Big Kachess Lake and Little Kachess Lake. These two lakes, acknowledged to be lakes in the SDEIS, represent the entirety of all KDRPP options, including the proposed action KDRPP-FPP. Thus, every drop of water to be pumped by the KDRPP will come from Big Kachess Lake. It is a misrepresentation, no doubt intentional, to assert this project involves Kachess Reservoir. The KDRPP has nothing to do with the reservoir (stated in page 1-1 to be the water over the natural lake) and exclusively affects the natural lake, Big Kachess Lake. This attempt to misrepresent a natural, glacial-created lake as a reservoir has only one purpose, to mislead and confuse the public. We ask that all representations of this project be corrected, and that inaccurate and confusing euphemisms such as “dead storage” and “inactive pool” be eliminated. The correct term should be either “Lake Kachess” or “Big Kachess Lake”. There is a Kachess Reservoir, the approximately 65 ft. of water currently managed by BoR. Below that is the natural Lake Kachess, and it is this body of water that is exclusively the target of, and impacted by, KDRPP. KDRPP has nothing to do with Kachess Reservoir. We ask that this confusion and misrepresentation stop, and accurate terminology be used that informs rather than confuses the public. This requires modification of language used in the SDEIS and all public communications, including correction of schematics such as Page 1-7.

12) Who will be responsible for costs, implementation and operation?  Chapter 1, Table 1-11 on page

This SDEIS Table indicates roles and responsibilities of participating entities. Roza Irrigation District will (according to Table 1-1) “Fund, design, construct, operate…etc.…the selected alternative.” This can only refer to the KDRPP-FPP. This statement of financial obligation also appears on Page 1-17. Unfortunately, there is confusion in the public’s mind, largely due to conflicting public comments by Roza representatives and BoR representatives. It is imperative that this confusion be removed before any Final DEIS and/or ROD be issued. We ask, therefore, that a complete and unambiguous statement of financial obligation of KDRPP-FPP be issued. The statement should make clear that 100% of the costs of implementing KDRPP-FPP, including all mitigation, litigation, and other assigned costs, will be borne by Roza Irrigation District or if not Roza, then by which entity/entities.

13) Teanaway Community Forest  Chapter 1, Section 1.8.2 on Page 1-18  The terms and conditions of the purchase of the Teanaway Property (TCF) is misrepresented with regard to its relationship to KDRPP-FPP and does so in a way that introduces extreme bias in favor of the project proponents. Page 1-18 indicates 214,000 acre-feet of additional water supply must be
in place by 2025, and if not the Board of Natural Resources is authorized to transfer the TCF to the common school trust and manage it for the beneficiaries of the trust.

The proponents of KDRPP-FPP make public representations that this means, unless their project is implemented, the TCF will be sold, clear-cut for timber revenue, and the property lost forever for recreation purposes. Simply stated, that is not true. The terms of the TCF do not require the property be reverted to the educational trust; that is only one alternative provided among many. (See RCW 90.38.130 Authorization to purchase land--management and disposal of land) Other options include continued management of the property for recreation, maintaining wildlife habitat, implementing conservation projects, and other beneficial purposes.

In fact, the only obligation is that a report be submitted indicating what progress has been achieved toward the milestone and requiring submission of a new plan if the milestone is not achieved. This can continue until the year 2045. It further states the milestone can be achieved through any of a combination of methods: conservation, improved management techniques, water marketing strategies, storage, and others. In fact, the report is required to state how much “net increase in available water” (the correct term, not “additional water supply” as stated in the SDEIS which implies all milestone water must be from storage). To date, the SDEIS claims 124,131 acre-feet of net increase in water due to conservation, and in the past has claimed as much as 300,000 acre-feet in future conservation savings. This would more than fulfill the 214,000 acre-feet milestone, were the planned conservation projects fully implemented.

Finally, if the very unlikely possibility of a reversion to trust fund management and clearcutting is selectively highlighted in the SDEIS, then the far more likely alternatives should be given equal space. After a decade of public recreation use, with untold thousands of new citizen-recreationists advocating for the Teanaway as a new resource, and an army of volunteer citizens and organizations upgrading the Teanaway, the public backlash against clearcutting would be overwhelming. With its misrepresentation of the Teanaway Purchase, the SDEIS has veered into a political speculation that is both inappropriate and inaccurate. However, given that SDEIS has now opened the door, in a subsequent SDEIS it must clarify, correct, and accurately inform the public of what is, and is not, required and implied by the Teanaway Purchase. We ask that this be done not only in a future SDEIS, but in all communication about the relationship between Teanaway and KDRPP-FPP, or any other element of YBIP. In addition, we asked that a notification of clarification be immediately issued stating that based on current and future water conservation savings, it is anticipated that the obligations under RCW 90.38.130 will be met with no additional water needed from the YBIP projects.

14) **Accurate Cost Estimate Chapter 2, Sections 2.7** The statement of budget (Page 2-59) for KDRPP-FPP is incomplete and under-valued. The “estimated costs” for Alternatives 2, 3, and 4 are shown, but since Alternative 4 is the “proposed option” it will be the focus of this comment (however these comments apply equally to the other alternatives). An “estimate” that has a variance of -30% to +50% is difficult to interpret, as in the case of the $282,000,000 estimate for KDRPP-FPP. Because the estimate is not a measure of central tendency (i.e., neither mean, median, or mode) it appears to be affected by non-measurement bias. Given the uncertainty surrounding the estimate, it would be far preferable to show the actual estimates in numerical terms; e.g.
as opposed to showing a single estimate of 282,000,000, without assigning a probability for variance ranges. That is, without knowing the likelihood of a “low” or “high” correction, each will be assumed to have equal probability, but clearly, they have different implications in terms of outcome. Under those circumstances, each estimate must be assumed to have an equal probability, and the actual numbers become more important. That would, or at least should, cause the SDEIS to state numerical estimates in each of the three (low, presented, high) estimates.

Taking that approach and understanding that taxpayers and farmers will be primarily concerned with their maximum obligation (especially in view of the fact that each option seems to be approximately equally likely), SDEIS should show KDRPP-FPP the high budget estimate. Readers can decide which one is the most likely and relevant to them. Following the approach of most readers, the KDRPP-FPP budget should present a $423,000,000 base. In all cases, the mitigation costs must be included. For some reason the required Bull Trout Volitional Passage is stated in the text (Page 2-60) to cost $23,000,000 (preliminary estimate) but is not included. That would bring the cost to $444,000,000. This does not include the large mitigation costs of private well failure mitigation, campground restoration and mitigation, negative impact on private property values, fire risk hazard increase, fire suppression cost increase, and many others mentioned in the SDEIS but not budgeted, and/or raised by citizens but ignored. It is likely the public should anticipate a financial obligation of closer to $500,000,000 than $282,000,000 for the KDRPP-FPP.

In summary, the budget presentation is inadequate, misleading, incomplete, and systematically biased to undervaluation. We request that all budget materials be revised to provide numerical values for all estimates and high/low ranges, that all mitigation costs be calculated and included in the budget, and that this be presented in a subsequent SDEIS that will allow people to review and comment before a Final DEIS and/or ROD is released.

15) **Accurate view of exposed shoreline Chapter 2, Section 2.10** Regarding depiction of Lake Kachess after drawdown of 80 ft. The SDEIS (Page 2-66) indicates the 80 ft. drawdown will expose 628 acres of shoreline. In no place is this accurately depicted. What profiles are shown continue to show water in the areas that would become mud or silt. An “imposed line” on the water conceals the true impact of 628 acres of exposure. We ask that an accurately scaled map be provided that depicts exposed shoreline in an accurate fashion, neither as “thatched”, “outlined water” or other techniques, but as mud or silt consistent with aerial pictures. An additional note; residents know the current drawdown exposes several large islands, and the drawdown will expand and increase the number of such exposures. It is inaccurate and deceptive to portray the drawdown without the exposure of the mud and silt islands. Please correct this misrepresentation.
16) **Bull Trout Chapter 2, Section 2.10 and elsewhere in the SDEIS** The Bull Trout Volitional Passage project is described on Page 2-67, Table 2.9. The “steep slope conditions” between Big Kachess Lake and Little Kachess Lake will occur when the water level is approximately 2,208 elevation and the pumping operation begins. These “steep slope” conditions will occur an additional 6,225 days if KDRPP-FPP is installed, this will mean 34 additional years (out of 90 modeled), and an average of 183 days a year, when Bull Trout Passage will be completely dependent on the Volitional Passage.

In some years (e.g., conditions such as occurred between 2001 – 2008) the pump...and therefore the channel...will be in continuous operation. Eight years of steep slope conditions, requiring 8 years of Bull Trout dependence on the volitional passage, represents 2-3 spawning cycles. **In other words, the entire population of Lake Kachess Bull Trout will be destroyed if the volitional passage is not effective.** No evidence is provided that the volitional passage is effective, has been demonstrated in other Bull Trout population support activities, has completed a “proof of concept” test, or is in any way assured to be successful to preventing destruction of the Lake Kachess Bull Trout population. Also, because the volitional passage is not included in the budget costs, it cannot be assumed to be part of the project going forward. Another concern is the lack of water flowing into tributaries of Little Kachess Lake, which will be the water needed to charge the volitional passage. The SDEIS states the tributary water disappears at the end of the year...when the water will be needed in the passage. There is no description of the length of the passage (the length and Southern outlet are never described in text, numeric, or schematic terms).

Finally, the Bull Trout find their way to spawning tributary by a complex but not-well-understood physiology of chemo and geo receptors. This returns them to the spawning tributary, and eventually spawning bed, where they started life. Creating a volitional passage means the Bull Trout will have to find an artificial tributary that did not exist when they were young and locate it several miles from where the “narrows” and “steep shelf” originated their life cycle.

For all of these reasons, the public demands more than a “conceptual design” of the volitional passage. This mitigation must be described in ways that make sure sufficient water will be available to charge the passage, the length, slope, and other characteristics of the passage will not deter Bull Trout passage, the returning redds will be able to find the entry point of the volitional passage, and the passageway to Box Creek will be maintained. The current plastic and straw bale approach is inadequate and has led to further declines of the population.

We ask that the volitional passage design and operation be updated to address all of these concerns, and that the revised design be available to citizens for review and comment in a subsequent SDEIS, prior to any Final DEIS or ROD.

Also, the Bull Trout Enhancement plan seems to allow killing the population in Kachess (dredging a channel between big and little Kachess but ignoring the side stream Box Creek where the trout actually are) but mitigating with improved populations elsewhere. P1-13 notes “While bull trout enhancement was included in the DEIS, specific BTE projects are not included in the Proposed Action, therefore not carried forward as part of this SDEIS.” What fraction of...
the resident endangered Bull Trout population in Lake Kachess is estimated will be killed under
the proposed alternative and all the active alternatives? What fraction of loss is allowable under
law and the EPA? How will the active alternatives and the proposed alternative meet these
legal requirements?

17) **USFWS BiOp** It is known that the USFWS is conducting a Biological Opinion on the
existing Yakima watershed with respect to the current operation of existing dams and irrigation
districts. That BiOp is not expected to be published until sometime in the fall of 2018. We
request that another SDEIS be produced after said BiOp is published as it could impact the
entire watershed including the necessity for the projects named in the current SDEIS for
Kachess.

18) **Increased forest vulnerability and Fire Hazard.** The vegetation and wetlands (Page 2-70) and densely forested watershed (Page 3-98) will, according to the SDEIS suffer with
reduced water levels in Lake Kachess. This will mean stressed trees and other foliage in a
single drought year, and in multiple years of pump operation dead trees due to lack of water and
insect vulnerability. The Snoqualmie Pass Fire and Rescue agency has the primary
responsibility fire and emergency medical services in the Lake Kachess and Lake Keechelus
areas. This state agency has repeatedly raised concerns about increased risk due to wildfires,
reduced capacity to suppress fires (due to lowering of the lake and removal of a source of water
for firefighting), the increased incidence of accidents and injuries due to construction activity,
and need for public education and communication strategies necessitated by KDRPP and KKC
projects. Despite numerous and repeated expressions of concern and requests to meet with
the responsible Fire Departments, the BoR has ignored and rejected these requests. This is a
clear violation of the NEPA/SEPA process and renders the current SDEIS incomplete and
unacceptable. We ask this plan be developed and included in a subsequent SDEIS, distributed to all stakeholders, and submitted for public comment prior
to any Final DEIS or ROD.

