



— BUREAU OF —
RECLAMATION

Finding of No Significant Impact

Implementation of Klamath Project Operating Procedures 2020-2023

Oregon and California
CGB-FONSI-2020-018

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Introduction

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the Bureau of Reclamation (Reclamation) has prepared an Environmental Assessment (EA) to examine the potential direct, indirect, and cumulative impacts to the affected environment associated with Reclamation's proposal to implement an interim plan on Klamath Project (Project) operating procedures from April 2020 to March 2023. The proposal is intended to continue operation of the Project consistent with contractual and/or water right delivery obligations while complying with Federal laws, including the Endangered Species Act (ESA) while Reclamation completes a longer-term consultation pursuant to section 7(a)(2) of the ESA (16 U.S.C. §1531 et seq.) with both the National Marine Fisheries Services (NMFS) and the U.S. Fish and Wildlife Services (USFWS; collectively the Services). This Finding of No Significant Impact (FONSI) is supported by Reclamation's EA Number CGB-EA-2020-018, which is attached and incorporated by reference.

Background

On November 13, 2019, Reclamation formally reinitiated consultation on the continued operation of the Project after it was confirmed that computer modeling input files provided by a third party and used to evaluate the amount of available habitat for Southern Oregon Northern California (SONCC) coho fry, both in Reclamation's modified 2018 Biological Assessment and subsequent NMFS' 2019 Biological Opinion (NMFS 2019 BiOp) contained erroneous information related to the SONCC coho fry Weighted Usable Area (WUA) habitat curves in a manner or to an extent not previously considered. Due to the interconnectedness of Klamath River flows and Upper Klamath Lake (UKL) water surface elevations with operation of the Project, Reclamation reinitiated consultations with both Services.

While Reclamation and the Services complete the longer-term reinitiation of consultation, Reclamation proposes to operate the Project in accordance with an Interim Plan (Proposed Action Alternative) for the time period April 2020 – March 2023. During the three-year interim period, the agencies will collect, review, and analyze additional scientific information, as well as work with the Tribes, key stakeholders, and other agencies to better inform the longer-term ESA consultation and the transition to the Operations Plan resulting from that consultation.

Reclamation's Interim Plan (Proposed Action Alternative analyzed in the EA) includes a water supply based operational strategy and water management approach for UKL and the Klamath and Lost rivers that endeavors to mimic natural hydrologic conditions observed in the Upper Klamath Basin. This approach attempts to meet the agency's obligations under the ESA, while also attempting to maintain reliable water deliveries for the Project through the agricultural season and then beginning to fill UKL during the fall/winter to increase and maximize the

ecologic benefit of the volumes available for the Environmental Water Account (EWA; flows allocated to the Klamath River), in UKL, and Project irrigation supply during the following spring/summer operational period.

On March 27, 2020, Reclamation provided the Services a description of the Proposed Action Alternative requesting confirmation on Reclamation's conclusions related to evaluation of effects on Federally-listed SONCC coho salmon, Southern Resident Killer Whale (SRKW), the Lost River and shortnose sucker (LRS and SNS or suckers, respectively) and finding that the Interim Plan meets Reclamation's ESA responsibility to not jeopardize Federally-listed species or destroy or cause adverse modification of their designated critical habitat. On April 10, 2020 the USFWS provided their 2020 Biological Opinion (USFWS 2020 BiOp) and on April 13, 2020, NMFS provided concurrence that the interim operating procedures are consistent with their 2019 BiOp. Both NMFS and USFWS concluded that Reclamation's Interim Plan (Proposed Action Alternative) for the Klamath Project is not likely to jeopardize the continued existence of federally listed species or to result in the destruction or adverse modification of their designated critical habitat.

Alternatives Evaluated Including Proposed Action

No Action Alternative

Under the No Action Alternative, Reclamation would continue to operate the Project consistent with the common elements described in Section 2.2 of the EA and as detailed in the modified 2018 Operations Plan¹ for the period 2020 - 2024.

Klamath River Management

During the spring/summer period, the EWA is the volume of water in UKL identified for meeting Klamath River flow requirements. The EWA is calculated monthly from March through June based on current hydrologic conditions and RCS UKL inflow forecasts. Under the No Action Alternative, the calculated EWA is no less than 400,000 AF, and increases based on observed and projected hydrologic conditions. When UKL Supply is greater than 1,035,000 AF, EWA is calculated as UKL Supply minus the maximum Project Supply. Refer to the *modified 2018 Operations Plan, Appendix 4 (Section 4.3.2.2.2.3)* for EWA calculations when UKL Supply is between 670,000 AF and 1,035,000 AF. The EWA allocation is calculated on the first of each month from March through June based on the Natural Resource Conservation Service (NRCS) inflow forecast and observed hydrology.

¹ As defined in the EA on page 1

UKL Management

Under the No Action Alternative, the operational objective would continue to focus on filling UKL during the fall/winter months (October to February) to increase the volumes available for the EWA, UKL, and Project Supply during the spring/summer (March through September) operational period. Reclamation would continue to operate such that the UKL control logic allows for the regulation of certain releases relative to UKL storage and recent hydrologic conditions in a manner that maintains: 1) UKL elevations important for suckers, and 2) the UKL Credit in order to buffer the lake against uncertainties associated with Natural Resource Conservation Service's (NRCS) forecast errors and other factors affecting UKL inflow available for subsequent diversion.

Klamath Project Supply from UKL and the Klamath River during the Spring/Summer Period

Under the No Action Alternative, the maximum Project Supply is 350,000 AF (as qualified in section 2.2.6 of the EA). Project Supply is initially determined in early March as the quantity of water remaining after the end of September target UKL storage and EWA are determined, or a maximum of 350,000 AF, whichever is less. The April 1 Project Supply establishes the minimum Project Supply for the irrigation season, with Project Supply recalculated again in May and June. While the Project Supply cannot decrease below the April 1 allocation (unless enhanced May/June flows are triggered in May), it may increase in May and June based on hydrologic conditions. When Project Supply is recalculated in early May using the NRCS inflow forecast and the May EWA allocation is less than 576,000 AF, the calculated Project Supply is further reduced by up to 10,000 AF in order to support augmented May/June river flows².

During the spring/summer period, Project Supply can be made available to LKNWR, consistent with Reclamation's contractual and other legal obligations. There are no formulaic conditions for determining if any unused Project Supply is available for delivery to LKNWR. Rather, Reclamation would, under the No Action Alternative, coordinate with USFWS and other Project water users (e.g., districts) to determine anticipated irrigation water demands within the Project and if there is any unused Project Supply available for delivery to LKNWR after Reclamation's contractual and other legal obligations have been met³.

Proposed Action

The water management approach of Reclamation's Proposed Action Alternative⁴ consists of five main elemental differences from the No Action Alternative:

- 1) *Klamath River Management*: The Proposed Action Alternative provides an additional 40,000 AF in base EWA augmentation in water years with an UKL Supply at or above 550,000 AF and at or below 950,000 AF (simulated to occur in 19 of the 29 years within the Period of

² EWA augmentation for May/June flows is split evenly at all enhancement volumes between Project Supply and from UKL.

³ LKNWR can also receive water from UKL in June and July that is not part of the Project Supply under certain hydrologic conditions (*see Section 4.3.2.2.2 of the modified 2018 Operations Plan for additional details*).

⁴ No new construction or modification of existing facilities would occur in order to complete the Proposed Action.

Record (POR; 1981-2019)). EWA would be managed flexibly for the purpose of addressing salmon disease and habitat concerns in the Klamath River through coordination with the Flow Account Scheduling Technical Advisory (FASTA) team. The 40,000 AF of EWA augmentation would be comprised of 23,000 AF from Project Supply and 17,000 AF from volume within UKL.

To provide additional certainty that the proposed 40,000 AF EWA augmentation volume can be utilized at the time and in the manner appropriate to address disease and habitat concerns for coho salmon, Reclamation has coordinated with PacifiCorp on potential springtime water borrowing operations from March to June. The potential spring operations agreed to with PacifiCorp would assist in providing augmented river flows and to help safeguard against UKL elevations below those protective of spawning suckers (further described below). Releases from UKL would repay the PacifiCorp reservoirs later (see *Section 2.4.1* of the EA). Reclamation and PacifiCorp have finalized an agreement on how these operations would occur.

In the event PacifiCorp is unable to provide the water, and/or if modeling shows that implementation of the 40,000 AF of EWA augmentation releases is likely to result in UKL elevations below 4,142.00 ft in April or May, despite good faith efforts to rearrange the 40,000 AF of EWA releases within reasonable bounds, Reclamation would coordinate with the Services and PacifiCorp to best meet the needs of ESA-listed species, as well as coordinate and obtain input from affected Klamath River Basin Tribes through government-to-government consultation on how to manage water.

Reclamation would allow for flexibility in the timing and distribution, magnitude, and duration of augmentation volumes through the Flow Accounting and Scheduling Technical Advisory (FASTA) team process. The FASTA process (*as described in Section 2.2.5 of the EA*) would be used to allow salmon and sucker biologists from Reclamation and the Services, as well as other Klamath Basin experts, to provide real-time operational input into the use of this water to provide ecological benefits to SONCC coho and SRKWs, whether those benefits be improved habitat conditions, reduced disease conditions, or both, while maintaining UKL elevations and conditions protective of LRS and SNS.

Any unused portion of the augmentation water would remain in the EWA after June and the formulaic approach to EWA release would be followed in the July through September period.

