JEAN E. WILLIAMS, Deputy Assistant Attorney General
U.S. Department of Justice
Environment & Natural Resources Division
SETH M. BARSKY, Chief
S. JAY GOVINDAN, Assistant Chief
ROBERT P. WILLIAMS, Sr. Trial Attorney
KAITLYN POIRIER, Trial Attorney
Wildlife & Marine Resources Section
Ben Franklin Station, P.O. Box 7611
Washington, D.C. 20044-7611
Tel: 202-307-6623; Fax: 202-305-0275
Email: robert.p.williams@usdoj.gov
Email: kaitlyn.poirier@usdoj.gov

Attorneys for Federal Defendants

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA
SAN FRANCISCO DIVISION

YUROK TRIBE, PACIFIC COAST FEDERATION OF FISHERMEN'S ASSOCIATIONS, and INSTITUTE FOR FISHERIES RESOURCES, Plaintiffs, v. U.S. BUREAU OF RECLAMATION and NATIONAL MARINE FISHERIES SERVICE, Defendants, and KLAMATH WATER USERS ASSOCIATION, Intervenor-Defendant.	Case No. 3:19-cv-04405-WHO ***STIPULATION TO STAY LITIGATION** * Immediate consideration requested

The parties, Yurok Tribe, Pacific Coast Federation of Fishermen's Associations, and Institute for Fisheries Resources (collectively, "Plaintiffs"), National Marine Fisheries Service ("NMFS") and U.S. Bureau of Reclamation ("Bureau") (collectively, "Federal Defendants"), and Klamath Water Users' Association ("Defendant-Intervenor") have agreed to stay the above captioned case in its entirety on the terms memorialized in this Stipulated Stay Agreement ("Stipulation"). The parties respectfully request immediate consideration of this Stipulation, by no later than March 31, 2020, due to the imminent commencement of the 2020 irrigation season on April 1, 2020.

WHEREAS, on March 29, 2019, the Bureau completed reinitiated consultation with NMFS pursuant to Section 7(a)(2) of the Endangered Species Act ("ESA") on the effects of a five-year plan of operations for the Klamath Project (2019-2024) on ESA-listed species and their critical habitats, including the listed Southern Oregon/Northern California Coast evolutionarily significant unit of coho salmon ("SONCC coho") and the Southern Resident Killer Whale.

WHEREAS, in the written biological opinion ("BiOp") provided to the Bureau at the conclusion of that consultation, NMFS concluded that the proposed operations plan was not likely to jeopardize the continued existence of SONCC coho or destroy or adversely modify its critical habitat.

WHEREAS, on July 31, 2019, Plaintiffs initiated the above-captioned lawsuit which, as amended, challenges, in part, the "no jeopardy" and "no adverse modification" conclusions of NMFS' BiOp, the Bureau's reliance on those conclusions to comply with the ESA, and alleges that the agencies are required to reinitiate consultation, as well as challenging the Bureau's compliance with the National Environmental Policy Act ("NEPA") in three separately-enumerated claims.

WHEREAS, on October 18, 2019, Plaintiffs filed a motion for preliminary injunction on four of their claims relating to the ESA (ECF 27), seeking "to revert to and operate the Klamath Project under" the Bureau's operations plan from 2012, consistent with the BiOp on that operations plan from 2013, "supplemented by the flows required by the injunction issued [in

2017] in *Yurok Tribe v. Bureau of Reclamation* ("*Yurok I*"), No. 16-cv-6863-WHO, ECF 70" (ECF 27-1 at 2), which included a requirement to establish a reserve of 50,000 acre feet of water to be used for an emergency dilution flow(s), if triggered under the criteria set forth in the 2017 injunction.

WHEREAS, on November 13, 2019, the Bureau requested reinitiation of formal ESA Section 7 consultation with NMFS – and also with the U.S. Fish & Wildlife Service ("FWS") – based on new information that revealed effects of Klamath Project operations on ESA-listed species and critical habitat in a manner or to an extent not previously considered.

WHEREAS, in written letters dated November 14, 2019 and December 9, 2019, NMFS and FWS, respectively, accepted the Bureau's request to reinitiate consultation.

WHEREAS, on December 11, 2019, Federal Defendants and Defendant-Intervenor filed oppositions to Plaintiffs' motion for preliminary injunction.

WHEREAS, on January 22, 2020, Plaintiffs filed a reply in support of their motion for a preliminary injunction, wherein they requested a modified preliminary injunction to alter the 2019-2024 Operations Plan, as amended and analyzed in the 2019 BiOps, by adding 50,000 acre feet of water to the Environmental Water Account ("EWA") for water year 2020 and until this case is resolved on the merits.

