



# United States Department of the Interior

BUREAU OF RECLAMATION  
Klamath Basin Area Office  
6600 Washburn Way  
Klamath Falls, OR 97603-9365



IN REPLY REFER TO:

KO-320

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APR 9, 2022

VIA ELECTRONIC MAIL

Jim Simondet  
National Marine Fisheries Service  
1655 Heindon Road  
Arcata, CA 95521

Subject: 2022 Water Year – Klamath Project Temporary Operating Procedures and Term and Condition 1A of the National Marine Fisheries Service’s 2019 Biological Opinion and Term and Condition 1c of the U.S. Fish and Wildlife Service’s 2020 Biological Opinion

Dear Mr. Simondet:

## Purpose

The purpose of this letter is for the Bureau of Reclamation (Reclamation) to document consistency with Term and Condition (T&C) 1A of the National Marine Fisheries Service’s (NMFS) *Endangered Species Act (ESA) Section 7(a)(2) Biological Opinion, and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Response* (2019 NMFS BiOp) issued on March 29, 2019, and T&C 1c of the U.S. Fish and Wildlife Service’s (USFWS; collectively the Services) *Biological Opinion on the Effects of the Proposed Interim Klamath Project Operations Plan, effective April 1, 2020, through September 30, 2022, on the Lost River and Shortnose Sucker* (2020 USFWS BiOp; collectively BiOps).

## Background

Critically dry and extraordinary hydrologic conditions in the Klamath River Basin are present for the third consecutive year and will prevent full, simultaneous satisfaction of requirements for ESA-listed species in Upper Klamath Lake (UKL) and the Klamath River, as specified in the 2020 Interim Operations Plan (2020 IOP) and associated Klamath Project (Project) biological opinions, even without water deliveries to the Project. As projections of potentially available water in the Klamath Basin have continually failed to materialize, there is simply not enough water in the Klamath River Basin system to meet all the competing demands, making management of the 2022 spring/summer operating season exceedingly challenging.

In response, on February 25, 2022, Reclamation initiated the meet and confer provisions of T&C 1A and 1c in NMFS and USFWS BiOps, respectively, which require Reclamation to coordinate with the Services to determine the causative factors for potentially falling outside BiOp requirements and to identify adaptive management and corrective actions. Coordination meetings were held between Reclamation and the Services weekly throughout the month of March and continue into April 2022. To ensure clear and transparent communication, Reclamation has also

engaged components of the Departments of the Interior and Commerce, Klamath Basin Tribes, Project water users, and other key stakeholders to discuss possible adaptive management actions that could be implemented to best meet the requirements of the ESA, tribal trust responsibilities, and contractual obligations.

## **Current and Projected Hydrologic Conditions**

### Upper Klamath Lake

Current hydrologic modeling suggests that, regardless of Reclamation's actions, extreme drought conditions will prevent UKL elevation from reaching 4,142.0 feet (ft) in April and May, the elevation described in the USFWS 2020 BiOp as necessary for adequate ESA-listed Lost River sucker spawning habitat at shoreline springs. Similarly, even without operation of the Project or provision of a Surface Flushing Flow (SFF) in the Klamath River, but for without a substantial improvement in projected dry hydrologic conditions, UKL surface elevations will also not meet or exceed an elevation of 4,140.5 ft prior to July 15, as required in the USFWS 2020 BiOp.

Based on this information, Reclamation has determined that meeting the specific UKL elevations from April 1 through July 15, as required under the 2020 USFWS BiOp for endangered sucker spawning and larval rearing habitat, is not obtainable in 2022. However, Reclamation modeling does indicate that UKL elevations at the end of the 2022 season will be above the required 4,138.0 ft elevation.