2) *Upper Klamath Lake Management:*

Under the Proposed Action Alternative, when the 40,000 AF EWA augmentation is triggered, 17,000 AF from UKL would be utilized and UKL surface elevation would be maintained above 4142.00 ft through the end of May, to the extent possible, once this elevation has been achieved earlier in the spring. Reclamation would also maintain UKL elevations above an annual minimum of 4,138.00 ft⁵. In dry to very dry years when UKL

⁵ A UKL elevation that is understood to be key for protecting sucker spawning habitat in the spring months is 4,142.00 ft or above with annual minimums of no less than 4,138.00 ft. These are changes from the No Action

elevations are simulated to drop below 4,142.00 ft in the spring, Reclamation proposes to borrow water from PacifiCorp's hydroelectric reservoirs on the Klamath River or modify EWA augmentation releases in coordination with the FASTA process to provide flexibility such that the Proposed Action Alternative would be protective of suckers in UKL at critical life stages and associated UKL elevations in the spring months.

When the 40,000 AF of EWA augmentation occurs, UKL elevations will be managed as described in USFWS's 2020 BiOp. The USFWS 2020 BiOp includes T&C 1c. that requires Reclamation to take corrective actions such that UKL elevations are managed within the scope of the analysis included therein. T&C 1c. outlines specific elevations of concern (*both for when the 40,000 AF augmentation occurs, and when it does not*) such that if the elevational criteria are triggered, Reclamation would determine the causative factors, further determine whether these factors are within the scope of the action and the effects analyzed, and immediately confer with the Service concerning the causes to adaptively manage and take corrective actions.

Under the agreement between Reclamation and PacifiCorp, the borrowed water would be returned in June (no later than July 4; from volume within UKL) so that PacifiCorp's reservoirs can be returned to normal operating levels.

- 3) *Klamath Project Supply from UKL and the Klamath River during the Spring/Summer Period* Project Supply from UKL is calculated and available for delivery the same way under both the No Action and Proposed Action alternatives. However, under the Proposed Action Alternative, Project Supply calculations, based on the April 1, May 1, and June 1 UKL inflow forecasts will be reduced by 23,000 AF when the EWA augmentation (as discussed in number 1 above) is triggered. The EWA augmentation would not otherwise affect Project operations, including Project diversion rates and timing beyond what is described in the No Action Alternative.
- 4) *Modifications to the Enhanced May/June Klamath River Flows.* The proposed 40,000 AF of EWA augmentation is in addition to an enhanced May/June flows (20,000 AF) provision described in the No Action Alternative above and in the modified 2018 Operations Plan, although with slight modifications (e.g., Klamath River "ramp up" and "ramp down" flows). Under the Proposed Action Alternative, the enhanced May/June flows would begin to increase linearly relative to UKL Supply from zero at a UKL Supply of 625,000 AF, reaching a maximum volume of 20,000 AF between a UKL Supply range of 717,000 and 858,000 AF, then decreasing linearly relative to UKL Supply to zero at a UKL Supply volume of 950,000 AF. The enhanced May/June flows would be utilized in May and June and tracked separately from formulaic use of EWA during that time period.

Alternative where Reclamation would manage UKL so that April and May elevations would not fall below 4,142.00 in two consecutive years, and elevations would not fall below an annual minimum of 4,138.26 ft.

- 5) *Acquisition of Project Water for Fish and Wildlife Purposes*⁶: Under the Proposed Action Alternative, in 2020 (and potentially in future years), Reclamation proposes to enter into one or more temporary water contracts with willing district entities within the Project (or their authorized representatives) for the acquisition of up to 25,000 AF of Project water⁷ for use for fish and wildlife purposes within Lower Klamath National Wildlife Refuge (LKNWR) and the Tule Lake National Wildlife Refuge (TLNWR). Reclamation’s discretionary action is limited to contracting to acquire water that is needed and can be used for fish and wildlife purposes. Under this action, Reclamation proposes to only change the place of use of existing Project water supplies as necessary; Reclamation would not acquire water outside of Project water sources (i.e., return flows from Klamath Straits Drain and the Lost River Diversion Channel).

Comments on the EA

Comment letters and/or emails were received from the following: (herein referred to as the “Commenters”): The Klamath Tribes, U.S. Fish and Wildlife Service Klamath Refuge Complex, The Klamath Water Users Association, the Environmental Protection Agency-Region 9, the Siskiyou County Administrative Office, E. Werner Reschke-State Representative Southern Klamath & Lake Counties, Oregon Department of Fish and Wildlife- Klamath Watershed District Office, Bureau of Indian Affairs-Pacific Region Office, California Waterfowl Association, Grassland Water District, Cal-Ore Wetlands & Waterfowl Council, The Black Brant Group, and Tulare Basin Wetlands Association, Langell Valley and Horsefly irrigation districts, and other members of the public.

These commenters presented a range of comments regarding analysis in the EA, and/or statements of opinion on applicability of NEPA and level of analysis required for the implementation of Reclamation’s proposed Project operating procedures from April 2020 – March 1, 2023. Other comments were made on Reclamation’s overarching legal authority to manage Project water supplies relative to state water rights, federal reserved tribal trust fishery and water rights, science used in the assessment, and refuge water supply, among others. Reclamation considered these comments, and where appropriate, included revised text in the final EA. Discussion of the substantive issues raised in the comments submitted during the public review period is provided below:

Obligations Under NEPA to Evaluate Environmental Impacts of Operating the Project—
Comments were received that there is no obligation under NEPA to evaluate the environmental effects of the storage, diversion, delivery, and use of water in the Project service area as the permanent water service contracts preceded enactment of NEPA with full delivery to Project lands is within the authorized and historic range of Project operations. The identified actions are part of Reclamation's management of the Klamath Project, which has changed since the passage of NEPA, thus, evaluation of these actions as identified in the EA is appropriate.

⁶ The proposed water acquisition is being undertaken pursuant to title I of the Drought Relief Act (see *Section 1.3* of the EA)

⁷ See Part 4.3.2 of the modified 2018 Operational Plan for the definition of the term “Project water”.

Obligation or Authority to Operate the Project Consistent with Project Purposes—*Comments were received that Reclamation’s proposed operation of the Project that results in insufficient water delivery to lands served by the Project is inconsistent with the decision of the United States Court of Appeals for the 10th Circuit, in Wildearth Guardians v. U.S. Corps of Engineers, 947 F.3d 635 (10th Cir. 2020), which recognizes and supports that there is no discretion to operate facilities for purposes that are not authorized purposes of the Project.* This 10th Circuit Court of Appeals decision is specific to the statutory direction to the U.S. Army Corps of Engineers for flood control operations at issue in that case. The Court expressly identified that water management by Reclamation is discretionary in this instance.

Adequacy of NEPA Evaluation—*Commenters raised concerns that the EA is deficient in its level of analysis on the Proposed Action Alternative’s impacts on the human environment. Preparation of an environmental impact statement was requested to ensure a more thorough evaluation of the Proposed Action Alternative impacts on the human environment:* Reclamation has determined it is appropriate to assess impacts of the proposed water management approach in an EA, and to prepare a FONSI if approving the action does not constitute a significant impact on the environment.

Inadequate Amount of Time for Public Review and Comment on the EA—*Commenters stated that the comment period was inadequate to conduct a thorough review of the EA:* Council on Environmental Quality regulations do not require that an EA be made available for public review. However, Reclamation released the EA on April 1, 2020, for a 10-day public comment period and subsequently extended the comment period to provide the public 12 days to comment.

Need More Robust Consideration of Alternatives—*Comments were made that Reclamation failed to take a “hard look” at all reasonable alternatives that NEPA mandates. Reclamation should have analyzed an alternative that analyzed the full 40,000 AF EWA augmentation coming exclusively from Project Supply instead of partially from UKL Supply as well as an alternative that results in UKL elevations of 4,412.00 ft in March, April, and May every year (regardless of water year type or the 40,000 AF EWA augmentation being triggered):* Reclamation fully collaborated with the Services, Project water users, and the Yurok Tribe on species needs through an iterative process that resulted in the development of the Proposed Action Alternative. Additional input on possible alternatives was received by Reclamation from the USFWS through discussions with The Klamath Tribes. In an effort to meet all requirements and obligations, Reclamation considered and eliminated the other alternatives considered as described in Section 2.1 of the EA for the reasons listed therein.

Failure to Acknowledge Existing New Science—*Comments were received that Reclamation failed to include the analysis of new science describing the relationship of UKL elevations and water quality:* Reclamation acknowledges the publication of Kann, J., Walker, J.D. (2020), *Detecting the effect of water level fluctuations on water quality impacting endangered fish in a shallow, hypereutrophic lake using long-term monitoring data.* Hydrobiologia (2020), on March 4, 2020. The complex nature of the relationship between UKL elevations and other factors which may influence water quality conditions, the temporal resolution of the datasets used in the analysis (as described in Section 4.3.2 of the EA), along with the very recent release of this

journal article, did not provide Reclamation with sufficient time for full evaluation and consideration of the new information and conclusions in the current environmental assessment. As such, Reclamation requires additional time to analyze, evaluate, and outstanding issues (see Section 4.3.2 of the EA) related to the publication which are necessary to determine how the content of the paper would contribute to Reclamation's findings related to water quality and UKL elevations.