WHEREAS, on January 29, 2020, Federal Defendants filed a motion to exclude or, in the alternative, limit consideration of extra-record materials proffered by Plaintiffs in support of their motion for preliminary injunction (ECF 50).

WHEREAS, on February 4, 2020, Plaintiffs filed an opposition to Federal Defendants' motion to exclude their extra-record materials.

WHEREAS, on February 7, 2020, Federal Defendants filed a combined objection to reply evidence and sur-reply to Plaintiffs' modified injunction request, and Defendant-Intervenor filed a sur-reply to Plaintiffs' modified injunction request.

WHEREAS, on February 14, 2020, Plaintiffs filed a response to Federal Defendants' and Defendant-Intervenor's sur-replies.

WHEREAS, on February 7, 2020, as part of the ongoing reinitiated consultation on the 2019-2024 operations plan, the Bureau provided NMFS with a biological assessment ("2020 BA") of a proposed operations plan for 2020-2024 Project operations.

WHEREAS, the Bureau had requested that NMFS and FWS complete the respective consultations on the Bureau's proposed 2020-2024 operations plan by March 31, 2020 but the parties now agree that it is in the public interest that the agencies have until September 30, 2022.

WHEREAS, if this Stipulation is approved and the litigation is stayed accordingly, the Bureau will develop and submit to the Services a modified or new proposed operations plan in lieu of the one set forth in the 2020 BA, informed by a collaborative process similar to the consultation process that was conducted in regards to the 2012 operations plan and Biological Assessment.

WHEREAS, in letters to NMFS and to FWS dated March 27, 2020, the Bureau has proposed to operate the Klamath Project during the currently-ongoing ESA Section 7 consultations with NMFS and FWS in accordance with a two-and-a-half year interim operations plan ("Interim Plan").

WHEREAS, the parties have negotiated in good faith and have reached the agreement set out below to stay this litigation pending completion of reinitiated consultation and implementation of the Interim Plan, while otherwise preserving all arguments on the merits of this litigation and motions and issues directly or indirectly implicated by the litigation and motion.

WHEREAS, the letters embodying the Bureau's proposed Interim Plan are attached to this Stipulation for the sole purpose of confirming the identity of the letters, and shall not be incorporated as requirements in any order of the Court.

THE PARTIES STIPULATE AS FOLLOWS:

1. Plaintiffs hereby withdraw their motion for preliminary injunction, as modified (ECF 27 & 48).

2. Federal Defendants hereby withdraw their motion to exclude, or in the alternative, limit consideration of Plaintiffs' extra-record materials (ECF 50).

3. The above-captioned litigation, and all associated deadlines and obligations are hereby stayed until September 30, 2022, provided that the Bureau operates the Klamath Project in accordance with the Interim Plan.

4. A party may file a motion in accordance with paragraph 6 seeking to lift the stay, subject to the meet and confer requirements of paragraph 9, if the Bureau deviates from or modifies the Interim Plan prior to September 30, 2022.

5. The parties will coordinate in good faith to consider whether an amended Interim Plan is appropriate for 2021 and/or 2022. The stay of litigation will remain in effect in accordance with the other provisions of this Stipulation unless unanimous agreement on an amended Interim Plan is reached.

6. A party to this litigation may file a motion with the Court seeking to lift the stay and resume the litigation only on the grounds that the Bureau is not implementing the Interim Plan or complying with any term or condition of this Stipulation. No party may seek specific performance of any term or condition of this Stipulation or the Interim Plan. This prohibition against seeking specific performance has no effect on the enforceability of any pre-existing or independent legal rights and obligations to engage in government-to-government consultation with affected Tribes or to protect Tribal fishing and water rights.

7. The parties have entered into this Stipulation so as to avoid further litigation of the Plaintiffs' pending lawsuit, afford more time for completion of the Bureau's ESA consultations, and create opportunity for a more collaborative process for resolving conflicts concerning water in the Klamath Basin. Nothing in this Stipulation shall be construed to constitute an admission of any issue of fact, law or liability by any of the parties hereto, nor as a concession by any such party that the Interim Plan either does or does not meet, or either is or is not necessary to meet, the needs of ESA-listed species or critical habitat, Tribal trust resources, or any legal requirements. Except as expressly provided in this Stipulation, none of the Parties waives or relinquishes any legal rights, claims or defenses it may have. Subject to paragraphs 2-4 and 6, the non-federal parties: fully reserve any rights to bring any claims, known or unknown, past, present, or future, regarding the Bureau's operation of the Klamath Project and

Federal Defendants' compliance with their obligations under the ESA, NEPA, and other applicable laws; and expressly reserve any rights to challenge or defend any aspect of Federal Defendants' future operations plans after the stay is lifted and Federal Defendants' compliance with the ESA, NEPA, the government's trust responsibility, and other applicable laws. Federal Defendants fully reserve all defenses to any such claims.

