http://www.usbr.gov/pn/programs/eis/kdrpp/index.html
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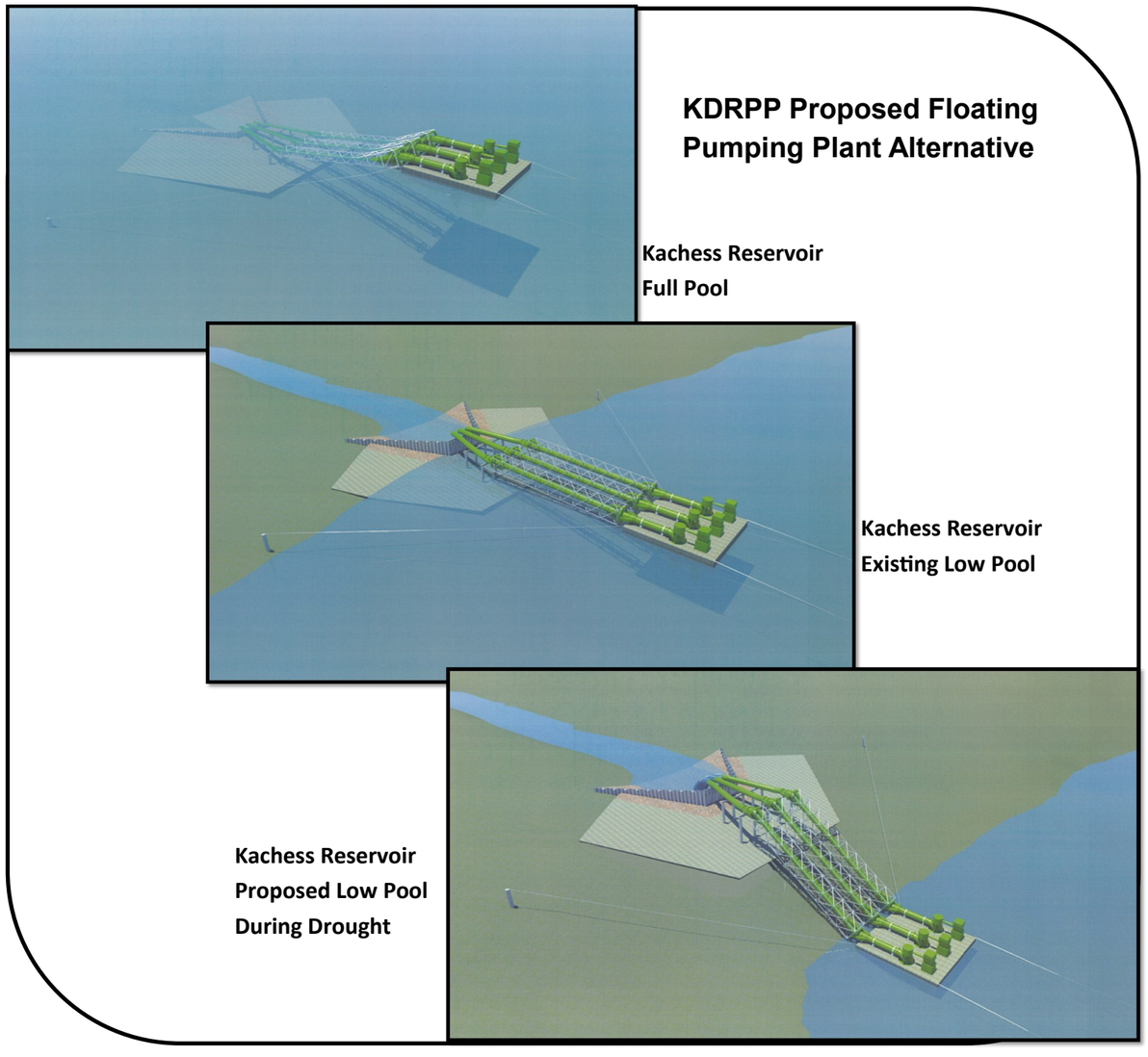
http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html



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U.S. Department of the Interior
Bureau of Reclamation

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DEPARTMENT OF ECOLOGY
State of Washington

Contact: Candace McKinley, (509) 575-5848 x603
cmckinley@usbr.gov

Contact: Tom Tebb, (509) 457-7120
thomas.tebb@ecy.wa.gov

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

A Component of the Yakima Basin Integrated Plan

May 2018

Demand for irrigation water by existing users in the Yakima River basin exceeds supply in drought years, which can lead to substantial prorationing of water deliveries and economic losses to farmers.

Proratable irrigation districts in cooperation with the Bureau of Reclamation and the Washington State Department of Ecology (Ecology) propose to construct, operate, and maintain one or both of two closely related water resource projects in the upper Yakima River basin — the Kachess Drought Relief Pumping Plant (KDRPP) and the Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC). See map inside for location projects.

The KDRPP Project is located just east of Interstate 90 near Easton, Washington. Construction of a pumping plant (either on shore or on a floating barge) would allow the reservoir to be drawn down approximately 80 feet lower than the current outlet, allowing up to 200,000 acre-feet of water to be withdrawn during drought years. This would improve water supply during periods of drought with a goal of providing up to 70 percent of proratable water rights, when feasible. The project would make maximum use of the existing reservoir storage for this purpose without altering the existing Kachess Dam or the footprint of the Kachess Reservoir.

The purpose of KKC is to move water from Keechelus Reservoir to Kachess Reservoir to reduce flows and improve habitat conditions during high-flow releases below Keechelus Dam, while providing more water storage in Kachess Reservoir for downstream needs. This project would divert water (approximately 400 cubic feet per second) below the Keechelus Reservoir's existing outlet channel into a 12-foot-diameter tunnel (approximately 4 miles long) and discharge it into Kachess Reservoir.

The *KDRPP and KKC Draft Environmental Impact Statement* (DEIS) was issued in January 2015. Two 60-day comment periods were provided (March and June 2015). Reclamation and Ecology received numerous comments on the DEIS. As a result of these comments and at the request of the irrigation districts, a Supplemental DEIS was prepared to include a floating pumping plant alternative (back page) to provide up to 200,000 acre-feet of water in a drought year. The *KDRPP and KKC Supplemental Draft Environmental Impact Statement* (SDEIS) was released to the public on April 13, 2018, for a 90-day public comment period. The comment period ends July 11, 2018.

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Kachess Drought Relief Pumping Plant and Keechelus to Kachess Conveyance Project Locations

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Legend

Kachess Drought Relief Pumping Plant:

2: East Shore Pumping Plant ; Pipeline

3: South Shore Pumping Plant ; Tunnel

4: Floating Pumping Plant ; Channel

Keechelus to Kachess Conveyance:

5: Intake

5: Outlet

Tunnel

0 0.5 1 1.5 2 Miles

N W E S

Kachess Narrows

Volitional Fish Passage

Keechelus Reservoir

Kachess Reservoir

Cle Elum Reservoir

5

90

2

3

4

CANADA

WASHINGTON

IDAHO

OREGON

Yakima River Basin

90

5

82

84

Kachess Reservoir

Cle Elum Res

Keechelus Reservoir

Bumping Res

Tieton Res

Naches R

Yakima R

90

82

Building A Future for Water, Wildlife, and Working Lands

Yakima River Basin Integrated Water Resource Management Plan

Reservoir Fish Passage

Provide fish passage at:

1. Clear Lake
2. Cle Elum
3. Bumping
4. Tieton (Rimrock)
5. Keechelus
6. Kachess

Enhanced Water Conservation

1. Implement an agricultural water conservation program designed to conserve up to 170,000 acre-feet of water in good water years.
2. Create a fund to promote water use efficiency basin-wide using voluntary, incentive-based programs. Focus on outdoor uses as top priority.