Finding and Determination of Effects on ESA-listed Species—*Comments were made that Reclamation needed to make the determination under the ESA that implementation of the Proposed Action Alternative “may affect but is not likely to adversely affect” coho salmon. Additionally, comments were raised that the Proposed Action Alternative does not meet the agency’s ESA responsibility to not jeopardize Federally-listed species or destroy or cause adverse modification of their designated critical habitat relative to SNS and LRS:*

The ESA obligates federal agencies “to afford first priority to the declared national policy of saving endangered species.” *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 185 (1978). Section 7(a)(2) requires federal agencies to ensure that any action they authorize, fund, or carry out “is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification” of designated critical habitat. 16 U.S.C. § 1536(a)(2). The Proposed Action Alternative was developed, in coordination with the Services, with the intent to avoid jeopardizing the continued existence of any Federally-listed species or destroy or adversely modify their critical habitat. Upon evaluation of the effects of the Interim Plan on Federally-listed SONCC coho salmon, SRKW, and Lost River and shortnose sucker, Reclamation concluded that the Interim Plan meets Reclamation’s ESA responsibility to not jeopardize Federally-listed species or destroy or cause adverse modification of their designated critical habitat. In response, the federal agencies charged with managing these species and that are entitled to deference regarding findings of effect concurred with our findings.

Insufficient Socioeconomic Evaluation—*Commenters stated concerns that Reclamation’s socioeconomic analysis underestimates the impacts of the Proposed Action Alternative, particularly the loss of jobs in industries upstream and downstream of agricultural production (such as farm and ranch equipment suppliers, livestock haulers, government services, etc.):*

Reclamation performed a robust socioeconomic analysis in the EA and a more comprehensive analysis is beyond the scope of an EA. Reclamation’s socioeconomics analysis is subject to an assumed margin of error; while the absolute magnitude of these impacts may be underestimated, the comparison of the two alternatives remains valid. Furthermore, when using different models to perform similar analysis and based on variable inputs, differences in datasets are to be expected resulting in varying outcomes.

Water Rights—*Comments were made relative to Reclamation’s compliance with state water law where the only water rights “of record” that relate to operation of the Project are the water rights to divert, store, and deliver water for the Project. That the Proposed Action Alternative would involve use of stored water for the meeting ESA flows in the Klamath River makes the action inconsistent with water rights:* See first paragraph under EA section 1.3 describing the various legal obligations related to the Project, which include compliance with the federal ESA and water rights, including water rights held in trust by the United States for Klamath Basin tribes. The Proposed Action is consistent with these various legal obligations.

Further, water rights related comments stated that Reclamation lacks authority to regulate water for only one use in favor of a water right that may be senior to additional uses (e.g., a downstream federal reserved water right would not include any right to storage releases and junior rights onto the Klamath Project): While Reclamation does not have authority to make a final determination of water rights as this comment is understood, in the absence of a completed water rights adjudication (determination), Reclamation may, for example, determine how best to meet vested, fairly implied senior tribal water rights that are unadjudicated, but which the United States holds in trust for Klamath Basin Indian Tribes. Further, there is overlap between the requirements of these senior water rights and the requirements of the ESA, which does not permit Reclamation to divert to irrigation water that would result in jeopardy to listed species or destruction or adverse modification of their critical habitat. The Reclamation Act is subject to these requirements of federal law.

Inadequate Water Supply for Refuges and Inadequate Analysis on Impacts to Refuge

Resources—*Concerns were raised that under the Proposed Action Alternative, that 1) there is no defined mechanism to supply water to the Lower Klamath Lake National Wildlife Refuge, 2) impacts to the refuge were not adequately addressed within the EA, and 3) water that is estimated to be available to the LKNWR under the Proposed Action Alternative is inadequate to meet refuge needs:* While the implementation of the Proposed Action has implications for refuge water deliveries particularly at LKNWR, the water supply situation for the refuges is not within the control of Reclamation. Water delivery for the refuge is impacted by many factors outside the scope of the Proposed Action Alternative including contracts with Project water users, water availability, water rights, and the lack of an established intra-Project priority for LKNWR's Project water rights. Reclamation is taking appropriate steps within its authority to work with the refuges to address its water supply challenges. Both the No Action and Proposed Action alternatives make water available for delivery to LKNWR consistent with Reclamation's contractual and other legal obligations. Both alternatives provide for a process whereby Reclamation will coordinate with Project water users to determine demand within the Project and any available allocation of the Project Supply that can be provided to LKNWR. Although there are no formulaic conditions for determining what portion of the Project Supply is available for delivery to LKNWR, this approach provides flexibility for a voluntary agreement between the USFWS and the Project water users that could result in securing additional water supplies for LKNWR. Additionally, for the 2020 operating season (and potentially in future years), Reclamation anticipates that through coordination with the Drought Response Agency and Project districts, Reclamation may acquire up to 25,000 acre-feet of Project water for delivery to either Lower Klamath or Tule Lake national wildlife refuge.

Tribal Trust—*Comments were made relative to Reclamation's Tribal Trust obligations (including, but not limited to the need to uphold federal reserved fishing and water rights) as well as how these obligations do not supersede the rights of others (i.e., the Project water rights) with specific language from an 11-14-2019 opinion in Baley v. United States, requested for inclusion in the EA:* In addition to complying with the ESA in connection with Reclamation's operation of the Project, the United States is also subject to tribal trust obligations. A treaty entered into in 1864 reserves to the Klamath Tribes fishing, hunting, and gathering rights on lands that were formerly part of the original Klamath Indian Reservation in Oregon as well as

federal reserved water rights. The Yurok and Hoopa Valley Tribes have federal Indian reserved fishing rights to take anadromous fish within their reservations in California, as well as federal reserved water rights. *Parravano v. Babbitt*, 70 F.3d 539, 541-42 (9th Cir. 1995); see also *United States v. Eberhardt*, 789 F.2d 1353, 1359 (9th Cir. 1986) (the Tribes' fishing rights include the right to harvest quantities of fish on their reservations sufficient to support a moderate standard of living including for ceremonial, subsistence and commercial purposes).

The United States has a trust responsibility to protect tribal trust resources. This trust responsibility is one held by all federal agencies. In general, the trust responsibility requires the United States to protect tribal fishing and water rights, which are held in trust for the benefit of the tribes. The Secretary, through Reclamation, must operate Reclamation projects consistent with vested, fairly implied senior Indian water rights and ensure that project operations not interfere with the Tribes' senior water rights. This responsibility arises from the doctrines of federal reserved water rights and prior appropriation as well as Reclamation's trust responsibility to protect tribal trust resources. With respect to the Tribes' fishing rights, Reclamation must, pursuant to its trust responsibility and consistent with its other legal obligations, prevent activities under its control that would adversely affect those rights, even though those activities take place off-reservation. Thus, Reclamation must use any operational discretion it may have to ensure that those rights are not diminished. Reclamation may not store or divert water for Project purposes under state water rights if otherwise required to satisfy senior tribal water rights.

Relative to the requested additional text from *Baley v. United States*, the text is from the portion of the Federal Circuit Court of Appeals opinion summarizing the holdings of the Court of Federal Claims, not the holdings of the appeals court. This case is specific to the events of 2001. That being said, the appeals court did hold, in general, that the Klamath Basin tribes' reserved water rights "encompass Klamath Project water." This holding is consistent with Reclamation's management of the Klamath Project and its tribal trust obligation. Further Reclamation has discretion in the management of the Project to determine, for example, water availability, quantities of water for delivery and how Project water is shared in times of short supply.

Reclamation improperly evaluated Cumulative Impacts of the Proposed Action—Comments were made that Reclamation's analysis of cumulative impacts was insufficient and should include analysis and evaluation of several future, pending, or ongoing project or plans that could seemingly impact Klamath River Basin resources: The CEQ implementing regulations define a cumulative impact as: "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" (40 CFR § 1508.7). When performing its cumulative effects analysis, Reclamation considered only future actions that have completed planning and required compliance activities to be reasonably foreseeable and those that will have effects within the three-year period of analysis for this action. Certain comments raised the issue of cumulative effects, however, those comments misinterpreted the nature of cumulative effects. Reclamation appropriately determined those actions that would result in cumulative impacts and appropriately addresses cumulative effects as described in Section 4.11 of the EA.

Findings

In accordance with NEPA, Reclamation has found that implementation of the water management approach for the Project for April 2020 to March 2023 is not a major Federal action that would significantly affect the quality of the human environment. Consequently, an EIS is not required. This FONSI determination is based on the following factors:

Water Resources

UKL and the Klamath River are the principal water sources affected by the No Action and Proposed Action alternatives. There are no material differences between Lost River storage, diversion, and flood control operations for the two alternatives.

Upper Klamath Lake Management

Under the Proposed Action Alternative, the average end of month water surface elevation for UKL for February would decrease by 0.04 ft as compared to the No Action Alternative. Similarly, the Proposed Action results in a decrease in the UKL average end of month water surface elevation for September by 0.15 ft. End of February water surface elevations (and storage) under both alternatives are key for calculating spring/summer allocations, including: 1) the volume of water required for release downstream to the Klamath River (EWA), 2) the volume reserved to meet sucker needs in UKL, and 3) the volume available for irrigation and refuge use within the Project (Project Supply). The end of September elevation often represents the lowest elevations annually observed in UKL and the volume needed to refill UKL during the subsequent fall/winter period. The average difference under the alternatives relative to the end of month UKL elevations in February and September are within the range of UKL elevations that have historically been observed.

In real time operations and in the years in which EWA augmentation is triggered, Reclamation would coordinate with the Services to distribute any EWA augmentation volumes and utilize any water available from PacifiCorp's reservoirs to help maintain UKL elevations at or above 4,142.00 ft in March, April, or May, to the extent possible. As shown in *Table 4-2* of the EA, end of May UKL surface elevations are simulated to be at or above 4,142.04 ft in 80 percent of simulated years and 4,141.70 ft in 90 percent of simulated years.

Additionally, and to the extent feasible, in dry/very dry water years and in real-time operations, Reclamation would coordinate with the Services and PacifiCorp on the timing and magnitude of the proposed surface flushing flow (described in *Section 2.2.5* of the EA) and distribution of the 40,000 AF augmented EWA releases, along with utilizing available volume within PacifiCorp's Klamath Hydroelectric Project, in efforts to help maintain UKL elevations at or above 4,142.00 ft in March, April, or May.