19) **Impact to private property** The SDEIS consistently under-represents the impact on
private residences and property owners. Page 3-155 refers to “several private parcels and
homes or cabins” that will be affected, but a better description would be “substantial numbers of
private residences...etc.” Lake Kachess Village HOA has 162 homesites, East Kachess HOA
has 70 homesites, Kachess Ridge has approximately 80 homesites, and East Kachess Ride
another 20-30, plus numerous unaffiliated residences in the area. This easily number 300
homesites, far more than would be inferred from the term “several.” The systematic bias
against representing impact on private citizens is displayed on page 4-23, when it excludes any
homesite farther than 0.1 mile from shoreline from negative impact by drawdown of the lake.
We ask for an accurate description, in numerical terms, of individuals and homesites affected by
the Lake Kachess drawdown. As a minimum, this would include all homesites on Kachess
Lake Road, Via Kachess Road, the Kachess Dam and eastern shoreline road, and private
residences within 5.0 miles of the shoreline.
20) **Impact to private property** BoR commissioned a study by Dean Potter LLC, a real estate appraisal firm, to determine the negative impact on private properties resulting from the pumping drawdown. This study showed a negative impact of 5-10%, but even this was an under-estimate. The Potter study imposed a primary screening criterion that the only value a lake had, was the view it provided to a homesite. This eliminated 85% of the homesites in the immediate area of the lake, even though the residents had chosen their homes because of access to the lake. The Potter LLC study claimed that even though the lake could become inaccessible for years at a time, people who lived there to enjoy boating, fishing, hiking, picnicking, and other water-related activities, wouldn’t notice the lake had disappeared. The only ones who would be adversely affected would be those people with a view…but not just any view, an “unfiltered view” (no description of what this might mean). Even this was perverted, to say only people with unfiltered views within 0.1 mile of the lake would be affected. The study actually claimed that a view of a full lake within 0.1 miles, and a view of the drawn down lake more than 0.1 miles away, would be equivalent. There is no precedent for such exclusionary criteria, and there is no justification using standard methods of appraisal. The entire exercise is a transparent effort to minimize any negative impact. Even so, a 5-10% negative on impacted properties was reported.

Even though the BoR commissioned this study, and even though the study went to extraordinary lengths to minimize impact, the BoR declared in the SDEIS there was “no way to reliably assign or assess impacts…”. The only analysis reported was that conducted by Dean Potter LLC, it used flawed methods that were biased to under-reporting of negative impacts on private property values, but it still reported significant (5-10%) negative impacts. Yet strangely, even these were rejected, without providing any data to support the rejection.

Lake Kachess homeowners have repeatedly requested to be involved in designing a valid and reliable study of the negative impacts on property values of proposed alternatives. BoR has ignored and rejected all requests, and instead contracted for a study that (although flawed by its obvious intent to minimize findings of damage) still showed significant damage to private property caused by the 80 ft. drawdown. Despite overwhelming evidence to the contrary…and their own analysis…BoR now claims the study they just completed, in fact can’t be done!

The implications of negative impact on private property values go beyond the affected citizens. A reduction in property values affects the tax base of the county and fire departments, and will reduce available resources to provide essential services. This is acknowledged in SDEIS Page 4-326 as follows: “**while effects on property values would most directly affect property owners, the wider community would also experience effects.**” In other words, private property owners, fire departments, city and county governments, and others would also be negatively impacted.

It is unacceptable to ignore and misrepresent the obvious reality that drawdown of Lake Kachess will have substantial negative impact on property owners and the wider community. We demand that the BoR engage the Lake Kachess community in designing and conducting a valid and reliable study of negative impact on private property values. This study should be conducted by an independent and non-conflicted expert with the results peer-reviewed according to standard practice. This study must be conducted and distributed in a subsequent SDEIS, with the public provided an opportunity to comment before a Final DEIS or ROD is issued.
21) **Impact on Senior Water Rights**  How will those with senior water rights to the existing 239,000 acre-ft of water currently stored by Kachess Dam be mitigated when that water is no longer available once Lake Kachess water level is lowered below the outlet to its dam? Who will pay to provide senior water rights holders with the water they have a right to? How will it affect the senior water rights holders’ own farming operations and/or enjoyment of their property? We request further studies about this and communication to those senior water rights holders of possible impacts to them by the SDEIS active alternatives. Then another public comment period be opened for their comments.

22) **Drought Definition**  Who will define the 70% of prorated water? What unbiased, non-irrigation district, party will make that determination? Page 2-6 of the SDEIS says, “Project proponents would use the pumping plant during drought years and could possibly use it in following years as the reservoir refills to a level above the existing gravity outlet.” Does this mean the definition of when the pumps could be used has changed from the prior definition of drought (less than 70% of prorated water expected to be available)? Why would the pump be used in following years “as the reservoir refills to a level above the existing gravity outlet?” Would that not prevent or delay refill?

23) **New Water Rights**  Table 1-2 on p 1-20 notes that ecology will “issue water rights as necessary.” We’ve been told over and over that no new rights will be generated from this plan. How will new water rights be issued? To whom?

24) **Water Conservation and Market Reallocation**  Page 1-4 notes that the Yakima Basin Integrated Plan has 7 components, but several are not included in the KDRPP EIS (groundwater storage, water conservation, market reallocation). Define the number of acre-feet saved by water conservation and market reallocation in the whole Yakima watershed.

25) **Noise**  Only the preferred alternative has pumps at lake level, exposed to the environment (all others have pumps at the bottom of a shaft). P2-75 notes the maximum permissible environmental noise is 55 dBA. What is the expected noise level in dBA at 100 feet from the pumps? At 1000 feet? Will the pumps be running 24/7 once they start running?

26) **KKC tunnel material**  115,000 cubic yards of KKC tunnel excavated material comes out on Kachess Lake Road with no mention of where it will be trucked to or the impact of over 5000 truckloads of material being hauled off. Where will the 115,000 cubic yards of KKC tunnel material be deposited? What safety measures and scheduling of hauling equipment will be made during the tunnel construction to insure the safe and customary use of Lake Kachess County Road by campground users and local property owners and guests?
27) **Turbidity** P2-68 notes all action alternatives will result in localized short-term exceedance of turbidity standard. Define the degree of turbidity exceedance and the effect it will have on native fish populations.

28) **Permanent Habitat Loss** P2-71 notes permanent habitat loss with the preferred alternative. Define the effect of permanent habitat loss on the spotted owl, bull trout, and other endangered / listed species.

29) **Decreased Recreation Desirability** P2-73 notes decreased recreation desirability and conflict with “established SIL/VOQ”. Quantify the economic impact of the decreased recreation desirability. Under what authority are established SIL/VOQ permitted to be violated?

30) **Purchase of private property** P2-76 notes that the parcels north of the existing beach road on the East side are indeed private and may need to be purchased from their current owners for the boat ramp and parking lot. There is no money in the SDEIS for property purchase. How many lots and at what expected price will be purchased? These additional costs should be included in the SDEIS Alternatives. A revised SDEIS is warranted.

31) **Water Impairment** P3-29, 3-45: both Keechelus and Kachess are listed as “category 5” water impairment because of PCB contamination. In the 2015 DEIS, only Keechelus was noted to have PCB contamination. Please release the report which also indicates that Kachess has a similar contamination. Would dredging and construction activities not stir up sediment containing PCBs? What increase of PCB levels is expected on the basis of the proposed alternative construction activities?

32) **Water Filtering** How will the water from Keechelus be moved to Kachess? What kind of filtration system will be installed to prevent any I-90 pollutants in Lake Keechelus from being transferred to Lake Kachess? If any hydraulic equipment is used, how will any PAH be kept from entering Lake Kachess?

33) **Lake Drainage during construction** The description of the preferred alternative notes that the lake would need to be drained to allow construction (p2-41ff). Describe the mechanics of draining the lake to allow construction. What happens to the excess water, and how is the “flip-flop” flow pattern maintained if the lake is drained early in the season? What is the effect on the Easton reach of the Yakima river spawning?

Because both the NEPA and SEPA process must be followed, we request that the Bureau of Reclamation and WA Department of Ecology each provide separate responses to the above comments.

Please send us a copy of any additional SDEIS, FEIS or Record of Decision that is released.

Thank you for considering and acting on these comments.

Sincerely,

March 2019
Submitted via email to kkbt@usbr.gov

Ms. Candace McKinley
Environmental Program Manager
Bureau of Reclamation / Columbia-Cascades Area Office
1917 March Road
Yakima, WA 98901-2058

RE: Kachess and Keechelus SDEIS

Dear Ms. McKinley:

Please accept these comments/questions regarding the KDRPP SDEIS.

Please find attached 600 signatures on a petition opposing KDRPP.

Thank you for including these opposition statements in the official SDEIS comments.

Sincerely,

Christine Johnson
40 Mountain View Lane
Easton, WA 98925
(NO MAIL DELIVERY AT THIS ADDRESS)