8. Federal Defendants will provide Plaintiffs and Defendant-Intervenors with status reports on the progress of the reinitiated consultations every six months after this Stipulation becomes effective.

9. If any disputes arise concerning the Interim Plan or the terms of this Stipulation, the parties agree to meet and confer in good faith to resolve the dispute before seeking to lift the stay of this litigation.

10. The terms of this Stipulation shall become effective immediately upon its approval by the Court.

IT IS SO STIPULATED

Dated: March 27, 2020

Respectfully submitted,

JEAN E. WILLIAMS and PRERAK SHAH,
Deputy Assistant Attorneys General
SETH M. BARSKY, Chief
S. JAY GOVINDAN, Assistant Chief
U.S. Department of Justice
Environment and Natural Resources Division

/s/ *Robert P. Williams*
ROBERT P. WILLIAMS, Sr. Trial Attorney
KAITLYN POIRIER, Trial Attorney
Wildlife and Marine Resources Section
Ben Franklin Station, P.O. Box 7611
Washington, D.C. 20044-7611
(202) 307-6623 (tel)
(202) 305-0275 (fax)
robert.p.williams@usdoj.gov
kaitlyn.poirier@usdoj.gov

/s/ *Thomas K. Snodgrass*
THOMAS K. SNODGRASS, Sr. Attorney
Natural Resources Section
999 18th Street, South Terrace, Suite 370
Denver, CO 80202
Telephone: 303-844-7233
Thomas.snodgrass@usdoj.gov

Attorneys for Federal Defendants

/s/ *Patti A. Goldman* (with permission on 3/26/2020)
PATTI A. GOLDMAN (WSBA # 24426) [*Pro Hac Vice*]
KRISTEN L. BOYLES (CSBA # 158450)
ASHLEY BENNETT (WSBA # 53748) [*Pro Hac Vice*]
Earthjustice
810 Third Avenue, Suite 610
Seattle, WA 98104
Ph: (206) 343-7340 | Fax: (206) 343-1526
kboyles@earthjustice.org
pgoldman@earthjustice.org
abennett@earthjustice.org

Attorneys for Plaintiffs Pacific Coast Federation of Fishermen's Associations, Institute for Fisheries Resources, and Yurok Tribe

/s/ *Amy Cordalis* (with permission on 3/26/2020)
AMY CORDALIS (CSBA # 321257)
Yurok Tribe
190 Klamath Blvd.
P.O. BOX 1027
Klamath, CA 95548
Ph: (707) 482-1350 | Fax: (707) 482-1377
acordalis@yuroktribe.nsn.us

DANIEL CORDALIS (CSBA #321722)
Cordalis Law, P.C.
2910 Springer Drive
McKinleyville, CA 95519
Ph: (303) 717-4618
dcordalislaw@gmail.com

Attorneys for Plaintiff Yurok Tribe

/s/ *Paul S. Simmons* (with permission on 3/24/2020)
SOMACH SIMMONS & DUNN, PC, A Professional Corporation
PAUL S. SIMMONS, ESQ. (SBN 127920)
JARED S. MUELLER, ESQ. (SBN 257659)
500 Capitol Mall, Suite 1000
Sacramento, CA 95814
Telephone: (916) 446-7979
Facsimile: (916) 446-8199
psimmons@somachlaw.com
jmueller@somachlaw.com

Attorneys for Defendant-Intervenor Klamath Water Users Association

THE STIPULATION IS APPROVED, AND IT IS HEREBY ORDERED THAT THE LITIGATION IS STAYED

Dated: March _____, 2020

William H. Orrick,
United States District Court Judge

ATTORNEY ATTESTATION OF CONCURRENCE

I hereby attest that I have obtained concurrence in the filing for the signature of all counsel indicated by a "conformed" signature ("/s/") within this e-filed document, in accordance with Civil L.R. 5-1(i).