### Klamath River

Relative to projected river releases, Reclamation has determined that the Environmental Water Account (EWA) distribution, inclusive of minimum Klamath River flows and a required SFF event pursuant to the NMFS 2019 BiOp, may fall outside the thresholds identified in T&C 1A during the 2022 spring/summer operating season. Although required flows have not yet fallen outside the thresholds listed in T&C 1A, based on current hydrology, low UKL elevations and resulting lack of hydraulic head, Reclamation projects that the full SFF with a peak of 6,030 cubic feet per second (cfs) for 72 hours as required by the 2019 NMFS BiOp is unattainable.

## **Biological Opinion Meet and Confer Provisions – T&C 1A (USFWS) and 1c (NMFS)**

Consistent with the meet and confer provisions introduced above, Reclamation has shared the hydrologic output with experts at the Services and with leadership at Interior and Commerce. Collectively, the agencies determined the causative factors for Reclamation's inability to simultaneously meeting boundary conditions specified in each BiOp are primarily the result of consecutive critically dry years and extraordinary hydrologic conditions. Specifically, cumulative inflows into UKL for the 2022 water year (starting on October 1, 2021) are the second lowest within the 42-year period of record (1981-2022). Additionally, since the start of the 2022 water year, the Williamson River, the largest tributary to UKL, has set numerous record lows for daily mean flows. The continuing unprecedented drought conditions have necessitated that Reclamation coordinate with the Services on an operational path forward.

## **Proposal**

As such, during the conferral process with the Services, government to government consultations with Klamath Basin Tribes, and individual meetings with affected key stakeholders, Reclamation determined that temporary adjustments to the 2020 IOP are warranted for 2022. These adjustments, or 2022 Temporary Operating Procedures (2022 TOP; enclosure), primarily focus on reshaping the required SFF event, allowing for a limited volume of water for Project purposes, and ensuring that UKL remains above the required

end of season elevation prescribed by the USFWS 2020 BiOp. Overall, the 2022 TOP serves to address the current and projected hydrologic conditions relative to the immediate and temporary competing needs for limited water resources.

### **Conclusion**

Because the distribution of the EWA may fall outside the thresholds identified in T&C 1A and because UKL is not expected to reach boundary conditions identified in T&C 1c, both the T&Cs' coordination/consultation provisions were triggered. As a result, Reclamation has coordinated with the Services, Tribes, and key stakeholders to develop corrective and adaptive actions in order to best meet the requirements of the ESA, tribal trust responsibilities, and contractual obligations during the 2022 operating season.

Accordingly, Reclamation believes that development and implementation of the proposed 2022 TOP as detailed in the enclosure is consistent with the letter, spirit and procedural intent of the Services' BiOps. The 2022 TOP recognizes and attempts to reconcile the exigent needs of the threatened and endangered species as well as affected tribal and irrigation communities with respect to a very limited amount of water available for the 2022 spring/summer operating season. Reclamation acknowledges that the 2022 TOP is unlikely to satisfy all groups but believes that the 2022 TOP represents a good-faith effort, developed collaboratively, to meet as many of the competing needs as is practicable under the circumstances.

Reclamation will continue to monitor hydrologic conditions relative to operation of the Project and coordinate further with the Services as new information becomes available. Reclamation requests acknowledgement from the Services that the process outlined in T&C 1A and 1c of the NMFS and USFWS BiOps, respectively, has been met. Reclamation also requests acknowledgement that the Services have been provided with the most current and up-to-date hydrologic data and forecasts that Reclamation has based management decisions upon in 2022. Reclamation is committed to continuing to provide updated hydrologic information as the spring and summer conditions continue to change and coordination with the Services continues.

Reclamation appreciates the extensive coordination and collaboration during development of the 2022 TOP and the federal agency partnership that facilitated coordination in an exceedingly challenging 2022 water year. Should you have any questions or require additional information, please contact Kristen Hiatt, Resource Management Division Chief, by email at (541) 880-2577 or via email at khiatt@usbr.gov.