MAILING ADDRESS
Christine Johnson
c/o Raymond Johnson
27810 217th Avenue SE
Maple Valley, WA 98038
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kylor Gieger</td>
<td>98925</td>
<td><a href="mailto:kylorgieger@gmail.com">kylorgieger@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Telian AVGERS</td>
<td>98925</td>
<td><a href="mailto:teliangieger@gmail.com">teliangieger@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Lachelle O' Connell</td>
<td>98925</td>
<td><a href="mailto:lachelleconnell@gmail.com">lachelleconnell@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Laila Z. Possani</td>
<td>98925</td>
<td><a href="mailto:lposhani@comcast.net">lposhani@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Connie Wanechek</td>
<td>98922</td>
<td><a href="mailto:wanechek@live.com">wanechek@live.com</a></td>
<td></td>
</tr>
<tr>
<td>Wayne Wanechek</td>
<td>98925</td>
<td><a href="mailto:wanechek@live.com">wanechek@live.com</a></td>
<td></td>
</tr>
<tr>
<td>Dave Heric</td>
<td>98925</td>
<td><a href="mailto:daveheric@outlook.com">daveheric@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Dan Ryymannen</td>
<td>98025</td>
<td><a href="mailto:runoman222@gmail.com">runoman222@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>John Reeves</td>
<td>98024</td>
<td><a href="mailto:johnscottreeves@live.com">johnscottreeves@live.com</a></td>
<td></td>
</tr>
<tr>
<td>John Seguin</td>
<td>98925</td>
<td><a href="mailto:seguinjoh@gmail.com">seguinjoh@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tyler Ryymannen</td>
<td>98025</td>
<td><a href="mailto:tylerball1@gmail.com">tylerball1@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>STACE Loftus</td>
<td>98925</td>
<td>jeffstacieoncomcast.net</td>
<td></td>
</tr>
<tr>
<td>Jake Loftus</td>
<td>98925</td>
<td><a href="mailto:jjloftus5@gmail.com">jjloftus5@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Madeleine Aiken</td>
<td>98045</td>
<td><a href="mailto:rcoa.aken@gmail.com">rcoa.aken@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mike Aiken</td>
<td>98045</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sandy Knaufl</td>
<td>98045</td>
<td><a href="mailto:knaufl@comcast.net">knaufl@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Andrew Dulin</td>
<td>98026</td>
<td><a href="mailto:cundy.dulin@gmail.com">cundy.dulin@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Judy Linderman</td>
<td>98038</td>
<td><a href="mailto:headry@comcast.net">headry@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Joel Martin</td>
<td>98225</td>
<td><a href="mailto:martinjla@comcast.net">martinjla@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Gmant Linedo</td>
<td>98026</td>
<td><a href="mailto:ghenredon@hotmail.com">ghenredon@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Rob Aigner</td>
<td>98026</td>
<td>robca <a href="mailto:haze@comcast.net">haze@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Linda Schoen</td>
<td>98026</td>
<td><a href="mailto:linda@henredon.schoen.com">linda@henredon.schoen.com</a></td>
<td></td>
</tr>
<tr>
<td>Kerry Seguin</td>
<td>98027</td>
<td><a href="mailto:kerryseguin@gmail.com">kerryseguin@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Marc Effen</td>
<td>98012, 98027</td>
<td><a href="mailto:mcanan190@ymail.com">mcanan190@ymail.com</a></td>
<td></td>
</tr>
<tr>
<td>Candy Rynearson</td>
<td>98035, 98012</td>
<td><a href="mailto:sunshinefarmoutfarm@gmail.com">sunshinefarmoutfarm@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kachess Lake and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin each year and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Brianna Busby Felix</td>
<td>98045</td>
<td>busby�@spu.edu</td>
<td>B. Felix</td>
</tr>
<tr>
<td></td>
<td>Marci Whitham Busby</td>
<td>98045</td>
<td><a href="mailto:mbusby2831@AOL.com">mbusby2831@AOL.com</a></td>
<td>Marci Busby</td>
</tr>
<tr>
<td></td>
<td>Bev Franklin</td>
<td>98925</td>
<td><a href="mailto:bev-franklin@comcast.net">bev-franklin@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>William Vaughn</td>
<td>98076</td>
<td><a href="mailto:groverwfv@comcast.net">groverwfv@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Robert Arismas</td>
<td>98024</td>
<td><a href="mailto:Rawrisano@gmail.com">Rawrisano@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Randy Aliment</td>
<td>98058</td>
<td><a href="mailto:randy.aliment@comcast.net">randy.aliment@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Harold Reeves</td>
<td>98059</td>
<td><a href="mailto:harold.reeves@kiewit.com">harold.reeves@kiewit.com</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>John M. Carlson</td>
<td>98925</td>
<td><a href="mailto:KACHESSLK@centurylink.net">KACHESSLK@centurylink.net</a></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Stuart F. Carlson</td>
<td>98925</td>
<td><a href="mailto:Kachesslk@centurylink.net">Kachesslk@centurylink.net</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kara Mulqueeney</td>
<td>98021</td>
<td><a href="mailto:kmulqueeney@msn.com">kmulqueeney@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Colleen Goodness</td>
<td>98029</td>
<td><a href="mailto:caitmae13@gmail.com">caitmae13@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Hallie Belker</td>
<td>98027</td>
<td><a href="mailto:hailkeboy4@gmail.com">hailkeboy4@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shea Mulqueeney</td>
<td>98027</td>
<td><a href="mailto:sheall@outlook.com">sheall@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Kendall Mulqueeney</td>
<td>95912</td>
<td><a href="mailto:km.donutlovera@gmail.com">km.donutlovera@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tatum Mulqueeney</td>
<td>95912</td>
<td><a href="mailto:bater95912@gmail.com">bater95912@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Eric Mulqueeney</td>
<td>95912</td>
<td><a href="mailto:emulqueeney@frontier.net">emulqueeney@frontier.net</a></td>
<td></td>
</tr>
<tr>
<td>Michelle Mulqueeney</td>
<td>95923</td>
<td><a href="mailto:relaychicchris@gmail.com">relaychicchris@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>David Mulqueeney</td>
<td>95912</td>
<td>papa@<a href="mailto:mail4@gmail.com">mail4@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Brett Mulqueeney</td>
<td>95912</td>
<td><a href="mailto:bmulqueeney7@gmail.com">bmulqueeney7@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>James Miller</td>
<td>98332</td>
<td><a href="mailto:jmiller96@gmail.com">jmiller96@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Diana Taise</td>
<td>98332</td>
<td><a href="mailto:jctaise@aoi.com">jctaise@aoi.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ethan Hurley</td>
<td>98038</td>
<td><a href="mailto:hulberte@Hotmail.com">hulberte@Hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Juan Ordaz</td>
<td>98038</td>
<td><a href="mailto:jordanasbusiness@gmail.com">jordanasbusiness@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Iliaona Hammerstrom</td>
<td>98051</td>
<td><a href="mailto:dancingdiva330@gmail.com">dancingdiva330@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Macayre Crotzer</td>
<td>98038</td>
<td><a href="mailto:crotzerphotography@gmail.com">crotzerphotography@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Anna Rucci</td>
<td>98038</td>
<td><a href="mailto:pinkdance21@gmail.com">pinkdance21@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Carter Boynton</td>
<td>98038</td>
<td><a href="mailto:bboyton2335@gmail.com">bboyton2335@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>David Henry</td>
<td>98038</td>
<td>davidanto@<a href="mailto:henry@gmail.com">henry@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Daniel Gissom</td>
<td>98038</td>
<td><a href="mailto:Mtgillivry@gmail.com">Mtgillivry@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Oscar Ely</td>
<td>98038</td>
<td><a href="mailto:olylyluse@so.fahceme.com">olylyluse@so.fahceme.com</a></td>
<td></td>
</tr>
<tr>
<td>Megan Schreck</td>
<td>98010</td>
<td><a href="mailto:meganschreck@comcast.net">meganschreck@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Ryan W. Hansen</td>
<td>98038</td>
<td><a href="mailto:ryangry1000@gmail.com">ryangry1000@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Gabriel Lehto</td>
<td>98038</td>
<td><a href="mailto:galehto@gmail.com">galehto@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shane Porter</td>
<td>98038</td>
<td><a href="mailto:ShanePorter8964@gmail.com">ShanePorter8964@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>John Phillips</td>
<td>98051</td>
<td><a href="mailto:jphillips@comcast.net">jphillips@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Patty Phillips</td>
<td>98051</td>
<td><a href="mailto:mytrend@comcast.net">mytrend@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Makayla Phillips</td>
<td>98038</td>
<td><a href="mailto:Wipperkettel@hotmail.com">Wipperkettel@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Matthew Harr</td>
<td>98038</td>
<td><a href="mailto:Matthew.Harr@gmail.com">Matthew.Harr@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Amanda Westendorf</td>
<td>98038</td>
<td><a href="mailto:traceyandamanco@hotmail.com">traceyandamanco@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Terri Berge</td>
<td>98051</td>
<td><a href="mailto:ty.mapsqueezer@yahoo.com">ty.mapsqueezer@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Katie Berge</td>
<td>98022</td>
<td><a href="mailto:Bergete@hill.edu">Bergete@hill.edu</a></td>
<td></td>
</tr>
<tr>
<td>Alexis Flint</td>
<td>98027</td>
<td><a href="mailto:aflint1998@hotmail.com">aflint1998@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ray Callanan</td>
<td>98038</td>
<td>24624 2504th Ave SE</td>
<td></td>
</tr>
<tr>
<td>Martin Bauer</td>
<td>98038</td>
<td>23039 SE 263rd St</td>
<td></td>
</tr>
<tr>
<td>Justin Eble</td>
<td>98059</td>
<td><a href="mailto:jebble@gmail.com">jebble@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shelby Nelson</td>
<td>98321</td>
<td><a href="mailto:Shelby.Nelson@multicare.org">Shelby.Nelson@multicare.org</a></td>
<td></td>
</tr>
<tr>
<td>Jeff Pierce</td>
<td>98422</td>
<td><a href="mailto:e_imp@ymail.com">e_imp@ymail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mikayla Willis</td>
<td>98038</td>
<td><a href="mailto:mwillis103@gmail.com">mwillis103@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Colten Douglas</td>
<td>98035</td>
<td><a href="mailto:cdoog1as698@gmail.com">cdoog1as698@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Connor Silverton</td>
<td>98038</td>
<td><a href="mailto:csbuskybounced@gmail.com">csbuskybounced@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Izaya Price</td>
<td>98038</td>
<td><a href="mailto:iprice0958@google.com">iprice0958@google.com</a></td>
<td></td>
</tr>
<tr>
<td>Nathaniel Sandoral</td>
<td>98038</td>
<td><a href="mailto:nsandoral510@google.com">nsandoral510@google.com</a></td>
<td></td>
</tr>
<tr>
<td>Jonas Olanovas</td>
<td>98038</td>
<td><a href="mailto:olanovas_business@gmail.com">olanovas_business@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Malachi Korache</td>
<td>98038</td>
<td><a href="mailto:mkmkgod@gmail.com">mkmkgod@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Renee Fasan</td>
<td>98038</td>
<td><a href="mailto:reneefsvno@gmail.com">reneefsvno@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kaylon Clements</td>
<td>98038</td>
<td><a href="mailto:kaylonclen@gmail.com">kaylonclen@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sam Wood</td>
<td>98038</td>
<td><a href="mailto:swood4839@gmail.com">swood4839@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chloe DiPace</td>
<td>98038</td>
<td><a href="mailto:cdipace475@google.com">cdipace475@google.com</a></td>
<td></td>
</tr>
<tr>
<td>Kylee Snyder</td>
<td>98038</td>
<td><a href="mailto:kylee.snyder123@gmail.com">kylee.snyder123@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>McKenna Peters</td>
<td>98038</td>
<td><a href="mailto:mckennapeters@gmail.com">mckennapeters@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Seth Molnar</td>
<td>98038</td>
<td><a href="mailto:Sethindah001@gmail.com">Sethindah001@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Albert Jennings</td>
<td>98038</td>
<td><a href="mailto:a.jennings860@gmail.com">a.jennings860@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ben Darney</td>
<td>98038</td>
<td><a href="mailto:B.darneys59@gmail.com">B.darneys59@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Luke Turner</td>
<td>98038</td>
<td><a href="mailto:TurnerLuke34@gmail.com">TurnerLuke34@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tim Mechnoguk</td>
<td>98038</td>
<td>Tim <a href="mailto:1axc@gmail.com">1axc@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Melinda Day</td>
<td>98038</td>
<td><a href="mailto:Lindymarie1211@gmail.com">Lindymarie1211@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kelsey Gross</td>
<td>98038</td>
<td><a href="mailto:kgross133@gmail.com">kgross133@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kylee Campbell</td>
<td>98038</td>
<td><a href="mailto:Kyleec156@hotmail.com">Kyleec156@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Connor Campbell</td>
<td>98038</td>
<td><a href="mailto:Connorst154@gmail.com">Connorst154@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Brooke Becker</td>
<td>98038</td>
<td><a href="mailto:brookeb.becker@gmail.com">brookeb.becker@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chayna Nelson-Hand</td>
<td>98038</td>
<td><a href="mailto:chayna.nhn@gmail.com">chayna.nhn@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kayla Anthony</td>
<td>98038</td>
<td><a href="mailto:Kayla_kaylay02@gmail.com">Kayla_kaylay02@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kaje Braham</td>
<td>98038</td>
<td><a href="mailto:kaje.braham@gmail.com">kaje.braham@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Amber Howard</td>
<td>98038</td>
<td><a href="mailto:Amber3255@gmail.com">Amber3255@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gravy Tubbs</td>
<td>98002</td>
<td><a href="mailto:stubbse@lahomas.d.us">stubbse@lahomas.d.us</a></td>
<td></td>
</tr>
<tr>
<td>Shalyn Milton</td>
<td>98038</td>
<td><a href="mailto:kcsit05e@gmail.com">kcsit05e@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sue Fishburn</td>
<td>98039</td>
<td><a href="mailto:SFishburn263@Gmail.com">SFishburn263@Gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sydney Popitz</td>
<td>98036</td>
<td><a href="mailto:sydneypopitz@gmail.com">sydneypopitz@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>John Brodie</td>
<td>98038</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wendy Burleson</td>
<td>98058</td>
<td><a href="mailto:wburleson38@Gmail.com">wburleson38@Gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Megan Lester</td>
<td>98059</td>
<td><a href="mailto:mlester331@Gmail.com">mlester331@Gmail.com</a></td>
<td>Megan Lester</td>
</tr>
<tr>
<td>Jenna Pinter</td>
<td>98038</td>
<td><a href="mailto:jptiner1659@Gmail.com">jptiner1659@Gmail.com</a></td>
<td>jena pinter</td>
</tr>
<tr>
<td>Nicholas Myers</td>
<td>98038</td>
<td><a href="mailto:nickthepickle@outlook.com">nickthepickle@outlook.com</a></td>
<td>Nickolas Myers</td>
</tr>
<tr>
<td>Cassidy Mueller</td>
<td>98051</td>
<td><a href="mailto:cassidymueller@yahoo.com">cassidymueller@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Alaina Brady</td>
<td>98036</td>
<td><a href="mailto:alainelowe@outlook.com">alainelowe@outlook.com</a></td>
<td>Alaina Brady</td>
</tr>
<tr>
<td>Meg Peacock</td>
<td>98038</td>
<td><a href="mailto:meg.cecilia3@gmail.com">meg.cecilia3@gmail.com</a></td>
<td>Megan Peacock</td>
</tr>
<tr>
<td>Samantha Garcia</td>
<td>98038</td>
<td><a href="mailto:singingramgar@gmail.com">singingramgar@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kendall Wold</td>
<td>98038</td>
<td><a href="mailto:kwold425@go.tahomad.us">kwold425@go.tahomad.us</a></td>
<td>Kendall Wold</td>
</tr>
<tr>
<td>Brenna Wallace</td>
<td>98038</td>
<td><a href="mailto:bwallace380@go.tahomad.us">bwallace380@go.tahomad.us</a></td>
<td>Brenna Wallace</td>
</tr>
<tr>
<td>Kristina Jasper</td>
<td>98038</td>
<td><a href="mailto:kjasper29@gmail.com">kjasper29@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jasmine Steiner-Dodge</td>
<td>98022</td>
<td><a href="mailto:jasminesteinerdodge@gmail.com">jasminesteinerdodge@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alexa Perry</td>
<td>98038</td>
<td><a href="mailto:aspinall317@go.tahomad.us">aspinall317@go.tahomad.us</a></td>
<td></td>
</tr>
<tr>
<td>Nicholas Garcia</td>
<td>98035</td>
<td><a href="mailto:nagarcia325@go.tahomad.us">nagarcia325@go.tahomad.us</a></td>
<td></td>
</tr>
<tr>
<td>Germanos Felice-Ramos</td>
<td>98035</td>
<td><a href="mailto:germanosfeliceramos@gmail.com">germanosfeliceramos@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chase Donohue</td>
<td>98036</td>
<td><a href="mailto:Donohue.chase@gmail.com">Donohue.chase@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Paul Donnelly</td>
<td>98038</td>
<td><a href="mailto:pdonnelly1111@go.tahomad.us">pdonnelly1111@go.tahomad.us</a></td>
<td></td>
</tr>
<tr>
<td>Chris Jeong</td>
<td>98038</td>
<td><a href="mailto:jeonga9@go.tahomad.us">jeonga9@go.tahomad.us</a></td>
<td></td>
</tr>
<tr>
<td>Taylor Houghton</td>
<td>98038</td>
<td><a href="mailto:taylornoughton2@gmail.com">taylornoughton2@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought R Pumping Plant (KDRPP) and the Keeche Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wyatt Swenson</td>
<td>98038</td>
<td><a href="mailto:wsnewson676@gmail.com">wsnewson676@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Lucy Rivera</td>
<td>98038</td>
<td><a href="mailto:rivera010@go.tahoe.net">rivera010@go.tahoe.net</a></td>
<td></td>
</tr>
<tr>
<td>Jordan Gonzalez</td>
<td>98035</td>
<td><a href="mailto:igonzalez12@go.tahoe.net">igonzalez12@go.tahoe.net</a></td>
<td></td>
</tr>
<tr>
<td>Natasha Verheest</td>
<td>98038</td>
<td><a href="mailto:natasha25918@gmail.com">natasha25918@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Megan Jansen</td>
<td>98038</td>
<td><a href="mailto:wyomson90@go.tahoe.net">wyomson90@go.tahoe.net</a></td>
<td></td>
</tr>
<tr>
<td>Esabelle Verheest</td>
<td>98051</td>
<td><a href="mailto:visicemm@gmail.com">visicemm@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Troy Melling</td>
<td>98038</td>
<td><a href="mailto:troy.melling@gmail.com">troy.melling@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dana Scheppke</td>
<td>98038</td>
<td><a href="mailto:danasaraelyon@yahoo.com">danasaraelyon@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Derek Fitts</td>
<td>98035</td>
<td><a href="mailto:dfitti1946@go.tahoe.net">dfitti1946@go.tahoe.net</a></td>
<td></td>
</tr>
<tr>
<td>Abby Cunningham</td>
<td>98058</td>
<td><a href="mailto:abbbycurrrene@gmail.com">abbbycurrrene@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kyle Fela</td>
<td>98038</td>
<td><a href="mailto:kyle6677@gmail.com">kyle6677@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Regina免疫力</td>
<td>98925</td>
<td><a href="mailto:reginai@pikmanresearch.com">reginai@pikmanresearch.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought R Pumping Plant (KDRPP) and the Keech Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ajay Frye</td>
<td>98038</td>
<td><a href="mailto:Frey623@gmail.com">Frey623@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jennifer Jegerma</td>
<td>98038</td>
<td>Jegerma@<a href="mailto:email@gmail.com">email@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tony Raffo</td>
<td>98036</td>
<td><a href="mailto:Raffo1014@gmail.com">Raffo1014@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alex Colletta</td>
<td>98039</td>
<td><a href="mailto:allycoltis12353@gmail.com">allycoltis12353@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ansley Rohrbaugh</td>
<td>98038</td>
<td><a href="mailto:rohrbaugh826@go.tahomasl.us">rohrbaugh826@go.tahomasl.us</a></td>
<td></td>
</tr>
<tr>
<td>Emmalee Adams</td>
<td>98051</td>
<td><a href="mailto:Emmadom267@go.tahomasl.us">Emmadom267@go.tahomasl.us</a></td>
<td></td>
</tr>
<tr>
<td>Lexy Lund</td>
<td>98038</td>
<td><a href="mailto:Lexy160323@gmail.com">Lexy160323@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Noah Simmons</td>
<td>98038</td>
<td><a href="mailto:Noahs2k@gmail.com">Noahs2k@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Rhonda Drumh</td>
<td>98055</td>
<td><a href="mailto:rdrumh@sprynet.com">rdrumh@sprynet.com</a></td>
<td></td>
</tr>
<tr>
<td>Teresa Hall</td>
<td>98926</td>
<td><a href="mailto:halls@fairpoint.net">halls@fairpoint.net</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kavla Ondik</td>
<td>98038</td>
<td><a href="mailto:kkordik4@gmail.com">kkordik4@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tyler Hobern</td>
<td>98038</td>
<td><a href="mailto:tylerhobern@gmail.com">tylerhobern@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Lora Gillingham</td>
<td>98038</td>
<td><a href="mailto:bladeck3@msn.com">bladeck3@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Ben Simmons</td>
<td>98038</td>
<td><a href="mailto:bsimmons@gmail.com">bsimmons@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Carter Larange</td>
<td>98038</td>
<td><a href="mailto:clarange9005@go.tahoealw.com">clarange9005@go.tahoealw.com</a></td>
<td></td>
</tr>
<tr>
<td>Hayden Neaden</td>
<td>98038</td>
<td><a href="mailto:hmeaden425@gmail.com">hmeaden425@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Evan Ottlieb</td>
<td>98038</td>
<td><a href="mailto:evanddrthiing@gmail.com">evanddrthiing@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sean Thomas</td>
<td>98035</td>
<td><a href="mailto:TTREACH@outlook.com">TTREACH@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Zachary Schwartz</td>
<td>98038</td>
<td><a href="mailto:Zac_schwartz7000@outlook.com">Zac_schwartz7000@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Rachel Askur</td>
<td>98038</td>
<td><a href="mailto:1111KCC1111KCC@outlook.com">1111KCC1111KCC@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Olivia Marconi</td>
<td>98038</td>
<td><a href="mailto:Hotgirl2owmarconi@gmail.com">Hotgirl2owmarconi@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Zoey Martinez</td>
<td>98038</td>
<td><a href="mailto:tyhornetzy@gmail.com">tyhornetzy@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tyler Bowman</td>
<td>98038</td>
<td><a href="mailto:tbow9122@gmail.com">tbow9122@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bianca Timmerman</td>
<td>98038</td>
<td><a href="mailto:bonkezoo2@hotmail.com">bonkezoo2@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Hannah Brown</td>
<td>98038</td>
<td><a href="mailto:hjeanb01@gmail.com">hjeanb01@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Nick Boren</td>
<td>98038</td>
<td><a href="mailto:thecathascats@gmail.com">thecathascats@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Emma Sweeney</td>
<td>98038</td>
<td><a href="mailto:emma13-c8@gmail.com">emma13-c8@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sierra Martin</td>
<td>98038</td>
<td><a href="mailto:smartin8108@gmail.com">smartin8108@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Elizabeth Hart</td>
<td>98038</td>
<td>njia_{mask}@icloud.com</td>
<td></td>
</tr>
<tr>
<td>Gabby Grubes</td>
<td>98038</td>
<td>membo2 <a href="mailto:901@gmail.com">901@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Luke Beauchene</td>
<td>98038</td>
<td><a href="mailto:BeaucheneLuke@gmail.com">BeaucheneLuke@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Claire Schlutt</td>
<td>98038</td>
<td><a href="mailto:cschlutt11s@gmail.com">cschlutt11s@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jada Webb</td>
<td>98038</td>
<td><a href="mailto:jada_webb@comcast.net">jada_webb@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Gia Fuda</td>
<td>98038</td>
<td><a href="mailto:giovannaf@comcast.net">giovannaf@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Erin Trygstad</td>
<td>98038</td>
<td><a href="mailto:elttryg@icloud.com">elttryg@icloud.com</a></td>
<td></td>
</tr>
<tr>
<td>Daria Leon</td>
<td>98038</td>
<td>df080241@go.tahomasonic3</td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stephanie Masters</td>
<td>98038</td>
<td><a href="mailto:samasters100@yahoo.com">samasters100@yahoo.com</a></td>
<td>Stephanie Masters</td>
</tr>
<tr>
<td>Cheri Mackinnn</td>
<td>98037</td>
<td><a href="mailto:skyeindinc@yahoo.com">skyeindinc@yahoo.com</a></td>
<td>Cheri Mackinnn</td>
</tr>
<tr>
<td>Emma Hardin</td>
<td>98038</td>
<td><a href="mailto:emmahardin257@gmail.com">emmahardin257@gmail.com</a></td>
<td>Emma Hardin</td>
</tr>
<tr>
<td>Kelsie Sykes</td>
<td>98038</td>
<td><a href="mailto:kelsiesykes871@gmail.com">kelsiesykes871@gmail.com</a></td>
<td>Kelsie Sykes</td>
</tr>
<tr>
<td>Ryan Sevedge</td>
<td>98038</td>
<td><a href="mailto:sevedge.rj@outlook.com">sevedge.rj@outlook.com</a></td>
<td>Ryan Sevedge</td>
</tr>
<tr>
<td>Hella Nassy</td>
<td>98038</td>
<td><a href="mailto:husbands400@gmail.com">husbands400@gmail.com</a></td>
<td>Hella Nassy</td>
</tr>
<tr>
<td>Russ Hayden</td>
<td>98051</td>
<td><a href="mailto:rshayden55@gmail.com">rshayden55@gmail.com</a></td>
<td>Russ Hayden</td>
</tr>
<tr>
<td>Wilke Murphy</td>
<td>98038</td>
<td><a href="mailto:murphy2004@newsmail.us">murphy2004@newsmail.us</a></td>
<td>Wilke Murphy</td>
</tr>
<tr>
<td>Aiden Manus</td>
<td>98038</td>
<td><a href="mailto:amanuscaree@outlook.com">amanuscaree@outlook.com</a></td>
<td>Aiden Manus</td>
</tr>
<tr>
<td>Donovan Faucher</td>
<td>98038</td>
<td><a href="mailto:Donovan12002@roemail.com">Donovan12002@roemail.com</a></td>
<td>Donovan Faucher</td>
</tr>
<tr>
<td>Julia Debord</td>
<td>98038</td>
<td><a href="mailto:debord2017@comcast.net">debord2017@comcast.net</a></td>
<td>Julia Debord</td>
</tr>
<tr>
<td>Margaret Downer</td>
<td>98038</td>
<td><a href="mailto:margaret.e.downer@gmail.com">margaret.e.downer@gmail.com</a></td>
<td>Margaret Downer</td>
</tr>
<tr>
<td>Tyrell Hardin</td>
<td>98039</td>
<td><a href="mailto:tyrell.hardin@gmail.com">tyrell.hardin@gmail.com</a></td>
<td>Tyrell Hardin</td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sabrina Wood</td>
<td>98038</td>
<td><a href="mailto:wood.saborina@outlook.com">wood.saborina@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Jordan Sadler</td>
<td>98038</td>
<td><a href="mailto:JordanSadler@gmail.com">JordanSadler@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Faith Valentine</td>
<td>98058</td>
<td><a href="mailto:Faithievalsarn@outlook.com">Faithievalsarn@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Kyle Motchin</td>
<td>98038</td>
<td><a href="mailto:KyleMotchin@outlook.com">KyleMotchin@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Lara Skaus</td>
<td>98038</td>
<td><a href="mailto:LaraSkaus@outlook.com">LaraSkaus@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Taryn Nelson</td>
<td>98038</td>
<td><a href="mailto:Tarynlyn0727@gmail.com">Tarynlyn0727@gmail.com</a></td>
<td>Taryn Nelson</td>
</tr>
<tr>
<td>Olivia Griffith</td>
<td>98058</td>
<td><a href="mailto:livvy10213@gmail.com">livvy10213@gmail.com</a></td>
<td>Olivia</td>
</tr>
<tr>
<td>Meeki Owens</td>
<td>96038</td>
<td><a href="mailto:Meeki.Owen@outlook.com">Meeki.Owen@outlook.com</a></td>
<td>Meeki</td>
</tr>
<tr>
<td>Michael Hudgens</td>
<td>98012</td>
<td><a href="mailto:Michael_Hudgens@Hotmail.com">Michael_Hudgens@Hotmail.com</a></td>
<td>Michael</td>
</tr>
<tr>
<td>Ellen Harris</td>
<td>98038</td>
<td>Ellen Harris <a href="mailto:367@go.tahoma.us">367@go.tahoma.us</a></td>
<td></td>
</tr>
<tr>
<td>Brent Barber</td>
<td>98038</td>
<td>brent.burber@<a href="mailto:115@gmail.com">115@gmail.com</a></td>
<td>Brent Barber</td>
</tr>
<tr>
<td>Megan Shaw</td>
<td>98038</td>
<td><a href="mailto:mshaw950@go.tahoma.us">mshaw950@go.tahoma.us</a></td>
<td>Megan Shaw</td>
</tr>
<tr>
<td>Seth Molnar</td>
<td>98038</td>
<td><a href="mailto:ellenHarris2501@gmail.com">ellenHarris2501@gmail.com</a></td>
<td>Seth Molnar</td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maji Draaisma</td>
<td>98922</td>
<td><a href="mailto:maji.draaisma@gmail.com">maji.draaisma@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Erik Draaisma</td>
<td>98922</td>
<td><a href="mailto:erik.draaisma@hotmail.com">erik.draaisma@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tammi Liberta</td>
<td>98045</td>
<td>Tamara@<a href="mailto:ann@hotmail.com">ann@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Rick Liberta</td>
<td>98045</td>
<td><a href="mailto:Rick.Liberta@gmail.com">Rick.Liberta@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dante Rasera</td>
<td>98112</td>
<td><a href="mailto:drasera@gmail.com">drasera@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Steve Pappel</td>
<td>98111</td>
<td><a href="mailto:pappel.steven@gmail.com">pappel.steven@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Martin Fernonson</td>
<td>98034</td>
<td><a href="mailto:mfernonson@hotmail.com">mfernonson@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tim Muder</td>
<td>98601</td>
<td><a href="mailto:tmmud@ymail.com">tmmud@ymail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kathy Mulder</td>
<td>98604</td>
<td><a href="mailto:kathy.mulder4@yahoo.com">kathy.mulder4@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Nikki Prusha</td>
<td>98055</td>
<td><a href="mailto:njprusha@gmail.com">njprusha@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Cora Prusha</td>
<td>98055</td>
<td><a href="mailto:interjection@gmail.com">interjection@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shawn Johnson</td>
<td>98055</td>
<td><a href="mailto:sjvector@gmail.com">sjvector@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tara Christefferson</td>
<td>98271</td>
<td><a href="mailto:TaraTCristefferson@Gmail.com">TaraTCristefferson@Gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ben Stiegglitz</td>
<td>98027</td>
<td><a href="mailto:benstiegglitz@msn.com">benstiegglitz@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Jenn Stiegglitz</td>
<td>98027</td>
<td><a href="mailto:jennstiegglitz@yahoo.com">jennstiegglitz@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Victoria Postolit</td>
<td>98040</td>
<td><a href="mailto:vpostolit@yahoo.com">vpostolit@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>David Naibert MD</td>
<td>98040</td>
<td><a href="mailto:dknaibert@comcast.net">dknaibert@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Anna Marshall</td>
<td>98115</td>
<td><a href="mailto:anna@sunshineisdown.com">anna@sunshineisdown.com</a></td>
<td></td>
</tr>
<tr>
<td>Andrey Litoukin</td>
<td>98059</td>
<td><a href="mailto:anliouki@gmail.com">anliouki@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Svetlana Kulikovskaia</td>
<td>98087</td>
<td><a href="mailto:lanasssa@gmail.com">lanasssa@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Viktoriya Skarov</td>
<td>98296</td>
<td><a href="mailto:koval.alex@gmail.com">koval.alex@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alek Koval</td>
<td>98011</td>
<td><a href="mailto:koval.alex@gmail.com">koval.alex@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Vera Koval</td>
<td>98011</td>
<td><a href="mailto:vera.koval79@gmail.com">vera.koval79@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tatyana Lomakin</td>
<td>98206</td>
<td><a href="mailto:tatyana.lomakin@gmail.com">tatyana.lomakin@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Olga Moiseywa</td>
<td>98059</td>
<td><a href="mailto:olgamoi@gmail.com">olgamoi@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Anna Kulikovskaya</td>
<td>98087</td>
<td><a href="mailto:annakulik@gmail.com">annakulik@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Karen Penny Stone</td>
<td>98106</td>
<td><a href="mailto:Kerrstoneclan@gmail.com">Kerrstoneclan@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Rachael Crickman</td>
<td>98122</td>
<td><a href="mailto:rachael_crickman@yahoo.com">rachael_crickman@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Lisa O'Day</td>
<td>98406</td>
<td><a href="mailto:heartofaloha@comcast.net">heartofaloha@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Andrew Lomatin</td>
<td>98216</td>
<td><a href="mailto:ashleylomatin4@gmail.com">ashleylomatin4@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kaustubh Kalgarwad</td>
<td>98006</td>
<td>kaustubh @ yahoo.com</td>