UKL elevation in 2020 appeared to peak in early April at an elevation of approximately 4,142.10 ft for a few days and has been slowly dropping through mid-April. Around April 20, 2020, UKL elevation declined below 4,142.00 ft and is projected to remain below this elevation for the rest of the season; this is primarily due to due to critically-dry hydrologic conditions arising in April,

implementation of the surface flushing flow, and the assumption that the full 40,000 AF of EWA augmentation will be released in May and June (60 percent in May).

Reclamation is coordinating with USFWS as conditions develop and is working with the FASTA team to modify EWA releases and/or to borrow water from PacifiCorp to help with to maintain UKL elevations as close as possible to 4,142.00 ft in April and May 2020.

As described in *Section 2.4.2*, the USFWS 2020 BiOp includes T&C 1c. that requires Reclamation to take corrective actions such that UKL elevations are managed within the scope of the analysis included therein and outlines a process Reclamation must undertake if certain elevational criteria are triggered. Consistent with T&C 1c., Reclamation began conferring with the Services on April 15, 2020, specific to projected elevations below 4,142.0 in April and May 2020. Reclamation's projections assume a flushing flow implementation and utilization of the full 40,000 AF in May and June, with 60 percent of that volume released in May. Although still early in the coordination process, Reclamation has identified preliminary causative factors and potential corrective actions that may be taken and will continue to confer with the Services in late April 2020.

Therefore, implementation of the Proposed Action Alternative would have less than significant impacts on UKL water resources.

Refuge Water Acquisition

Similar UKL elevations to those that are simulated to occur under implementation of the Project Operations component of the Proposed Action Alternative would also be expected to occur as a result of the potential acquisition of Project Supply through the use of short-term water contracts.

Klamath River Management

Under each alternative, Klamath River flows attempt to mimic a natural hydrograph with peak flows generally occurring in the spring (March/April) and base (lowest) flows in late summer (August). The differences between river flows under both alternatives would be within the range of flows observed for the POR (1981-2019) for the Klamath River at Iron Gate Dam (IGD). Table 4-6 in the EA shows that both alternatives have relatively similar flows at IGD by month and probability of exceedance. The largest differences in simulated IGD flows occur in average to dry years (50 to 90 percent Probability of exceedance; POE) in the months of April and May, the time period and water year types when the EWA augmentation volume was simulated to be used.

Both the No Action and Proposed Action alternatives assume there is flexibility in the timing of the surface flushing flow between March 1 and April 15 as described above in section 2.2.5. However, surface flushing flow timing could occur outside the March 1 to April 15 period based on input from the FASTA team. The FASTA team may also provide input on surface flushing flow magnitude and duration that deviate from how these events were simulated to occur within the KBPM. The Proposed Action Alternative simulation assumes that, when appropriate, the timing of the surface flushing flow (*as described in Section 2.2.5 of the EA*) and the timing and distribution of the EWA augmentation would be coordinated to provide maximum benefit to ESA-listed coho salmon and SRKW (through Chinook salmon) consistent with Section 2.2.5

(which allows for input from the FASTA team and the flexible management of the EWA augmentation volumes, unconstrained by how they were simulated in the KBPM).

The 40,000 AF EWA augmentation is triggered under the Proposed Action Alternative in 2020, because the April 1, 2020, UKL Supply is 577,000 AF, which is within the range where EWA augmentation is triggered. Additionally, based on current projections, Reclamation does not anticipate providing enhanced May/June flows in 2020. With input from the FASTA team, the timing, distribution, and magnitude and duration of EWA augmentation releases will be managed flexibly and not constrained by how these releases were simulated in the KBPM. Reclamation retains ultimate discretion in the timing and volume of these releases to meet the needs of listed species and contractual obligations.

The differences between simulations between the alternatives can help explain the modest differences in flows that would be observed in March and April (i.e., the Proposed Action Alternative simulation provides a flushing flow more often in April than under the No Action Alternative; Table 4-6). Klamath River flows presented in the Proposed Action Alternative result in flow variations that are within the range of flows recorded for the POR for the Klamath River at IGD. The largest calculated change in flows within the POR occurs at the 60 percent POE range in the month of April, with a monthly average difference of 496 cubic feet per second (cfs), a value that is reflective of both the EWA augmentation expenditures, as well as differences in simulated surface flushing flows. In months other than March through May, the average monthly flow differences are generally less than 100 cfs. Flows throughout the year across all exceedance values under the Proposed Action Alternative are well within historic operations and would have less than significant impacts on Klamath River water resources.

Refuge Water Acquisition

Similar IGD releases as those that are simulated to occur under implementation of the Project Operations component of the Proposed Action Alternative would also be expected to occur as a result of execution of short-term water contracts. Only Project water available for irrigation purposes would be acquired, which would not change any volumes calculated in the KBPM for EWA or otherwise allocated for IGD releases.

Project Supply

Total Spring/Summer Project Diversions

Compared to the No Action Alternative, Project Supply under the Proposed Action Alternative will be reduced on average by 13,000 AF (from an average of 294,000 AF to an average of 281,000 AF) or approximately five percent. Total spring/summer water available for diversion by the Project, inclusive of Lost River Diversion Channel (LRDC) and Klamath Straits Drain (KSD) flows will be reduced on average by 15,000 AF or approximately four percent, under the Proposed Action Alternative, from 365,000 AF to 350,000 AF, compared to the No Action Alternative. The Proposed Action Alternative is not expected to result in significant impacts due to a firm Project Supply allocation made in April, use of private supplemental groundwater resources, changes in agricultural practices, application of on-farm crop insurance program, use of NRCS and Farm Service Agency programs, and other potential state and federal programs and activities.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, to acquire water for fish and wildlife purposes at LKNWR and TLNWR, Reclamation's acquisition of Project water only potentially results in the different place of use within the Project where Project water is applied to beneficial use. There would be no change in total Project Supply, so acquisition of refuge water would result in the same calculated volumes for total spring/summer Project diversions.

Total Fall/Winter Project Diversion

Under the Proposed Action Alternative and No Action Alternative, average water diversions to the Project during the fall/winter period are both 27,000 AF over the 39-year POR. Under the Proposed Action Alternative, there are six years in the POR where fall/winter deliveries would be reduced by an average of approximately 5,000 AF. These differences are due to the slightly lower UKL elevations observed in the fall/winter months as a result of the 40,000 AF of EWA augmentation (and therefore, reduced deliveries as a result of UKL Control Logic). This is a minimal change and expected to have minor effects.

Refuge Water Acquisition

Reclamation does not propose to acquire water that is part of the fall/winter supply as described here. Accordingly, the refuge water acquisition component of the Proposed Action Alternative, to acquire water for fish and wildlife purposes at LKNWR and TLNWR would not impact fall/winter Project diversions, either with respect to the volume of this water or where or how it is used for beneficial purpose.

Total Annual Lower Klamath National Wildlife Refuge Deliveries from Upper Klamath Lake and the Klamath River

Under the No Action Alternative, simulated deliveries to the LKNWR ranged from 13,539 AF (1992) to 25,191 AF (1984), with a median of 22,068 AF (*Tables 4-18 and 4-20*). Similarly, under the Proposed Action Alternative, simulated deliveries to the LKNWR ranged from 13,467 AF (2016) to 25,191 AF (1984), with a median of 22,068 AF (*Tables 4-19 and 4-20*). Differences in the deliveries to LKNWR as a result of unused Project Supply are compared in Table 4-21. Under the Proposed Action Alternative, estimates of unused Project Supply range from a minimum of 748 AF and a maximum of 32,155 AF (average of approximately 8,000 AF). Under the No Action Alternative estimates of unused Project Supply that could be delivered to the LKNWR ranged from a minimum of 838 AF to a maximum of 32,156 AF (average of approximately 9,400 AF). Between the two alternatives, the difference in impacts is expected to be insignificant, resulting from minor interannual effects and the relatively minor differences in unused Project Supply that could be delivered to the LKNWR between the actions (average annual value of approximately 1,400 AF).

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation would acquire up to 25,000 AF of Project Supply from UKL and/or other sources (LRDC and KSD return flows), for use for fish and wildlife purposes within LKNWR. This acquisition could increase the volumes delivered to LKNWR in a given year. However, the amount of

additional water (which could be up to 25,000 AF) that could be delivered as a result of the water acquisition component of the Proposed Action Alternative is currently uncertain in 2020 and future years.

Gerber Reservoir and Clear Lake Reservoir

Operational procedures to identify annual irrigation supply, resultant water deliveries and releases, and reservoir surface elevations at Clear Lake and Gerber reservoirs are the same under both the No Action and Proposed Action alternatives. A minimum September 30 surface elevation at or above 4,520.60 ft for Clear Lake Reservoir and at or above 4,798.10 ft for Gerber Reservoir would be maintained to remain consistent with the USFWS 2020 BiOp. During dry hydrologic conditions, Reclamation assumes additional releases of 5,000 to 15,000 AF from both reservoirs may be made available for irrigation in the portion of the Project between Klamath Falls, Oregon and Tule Lake, California (via requests from Tule Lake Irrigation District and Klamath Irrigation District) for a total volume of up to about 50,000 AF from each reservoir. Dependent on the annual hydrologic conditions, the extent to which additional releases as described above would occur is unknown; however, it is likely that additional releases could occur under the Proposed Action Alternative as compared to the No Action Alternative which could result in interannual impacts to reservoir elevations. The timing and quantity of water from both Clear Lake and Gerber reservoirs for irrigation purposes on Project lands between Klamath Falls and Tule Lake is uncertain as it is subject to the specific contract terms, ESA requirements, and the extent and nature of the shortage at any given time.