Habitat/Watershed Protection & Enhancement

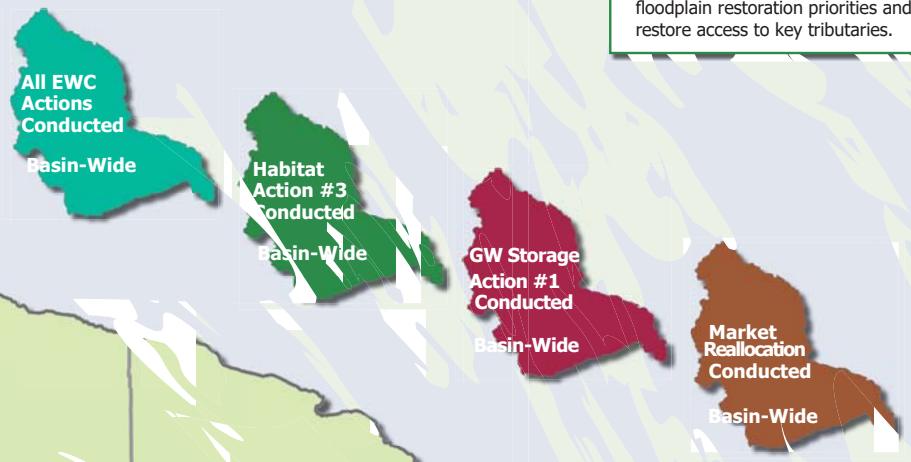
1. Protect ~70,000 acres of land by acquiring high elevation portions of the watershed and forest and shrub steppe habitat.
2. Evaluate potential wilderness area and wild and scenic river designations to protect streams and habitat.
3. Create a habitat enhancement program to address reach-level floodplain restoration priorities and restore access to key tributaries.

Market Reallocation

Employ a water market and/or a water bank to improve water supply in the Yakima River basin. Market reallocation would be conducted in two phases:

The near-term phase would continue existing water marketing and banking programs in the basin, but take additional steps to reduce barriers to water transfers.

The long-term program would focus on facilitating water transfers between irrigation districts. This would allow an irrigation district to fallow land within the district and lease water rights for that land outside the district.



Surface Water Storage

1. Access an additional 200,000 ac-ft of water by tapping into inactive storage at Lake Kachess.
2. Build a 162,500 ac-ft off-channel surface storage facility at Wymer on Lmuma Creek.
3. Construct a new dam at Bumping Reservoir to increase capacity to 190,000 ac-ft.

Groundwater Storage

1. Construct pilot projects to evaluate recharging shallow aquifers via groundwater infiltration. Full scale implementation may follow.
2. Build an aquifer storage and recovery facility allowing Yakima City to withdraw water from the Naches River during high flow periods and store it underground for use during low flow periods.

Structural & Operational Changes

1. Raise the Cle Elum Pool by three feet to add 14,600 ac-ft in storage capacity.
2. Modify Kittitas Reclamation District canals to provide efficiency savings.
3. Construct a pipeline from Lake Keechelus to Lake Kachess to reduce flows and improve habitat conditions during high flow releases below Keechelus and to provide more water storage in Lake Kachess for downstream needs.
4. Decrease power generation at Roza Dam and Chandler power plant to support outmigration of juvenile fish.
5. Make efficiency improvements to the Wapatox Canal.

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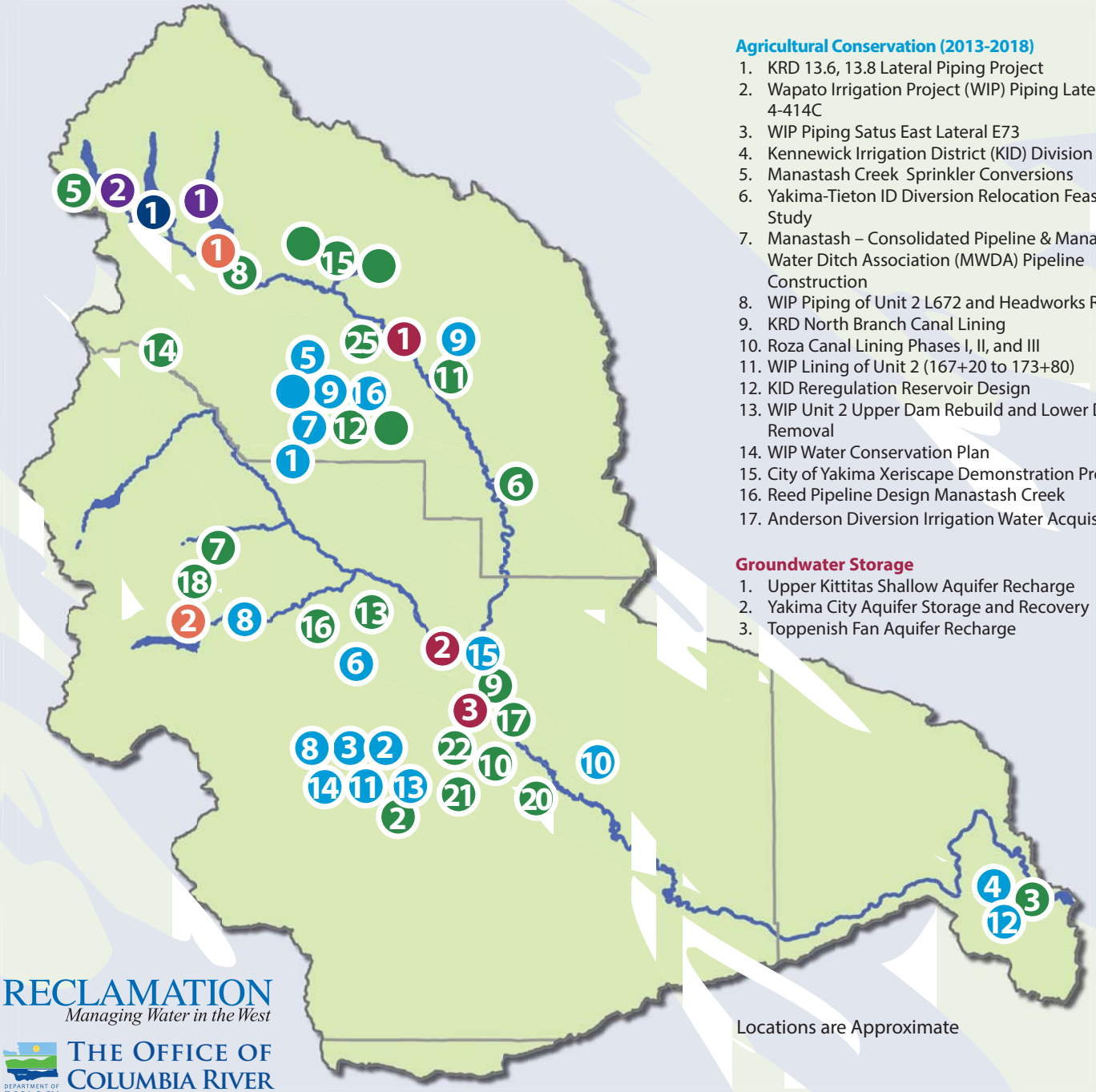
Yakima Basin Integrated Plan
Initial Development Phase Projects