<td></td>
</tr>
<tr>
<td>Jackie Beruchamp</td>
<td>98375</td>
<td><a href="mailto:jbush1937@yahoo.com">jbush1937@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Jamie Olson</td>
<td>98338</td>
<td><a href="mailto:jamieolson@windermere.com">jamieolson@windermere.com</a></td>
<td></td>
</tr>
<tr>
<td>Mike Olson</td>
<td>98338</td>
<td><a href="mailto:Fullbox2002@msn.com">Fullbox2002@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Sean Adams</td>
<td>98115</td>
<td><a href="mailto:sean_s_adams@hotmail.com">sean_s_adams@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Andrea Severson</td>
<td>98105</td>
<td><a href="mailto:andrea_severson@gmail.com">andrea_severson@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Tiffany Giacominio</td>
<td>98014</td>
<td><a href="mailto:tiffany.misscht@comcast.net">tiffany.misscht@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Brandon Placek</td>
<td>98027</td>
<td><a href="mailto:bpmail@yahoo.com">bpmail@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Rebecca Rowland</td>
<td>98103</td>
<td><a href="mailto:rlrowland@gmail.com">rlrowland@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leggy O'lette</td>
<td>98002</td>
<td><a href="mailto:ehammons51@gmail.com">ehammons51@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Emily Hammons</td>
<td>98001</td>
<td><a href="mailto:jjordanj2@gmail.com">jjordanj2@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Justin Jordan</td>
<td>98001</td>
<td><a href="mailto:Reliable4tuser@gmail.com">Reliable4tuser@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Michelle D'Arcy</td>
<td>98022</td>
<td><a href="mailto:Reliable4tuser@gmail.com">Reliable4tuser@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Andrew Apry</td>
<td>98013</td>
<td><a href="mailto:andyapre@gmail.com">andyapre@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shirley Waughart</td>
<td>98022</td>
<td><a href="mailto:Swainphoto@hotmail.com">Swainphoto@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Joan Broechling</td>
<td>99312</td>
<td>selah <a href="mailto:centered@hotmail.com">centered@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Michelle Broechling</td>
<td>98042</td>
<td>selah <a href="mailto:centered@hotmail.com">centered@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chalida Kongtang</td>
<td>98104</td>
<td><a href="mailto:cherry-ksgang@hotmail.com">cherry-ksgang@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Barbara Brunner</td>
<td>98922</td>
<td><a href="mailto:trybjbrunner@yahoo.com">trybjbrunner@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Nancy Horne</td>
<td>98020</td>
<td><a href="mailto:nancyhorne56@gmail.com">nancyhorne56@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>J. Pollard</td>
<td>98020</td>
<td><a href="mailto:nancyhorne56@gmail.com">nancyhorne56@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Stephen Fogel</td>
<td>98013</td>
<td><a href="mailto:page12@gmail.com">page12@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Margaret Taasevigen</td>
<td>98926</td>
<td><a href="mailto:doghouse@elliottel.net">doghouse@elliottel.net</a></td>
<td>Margaret Taasevigen</td>
</tr>
<tr>
<td>Edward Taasevigen</td>
<td>98926</td>
<td><a href="mailto:TSUNKA_SAPA@YAHOO.COM">TSUNKA_SAPA@YAHOO.COM</a></td>
<td></td>
</tr>
<tr>
<td>William Kaul</td>
<td>98058</td>
<td><a href="mailto:yellow_dog4@comcast.net">yellow_dog4@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Tamara Kaul</td>
<td>98058</td>
<td><a href="mailto:TKFLY91589@COMCAST.NET">TKFLY91589@COMCAST.NET</a></td>
<td></td>
</tr>
<tr>
<td>Traci McHenry</td>
<td>98004</td>
<td><a href="mailto:Traci.McHenry@gmail.com">Traci.McHenry@gmail.com</a></td>
<td>Traci McHenry</td>
</tr>
<tr>
<td>Lindsey Falsis</td>
<td>98037</td>
<td><a href="mailto:lindsay.falsis@gmail.com">lindsay.falsis@gmail.com</a></td>
<td>Lindsey Falsis</td>
</tr>
<tr>
<td>Teresa Kartes</td>
<td>98925</td>
<td><a href="mailto:tezcomp@yahoo.com">tezcomp@yahoo.com</a></td>
<td>Teresa Kartes</td>
</tr>
<tr>
<td>Jessica Kartes</td>
<td>98182</td>
<td><a href="mailto:jessicakartes@hotmail.com">jessicakartes@hotmail.com</a></td>
<td>Jessica Kartes</td>
</tr>
<tr>
<td>Betty Burnett</td>
<td>98943</td>
<td><a href="mailto:betfayburnett@msn.com">betfayburnett@msn.com</a></td>
<td>Betty Burnett</td>
</tr>
<tr>
<td>Kurtis Burnett</td>
<td>98943</td>
<td><a href="mailto:kurtisburnett@msn.com">kurtisburnett@msn.com</a></td>
<td>Kurtis Burnett</td>
</tr>
<tr>
<td>Angela Carigen</td>
<td>98922</td>
<td><a href="mailto:angela.carigen@icloud.com">angela.carigen@icloud.com</a></td>
<td>Angela Carigen</td>
</tr>
<tr>
<td>Anastasia Fabulic</td>
<td>98922</td>
<td><a href="mailto:anastasia.fabulic@yahoo.com">anastasia.fabulic@yahoo.com</a></td>
<td>Anastasia Fabulic</td>
</tr>
<tr>
<td>Aaron Morgan</td>
<td>98940</td>
<td><a href="mailto:ASMORGAN123@HOTMAIL.COM">ASMORGAN123@HOTMAIL.COM</a></td>
<td>Aaron Morgan</td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vasily Serov</td>
<td>98296</td>
<td><a href="mailto:Vasily.Serov3@gmail.com">Vasily.Serov3@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ruben Lomakin</td>
<td>98294</td>
<td><a href="mailto:Ruben.Lomakin2@gmail.com">Ruben.Lomakin2@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jessica Plack</td>
<td>98021</td>
<td>Jesswock79@yahoocoz</td>
<td></td>
</tr>
<tr>
<td>Daniel Gilmore</td>
<td>98115</td>
<td><a href="mailto:daniel.n.gilmore@gmail.com">daniel.n.gilmore@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Julie Gilmore</td>
<td>98115</td>
<td><a href="mailto:julie.r.dill@gmail.com">julie.r.dill@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Marinda Crum</td>
<td>98115</td>
<td><a href="mailto:marindarama@msn.com">marindarama@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Claire Coby</td>
<td>98922</td>
<td>paradysenois.pacifiCaudit</td>
<td></td>
</tr>
<tr>
<td>Ryan Malcom</td>
<td>98922</td>
<td><a href="mailto:r.malcom@gmail.com">r.malcom@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Shannon Malcom</td>
<td>98922</td>
<td><a href="mailto:s.malcom@gmail.com">s.malcom@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Connor Cathery</td>
<td>98922</td>
<td><a href="mailto:Cathery.conner@gmail.com">Cathery.conner@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Lauren Tobin</td>
<td>98922</td>
<td><a href="mailto:lauren.tobin43@gmail.com">lauren.tobin43@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Derek Johansen</td>
<td>98922</td>
<td><a href="mailto:Derek.msn@hotmail.com">Derek.msn@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ralph Westermar</td>
<td>98024</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Erin Kammeier</td>
<td>98922</td>
<td><a href="mailto:jmaercing@yahoo.com">jmaercing@yahoo.com</a></td>
<td>Erin Kammeier</td>
</tr>
<tr>
<td>Todd Thayer</td>
<td>98926</td>
<td><a href="mailto:tthayerx@gmail.com">tthayerx@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Barbara Wescott</td>
<td>98920</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Carson Bowling</td>
<td>98208</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Charity Warnecke</td>
<td>98922</td>
<td><a href="mailto:gho3t7emalawer@gmail.com">gho3t7emalawer@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jeffrey P. Freeman</td>
<td>98925</td>
<td><a href="mailto:falcon24@hotmail.com">falcon24@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Anna H. Anderson</td>
<td>98020</td>
<td><a href="mailto:kande31970@aol.com">kande31970@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Keith A. Anderson</td>
<td>98020</td>
<td>hamil31970@ed. com</td>
<td></td>
</tr>
<tr>
<td>Tammy C. Beer</td>
<td>98940</td>
<td>Thean beer tana @gmail.com</td>
<td></td>
</tr>
<tr>
<td>Curtis M. Smith</td>
<td>98922</td>
<td><a href="mailto:curtismsmith@yahoo.com">curtismsmith@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Henry Broekling</td>
<td>99212</td>
<td>selehe <a href="mailto:centered@hotmail.com">centered@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Brian Brunner</td>
<td>98042</td>
<td><a href="mailto:mahwebleman@yahoo.com">mahwebleman@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Doyle Beckley</td>
<td>98042</td>
<td><a href="mailto:dbeckley@gmail.com">dbeckley@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Robert Trapp</td>
<td>98942</td>
<td><a href="mailto:sandy.trapp@pro.com">sandy.trapp@pro.com</a></td>
<td></td>
</tr>
<tr>
<td>Nikki Tollie</td>
<td>98366</td>
<td><a href="mailto:nikkias99@aol.com">nikkias99@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Jeffy Gregson</td>
<td>98010</td>
<td>31725-3904 Ct. Seattle, WA</td>
<td></td>
</tr>
<tr>
<td>Pat Gregson</td>
<td>98010</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jan</td>
<td>98096</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry Anderson</td>
<td>98071</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vikkiya Poop</td>
<td>98246</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adriana Alder</td>
<td>98922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Don S.</td>
<td>98440</td>
<td><a href="mailto:dyna.stevens@gmail.com">dyna.stevens@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Natalia Stevens</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jody Thayer</td>
<td>98926</td>
<td><a href="mailto:hansonjody@hotmail.com">hansonjody@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chris Watts</td>
<td>98922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Doni PAE z</td>
<td>98925</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Richard Rolletto</td>
<td>98002</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chloe Witosky</td>
<td>98038</td>
<td><a href="mailto:chloe.witosky@gmail.com">chloe.witosky@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Cayla Egberg</td>
<td>98038</td>
<td>cegberg142@go问问sd.us</td>
<td>Cayla Egber</td>
</tr>
<tr>
<td>Karen Aguilar</td>
<td>98038</td>
<td><a href="mailto:karenaguer@gmail.com">karenaguer@gmail.com</a></td>
<td>Karen aguir</td>
</tr>
<tr>
<td>Reegan Hansen</td>
<td>98038</td>
<td><a href="mailto:rhansen821@interpomosd.us">rhansen821@interpomosd.us</a></td>
<td>Reegan Hanse</td>
</tr>
<tr>
<td>Hannah Knauss</td>
<td>98038</td>
<td><a href="mailto:hannahknauss@gmail.com">hannahknauss@gmail.com</a></td>
<td>Hannah Knau</td>
</tr>
<tr>
<td>COURTNEY LE</td>
<td>98038</td>
<td>COURTNEYLE@<a href="mailto:IS@YAHOO.COM">IS@YAHOO.COM</a></td>
<td></td>
</tr>
<tr>
<td>Jeremy Crokken</td>
<td>98038</td>
<td>jeremycroken798@go.问问sd.us</td>
<td></td>
</tr>
<tr>
<td>Anna Reitz</td>
<td>98038</td>
<td><a href="mailto:annaireitz@gmail.com">annaireitz@gmail.com</a></td>
<td>Anna Reitz</td>
</tr>
<tr>
<td>Julius Hanks</td>
<td>99038</td>
<td><a href="mailto:jhanks200@gmail.com">jhanks200@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Zoe Hudgins</td>
<td>98038</td>
<td><a href="mailto:zoe.hudgins11@gmail.com">zoe.hudgins11@gmail.com</a></td>
<td>Zoe Hudgi</td>
</tr>
<tr>
<td>Maggie McNeil</td>
<td>98038</td>
<td><a href="mailto:maggie.mcneil17@gmail.com">maggie.mcneil17@gmail.com</a></td>
<td>Maggie McN</td>
</tr>
<tr>
<td>Mary Hardwood</td>
<td>98038</td>
<td><a href="mailto:mary.hardwood979@gmail.com">mary.hardwood979@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mikah Davenport</td>
<td>98038</td>
<td><a href="mailto:dmikahc@gmail.com">dmikahc@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Krail Krueger</td>
<td>98947</td>
<td><a href="mailto:krailkrueger@yahoo.com">krailkrueger@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Jon Kremer</td>
<td>98910</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Larry Hill</td>
<td>9884</td>
<td></td>
<td></td>
</tr>
<tr>
<td>David Johnson</td>
<td>98925</td>
<td><a href="mailto:Houseboat_dave@hotmail.com">Houseboat_dave@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Wende Caudyader</td>
<td>98336</td>
<td><a href="mailto:weinyc26@gmail.com">weinyc26@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Pucey Ryan</td>
<td>98074</td>
<td><a href="mailto:puceyryan@gmail.com">puceyryan@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Christi House</td>
<td>98927</td>
<td><a href="mailto:christi.liss45@gmail.com">christi.liss45@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kimberly Alvarez</td>
<td>98925</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jonnie Beach</td>
<td>98027</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tommy Martinez</td>
<td>98925</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kelly Millman</td>
<td>98826</td>
<td><a href="mailto:kellymillman@gmail.com">kellymillman@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Matt Millman</td>
<td></td>
<td><a href="mailto:mithm0011@gmail.com">mithm0011@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Symon Peter</td>
<td>98038</td>
<td>Maple Valley</td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shannon Gerber</td>
<td>98925</td>
<td><a href="mailto:AntShanyQ@gmail.com">AntShanyQ@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>David Allen</td>
<td>98925</td>
<td>[email protected]</td>
<td></td>
</tr>
<tr>
<td>Larry Perry</td>
<td>98922</td>
<td><a href="mailto:nancy@northcom.net">nancy@northcom.net</a></td>
<td></td>
</tr>
<tr>
<td>Howard Suckland</td>
<td>98154</td>
<td><a href="mailto:joelm.johnson@comcast.net">joelm.johnson@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Joel Johnson</td>
<td>98092</td>
<td><a href="mailto:nancy.johnson.pt61@comcast.net">nancy.johnson.pt61@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Nancy Johnson</td>
<td>98925</td>
<td><a href="mailto:Richendifer.sarah1@gmail.com">Richendifer.sarah1@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sara Hamilton</td>
<td>98925</td>
<td><a href="mailto:Mike765@gmail.com">Mike765@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Geraldine Haugen</td>
<td>98923</td>
<td><a href="mailto:haugen.deane@yahoo.com">haugen.deane@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Denis &amp; Gay Fury</td>
<td>98845</td>
<td><a href="mailto:gfeenald@comcast.net">gfeenald@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Neil Richard</td>
<td>98972</td>
<td><a href="mailto:Neil_Richard@manxcom.com">Neil_Richard@manxcom.com</a></td>
<td></td>
</tr>
<tr>
<td>Kurt Wyman</td>
<td>98333</td>
<td><a href="mailto:wynekur10@hotmail.com">wynekur10@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Denise Howard</td>
<td>98272</td>
<td><a href="mailto:addhoward@comcast.net">addhoward@comcast.net</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>KEVIN MCLEANAHAN</td>
<td>98059</td>
<td><a href="mailto:SVCWIRK@AOL.COM">SVCWIRK@AOL.COM</a></td>
<td></td>
</tr>
<tr>
<td>Peggy Berline</td>
<td>98925</td>
<td></td>
<td>Peggy Berline</td>
</tr>
<tr>
<td>Emily Berline</td>
<td>98925</td>
<td></td>
<td>Emily Berline</td>
</tr>
<tr>
<td>Casey Clark</td>
<td>98926</td>
<td></td>
<td>Casey Clark</td>
</tr>
<tr>
<td>Laurene O'Brien</td>
<td>9862</td>
<td><a href="mailto:lou.ber4@hotmail.com">lou.ber4@hotmail.com</a></td>
<td>Laurene O'Brien</td>
</tr>
<tr>
<td>KAREN WOLFF</td>
<td>98382</td>
<td></td>
<td>Karen Wolff</td>
</tr>
<tr>
<td>Ciardi Van Sickle</td>
<td>98925</td>
<td></td>
<td>Ciardi Van Sickle</td>
</tr>
<tr>
<td>Gary Wicker</td>
<td>98036</td>
<td></td>
<td>Gary Wicker</td>
</tr>
<tr>
<td>SUSAN K NIELSEN</td>
<td>98027</td>
<td><a href="mailto:SusanKantoh@gmail.com">SusanKantoh@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chris Gorchels</td>
<td>98354</td>
<td><a href="mailto:gorchels907@comcast.com">gorchels907@comcast.com</a></td>
<td>Chris Gorchels</td>
</tr>
<tr>
<td>Tammy Nguyen</td>
<td>98022</td>
<td><a href="mailto:Tan67721@gmail.com">Tan67721@gmail.com</a></td>
<td>Tammy Nguyen</td>
</tr>
<tr>
<td>Shane Kenny</td>
<td>98042</td>
<td><a href="mailto:suke23@uornet.com">suke23@uornet.com</a></td>
<td>Shane Kenny</td>
</tr>
<tr>
<td>Kay Gorchels</td>
<td>99354</td>
<td><a href="mailto:gorchelskay@gmail.com">gorchelskay@gmail.com</a></td>
<td>Kay Gorchels</td>
</tr>
<tr>
<td>Name</td>
<td>Email Address</td>
<td>How heard about this or affiliated with?</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Ross Reser</td>
<td><a href="mailto:Rossan@rogers.com">Rossan@rogers.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kevin Saueile</td>
<td><a href="mailto:kevin.saueile@msn.com">kevin.saueile@msn.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mike Aiken</td>
<td><a href="mailto:pocoaiken@gmail.com">pocoaiken@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alistair Hamilton</td>
<td><a href="mailto:alistair.hamilton@gmail.com">alistair.hamilton@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Grace Hamilton</td>
<td><a href="mailto:grace.hamilton@gmail.com">grace.hamilton@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Laura Hamilton</td>
<td><a href="mailto:hamiltons@gmail.com">hamiltons@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Shelley Gienger</td>
<td><a href="mailto:mgienger@me.com">mgienger@me.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lonnie Gienger</td>
<td><a href="mailto:lonnie@wilkinsoncorporation.com">lonnie@wilkinsoncorporation.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kylon Gienger</td>
<td><a href="mailto:kylon.gienger@gmail.com">kylon.gienger@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tehiah Gienger</td>
<td><a href="mailto:tehiah.gienger@gmail.com">tehiah.gienger@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lachele O'Connell</td>
<td><a href="mailto:lacheleocconnell@gmail.com">lacheleocconnell@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Auren O'Connell</td>
<td>auren.o'<a href="mailto:connell@gmail.com">connell@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Sky Gienger</td>
<td><a href="mailto:skygienger@gmail.com">skygienger@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Chelann Gienger</td>
<td><a href="mailto:chelann.gienger@hotmail.com">chelann.gienger@hotmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Email Address</td>
<td>How heard about this or affiliated with?</td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>--------------------------------------</td>
<td>-----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Timi-Jean Fonfrieti</td>
<td><a href="mailto:kachess385@gmail.com">kachess385@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>JDAW OWENS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>BRAD Jonas</td>
<td><a href="mailto:bradjo1@msn.com">bradjo1@msn.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ann Lewis</td>
<td><a href="mailto:ronia.sparacio@gmail.com">ronia.sparacio@gmail.com</a></td>
<td>YBIP Coalition/Kachess Ridge</td>
<td></td>
</tr>
<tr>
<td>Lynne Thomas</td>
<td>joelandlynnellive.com</td>
<td>Kachess Ridge</td>
<td></td>
</tr>
<tr>
<td>Marcie Busby</td>
<td><a href="mailto:mbusby_2831@comcast.com">mbusby_2831@comcast.com</a></td>
<td>Katie &amp; Clay Ewen</td>
<td></td>
</tr>
<tr>
<td>Melvena Whitteman</td>
<td><a href="mailto:our_sweetened@comcast.com">our_sweetened@comcast.com</a></td>
<td>Katie &amp; Clay Ewen</td>
<td></td>
</tr>
<tr>
<td>Rick North</td>
<td><a href="mailto:rkmnorth@comcast.net">rkmnorth@comcast.net</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paige Ryan</td>
<td><a href="mailto:paigecryan@gmail.com">paigecryan@gmail.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Tom Carmody</td>
<td><a href="mailto:tcarmody@carmodycompany.com">tcarmody@carmodycompany.com</a></td>
<td>Kachess HOA</td>
<td></td>
</tr>
<tr>
<td>Katie Ewen</td>
<td><a href="mailto:katie_ewen@yahoo.com">katie_ewen@yahoo.com</a></td>
<td>William Campbell</td>
<td></td>
</tr>
<tr>
<td>Bill/Karen Campen</td>
<td><a href="mailto:bkc2@uw.edu">bkc2@uw.edu</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gary/Sandy Knauff</td>
<td><a href="mailto:knauff@comcast.net">knauff@comcast.net</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Name</td>
<td>Email Address</td>
<td>How heard about this or affiliated with?</td>
<td></td>
</tr>
<tr>
<td>-------------------------------</td>
<td>--------------------------------------</td>
<td>----------------------------------------</td>
<td></td>
</tr>
<tr>
<td>Roy &amp; Amy Sparks</td>
<td><a href="mailto:sprsparkse@yahoo.com">sprsparkse@yahoo.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SCOTT NICHOLSON</td>
<td><a href="mailto:J_scott_nicholson@msn.com">J_scott_nicholson@msn.com</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Marvin Parsons</td>
<td><a href="mailto:marvin@parsonswet.net">marvin@parsonswet.net</a></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Jerry &amp; Gayle Watts</td>
<td><a href="mailto:jerry5watts@gmail.com">jerry5watts@gmail.com</a></td>
<td>Ridge</td>
<td></td>
</tr>
<tr>
<td>Tracey Donovan</td>
<td><a href="mailto:tdexcavating@gmail.com">tdexcavating@gmail.com</a></td>
<td>KRMA</td>
<td></td>
</tr>
<tr>
<td>Bernie Ward</td>
<td><a href="mailto:bandiwward@msn.com">bandiwward@msn.com</a></td>
<td>KRMA</td>
<td></td>
</tr>
<tr>
<td>Sean Courage</td>
<td><a href="mailto:seanercourage@comcast.net">seanercourage@comcast.net</a></td>
<td>APLENTIAL</td>
<td></td>
</tr>
<tr>
<td>Feb McCleary</td>
<td><a href="mailto:jhmiscay@yahoo.com">jhmiscay@yahoo.com</a></td>
<td>KRMA</td>
<td></td>
</tr>
<tr>
<td>BILLY McCleary</td>
<td><a href="mailto:wmciscay@gmail.com">wmciscay@gmail.com</a></td>
<td>KERVIAK</td>
<td></td>
</tr>
<tr>
<td>Michael &amp; Kathy Craig</td>
<td><a href="mailto:mardkcraig@aol.com">mardkcraig@aol.com</a></td>
<td>sean parsons</td>
<td></td>
</tr>
<tr>
<td>Dick &amp; Bonnie Landen</td>
<td><a href="mailto:dicklanden@aol.com">dicklanden@aol.com</a></td>
<td>there</td>
<td></td>
</tr>
<tr>
<td>Dan &amp; Carol Ferguson</td>
<td><a href="mailto:canddferg1976@comcast.net">canddferg1976@comcast.net</a></td>
<td>Cabin owner, on East Lake Kachess</td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kaila Russell</td>
<td>98014</td>
<td><a href="mailto:russell.kaila@gmail.com">russell.kaila@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mark Russell</td>
<td>98014</td>
<td><a href="mailto:m.russell@pugetelectric.com">m.russell@pugetelectric.com</a></td>
<td></td>
</tr>
<tr>
<td>Vianne Nordlund</td>
<td>98025</td>
<td><a href="mailto:jenney@sbs.com">jenney@sbs.com</a></td>
<td></td>
</tr>
<tr>
<td>Sarah Kinney</td>
<td>98025</td>
<td><a href="mailto:skinny1357@gmail.com">skinny1357@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dan Wymer</td>
<td>98025</td>
<td><a href="mailto:dan.wymer@gmail.com">dan.wymer@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dave Allenburg</td>
<td>98043</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Al Tanner</td>
<td>98198</td>
<td><a href="mailto:aliosterbalister@hotmail.com">aliosterbalister@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dale Tanner</td>
<td>98198</td>
<td><a href="mailto:greneberg@msn.com">greneberg@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Gregory K. Everson</td>
<td>98056</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Michael &amp; Shirley Baker</td>
<td>98022</td>
<td><a href="mailto:mjbsocks2001@gmail.com">mjbsocks2001@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Velby Herman</td>
<td>98108</td>
<td><a href="mailto:velby.herman.tux@gmail.com">velby.herman.tux@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Angela Herman</td>
<td>98015</td>
<td><a href="mailto:angela.hardman123@gmail.com">angela.hardman123@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Diane Vederman</td>
<td>98408</td>
<td><a href="mailto:diane.vederna@gmail.com">diane.vederna@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Devan Smith</td>
<td>98922</td>
<td><a href="mailto:devinsmith57@gmail.com">devinsmith57@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Steven Smith</td>
<td>98922</td>
<td><a href="mailto:Steven.Smith57@gmail.com">Steven.Smith57@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Donita Pitts</td>
<td>98922</td>
<td><a href="mailto:ampitts@comcast.net">ampitts@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Jackie Mensing</td>
<td>98922</td>
<td><a href="mailto:jackiemensing923@gmail.com">jackiemensing923@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Chris Baker</td>
<td>98925</td>
<td><a href="mailto:Baker477@gmail.com">Baker477@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mary Wasell</td>
<td>98925</td>
<td><a href="mailto:mary98026@yahoo.com">mary98026@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Troy Howard</td>
<td>98942</td>
<td><a href="mailto:mbb3@live.com">mbb3@live.com</a></td>
<td></td>
</tr>
<tr>
<td>Teresa Gravseth</td>
<td>98446</td>
<td><a href="mailto:TCORNEFORTH@YHOO.COM">TCORNEFORTH@YHOO.COM</a></td>
<td></td>
</tr>
<tr>
<td>Janet Norton</td>
<td>98925</td>
<td>JANET.M.NORTON@HITMAIL</td>
<td></td>
</tr>
<tr>
<td>Gary Oswald</td>
<td>98925</td>
<td><a href="mailto:Gary@MrPressureWash.net">Gary@MrPressureWash.net</a></td>
<td></td>
</tr>
<tr>
<td>Kenneth McLevin</td>
<td>98321</td>
<td><a href="mailto:KennethymcLevin@gmail.com">KennethymcLevin@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sam Sauney</td>
<td>98321</td>
<td><a href="mailto:DJent1999@yahoo.com">DJent1999@yahoo.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-1204
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kyle Conklin</td>
<td>98021</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Terrace</td>
<td>98075</td>
<td><a href="mailto:dustineangland@gmail.com">dustineangland@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Randy Lee</td>
<td>98282</td>
<td><a href="mailto:hiredhand@wavecable.com">hiredhand@wavecable.com</a></td>
<td></td>
</tr>
<tr>
<td>Mary Lee</td>
<td>98282</td>
<td><a href="mailto:marymac@wavecable.com">marymac@wavecable.com</a></td>
<td></td>
</tr>
<tr>
<td>David M. Hall</td>
<td>98926</td>
<td><a href="mailto:half@fairpoint.net">half@fairpoint.net</a></td>
<td></td>
</tr>
<tr>
<td>Tristan Carpenter</td>
<td>98926</td>
<td><a href="mailto:tristan.carpenter.89@gmail.com">tristan.carpenter.89@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Ashley Mankus</td>
<td>98922</td>
<td><a href="mailto:mankusashley@gmail.com">mankusashley@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kayla Owens</td>
<td>98920</td>
<td><a href="mailto:kayladawnowens@gmail.com">kayladawnowens@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Hayden Lewis</td>
<td>98926</td>
<td><a href="mailto:hayden.lewis92@yahoo.com">hayden.lewis92@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Mick Manicew</td>
<td>98922</td>
<td><a href="mailto:kcim54@hotmail.com">kcim54@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jessica Hutchinson</td>
<td>98946</td>
<td><a href="mailto:jdhutch07@gmail.com">jdhutch07@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jessica Harrison</td>
<td>98925</td>
<td><a href="mailto:chrismariejessica@gmail.com">chrismariejessica@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant. (KDRPP)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kay Duncanson</td>
<td>98166</td>
<td><a href="mailto:KayD@duncansonnco.com">KayD@duncansonnco.com</a></td>
<td></td>
</tr>
<tr>
<td>Harold Duncanson</td>
<td>98166</td>
<td><a href="mailto:Harold@DuncansonCO.com">Harold@DuncansonCO.com</a></td>
<td></td>
</tr>
<tr>
<td>Bee Narahau</td>
<td>98024</td>
<td><a href="mailto:bee4981c@gmail.com">bee4981c@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>MARK Burns</td>
<td>98075</td>
<td><a href="mailto:Burkepostoffice@gmail.com">Burkepostoffice@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Joanna Owens</td>
<td>98391</td>
<td><a href="mailto:jpowens99@yahoo.com">jpowens99@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Melanie Breitbach</td>
<td>98024</td>
<td><a href="mailto:melbreit@comcast.net">melbreit@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Heather Flynn</td>
<td>98027</td>
<td><a href="mailto:heatherflynn@comcast.com">heatherflynn@comcast.com</a></td>
<td></td>
</tr>
<tr>
<td>Joe Malloy</td>
<td>98025</td>
<td><a href="mailto:Joe98025@yahoo.com">Joe98025@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Katie Lewis</td>
<td>98105</td>
<td><a href="mailto:kawiis@gmail.com">kawiis@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Keri Monroe</td>
<td>98075</td>
<td><a href="mailto:kerimonroe@comcast.net">kerimonroe@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Bill and Alison Trimm</td>
<td>98055</td>
<td><a href="mailto:thetrimms@comcast.net">thetrimms@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Jamie Casebolt</td>
<td>98073</td>
<td><a href="mailto:jamiecasebolt@live.com">jamiecasebolt@live.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant. (KDRPP)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Marcia Brownworth</td>
<td>98198</td>
<td><a href="mailto:mmendez120225@yahoo.com">mmendez120225@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Rayna Brownsworth</td>
<td>98059</td>
<td><a href="mailto:beann55@hotmail.com">beann55@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Travis Broun</td>
<td>98015</td>
<td><a href="mailto:beemervanes@gmail.com">beemervanes@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Gail McDermott</td>
<td>98039</td>
<td><a href="mailto:mod2ga@gmail.com">mod2ga@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Keith Anderson</td>
<td>98020</td>
<td><a href="mailto:KANDE31970@aol.com">KANDE31970@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Anna Anderson</td>
<td>98020</td>
<td><a href="mailto:KANDE31970@aol.com">KANDE31970@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Brad Reeves</td>
<td>98059</td>
<td><a href="mailto:breves57@yahoo.com">breves57@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Jeffrey Henry</td>
<td>98031</td>
<td><a href="mailto:Foolbiker2@aol.com">Foolbiker2@aol.com</a></td>
<td></td>
</tr>
<tr>
<td>Christine Reeves</td>
<td>98031</td>
<td>Tina <a href="mailto:Reeves63@gmail.com">Reeves63@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Heidi Huynh</td>
<td>98031</td>
<td><a href="mailto:reaves93@gmail.com">reaves93@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Gerald &amp; Sharon Golda</td>
<td>98065</td>
<td><a href="mailto:gernalr@comcast.net">gernalr@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Michael Aiken</td>
<td>98045</td>
<td><a href="mailto:MICHAEL.AIKEN@HOTMAIL.COM">MICHAEL.AIKEN@HOTMAIL.COM</a></td>
<td></td>
</tr>
<tr>
<td>Kevin Sauer</td>
<td>98045</td>
<td><a href="mailto:KEVINSAUER@MSN.COM">KEVINSAUER@MSN.COM</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant. (KDRPP)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gayle L Kimmel</td>
<td>98031</td>
<td><a href="mailto:gayle.kimmel@outlook.com">gayle.kimmel@outlook.com</a></td>
<td></td>
</tr>
<tr>
<td>Kathryn J Reeves</td>
<td>98059</td>
<td><a href="mailto:d1matthai@comcast.net">d1matthai@comcast.net</a></td>
<td>Kathy Reeves</td>
</tr>
<tr>
<td>Debbie Matthai</td>
<td>98038</td>
<td><a href="mailto:d1matthai@comcast.net">d1matthai@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Nathan Cooper</td>
<td>98028</td>
<td><a href="mailto:DyerPaint21@gmail.com">DyerPaint21@gmail.com</a></td>
<td>Matt Cooper</td>
</tr>
<tr>
<td>Janine Cooper</td>
<td>98059</td>
<td><a href="mailto:CooperJanine09@yahoo.com">CooperJanine09@yahoo.com</a></td>
<td>Janine Cooper</td>
</tr>
<tr>
<td>Aaron Braunworth</td>
<td>98039</td>
<td><a href="mailto:abbraunworth@gmail.com">abbraunworth@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Carrera Hallwachs</td>
<td>98059</td>
<td><a href="mailto:bellaacche@gmail.com">bellaacche@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Taylor Braunworth</td>
<td>98208</td>
<td><a href="mailto:TBAUNWORTH@GMAZL.COM">TBAUNWORTH@GMAZL.COM</a></td>
<td></td>
</tr>
<tr>
<td>Olivia Driscoll</td>
<td>98208</td>
<td><a href="mailto:oliviadriscoll96@gmail.com">oliviadriscoll96@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Joseph Bullock</td>
<td>98058</td>
<td><a href="mailto:Bullock.Joseph@Gmail.com">Bullock.Joseph@Gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jeff Reynolds</td>
<td>98058</td>
<td><a href="mailto:jeff.wn.reynolds@gmail.com">jeff.wn.reynolds@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kiri Anthony</td>
<td>98272</td>
<td><a href="mailto:kirikothy@gmail.com">kirikothy@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alex Faulkner</td>
<td>98280</td>
<td><a href="mailto:alexfaulkner@gmail.com">alexfaulkner@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019