In 2020, Reclamation anticipates the ability to deliver 40,000 AF from both Clear Lake and Gerber reservoirs for irrigation purposes in the Langell and Yonna valleys and for Project lands between Klamath Falls and Tule Lake. With these planned releases, Reclamation anticipates surface elevation for Clear Lake on September 30, 2020, of 4,525.54 ft, approximately 4.95 ft above the minimum surface elevation, equivalent to a volume of 75,585 AF. Gerber Reservoir is anticipated to have a surface elevation on September 30, 2020, of 4,814.51ft., approximately 16.40 ft. above the minimum elevation, equivalent to a volume of 26,176 AF.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, to acquire water for fish and wildlife purposes at LKNWR and TLNWR, Reclamation's acquisition of Project water would not affect Gerber and Clear Lake reservoir supplies as Reclamation is not considering and will not acquire stored water from Clear Lake or Gerber reservoirs for use within TLNWR or LKWNR for fish and wildlife purposes because such operations would be inconsistent with historical operations and inefficient due to downstream impediments.

Water Quality

Upper Klamath Basin

Most empirical analyses of water quality data from UKL indicate no clear and statistically significant connection between UKL levels and water quality over the range at which the lake is usually managed as lake elevation is only one of many variables that could affect water quality. While UKL elevations modeled under the Proposed Action Alternative are not constrained by the conservation elevations described in the Kann and Walker (2020) manuscript, average

modeled elevations are very similar to those described (see *Section 4.3.2* of the EA) as being necessary to minimize the probability of poor water quality events. As such, with the Proposed Action Alternative likely resulting in UKL elevations similar to or slightly less than those of the No Action Alternative, water quality changes are unlikely between the alternatives. The Proposed Action Alternative is also anticipated to have little to no impacts to current water quality in the Upper Klamath River or Lost River. The Proposed Action Alternative and No Action Alternative are not anticipated to change water quality in the Upper Klamath River or Lost River watersheds.

Lower Klamath Basin

The Proposed Action Alternative and the additional 40,000 AF of water would likely have only minor effects, either positive or negative, on overall water quality factors such as nutrients or physical parameters (e.g., DO, water temperature) as compared to the No Action Alternative.

Refuge Water Acquisition

Upper Klamath Basin

Under the refuge water acquisition component of the Proposed Action Alternative, KSD return flows are available for use within the Project and therefore could be acquired for use within LKNWR. The Proposed Action Alternative, including the component of acquiring water for NWRs, is not anticipated to change the quality, rate or volume of KSD return flows that are reused for beneficial use within the Project or LKNWR.

Lower Klamath Basin

As water emanating from UKL is the predominant control on water quality in the Link River to Keno Dam reach of the Klamath River and modeling studies indicating that water quality from KSD has only very localized effects on Klamath River water quality (Sullivan et al. 2013), there would be minor to no change in water quality under the Proposed Action Alternative as compared to the No Action Alternative.

Groundwater

No measurable effects upon surface or groundwater water quality are expected. While pumping of groundwater is not included as part of either the No Action or Proposed Action alternatives, Reclamation recognized that some level of private groundwater pumping would occur when Project Supply is less than historic demand. Consistent with the State of California's 2014 Sustainable Groundwater Management Act, the formation of Groundwater Sustainability Agencies and Groundwater Sustainability Plans by 2022 is still underway. This may result in increases in impacts to groundwater resources within the term of the Proposed Action in the form of declining groundwater levels. However, utilizing the sustainable pumping limits provided by the Oregon Water Resources Department (OWRD) (i.e., 80,000 AF pumped in any given year and a 10-year average not exceeding 30,000 AF), it is estimated there would be an increase of approximately 1.6 percent in groundwater pumping compared to the No Action Alternative. This insignificant increase in expected pumping is due to an increase in years where Project water supply is less than demand but reflects the fact that total pumping is constrained by the 30/80 rule such that more groundwater pumping in any single year makes less available in subsequent years. The expected pumping rates under the Proposed Action Alternative are within

the bounds of sustainability outlined by OWRD based on U.S. Geological Survey research and would result in less than significant impacts on groundwater resources. Reclamation will continue to rely on the state agencies with jurisdiction over groundwater to ensure that the private groundwater resources are used in a sustainable manner.

Refuge Water Acquisition

The refuge water acquisition component of the Proposed Action Alternative, in which Reclamation would acquire up to 25,000 AF of Project water for fish and wildlife purposes at LKNWR and TLNWR, may result in additional impacts to groundwater.

Biological Resources

Upper Klamath River Basin/ Upper Klamath Lake Federally-Listed (Under the Endangered Species Act) Threatened and Endangered Species

The Proposed Action Alternative results in both higher and lower end of month UKL surface elevations, but the overall trend is toward lower UKL surface elevations in years that UKL contributes to augmented downstream flows.

A surface elevation understood to be important for meeting ESA requirements for sucker spawning habitat is maintaining UKL surface elevation above 4,142.00 ft in March, April, and May, once this elevation (or higher) has been achieved earlier in the spring. As such, to the extent possible, Reclamation proposes to manage UKL elevations in a way that does not cause water surface elevation below 4,142.00 ft in March, April, or May. Reclamation would borrow water from PacifiCorp's downstream reservoirs and/or modify EWA augmentation releases in coordination with others to help safeguard against UKL elevations falling below those that have been identified as sufficiently protective of spawning suckers. The other elevation understood to be important is maintaining UKL above the annual minimum of 4,138.00 ft. to provide adequate depth in the northern portions of UKL and for access to refuge habitat for adult suckers in the late summer and fall. UKL surface elevation of 4,138.00 ft provides more than a meter of depth at the mouth of Pelican Bay which is sufficient for adult suckers to access Pelican Bay in late summer and early fall (USFWS 2019). This minimum elevation would also provide similar acres of habitat greater than two meters depth (USFWS 2019) in late summer and early fall.

The 40,000 AF EWA augmentation is triggered under the Proposed Action Alternative in 2020, because the April 1, 2020, UKL Supply is 577,000 AF, which is within the range where EWA augmentation is triggered. UKL elevations in 2020 appeared to peak in early April at an elevation of approximately 4,142.10 ft for a few days and have been slowly dropping through mid-April. Around April 20, UKL elevation declined below 4,142.00 ft and due to critically dry hydrologic conditions combined with the implementation of a flushing flow and the release of the full 40,000 AF of EWA augmentation, UKL elevations are projected to remain below 4,142.00 ft for the rest of the season. The lowest 2020 UKL surface elevation is anticipated to occur in late September and early October at an elevation of approximately 4,138.25 ft, which exceeds the annual minimum elevation of 4,138.00 ft.

As stated in Section 2.4.2, the USFWS 2020 BiOp includes T&C 1c. that requires Reclamation to take corrective actions such that UKL elevations are managed within the scope of the analysis

included therein and outlines a process Reclamation must undertake if certain elevational criteria are triggered. Consistent with T&C 1c., Reclamation began conferring with the Services on April 15, 2020, specific to projected elevations below 4,142.0 in April and May 2020. Reclamation, in coordination with the Services, has identified the causative factors and believe those factors are within the scope of the action and the effects analyzed in the USFWS 2020 BiOp and has identified the corrective actions that will be taken to adaptively manage through these conditions (See Section 4.3.1.1 of the EA).

Even with the Proposed Action Alternative's implementation of the additional 40,000 AF of EWA augmentation, the modeled output indicates that the frequency at which reduced habitat may concentrate spawning or compel suckers to skip spawning at the shoreline areas is relatively low (i.e., 6 out of 39 years or 15 percent).

In general, the Proposed Action Alternative results in surface elevations protective of both sucker spawning at the shoreline areas in the spring months and adult suckers and their access to refuge habitat in late summer and fall, although at slightly lower surface elevations than the No Action Alternative. The refugial areas referenced include the access channel to Pelican Bay and Fish Banks, which have similar lake bottom elevations, and areas near the Williamson River which has slightly deeper lake bottom. Surface elevations under the Proposed Action Alternative are on average 0.07 ft lower than the No Action Alternative during sucker spawning from the end of February through May (4,142.62 compared to 4,142.69 ft) and 0.15 ft lower at the end of August and September (4,139.57 versus 4,139.72 ft) which results in minimal reductions of habitat available to adult suckers in late summer at preferred depths in the northern part of UKL and should reduce the most severe impacts due to pelican predation (USFWS 2020).

Despite the challenges of water year 2020, model output indicates that the Proposed Action Alternative is likely to result in surface elevations that meet Reclamation's ESA requirements as outlined in the USFWS 2020 BiOp, including measures that provide adequate spawning access and habitat at the shoreline areas in the spring months and adult suckers access to refuge habitat in late summer and fall.

Regarding operations at both Clear Lake and Gerber reservoirs and impacts to suckers, Reclamation annually identifies the amount of irrigation water available that maintains the surface elevation as prescribed by USFWS in both their USFWS 2019 and more recent USFWS 2020 BiOps. Outside natural hydrologic conditions, Reclamation's Proposed Action Alternative would be implemented such that the reservoirs are at or above the specified September 30 minimum elevation for each reservoir (e.g., 4,520.60 ft for Clear Lake and 4,798.10 ft for Gerber reservoir). As part of the annual operations and compliance with the USFWS 2020 BiOp, Reclamation will conduct this step and coordinate with USFWS each year on the identified irrigation delivery from each reservoir under the Proposed Action Alternative.