Locations are Approximate

Agricultural Conservation (2013-2018)

1. KRD 13.6, 13.8 Lateral Piping Project
2. Wapato Irrigation Project (WIP) Piping Lateral 4-414C
3. WIP Piping Satus East Lateral E73
4. Kennewick Irrigation District (KID) Division IV Lining
5. Manastash Creek Sprinkler Conversions
6. Yakima-Tieton ID Diversion Relocation Feasibility Study
7. Manastash – Consolidated Pipeline & Manastash Water Ditch Association (MWDA) Pipeline Construction
8. WIP Piping of Unit 2 L672 and Headworks Rebuild
9. KRD North Branch Canal Lining
10. Roza Canal Lining Phases I, II, and III
11. WIP Lining of Unit 2 (167+20 to 173+80)
12. KID Reregulation Reservoir Design
13. WIP Unit 2 Upper Dam Rebuild and Lower Dam Removal
14. WIP Water Conservation Plan
15. City of Yakima Xeriscape Demonstration Project
16. Reed Pipeline Design Manastash Creek
17. Anderson Diversion Irrigation Water Acquisition

Groundwater Storage

1. Upper Kittitas Shallow Aquifer Recharge
2. Yakima City Aquifer Storage and Recovery
3. Toppenish Fan Aquifer Recharge

Fish Passage

1. Cle Elum Dam
2. Tieton (Rimrock) Dam

Structural and Operational Changes

1. Cle Elum Pool Raise
2. Keechelus to Kachess Conveyance

Surface Water Storage

1. Kachess Drought Relief Pumping Plant

Water Bank/Exchange Programs

Basin Wide

Habitat Enhancement (2013-2018)

1. Manastash Creek Conservation and Tributary Enhancement Project
2. Toppenish Creek Habitat Restoration
3. Bateman Island Causeway Modification Conceptual Design/Outreach/Permitting
4. Bull Trout Habitat Improvements (basin wide)
5. Gold Creek Habitat Assessment and Conceptual Design
6. Upper Yakima Floodplain Acquisition and Design Ringer Loop Road
7. Little Rattlesnake Road Decommissioning
8. Cle Elum River Side Channel Restoration Project, Phase 2
9. Gap-to-Gap Property Acquisitions
10. Upper Wapato reach Riparian Restoration
11. Ellensburg Water Company /Coleman Creek Restoration
12. Reed Diversion Barrier Removal
13. Trout Meadows Acquisition /Enhancement
14. Manastash/ Little Naches Land Acquisition
15. Teanaway Valley Farm Acquisition and Restoration
16. Cowiche Easement/Design
17. Gap-to-Gap Outfall Relocation and Levee Removal Design and Restoration
18. South Fork Tieton Bull Trout Passage Feasibility and Design
19. Teanaway/Indian Creek Restoration
20. Yakima Rivermile 89.5 Levee Breach
21. Island Road Floodplain Reconnect ion - Toppenish Creek
22. Toppenish Creek - 3-way Levee Setback
23. Teanaway Habitat Restoration and Fencing

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Pub #16-12-009

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Keechelus, Kachess, and Cle Elum Reservoirs

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

NEPA-SEPA Process Milestones

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Time not to scale

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Kachess Drought Relief Pumping Plant Alternatives

Yakima River Basin Integrated Water Resource Management Plan

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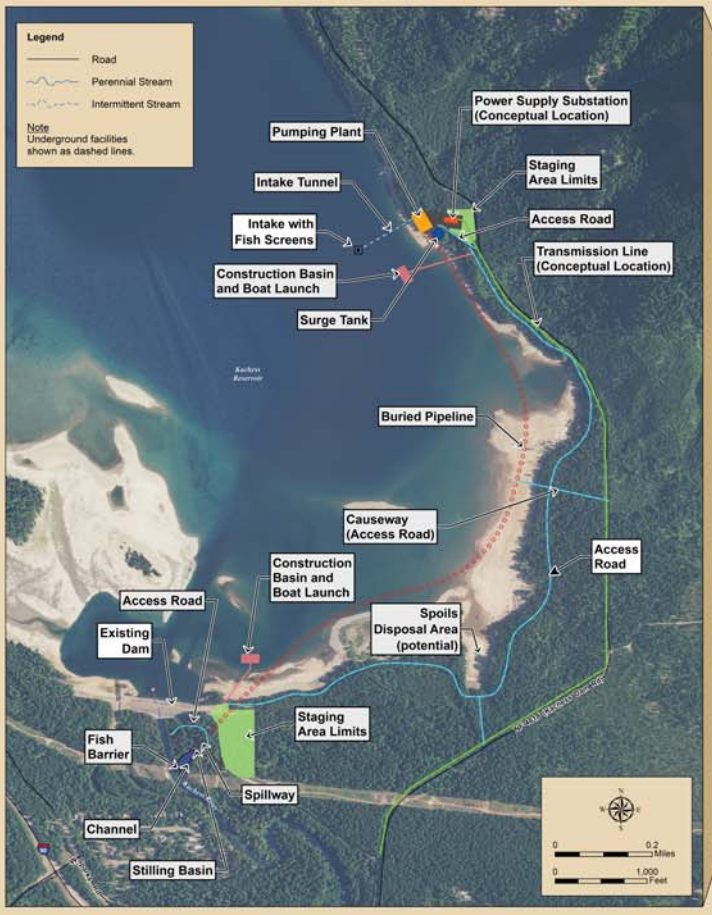