SDEIS-CR-1208
<table>
<thead>
<tr>
<th>Name</th>
<th>Email Address</th>
<th>How heard about this or affiliated with?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gordon Brandt</td>
<td><a href="mailto:GBRAND7@COMCAST.NET">GBRAND7@COMCAST.NET</a></td>
<td></td>
</tr>
<tr>
<td>Susan Anderson</td>
<td><a href="mailto:sasananderson23@comcast.net">sasananderson23@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>William Vaughn</td>
<td><a href="mailto:grovecity@comcast.net">grovecity@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>Colwell Reed</td>
<td><a href="mailto:readers2@centurylink.net">readers2@centurylink.net</a></td>
<td></td>
</tr>
<tr>
<td>Edward &amp; Lisa Lux</td>
<td><a href="mailto:elux001@gmail.com">elux001@gmail.com</a></td>
<td>Alpental Community Club</td>
</tr>
<tr>
<td>Bonnie Aguilar</td>
<td><a href="mailto:bonagi@msn.com">bonagi@msn.com</a></td>
<td>CMCA</td>
</tr>
<tr>
<td>Mike Edde</td>
<td><a href="mailto:mike_edde@msn.com">mike_edde@msn.com</a></td>
<td>KMTA</td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joe Dill</td>
<td>98103</td>
<td><a href="mailto:jocdill12@gmail.com">jocdill12@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Montana Moore</td>
<td>98922</td>
<td><a href="mailto:stephaniemo@johnscott.com">stephaniemo@johnscott.com</a></td>
<td></td>
</tr>
<tr>
<td>Mary Balliet</td>
<td>98858</td>
<td><a href="mailto:maryDunican34@gmail.com">maryDunican34@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Colton Moore</td>
<td>98922</td>
<td>colton <a href="mailto:moore62@akacers.com">moore62@akacers.com</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kurt Langendorfer</td>
<td>98208</td>
<td>Strawberry &amp; Hotmail.com</td>
<td></td>
</tr>
<tr>
<td>Cathie Missman</td>
<td>98926</td>
<td><a href="mailto:Cathimissman@email.com">Cathimissman@email.com</a></td>
<td></td>
</tr>
<tr>
<td>Scott Powers</td>
<td>98922</td>
<td><a href="mailto:jerinscott@email.com">jerinscott@email.com</a></td>
<td></td>
</tr>
<tr>
<td>Chris Hawk</td>
<td>98922</td>
<td><a href="mailto:chris@hawk.net">chris@hawk.net</a></td>
<td></td>
</tr>
<tr>
<td>Susan Padgett</td>
<td>98943</td>
<td>susann@<a href="mailto:cleelum@gmail.com">cleelum@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Randall Hughes</td>
<td>98943</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Debbie Cernick</td>
<td>98922</td>
<td><a href="mailto:rcernick@gmail.com">rcernick@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>J. Sam Maybeo</td>
<td>98922</td>
<td><a href="mailto:sammaybeo@msn.com">sammaybeo@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Claudette Maybeo</td>
<td>98922</td>
<td>&quot;</td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Kati Forsell</td>
<td>98051</td>
<td><a href="mailto:Kmhugan.13@hotmail.com">Kmhugan.13@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Kurt Forsell</td>
<td>98059</td>
<td><a href="mailto:KurtForsell@hotmail.com">KurtForsell@hotmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dave Cline</td>
<td>98922</td>
<td><a href="mailto:decline97@gmail.com">decline97@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Charlene Cline</td>
<td>98972</td>
<td><a href="mailto:charlenecline2007@yahoo.com">charlenecline2007@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Chris Heintz</td>
<td>98925</td>
<td><a href="mailto:cheintz17@gmail.com">cheintz17@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Stefani Hendry</td>
<td>98925</td>
<td><a href="mailto:BrendanStee@gmail.com">BrendanStee@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Dennis Becker</td>
<td>98445</td>
<td><a href="mailto:DBSHoot2kill@gmail.com">DBSHoot2kill@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Rick Spencer</td>
<td>98922</td>
<td><a href="mailto:rick4beeks@gmail.com">rick4beeks@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Sue Spencer</td>
<td>98922</td>
<td><a href="mailto:suzespoo@gmail.com">suzespoo@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Fred Joseph</td>
<td>98177</td>
<td><a href="mailto:f.joseph@comcast.net">f.joseph@comcast.net</a></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC).