Impacts to suckers and sucker habitat in each reservoir is anticipated to remain unchanged from past operations as the surface elevations anticipated are within the range of elevations analyzed in USFWS 2020 BiOp. Although, there is recognition that some impacts need additional analysis, USFWS determined the known impacts do not result in jeopardy to suckers or sucker habitat at either reservoir.

The USFWS 2020 BiOp, issued on April 10, 2020, concluded that the Proposed Action Alternative is not likely to jeopardize the continued existence of the Lost River sucker and shortnose sucker and is not likely to result in the destruction or adverse modification of critical habitat for Lost River sucker and shortnose sucker. However, USFWS does anticipate incidental take of Lost River sucker and shortnose sucker as well as adverse effects to their designated critical habitat.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Project water acquired by Reclamation for fish and wildlife purposes for TLNWR and LKNWR may come from Project Supply in UKL and/or KSD and LRDC return flows during the spring/summer period. Acquisition of Project water for fish and wildlife purposes would not increase the volume of water diverted from UKL to fulfill the Project Supply nor would it increase the amount of return flows from KSD and LRDC that would otherwise be used elsewhere within the Project during this time period. Accordingly, no additional effect to Federally-listed species in the Upper Klamath Basin would be expected outside those described for Project operations.

Wetland and Riparian Areas/Migratory Birds

The modeled UKL water levels resulting from the Proposed Action will result in similar frequency and periods of time when wetlands around UKL, including within Upper Klamath National Wildlife Refuge (UKNWR), would largely be without standing surface water (i.e., when the UKL elevation is below 4,139.50 feet). In terms of scope, the Hanks Marsh and Upper Klamath Marsh units of UKNWR (comprising approximately 15,000 acres) are most directly affected when water levels in UKL are below 4,139.50 ft. Standing surface water supports emergent and submergent wetland vegetation, and invertebrates, fish, and amphibians that occupy this habitat. Wetland areas provide food and habitat for other wetland-dependent wildlife, including waterfowl and other migratory birds.

There are limited amounts of wetland habitat downstream of Link River Dam. Most of these wetlands are associated with the riverbank shoreline and areas of impounded water near reservoirs. The largest amount of wetland habitat in the river reach below Link River Dam is between the Link River and Keno Dam (i.e., Keno Impoundment). Reclamation anticipates little to no impact to the amount of wetlands from the Link River Dam to IGD as a result of the No Action Alternative.

Under the Proposed Action Alternative, minimum water levels in TLS1A would be 4,034.00 ft year-round. Therefore, minimum elevations under the Proposed Action Alternative would be the same under both the No Action Alternative and the Proposed Action Alternative. As such, for the 13,240 acres of permanently flooded wetlands within TLNWR (TLS1A and 1B), this minimum elevation for TLS1A under the Proposed Action Alternative provides sufficient water levels to maintain the emergent and submergent vegetation, and associated invertebrates, fish, and amphibians, that characterize these wetland areas.

Under both the No Action Alternative and Proposed Action Alternative, the total annual water deliveries from Clear Lake National Wildlife Refuge (CLNWR) are determined through estimating the volume of water in Clear Lake Reservoir, evaporative losses, and maintaining at

or above a lake surface elevation of 4520.60 ft on September 30 each year. The Proposed Action Alternative is not expected to impact the amount or quality of upland or wetland habitat. Under both the No Action Alternative and Proposed Action Alternative, open water habitat is expected to vary in relation to the prevailing hydrologic conditions with a contraction of this habitat during consecutive dry years.

The average annual water deliveries to LKNWR from UKL and the Klamath River is the same under both the No Action Alternative and the Proposed Action (22,100 AF) with a range from 13,500 AF to 25,100 AF. Under dry water years types approximately 2,000 AF less water is available under the Proposed Action compared to the No Action Alternative which would be estimated to support approximately 800 additional acres of seasonal wetlands. However, in other year types, the Proposed Action Alternative is not expected to result in a discernable change in wetland and riparian areas within LKNWR compared to the No Action Alternative.

Although deliveries to LKNWR are similar under both alternatives, the average volume of water for LKNWR under both the alternatives is still inadequate to meet refuge needs. The constraints on the average annual volume of water available for LKNWR limits USFWS' ability to manage the various units within the refuge to provide a variety of vegetative communities, particularly for wetland-dependent species. In addition to the water available from UKL and the Klamath River, unused Project Supply under both alternatives could augment overall supplies to the LKNWR and result in greater availability of wetland habitats in certain water year types (primarily wet years). Overall, because of the inadequate annual supply in all years, less habitat can be maintained as wetland areas at any given time. In severely dry years, the lack of water may result in LKNWR being completely dry (i.e., no wetland areas) due to evaporation and seepage consuming the small volumes of water that are anticipated to be available.

Impacts to wetland and riparian areas and subsequent impacts to wetland-dependent species, including migratory birds and waterfowl as a result of water deliveries (which are influenced by many factors including contracts with Project water users, water availability, water rights, and the lack of an established intra-Project priority for LKNWR's Project water rights) are outside the scope of the Proposed Action Alternative. However, as discussed in Section 1.4.4 of the EA, Reclamation is taking appropriate steps within its authority to coordinate with USFWS, Project water users, and others to address the refuge water supply challenges.

Refuge Water Acquisition

The Proposed Action includes a refuge water acquisition component where up to 25,000 AF of Project water, including potentially Project Supply from UKL and LRDC and KSD return flows, for use for fish and wildlife purposes could increase available wetland and riparian areas within TLNWR and LKNWR. Although the amount of additional water that could be delivered as a result of the water acquisition component of the Proposed Action Alternative is currently uncertain in 2020 (and in future years), the amount of water acquired could be up to 25,000 AF for the spring/summer period (March – November). This action would be expected to increase deliveries to LKNWR and/or TLNWR, particularly during drier years when refuge water supply would likely be deficient, which would be expected to increase wetland and riparian areas beyond those that would be expected if water was not to be acquired. If 25,000 AF of water was acquired for fish and wildlife purposes it is anticipated that it could maintain up to approximately

10,000 to 12,000 acres of wetlands between the two refuges, however, the place of use of the acquired water is yet to be determined.

Furthermore, it is anticipated that under the refuge water acquisition component of the Proposed Action Alternative, potential negative impacts to fish and wildlife resources in LKNWR and TLNWR may be reduced in 2020 and future similar dry years, due to Reclamation acquiring water from district entities willing to make limited water supplies available in exchange for federal drought relief assistance. As this action would be expected to increase deliveries to LKNWR and/or TLNWR, particularly during drier years when the refuge's water supply would likely be deficient, the refuge water acquisition component of the Proposed Action Alternative would be expected to increase food and habitat resources for migratory birds beyond those that would be expected if water was not to be acquired.

Lower Klamath Basin/Klamath River Federally-Listed (Under the Endangered Species Act) Threatened and Endangered Species

Under the Proposed Action Alternative, Reclamation would provide an additional EWA augmentation of 40,000 AF during water years when UKL Supply is between 550,000 AF and 950,000 AF. The 40,000 AF of EWA augmentation included in the Proposed Action Alternative is in addition to an enhanced May/June flows provision in the modified 2018 Operations Plan with slight modifications. However, as mentioned in *Section 4.3.1.2* of the EA, based on current projections, Reclamation does not anticipate providing enhanced May/June flows in 2020. As described in Reclamation's modified 2018 Operations Plan, Reclamation would maintain a flexible approach when utilizing the proposed 40,000 AF of EWA augmentation and enhanced May/June flows. Reclamation has coordinated with PacifiCorp to borrow water during springtime operations to help ensure EWA augmentation volumes can be used to address disease and habitat concerns for coho salmon.

Based on the currently available science utilizing 80 percent WUA as a conservation standard, increased flows as a result of the proposed 40,000 AF of EWA augmentation and enhanced May/June provision would likely improve simulated achievement of the 80 percent WUA. The augmentation volumes produce a simulated increase in the amount of suitable habitat for juvenile salmonids and, therefore, increase the simulated frequency of meeting the 80 percent WUA habitat conservation standard. While increases in aquatic habitat are likely to occur along the mainstem of the Klamath River with the additional 40,000 AF of EWA, questions remain about the use of the 80 percent WUA as a means for appropriately identifying critical needs for threatened coho salmon in the Klamath River basin. The augmentation volumes would likely increase the amount of suitable habitat for juvenile salmonids and the amount of time the habitat conservation standard is met.

The Proposed Action Alternative provides for implementation of a surface flushing flow in nearly every year. The timing of the surface flushing flow release depends on hydrologic conditions but normally would occur between March 1 and April 15. However, surface flushing flow timing could occur outside the March 1 to April 15 period based on input from the FASTA team. The FASTA team may also provide input on surface flushing flow magnitude and duration that deviate from how these events were simulated within the KBPM. The timing of these flows relative to the release of salmon-infecting *C. shasta* spores (actinospores) and smolt outmigration in the spring may increase the efficacy that these flows have on minimizing prevalence of

infection and mortality in salmonids. For example, under the Proposed Action Alternative, surface flushing flows would be shifted later in the season as described in Section 2.2.5 of the EA. Due to actual and projected lake elevations below 4,142.00 ft in April and May and a lack of compelling disease data in early April, the FASTA team made a recommendation for delaying the implementation of a modified surface flushing flow later than April 15. As such, Reclamation plans to initiate a modified surface flushing flow on April 22, 2020 (mean daily flow of 6,030 cfs on the first day, followed by a mean daily flow of 5,030 cfs on the second day, and mean daily flow of 4,500 cfs on the third day, followed by appropriate ramping rates).