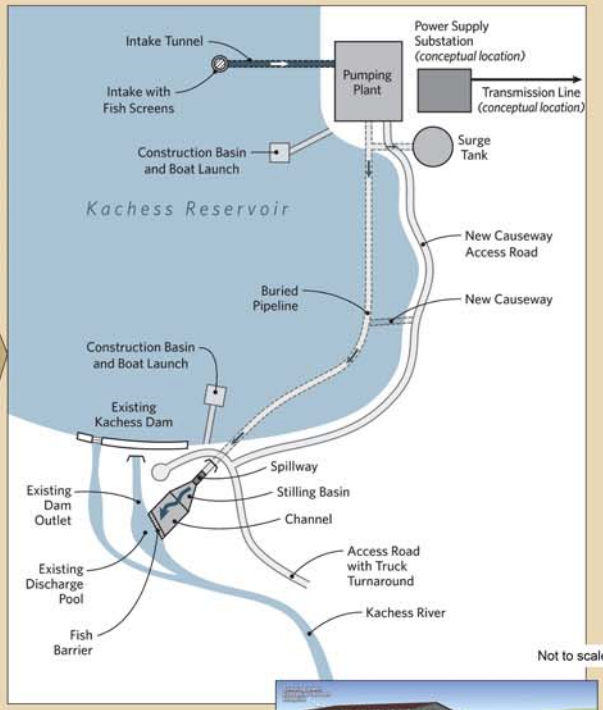

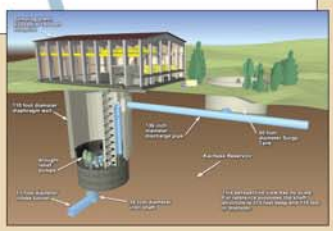

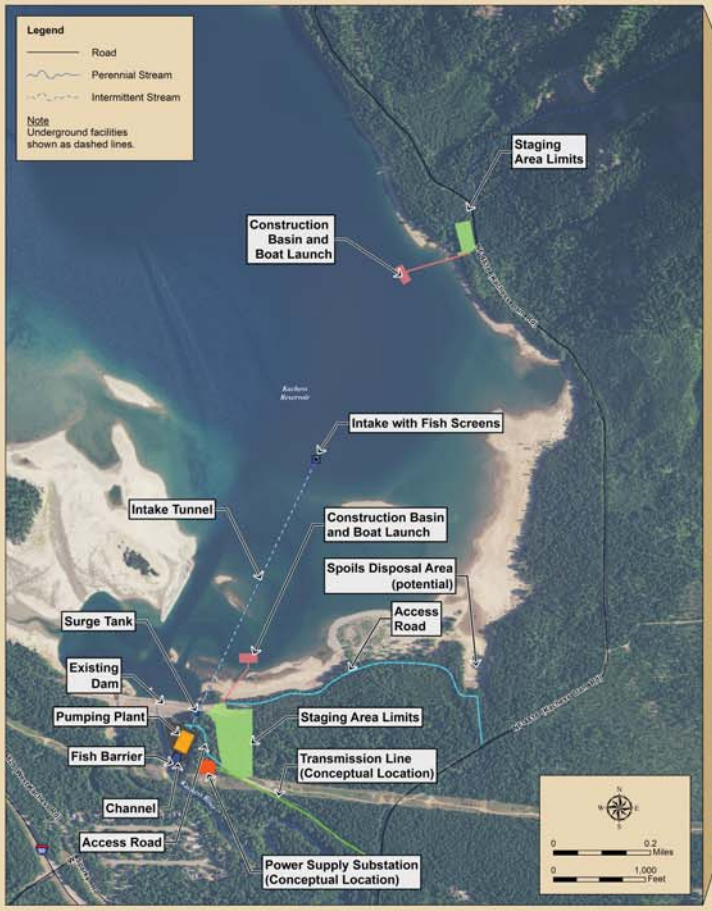

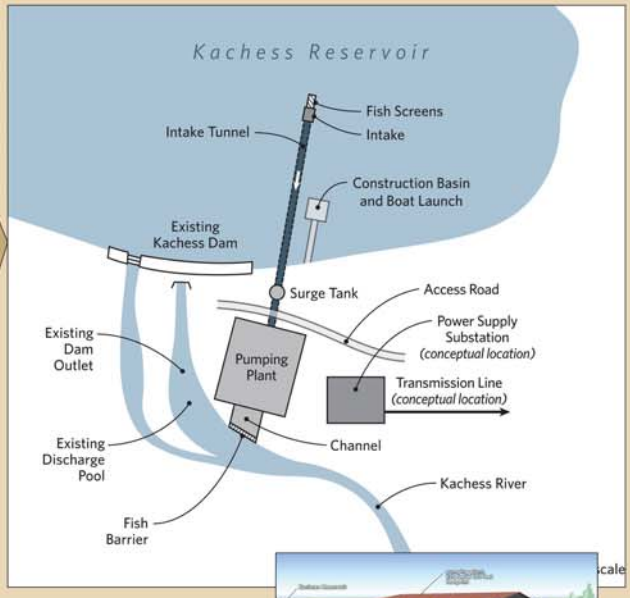

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Kachess Drought Relief Pumping Plant and Keechelus to Kachess Conveyance Project Locations

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Kachess Drought Relief Pumping Plant