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mike Jackson</td>
<td>98031</td>
<td><a href="mailto:mjackson@tahamast.com">mjackson@tahamast.com</a>, us</td>
<td></td>
</tr>
<tr>
<td>Jeff Carter</td>
<td>98038</td>
<td>gcarter <a href="mailto:4155@go.tahamast">4155@go.tahamast</a></td>
<td></td>
</tr>
<tr>
<td>Trenton Taylor</td>
<td>98031</td>
<td><a href="mailto:ttaylor299@go.tahamast.com">ttaylor299@go.tahamast.com</a></td>
<td></td>
</tr>
<tr>
<td>Andrew Oliver</td>
<td>98038</td>
<td><a href="mailto:candioliard@gmail.com">candioliard@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Connor Webb</td>
<td>98038</td>
<td><a href="mailto:hewumbos21@gmail.com">hewumbos21@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Jacob Anderson</td>
<td>98031</td>
<td>JacobAnderson350</td>
<td></td>
</tr>
<tr>
<td>Canyon Masterson</td>
<td>98027</td>
<td>cmasterson350</td>
<td></td>
</tr>
<tr>
<td>Daniel McCloud</td>
<td>98036</td>
<td><a href="mailto:v.mclaren36@go.tahamast.com">v.mclaren36@go.tahamast.com</a></td>
<td></td>
</tr>
<tr>
<td>Derek Fite</td>
<td>98038</td>
<td><a href="mailto:dfite194@go.tahamast.com">dfite194@go.tahamast.com</a></td>
<td></td>
</tr>
<tr>
<td>Dylan King</td>
<td>98038</td>
<td><a href="mailto:kingdylan860@gmail.com">kingdylan860@gmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yvissa Wald</td>
<td>98028</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clarissa Syne</td>
<td>98926</td>
<td><a href="mailto:Clarissa.syne@gmail.com">Clarissa.syne@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Lindsey Thiel</td>
<td>98926</td>
<td><a href="mailto:marcyrauso@hotmail.com">marcyrauso@hotmail.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doris Yeager</td>
<td>98080</td>
<td><a href="mailto:dyager.5356@yahoo.com">dyager.5356@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Windy Tonan</td>
<td>98051</td>
<td><a href="mailto:14Peach@q.com">14Peach@q.com</a></td>
<td></td>
</tr>
<tr>
<td>Jean Fountain</td>
<td>98059</td>
<td><a href="mailto:kachess536@gmail.com">kachess536@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Joanne Owens</td>
<td>98371</td>
<td><a href="mailto:jpowens77@yahoo.com">jpowens77@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Joan Boly</td>
<td>98925</td>
<td><a href="mailto:smilfu@mail.com">smilfu@mail.com</a></td>
<td></td>
</tr>
<tr>
<td>Pete Boly</td>
<td>98925</td>
<td><a href="mailto:rite.jhansen@yahoo.com">rite.jhansen@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Alexis Adams</td>
<td>98422</td>
<td><a href="mailto:alexisadamsx3@gmail.com">alexisadamsx3@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alan Lawrence</td>
<td>98338</td>
<td><a href="mailto:Charles.A.Lawrence@Gmail.com">Charles.A.Lawrence@Gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Thel Prince</td>
<td>98922</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Paul Perry</td>
<td>98331</td>
<td><a href="mailto:Paulp@peaksteel.com">Paulp@peaksteel.com</a></td>
<td></td>
</tr>
<tr>
<td>Stan Lund</td>
<td>98042</td>
<td>Stanlund@Hotmail</td>
<td></td>
</tr>
<tr>
<td>Jen Bad</td>
<td>98940</td>
<td><a href="mailto:jen_bod@yahoo.com">jen_bod@yahoo.com</a></td>
<td></td>
</tr>
</tbody>
</table>
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