A frequent disturbance regime in the Klamath River via surface flushing flows is likely to provide a preventative mechanism for reducing disease risks for juvenile coho and Chinook salmon. Reduced disease risk for outmigrating salmon may also improve the prey base for SRKW. Green sturgeon (Southern Distinct Population Segment (DPS) and Eulachon (Southern DPS) would only be minimally impacted due to life history traits, winter use of the river, and their primary occupancy in the lower 10 miles of the Klamath River.

As the Proposed Action Alternative includes an additional volume of EWA augmentation, there is the potential to reduce Klamath River spring water temperatures, increase habitat availability and further reduce prevalence of infection from disease, in salmonids, increasing survival and thereby triggering increased survival and forage for interconnected species, such as SRKW. As a result, impacts to coho salmon, Chinook salmon (a seasonal food source for SRKW), and therefore SRKW, are anticipated to result in increased prey availability and improved overall conditions, as compared to those simulated under the No Action Alternative. The Proposed Action Alternative provides river flows that increase juvenile Chinook habitats, but the overall effect for SRKW is likely to be a small improvement in prey availability. Any reduced water temperatures as a result of the Proposed Action Alternative could beneficially influence prey availability for SRKW, although temperature influences of the Proposed Action Alternative are anticipated to be small.

As a result of implementation of the Proposed Action Alternative, the Project's impacts to SONCC coho salmon, Chinook salmon (and therefore SRKW) relative to disease risk, are anticipated to be lessened relative to the No Action Alternative.

On April 13, 2020, NMFS provided a response that Reclamation's Proposed Action Alternative is consistent with their 2019 BiOp and is not likely to jeopardize the continued existence of the SONCC coho salmon Evolutionarily Significant Unit (ESU), or the SRKW, or destroy or adversely modify designated critical habitat for the SONCC coho salmon ESU. Critical habitat for Southern Residents is outside of the action area. However, NMFS anticipates incidental take of SONCC coho salmon and SRKWs will not jeopardize their continued existence. Included with the NMFS 2019 biological opinion is an incidental take statement with non-discretionary terms and conditions. NMFS also concluded that the Proposed Action Alternative is not likely to adversely affect green sturgeon, eulachon, or designated critical habitat for eulachon, thereby concluding informal consultation for those species.

NMFS also conveyed in the April 13, 2020, response letter to Reclamation that Proposed Action Alternative would, as described in their 2019 BiOp, adversely affect coho salmon and Chinook

salmon Essential Fish Habitat (EFH). NMFS provided the following EFH conservation recommendations to protect the mainstem Klamath River and tributaries designated as EFH for Pacific Coast salmon by avoiding or minimizing the adverse effects described above.

- Reclamation should maximize the benefits of opportunistic high flow releases to create habitat conditions conducive to salmonid fitness, and detrimental to the disease pathogen *Ceratanova shasta*. For example, to the extent practicable, Reclamation should implement deep flushing flow events described as Measure 2 in Hillemeier et al. (2017) Implementation of Guidance Measure 2 will also help reduce adverse effects of the proposed action to water quality.
- Reclamation should ensure that habitat restoration projects funded through the coho restoration grant program are designed and implemented consistent with techniques and minimization measures presented in California Department of Fish and Wildlife (CDFW) California Salmonid Stream Habitat Restoration Manual, Fourth Edition, Volume II (Part IX: Fish Passage Evaluation at Stream Crossings, Part XI: Riparian Habitat Restoration, and Part XII: Fish Passage Design and Implementation; referred to as the Restoration Manual) (Flosi et al. 2010). This will help ensure that any short-term adverse effects to the streambed and associated benthic organisms EFH are minimized.

NMFS's April 13, 2020, response letter, concluded that the Proposed Action Alternative had not been substantially revised (i.e., relative to the No Action Alternative analyzed in their 2019 BiOp) in a way that may adversely affect MSA EFH, nor has new information become available that affects the basis for NMFS EFH Conservation recommendations in their March 2019 EFH Assessment.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation's acquisition of Project water, including from Project Supply or other sources, for use for fish and wildlife purposes in TLNWR and/or LKNWR, would result in the same Klamath River flows as simulated under the No Action Alternative. No additional water from UKL that is allocated for Klamath River flows (EWA) would be needed to fulfill the short-term water acquisition contracts, but rather only water already allocated under Project Supply and available from other sources (i.e., return flows from LRDC and KSD for irrigation purposes). As a result, no impacts to Lower Klamath River Basin ESA-listed species would occur.

Other Fish and Wildlife Species (Non-Endangered Species Act Listed)

Other aquatic and terrestrial species are expected to experience an indiscernible level of change from existing conditions from implementation of the Klamath Project operation procedures.

In summary, there are no significant impacts to biological resources associated with the Proposed Action Alternative.

Recreation

Impacts to recreation on the Klamath River under each alternative would be minor and temporary (specifically in the spring/early summer period) as a result of fluctuations in river operations to implement surface flushing flows downstream of IGD, to assist in control of

salmon disease and habitat improvement. Flow variations under the proposed Action Alternative during the spring/summer period are short in duration (7-10 days) and would only temporarily affect river activities (e.g., fishing and/or boating). These flows may assist in providing benefits to species, other than the target salmonids and thus recreational fishing opportunities.

Recreational fish and boating in the Lower Klamath Basin are anticipated to remain the same as existing conditions throughout the majority of the term of the Proposed Action Alternative.

For the Upper Klamath Basin, recreation (e.g., fish and/or boating) associated with open water bodies like UKL, would remain unchanged, and would remain consistent with historical operations. Boat access to adjacent wetland areas, including in UKNWR, would also be similar to existing and historic conditions.

Portions of LKNWR are open to and accessible for hunting (waterfowl and ring-necked pheasant), boating, wildlife observation, and photography. Hunting opportunities vary between walk-in areas, boat-in marshes, agricultural fields, and established pit blinds. As such, although waterfowl hunting use is primarily focused around flooded, wetland areas, there are still hunting opportunities when wetlands lack standing water. The annual numbers of waterfowl hunters that visit LKNWR varies between approximately 1,500 and 2,600, including years with severely reduced water deliveries. Boating, however, does require open water areas, and thus water deliveries to areas of LKNWR to support these conditions would be impacted under both alternatives, but slightly more so under the Proposed Action Alternative.

Wildlife observation and photography at the UKNWR, LKNWR, TLS1A, and CLNWR are also aided by the presence of water, but not dependent upon it, and can be assumed to continue at the same general level as the No Action Alternative.

Overall, recreational opportunities, which are primarily focused around wildlife observation, boating, waterfowl hunting, and interpretation, are anticipated to continue at historic levels under both alternatives.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, where Reclamation would acquire water for fish and wildlife purposes at LKNWR and TLNWR, it is anticipated that additional inundated wetland areas within LKNWR and TLNWR would occur as compared to the No Action Alternative. These inundated areas would provide more hunting, boating and wildlife viewing opportunities compared to the No Action Alternative.

Land Use

Due to the nature of the Proposed Action Alternative, impacts to land use outside of the Project are not anticipated. Compared to the No Action Alternative, the Proposed Action Alternative is not anticipated to change established land management practices within the Project boundaries or within the Klamath Basin Refuge Complex. Any potential effects are expected to be limited in duration due to the term of the action.

In economic impact simulations of the No Action Alternative (Section 4.7 of the EA.) involuntary land idling due to reduced Project water supplies occurs in eleven years of the 39-year POR (28 percent of years) while under the Proposed Action Alternative, involuntary land

idling increases to 20 years of the 39-year POR (or 51 percent of years). Under the No Action Alternative, land fallowing will average 43,900 acres in each occurrence when available water supplies (including groundwater) are insufficient to meet demand. Under the Proposed Action Alternative land fallowing will decrease to an average of 35,500 acres per occurrence but occurs more frequently.

The impact of the Proposed Action Alternative as compared to the No Action Alternative is therefore an additional nine years of involuntary land idling, but a decrease in average fallowed acreage of 8,400 acres per occurrence in water-short years, with corresponding potential declines in weed growth and dust. As a percentage of the Project's irrigated acreage, involuntarily fallowed land would increase from 8 percent under the No Action Alternative to 12 percent under the Proposed Action Alternative on average over the POR, with corresponding increases in weed growth and dust.

Under the Proposed Action Alternative there would be an increase in the frequency and magnitude of shortages of Project surface water. Likely responses to this shortage include groundwater supplementation and involuntary land idling. Groundwater will assist in filling the gap between available Project supplies and irrigation demand, but due to sustainable management of groundwater resources by the respective state water resource agencies, groundwater supplementation may be limited or altogether unavailable, resulting in an increase in involuntarily idled land. Based on the analysis presented, under the Proposed Action Alternative an annual average of 12 percent of the Project would be involuntarily idled. As there may be other mitigating factors available to Project water users, including but not limited to the NRCS on-farm programs and other potential state and federal programs and activities, only short-term impacts are expected. Long-term land use patterns would not be expected to change as a result of this short-term action (five years).

Refuge Water Acquisition

The acquisition of water by Reclamation may result in delayed or reduced irrigation practices to some extent (again unquantifiable as individual water acquisition proposals have not yet been determined), but not in additional land idling beyond what would already be expected to occur were Reclamation to not acquire water; the primary effect of water acquisition would be to replace involuntary land idling with voluntary land idling. This action would only be taken in drought years so even though the acreage of land participating in voluntary land idling is uncertain, the same short-term impacts could be expected as for involuntary land idling.