Yakima River Basin Integrated Water Resource Management Plan

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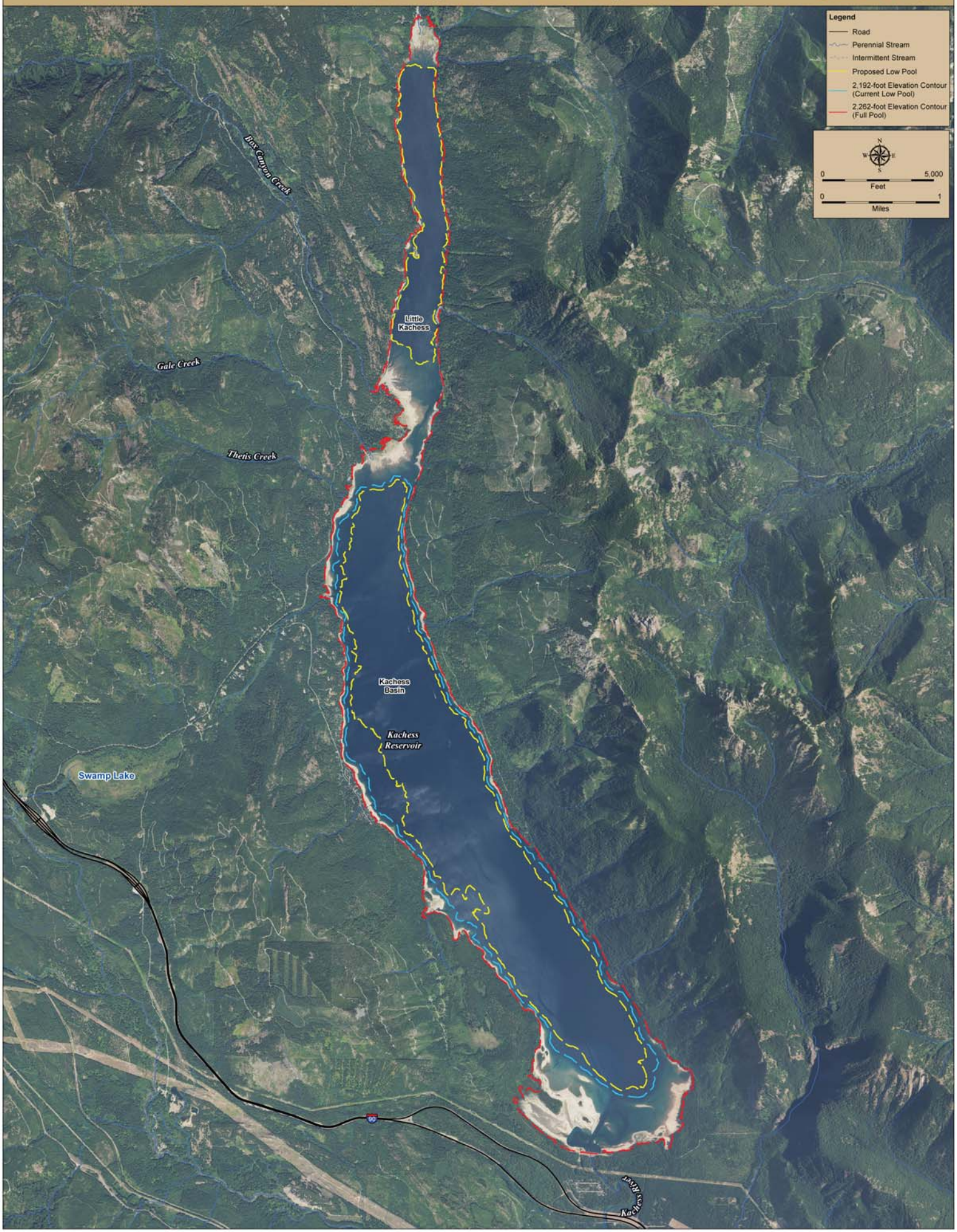
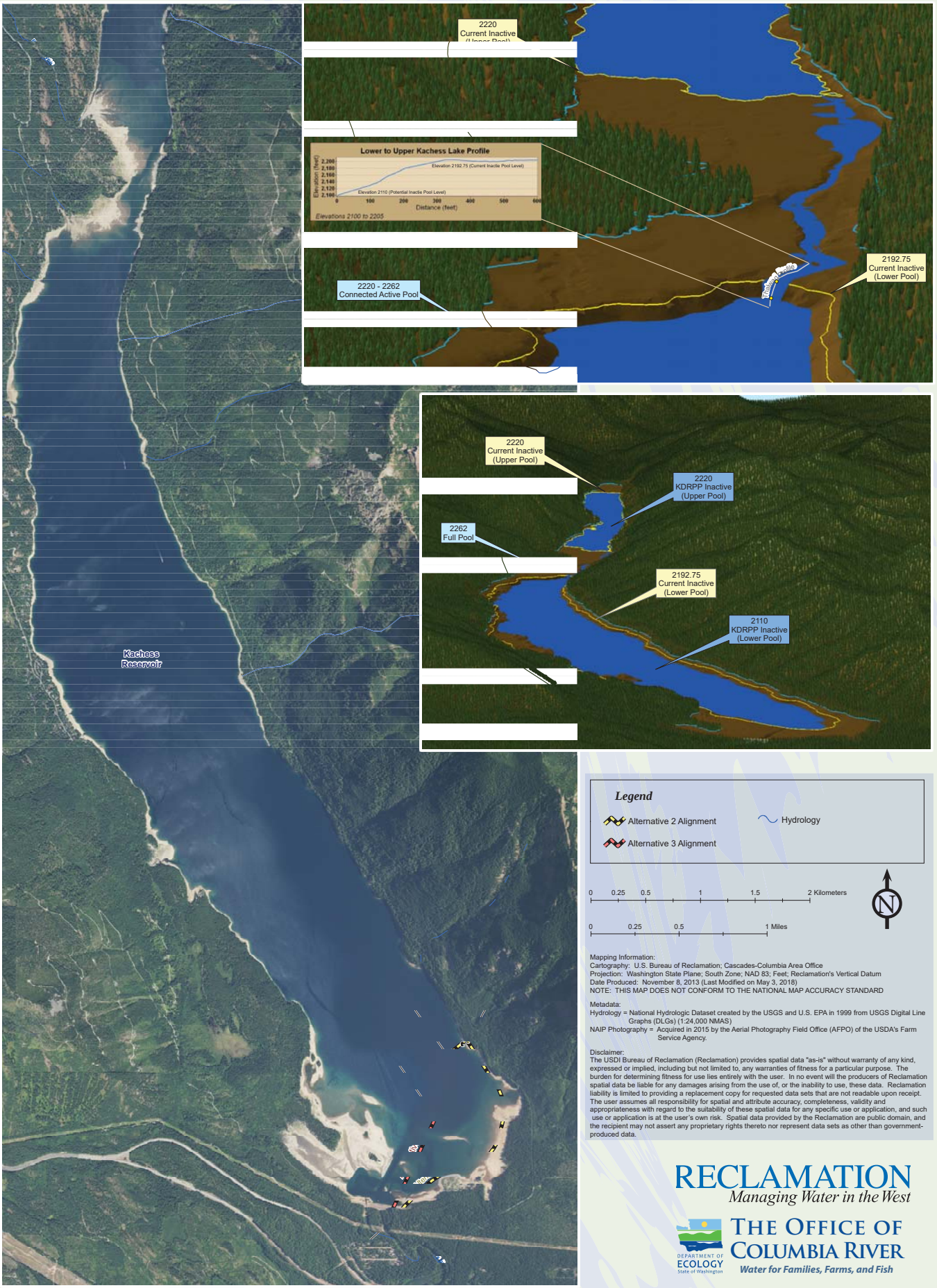


Kachess Drought Relief Pumping Plant



Legend

- Alternative 2 Alignment
- Alternative 3 Alignment
- Hydrology

0 0.25 0.5 1 1.5 2 Kilometers

0 0.25 0.5 1 Miles

N

Mapping Information:
Cartography: U.S. Bureau of Reclamation; Cascades-Columbia Area Office
Projection: Washington State Plane; South Zone; NAD 83; Feet; Reclamation's Vertical Datum
Date Produced: November 8, 2013 (Last Modified on May 3, 2018)
NOTE: THIS MAP DOES NOT CONFORM TO THE NATIONAL MAP ACCURACY STANDARD

Metadata:
Hydrology = National Hydrologic Dataset created by the USGS and U.S. EPA in 1999 from USGS Digital Line Graphs (DLGs) (1:24,000 NMAS)
NAIP Photography = Acquired in 2015 by the Aerial Photography Field Office (AFPO) of the USDA's Farm Service Agency.