Sincerely,

Alan C. Heck, Jr.  
Acting Area Manager

**ALAN HECK**

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Enclosure (1)

cc: Jenny Marek  
U.S. Fish and Wildlife Service  
1936 California Avenue  
Klamath Falls, Oregon 97601

Mr. Mark Sturtevant  
PacifiCorp  
825 NE Multnomah Suite 1800  
Portland, Oregon 97232

**2022 Temporary Operating Procedures**  
Interior Region 10 California-Great Basin  
Bureau of Reclamation – Klamath Basin Area Office  
April 9, 2022

Given the current and projected hydrologic conditions for the remainder of water year 2022, the Bureau of Reclamation (Reclamation) proposes to implement temporary adjustments to the 2020 Interim Operations Plan (2020 IOP) herein described as the 2022 Temporary Operating Procedures (2022 TOP) and as detailed below. Water management elements not specifically identified below can be considered to be consistent with the management approach described in the 2020 IOP.

**Proposal**

Duration: The 2022 TOP would be administered April 15 through the end of the water year on September 30, 2022<sup>1</sup>, at which time Reclamation would revert back to the fall/winter operating procedures of the 2020 IOP or transition to a new water management approach pending completion of the ongoing Section 7 Endangered Species Act reinitiation of consultation effort.

Klamath River<sup>2</sup>

*Surface Flushing Flow (SFF)*

Consistent with *Section 1.3.2.6.4 Disease Mitigation and Habitat Flows* of the NMFS 2019 BiOp, Reclamation proposes, to the extent possible under the UKL surface elevations and hydrologic conditions, to implement a SFF on or around April 15, 2022. Releases at Link River Dam from UKL would be managed to produce a target flow event exceeding 4,200 cfs for approximately 24 hours at Iron Gate Dam. Reclamation will strive to maximize the peak flows during the SFF. Table 1 below indicates approximate peak flows expected for the 2022 SFF event given current projections.

Table 1. Approximate targeted Surface Flushing Flow Rates (cfs) if implemented on or around April 15 under the Natural Resource Conservation Service 50 percent Upper Klamath Lake Inflow Exceedance Forecast.

	<b>April 15</b>	<b>April 16</b>	<b>April 17</b>
<b>Peak Flow (cfs)</b>	4,200	3,200	4,050

To reduce potential effects to ESA-listed species (i.e., endangered Lost River and shortnose sucker populations) present in UKL and to address the duration that UKL is below fill trajectories, Reclamation would attempt to coincide the SFF with a hydrologic event. Further, Reclamation may implement accelerated ramp down rates during the SFF event.

<sup>1</sup> It is recognized that although the operating season and water year ends on September 30 of each year, final spring/summer irrigation diversions continue until mid-November to finish crop productions.

<sup>2</sup> Reclamation intends to maintain minimum flows in the Klamath River below Iron Gate Dam as prescribed in the 2019 NMFS BiOp.

Reclamation would ensure close coordination with the Services to monitor and integrate real-time conditions to ensure that peak SFF discharges (see Table 1) would be commensurate with the maximum discharge capability of Link River Dam and PacifiCorp's dams in the hydroelectric reach on days 1 and 3 for no less than 24 hours unless a greater magnitude can be achieved over a shorter duration. In total under the 2022 TOP SFF, Reclamation proposes to utilize approximately 25,000-26,000 acre-feet (AF) from UKL. NMFS has indicated that they would coordinate an effort to closely monitor riverine conditions to identify any fish stranding occurring during a rapid drawdown, and if necessary, would rescue any stranded fish.

Although Reclamation's analysis indicates that this proposed SFF should not result in human health and safety and/or property concerns, if such concerns are encountered during implementation of the SFF event, Reclamation proposes that the flow may be halted immediately.

### Project Supply

#### *Upper Klamath Lake and Klamath River*

Reclamation proposes to adaptively manage the Project Supply<sup>3</sup> to safeguard UKL water surface elevations as described further below. Accordingly, the Project Supply volume would ultimately be determined by subsequent inflows to UKL. Reclamation estimates the Project Supply would be approximately up to 62,000<sup>4</sup> AF as a result of projected hydrologic conditions which currently align with the April 1, Natural Resource Conservation Service (NRCS) 50 percent UKL inflow forecast, trajectories observed in water year 2021, and borrowing of up to 20,000 AF from PacifiCorp reservoirs.