<table>
<thead>
<tr>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td>LAURIE LENT</td>
<td>98225</td>
<td><a href="mailto:Linkhotthlake@gmail.com">Linkhotthlake@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Mike Burns</td>
<td>98225</td>
<td><a href="mailto:Almico75@comcast.net">Almico75@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>JEFF LOFTUS</td>
<td>98038</td>
<td>jloftus82kiddermathews.com</td>
<td></td>
</tr>
<tr>
<td>Mike Eddie</td>
<td>98005</td>
<td><a href="mailto:mike_edde@msn.com">mike_edde@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>Jill Mischke</td>
<td>98225</td>
<td><a href="mailto:jhmischke@yahoo.com">jhmischke@yahoo.com</a></td>
<td></td>
</tr>
<tr>
<td>Maria Burke</td>
<td>98075</td>
<td><a href="mailto:burkepostoffice@gmail.com">burkepostoffice@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Andrew Burke</td>
<td>98075</td>
<td><a href="mailto:andrewalannburke@gmail.com">andrewalannburke@gmail.com</a></td>
<td></td>
</tr>
<tr>
<td>Alexandra Delegans</td>
<td>98014</td>
<td>kandila22001.com</td>
<td></td>
</tr>
<tr>
<td>Taylor Hazard</td>
<td>98026</td>
<td><a href="mailto:Thazard1eg@ymail.com">Thazard1eg@ymail.com</a></td>
<td></td>
</tr>
<tr>
<td>George Delegans</td>
<td>98764</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