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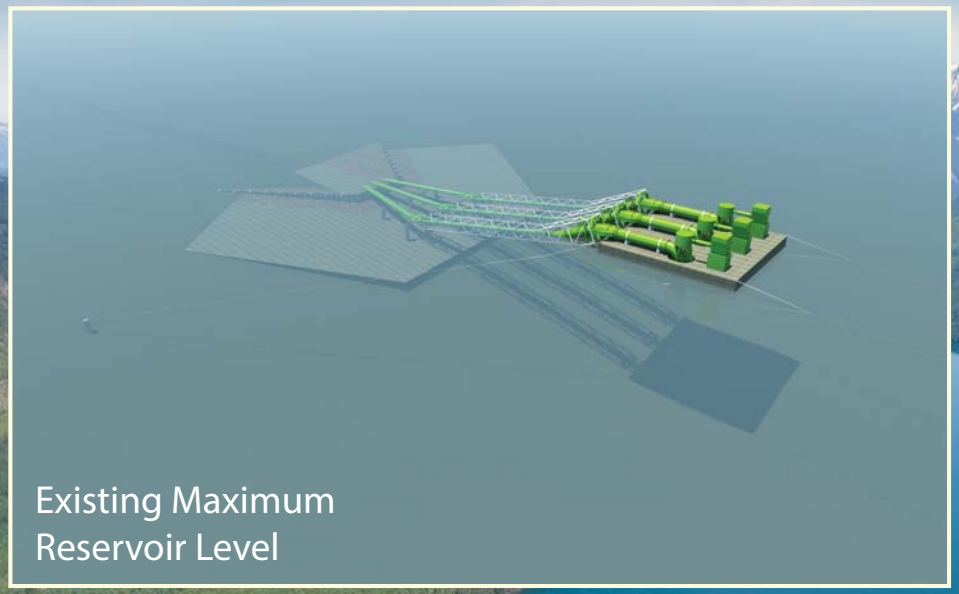
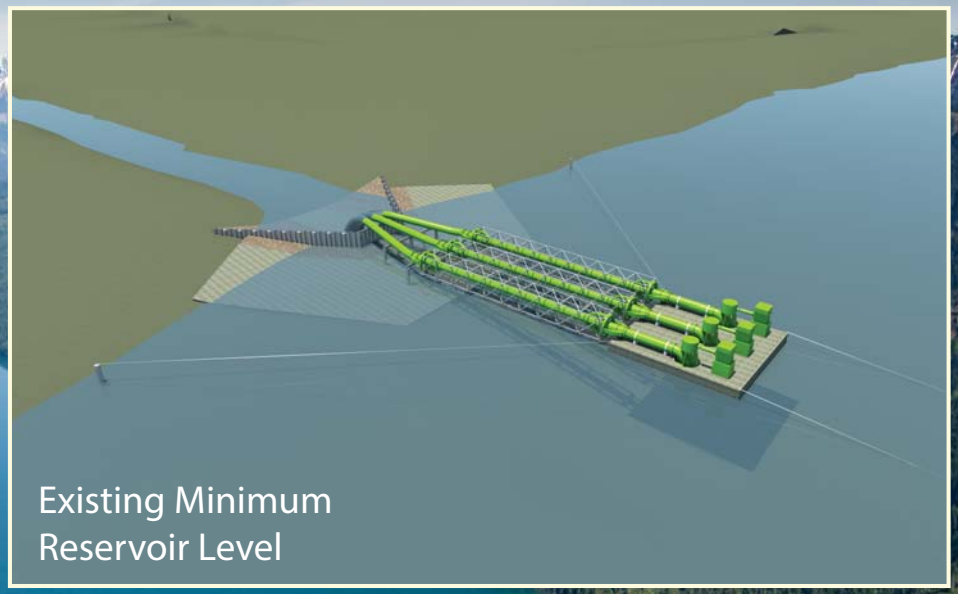


Existing Maximum
Reservoir Level



Existing Minimum
Reservoir Level

Proposed Minimum
Reservoir Level

Floating Pumping Plant at Maximum, Minimum, and Proposed Reservoir Levels

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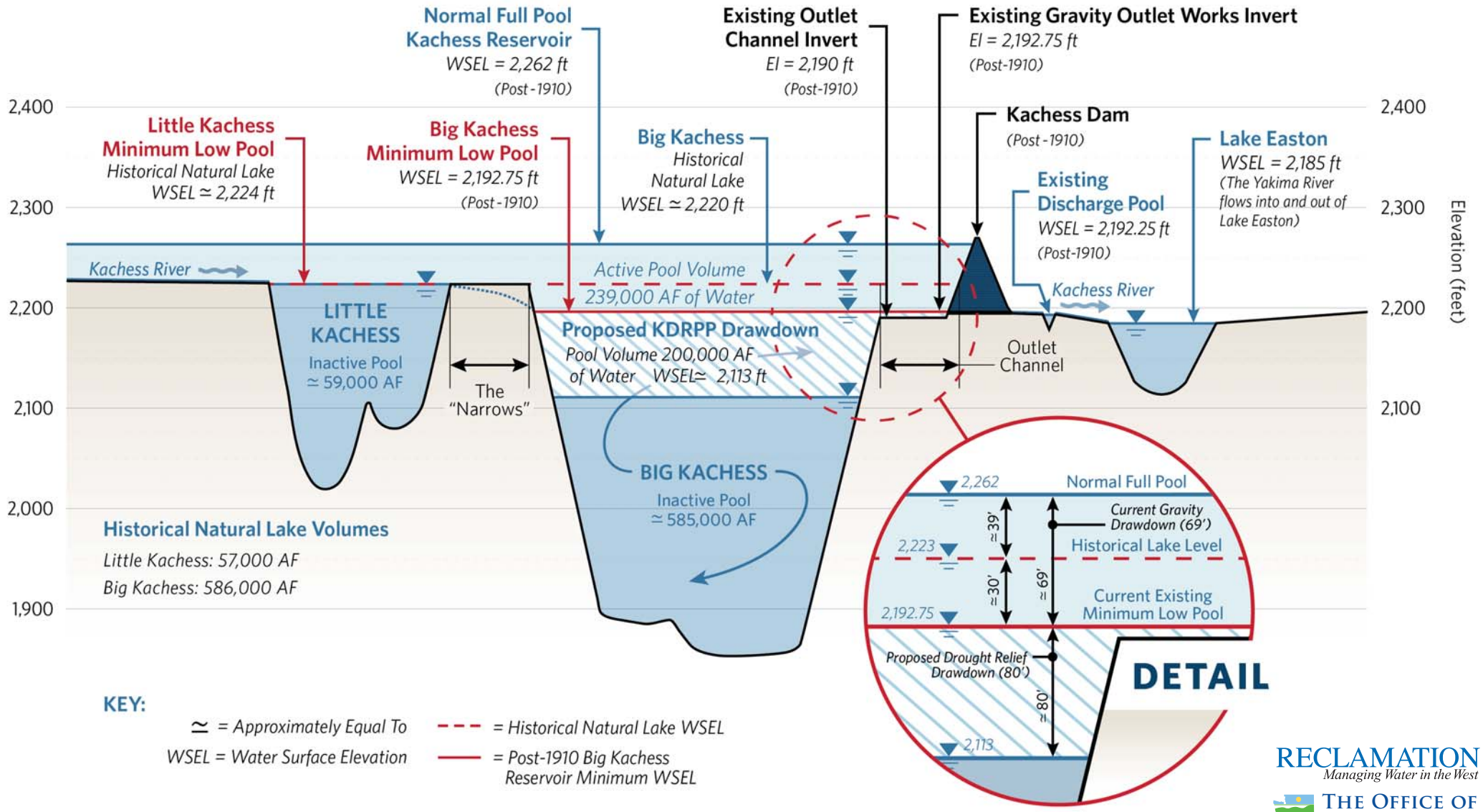
KACHESS RESERVOIR SCHEMATIC HYDRAULIC PROFILE

(Showing Historical Natural Lakes, Existing Kachess Dam & Reservoir, and Proposed Drawdown ~ Not to Scale)