#### *Distribution*

Reclamation proposes to initiate irrigation deliveries on or about April 15 and adaptively manage the Project Supply through a collaborative effort with Project contractors and the Services. Deliveries would be adaptively managed in a manner that would ensure UKL water surface elevations do not recede below 4,138.15 ft. The actual available Project Supply would be dependent on observed inflows and UKL elevations during the spring/summer period. This adaptive management approach would require continual monitoring of all operational parameters and projections, and frequent communication with Project water users and the Services to ensure that Project deliveries, coupled with releases to the Klamath River, do not cause UKL to be at any time drafted below elevation 4,138.15 ft.

Further, if observed cumulative UKL inflows and/or UKL elevations for any given operational week exceed expectations, the following action may be taken, as situationally

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<sup>3</sup> Project Supply is the volume of water available from UKL and the Klamath River for lands within the Klamath Project boundaries not served by the Lost River Basin (i.e., Clear Lake and Gerber reservoirs).

<sup>4</sup> This volume does not add the estimated 7,436 AF of Project-associated diversions from the Klamath River (other than Station 48, Miller Hill Pumping Plant, North Canal and Ady Canal). The 7,436 AF volume is only added when the Project Supply calculated for the year had preliminarily subtracted this volume from the supply only to subsequently declare no water was available for lower-priority contractors based on dry hydrological conditions.

appropriate. Increased volumes would be split, with 50 percent to remain in UKL to assist in providing a buffer in the end of season UKL elevation, with the remaining 50 percent to be distributed as Project Supply for irrigation use and/or refuge purposes, according to contract priorities.

In the event that observed inflows and/or UKL elevations do not materialize as forecasted, net inflow volumetric shortfalls would be calculated, and diversions for Project purposes would be reduced to a rate allowing UKL elevations to remain above 4,138.15 ft. If it is projected that a reduction in, or cessation of, Project diversions is insufficient to ensure a minimum UKL elevation of 4,138.15 ft., Reclamation would confer with NMFS to determine if a temporary reduction in releases from UKL could be instituted.

Reclamation will continue to coordinate with the Services and Project contractors on Project diversions to address unforeseen circumstances that may arise this year. The estimated available water supply is tracked daily, with updates regarding remaining Project Supply to Project water users occurring approximately every week during the irrigation season or as needed. If the Project Supply must be curtailed, Reclamation will provide notification in writing.

### Upper Klamath Lake

#### *End of Season Elevations*

Reclamation proposes to ensure that the 2022 TOP is implemented such that UKL remains at or above 4,138.15 ft, approximately 10,230 AF above the USFWS 2020 BiOp end of season minimum elevation requirement of 4,138.00 ft. Reclamation will seek to augment UKL elevation in the event that favorable hydrology manifests through the summer, as described above.

### PacifiCorp Borrow

Reclamation proposes to work with PacifiCorp to borrow likely 15,000 AF, but up to 20,000 AF of water from their hydroelectric reservoirs to assist with implementation of the late summer 2022 Yurok Tribe's Ceremonial Boat Dance flow event. The borrowed water would be *paid back* so that PacifiCorp's reservoirs can be returned to normal operating levels. Details on the *PacifiCorp pay back* would be determined through further coordination and agreement between Reclamation, the Services, and PacifiCorp, with agreements to be finalized prior to fall 2022.

### Real-Time Management

The real-time management approach consisting of close monitoring and reporting of observed hydrologic conditions would occur to assist Reclamation, the Services, and other affected parties in determining if further adaptive management actions are needed in response to evolving environmental conditions. Overall, using real-time monitoring and forecasting information, Reclamation proposes to continue to meet and confer with the Services as necessary while updating and receiving input from affected Klamath Basin parties on the dynamic hydrologic conditions allowing timely action on opportunities to reduce risk to ESA-listed species, meet tribal trust responsibilities, and uphold contractual water supply obligations.