March 2019
I am opposed to the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus to Kachess Conveyance (KKC)

I am writing to express my concern and disapproval of the proposed Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance within Kittitas County. The environmental risks/impact and estimated financial cost greatly outweigh any potential benefits to the Yakima Basin.

Additionally, I staunchly oppose these proposed projects in the interest of preservation of ancient Kac and the ecosystem within the Wenatchee National Forest. This land should be preserved for the thousands of visitors to the Kachess Lake basin and future generations. It is inappropriate to move forward with projects that have unknown risks to wilderness watershed areas within Kittitas County.

I would also like to petition that these proposed projects (Kachess Drought Relief Pumping Plant and Keechelus Reservoir-to-Kachess Reservoir Conveyance) pass a voter referendum before any tax payer money is used.

<table>
<thead>
<tr>
<th>No.</th>
<th>Name</th>
<th>Residence Zip Code</th>
<th>Email Address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Denis Fury</td>
<td></td>
<td><a href="mailto:FuryConstruction@msn.com">FuryConstruction@msn.com</a></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>Judith Mallon</td>
<td>98074</td>
<td>jamaffehotmail.com</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Billie Marquiss</td>
<td>98926</td>
<td><a href="mailto:billies@kvalley.com">billies@kvalley.com</a></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Willow Marquiss</td>
<td>98026</td>
<td><a href="mailto:billies@kvalley.com">billies@kvalley.com</a></td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Charles Jung</td>
<td>98040</td>
<td><a href="mailto:jungaf@comcast.net">jungaf@comcast.net</a></td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Koleen Cook</td>
<td>98004</td>
<td>koleenc@gmail</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Judith Winter-Newman</td>
<td>98038</td>
<td><a href="mailto:heabry@comcast.net">heabry@comcast.net</a></td>
<td></td>
</tr>
</tbody>
</table>