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KKC North Tunnel Alignment

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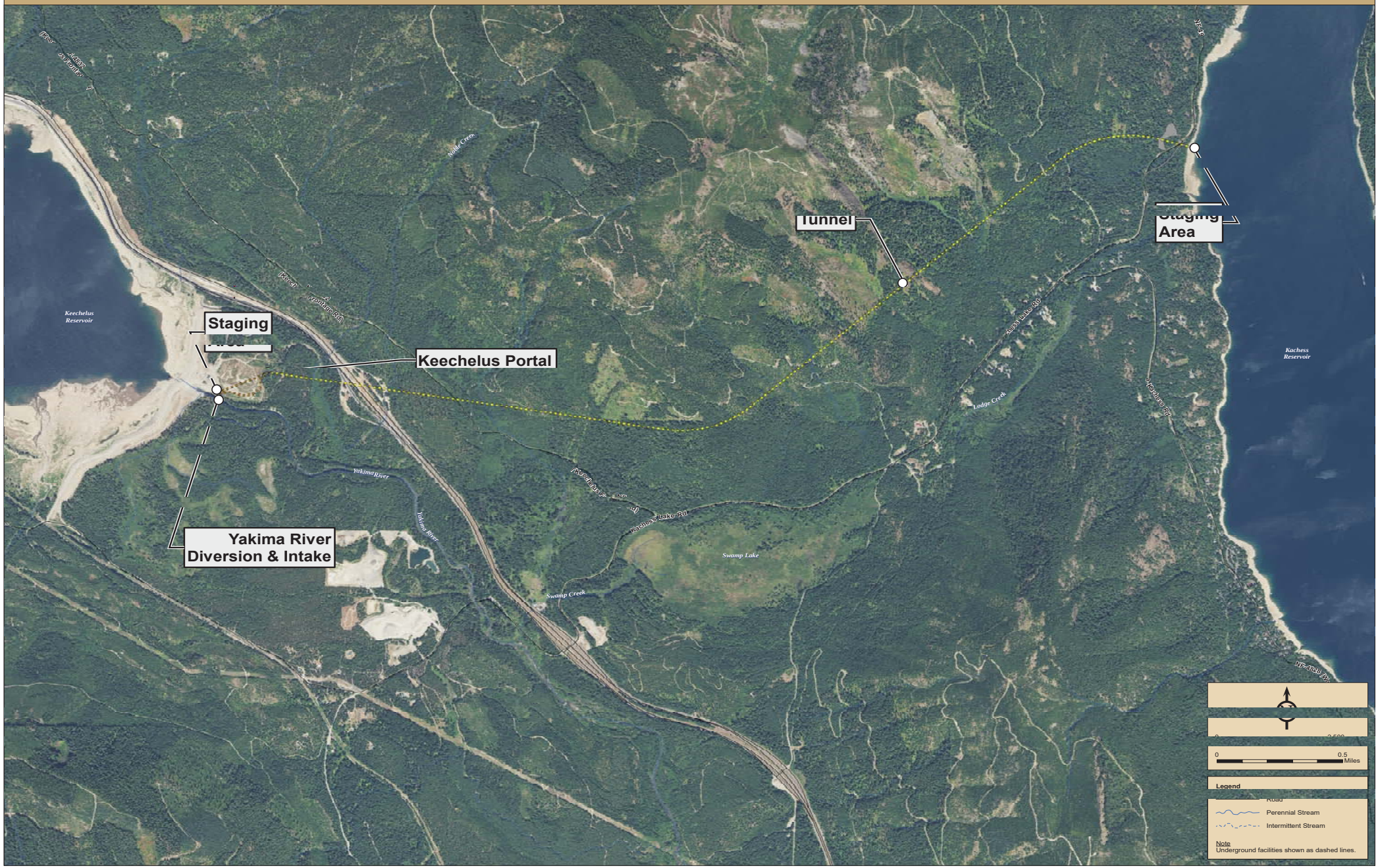
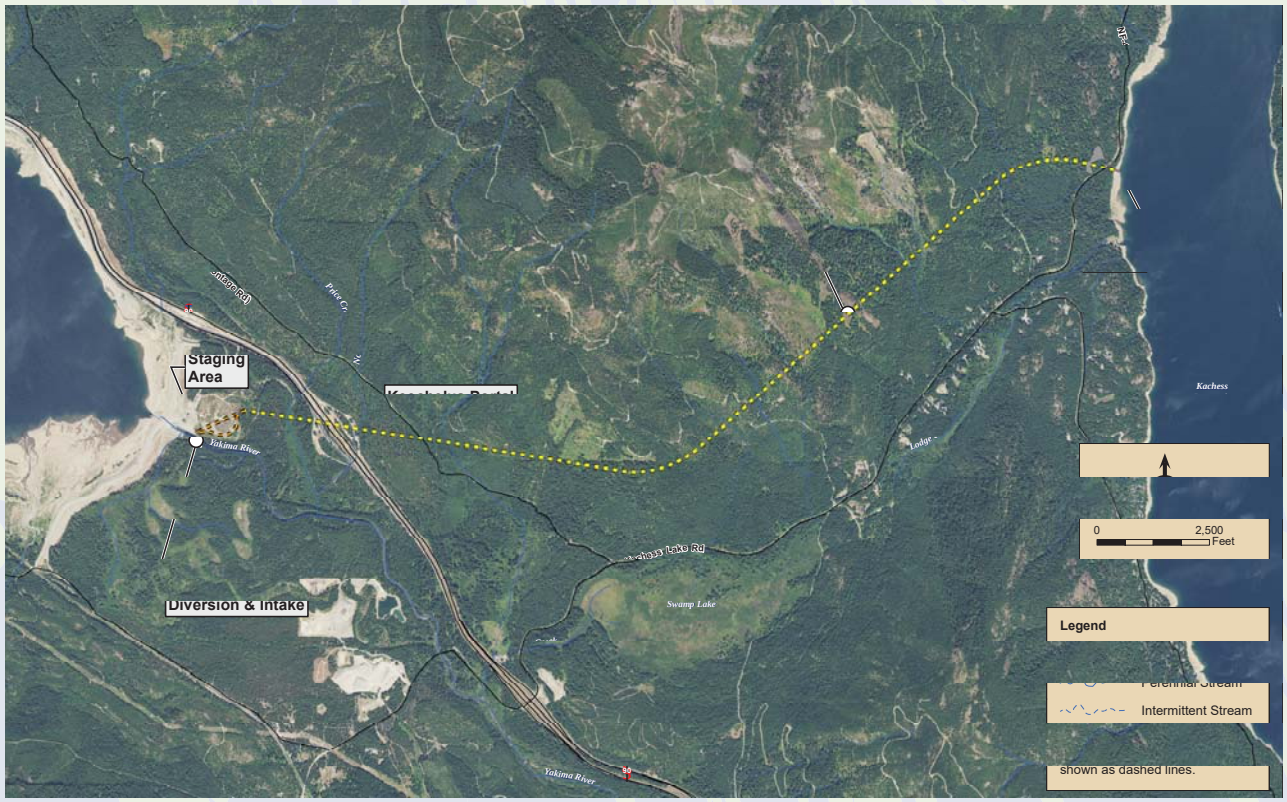
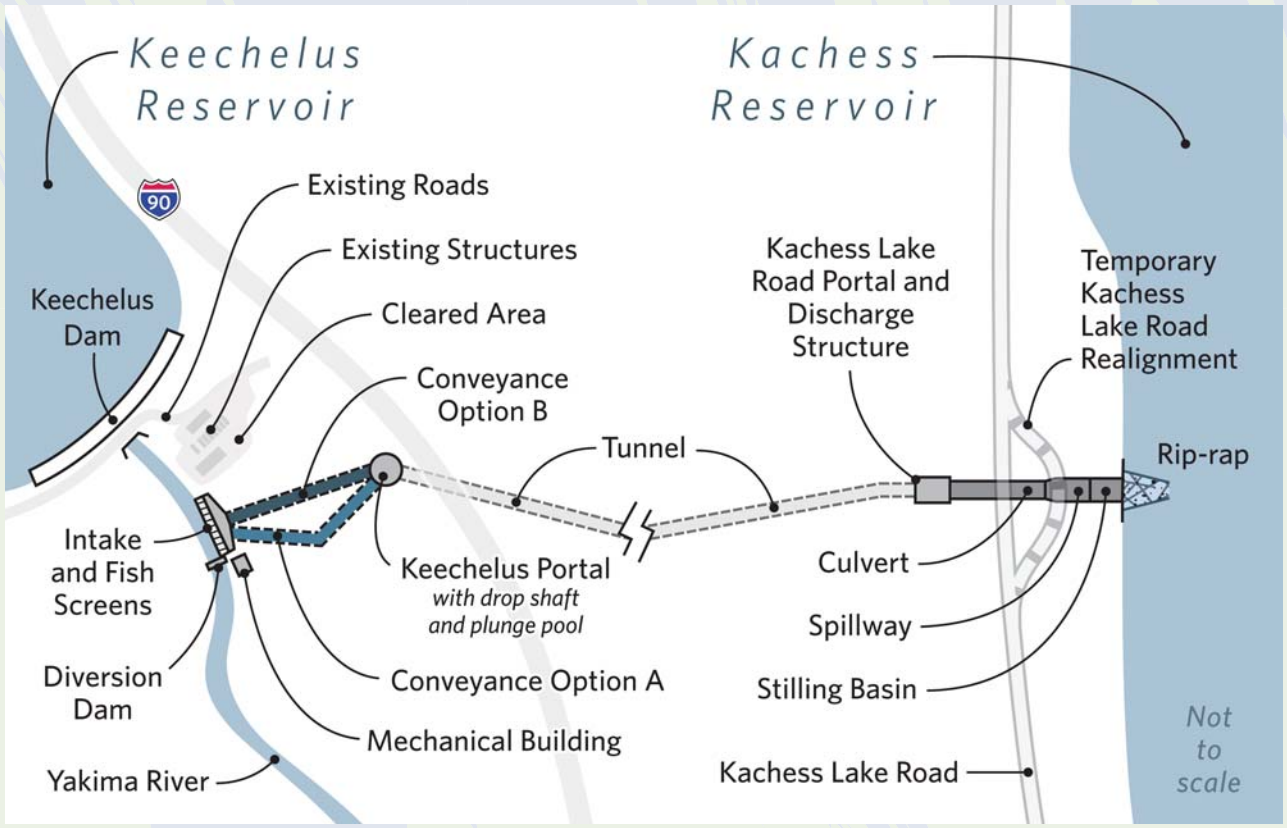