Socioeconomic Resources

Under the Proposed Action Alternative, shortages in Project surface water supply are estimated to occur in 59 percent of years (23 of 39 years). Sustainable use of groundwater is able to mitigate the shortage in 15 of the 23 years at a cost of \$867,000 per occurrence, but completely mitigates the shortage in only 3 of those years. After groundwater supplementation, the frequency of unmitigated shortages in irrigation water (Project surface water plus private groundwater) is reduced to 20 years (51 percent of years in the POR). Estimated annual regional output losses in those 20 years average \$16.4 million (10 percent below estimated full output of \$163.2 million) per year of occurrence, or \$8.4 million per year averaged over the entire POR.

Under the Proposed Action Alternative, regional job losses within the geographic scope of analysis in this EA average 62 over the POR, or 122 jobs in each year of unmitigated short water supplies. Compared to the No Action Alternative, the Proposed Action Alternative would result in an additional nine years experiencing job losses (from 11 years to 20 years), although 42 fewer jobs would be lost, on average, per occurrence. Reclamation recognizes that additional regional economic losses, measured in dollars and job losses, may occur on both the input and output sides of the agricultural production that was modeled.

While groundwater pumping as a result of inadequate Project water supplies would occur less often under the Proposed Action Alternative, pumping costs in each year would be 22 percent higher because of the need to pump more supplemental groundwater. Total pumping costs over the POR, were only 1.5 percent higher due to fewer years of pumping. Losses to the Project's \$163.2 million regional output due to unmitigable shortages in irrigation water supply would be expected to occur in an additional six years as compared to the No Action and would be more severe (impact would increase from \$10.8 million to \$20.2 million per occurrence, and from \$2.2 million to \$7.5 million over the POR). Repeated years of inadequate Project water supplies may be more impactful than isolated years which provide irrigators greater opportunity to recover from their economic losses.

Under the Proposed Action, Reclamation anticipates that there would be no change to fishing opportunities for the Klamath Basin Tribes, relative to the No Action Alternative. Reclamation anticipates a reduced disease risk to coho and Chinook salmon in the Klamath River which is likely to result in increased fitness and decreased vulnerability, relative to the No Action Alternative. In turn, there may be less potential for adverse effects to tribal fisheries-related socioeconomic resources which may increase fish harvest for subsistence and commercial fishing and associated cultural and associated practices for the Klamath River Tribes. Due to the integral nature of fish to the worldview, status, and health of the Tribes, any improvements to the health and availability of fish and the Klamath River could contribute to improved standard of living and health for the Tribes. However, standard of living and health improvements would likely occur over the long term which would exceed the three-year period of the Proposed Action.

Implementation of the Proposed Action Alternative is unlikely to significantly impact commercial fishing opportunities and resultant economic activity as compared to the No Action Alternative.

Refuge recreation is unlikely to be significantly impacted by implementation of the Proposed Action Alternative. Likewise, as noted for commercial fishing above, water-based recreation centered on recreational fishing is unlikely to change significantly.

Impacts of socioeconomic effects are likely to occur under the Proposed Action Alternative. However, under 40 CFR § 1508.14, the economic or social effects as a result of a proposed action are not intended by themselves to require further analysis under an environmental assessment. Based on the socioeconomic analysis in the EA and this FONSI, the resulting socioeconomic impacts from water shortage under the Proposed Action is independent from impacts on other resources within the natural and physical environment. The impacts to

socioeconomics resulting from the Proposed Action Alternative, where combined with analysis of impacts on other resources within the natural and physical environment (see discussion on impacts to all other resources identified in this FONSI and associated EA) result in insignificant impacts on the human environment.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation's acquisition of water for fish and wildlife purposes in LKNWR and TLNWR in 2020, and possibly future years, would offset at least part of the economic impacts to agriculture by providing federal funds that can be used (if districts so choose) to compensate landowners for the cost of pumping supplemental groundwater or voluntary or involuntary curtailments resulting in fallowed lands. This benefit may partially mitigate the negative impacts of reduced water supply discussed above.

Air Quality

As modeled over the POR, implementation of the Proposed Action would likely result in an increase in the frequency of land idling, partially offset by a decrease in the acreage of fallowed land in each year of occurrence. It is likely that, due to water supply allocation based on Reclamation's contractual prioritization, the increase in land idling would result in lower, but more frequent, episodes of PM_{2.5} emissions from idled lands affecting air quality in Klamath County, Oregon and Modoc and Siskiyou counties in California. As has occurred in the past, dust mitigation and soil retention best management practices (BMPs) such as cover crops and stubble management would likely be employed. Although unquantifiable, it is probable that the level of PM_{2.5} or dust emissions under the Proposed Action Alternative, even with best management practices in effect, would increase by some small amount.

Air quality condition is anticipated to remain the same as existing conditions in Del Norte and Humboldt, California counties.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation's acquisition of water for fish and wildlife purposes in LKNWR and TLNWR in 2020, and possibly future years, may impact air quality, as dust emissions (PM_{2.5}) within the Project boundaries would likely occur if federal funds are used (if districts or their representatives so choose) to compensate landowners for voluntarily fallowing agricultural farmland. Dust mitigation practices such as cover crops and stubble management may be employed but are speculative and not able to be measured accurately as they would occur at the farm level. Any air quality impacts as a result of this component of the Proposed Action Alternative would likely be short-term, temporary and limited to drought years.

Indian Trust Resources

The Klamath Tribes' current levels of ceremonial use would continue and fishing for subsistence and commercial needs would still not occur. As such, there would be no change in the Klamath Tribes Trust Assets. The Proposed action will have no effect upon the Klamath Tribes' federal reserved water rights.

It is anticipated, due to increased flows and disease management measures, that the Tribal Trust water and fishery resources in the Klamath River may experience increased fitness and decreased vulnerability, which may allow for increased harvest of salmon for subsistence, ceremonial, and commercial needs. Therefore, implementation of the Proposed Action Alternative is anticipated to have a positive impact on the Tribal Trust water and fishery resources in the lower Klamath River.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation's acquisition of water for fish and wildlife purposes for LKNWR and TLNWR would not impact Indian trust resources as the proposed acquisition is solely to acquire water from Project Supply (or other Project sources i.e., LRDC and KSD) for LKNWR and TLNWR that are likely to receive limited water supplies in dry hydrologic years.

Environmental Justice

Involuntary idling of productive irrigable land within the Project boundary would occur leading to an increased risk to local rural agricultural communities. Though uncertain, the use of supplemental water supplies, changes in agricultural practices, and/or application of on-farm crop insurance programs are expected to be implemented if shortages exist, thereby reducing risks to agriculture related populations.

Klamath River fisheries are anticipated to experience an increased fitness and decreased vulnerability, relative to the No Action Alternative potentially allowing for an increase in coho and Chinook salmon as a community economic and cultural resource. For Lost River and shortnose suckers there would be no change from existing levels related to use of suckers as a community economic and cultural resource. In turn, the overall risk to the tribal related population and the associated environmental justice would be reduced.

In summary, ethnic minority and/or low-income sectors of both populations are not expected to be disproportionately affected by adverse environmental impacts associated with the project alternatives.

Refuge Water Acquisition

Under the refuge water acquisition component of the Proposed Action Alternative, Reclamation's acquisition of 25,000 AF of Project water for fish and wildlife purposes in LKNWR and TLNWR could lessen the economic hardships on local low income rural agricultural communities in Klamath, Modoc, and portions of Siskiyou counties during years of dry hydrologic conditions like WY 2020, by providing a source of funding for non-federal voluntary demand management activities including land idling and groundwater pumping, etc.

Indian Sacred Sites

The Proposed Action is not likely to limit access to, and ceremonial use of, Indian Sacred Sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO13007 and 512 OM 3). As under the No Action Alternative, flow increases to accommodate the Yurok Tribe's Boat Dance Ceremony are incorporated into the Proposed Action Alternative. Therefore, the Proposed Action Alternative would not inhibit

access to, or ceremonial use of, an Indian Sacred Site nor would the Proposed Action Alternative adversely affect the physical integrity of such sacred sites.

Cultural Resources

The Proposed Action has no potential to affect historic properties (40 CFR 1508.27(b)(8)). The Proposed Action would allow for implementation of Klamath Project operating procedures within existing facilities and would not produce any ground disturbances, construction of new facilities or the modification of existing facilities, or land use changes. Since the Proposed Action has no potential to affect historic properties, no cultural resources would be impacted as a result of the Proposed Action.

Climate Change and Greenhouse Gases

Implementation of the Proposed Action will result in insignificant impacts to climate change or increases in greenhouse gases due to the nature and short time period of the Proposed Action Alternative.

Cumulative Impacts

The Proposed Action will not have significant cumulative impacts (40 CFR 1508.27(b)(7)). Reclamation reviewed the cumulative impacts for the Proposed Action for all resource areas analyzed in the EA. There were no significant cumulative impacts identified for these resource areas.

Other Considerations

- The Proposed Action will not significantly impact natural resources and unique geographical characteristics such as historic or cultural resources; parks, recreation lands, and refuges; national natural landmarks; sole or principal drinking water aquifers; prime and unique farmlands; wetlands (Executive Order 1190); national monuments; and other ecologically significant or critical areas (40 CFR 1508.27(b)(3) and 43 CFR 46.215(b)). Although portions of the Klamath River are designated as Wild and Scenic, Klamath Project flow management would largely be within the normal release range of water levels along the Klamath River and would not be reduced below or exceed the historic range of flows.
- The Proposed Action will not significantly impact flood plains (EO 11988). No construction, dredging or other modifications of regulated water features would be associated with the Proposed Action. No permits under the Clean Water Act would be needed. The Proposed Action only includes providing controlled water deliveries and releases that are within the normal operational range and maintenance activities within enclosed facilities. Floodplains would not be impacted by the Proposed Action.
- The Proposed Action will not violate Federal, state, tribal, or local law or requirements imposed for the protection of the environment (40 CFR 1508.27(b)(10)).