Keechelus-to-Kachess Conveyance





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Contact: Candace McKinley, (509) 575-5848, ext. 603

Tom Tebb, 509-457-7120

How Do I Provide Input?

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

May 2018

As part of the public and agency involvement process under the National Environmental Policy Act (NEPA) and the State Environmental Policy Act (SEPA), you are invited to provide comments on the Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) SDEIS. **The comment period began on April 13, 2018, and continues through July 11, 2018.**

All comments received during the 90-day comment period for the SDEIS will be considered and addressed in the Final EIS. In addition, comments received on the DEIS will be responded to in the Final EIS. Being clear, concise, relevant to the analysis, and as specific as possible in your comments will help us to better understand your concerns and improve the EIS and decisionmaking process.

We are seeking comments on this document and we would like your help! There are a variety of ways for you to participate in this process:

Attend one of two official NEPA/SEPA public meetings (court reporter will be present to record your oral comments):

- Cle Elum – May 16, 2018, 4-7 p.m. at the West Craven Room, U.S. Forest Service Cle Elum Ranger District Office.
- Ellensburg– May 17, 2018, 4-7 p.m. at the The Armory, Kittitas Valley Event Center

Mail written comments to:

Bureau of Reclamation, Columbia-Cascades Area Office
Attention: Candace McKinley, Environmental Program Manager
1917 Marsh Road, Yakima WA 989012-2058

E-mail comments to **kkbt@usbr.gov**

Fax comments to 509-454-5650

Voicemail and record your comments at (509) 575-5848, ext. 603.

Then What Happens?

A Final EIS will be prepared. Notice of the availability of the Final EIS will be published in the *Federal Register* and local newspapers prior to release of the document, which is anticipated in late 2018. A Record of Decision may be prepared by the Bureau of Reclamation no sooner than 30 days after the Final EIS is issued.

http://www.usbr.gov/pn/programs/eis/kdrpp/index.html
http://www.usbr.gov/pn/programs/eis/kkc/index.html
http://www.usbr.gov/pn/programs/yrbwep/2011integratedplan/index.html

Reminder— KDRPP & KKC SDEIS
90-day Comment Period Ends July 11, 2018

Kachess Dam

On April 13, 2018, the Bureau of Reclamation and the Washington State Department of Ecology issued a Supplemental Draft Environmental Impact Statement (SDEIS) for the proposed Kachess Drought Relief Pumping Plant (KDRPP) and Keechelus Reservoir-to-Kachess Reservoir Conveyance (KKC) projects. The comment period opened April 13 and ends July 11, 2018.

What does the SDEIS propose?

The purpose of these projects is to restore and enhance instream flows and aquatic habitat for fish, improve water supply reliability during drought years, improve the ability of water managers to respond and adapt to potential changing hydrology, and contribute to the vitality of the regional economy and riverine environment in the Yakima River basin.

The SDEIS evaluates the following seven alternatives:
Alternative 1 – No Action
Alternative 2 – KDRPP East Shore Pumping Plant
Alternative 3 – KDRPP South Pumping Plant
Alternative 4 – KDRPP Floating Pumping Plant
Alternative 5A – KDRPP East Shore Pumping Plant with KKC North Tunnel Alignment
Alternative 5B – KDRPP South Shore Pumping Plant with KKC North Tunnel Alignment
Alternative 5C – KDRPP Floating Pumping Plant with KKC North Tunnel Alignment

How do I provide input?

You may send written comments to the attention of Candace McKinley, Environmental Program Manager, Bureau of Reclamation, Columbia Cascades Area Office by the following:

- Mail to 1917 Marsh Rd., Yakima, WA 98901-2058
- Email to kkbt@usbr.gov
- Fax to (509) 454-5650

Questions? Leave a voice message at (509) 575-5848, ext. 603
Or visit
http://www.usbr.gov/pn/programs/eis/kdrpp/index.html
http://www.usbr.gov/pn/programs/eis/kkc/index.html
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