Dated: March 27, 2020

/s/ Robert P. Williams
ROBERT P. WILLIAMS, Sr. Trial Attorney
U.S. Department of Justice
Environment and Natural Resources Division
Wildlife and Marine Resources Section
Ben Franklin Station, P.O. Box 7611
Washington, D.C. 20044-7611
(202) 305-0206 (tel) | (202) 305-0275 (fax)
robert.p.williams@usdoj.gov

Exhibit 1

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-100
2.2.1.06 (ENV-7.00)

MAR 27 2020

VIA ELECTRONIC and USPS

MEMORANDUM

To: Field Supervisor, U.S. Fish and Wildlife Service
Attn: Mr. Daniel Blake

From: Jeffrey Nettleton
Area Manager

JEFFREY NETTLETON
Digitally signed by JEFFREY NETTLETON
Date: 2020.03.27 09:33:19 -07'00'

Subject: Transmittal of Proposed Interim Operations Plan for operation of the Klamath Project for Water Years 2020-2022

The purpose of this letter is for the Bureau of Reclamation (Reclamation) to describe and transmit a proposed Interim Operations Plan (Interim Plan) developed to allow for the continued operation of the Project during the ongoing reinitiated consultation effort under Section 7 of the Endangered Species Act (ESA).

Background

On March 29, 2019, Reclamation completed reinitiated consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS; collectively the Services) pursuant to Section 7(a)(2) of the ESA on the effects of a five-year plan of operations for the Klamath Project (Project) (2019-2024) on Federally-listed species and their critical habitats, including the listed Southern Oregon/Northern California Coast evolutionarily significant unit of coho salmon (SONCC coho), Southern Resident Killer Whales, and Lost River and shortnose suckers. As a result, the Services provided Reclamation with written biological opinions (NMFS 2019 BiOp and USFWS 2019 BiOp) concluding the proposed 2018 Operations Plan was not likely to jeopardize the continued existence of SONCC coho salmon and Lost River and shortnose suckers nor destroy or adversely modify their critical habitat.

Reinitiation of Consultation

Based on information related to Weighted Usable Area (WUA) curves provided by a third party, which were confirmed in October 2019 and revealed effects of the 2018 Operations Plan on listed species or critical habitat (specifically to SONCC coho salmon) in a manner or to an extent not previously considered, Reclamation requested reinitiation of formal consultation with both Services on November 13, 2019, under Section 7 of the ESA (50 C.F.R. § 402.16 (a)(2)). In written letters dated November 14, 2019 and December 9, 2019, NMFS and FWS, respectively, accepted Reclamation's request to reinitiate consultation.

As part of the reinitiated consultations, on February 7, 2020, Reclamation transmitted a *Final Biological Assessment on the Effects of the Proposed Action to Operation the Klamath Project* (Project) *from April 1,*

2020 through March 31, 2024 on Federally Listed, Threatened, and Endangered Species (2020 Biological Assessment (2020 BA)) to both Services on Project operations during the period of April 1, 2020 through March 31, 2024. Reclamation requested that the formal consultations be completed by March 31, 2020. However, Reclamation and the Services agree that it is in the public interest that additional time be provided to complete the consultations on Project operations. Subject to Reclamation's final approval of the Interim Plan, Reclamation will develop and submit to the Services a modified or new proposed operations plan in lieu of the one set forth in the 2020 BA, informed by a collaborative process similar to the consultation process that was conducted in regards to the 2012 operations plan and Biological Assessment. Representatives of the Yurok Tribe have informed Reclamation staff that they have convened a team of individuals with demonstrated technical expertise in modeling and operations to exchange technical information and provide input to Reclamation for consideration in the development of a subsequent proposed action. Reclamation and the Services will participate and provide technical assistance, including Klamath Basin Planning Model runs and other support, to this workgroup throughout the reinitiation process.

While Reclamation completes the consultations that it reinitiated with the Services in 2019, it proposes to operate the Project in accordance with the Interim Plan, which it believes would be consistent with the Services' 2019 BiOps and the associated October 11, 2019, amendment, with the exception of specific deviations described below.

Proposal

Interim Operations Plan

Reclamation proposes an Interim Plan that would be in effect until the earlier of September 30, 2022, or the completion of reinitiated ESA Section 7 consultations on a modified or new proposed Operations Plan developed through the process described above to supersede Reclamation's 2018 Operations Plan analyzed by the Services in their 2019 BiOps and the Proposed Interim Plan, which Reclamation would request be completed by September 30th of the year preceding the start of the upcoming irrigation season to give time for a smooth transition from the Interim Plan to the new operations plan. The Interim Plan includes deviations from Reclamation's 2018 Operations Plan analyzed by the Services in their 2019 BiOps, specifically with the augmentation of the Environmental Water Account (EWA; water allocated for Klamath River flows) in certain water year types.

As part of the Interim Plan, Reclamation proposes to provide a base EWA augmentation of 40,000 acre-feet (AF) in water years with an Upper Klamath Lake (UKL) Supply at or above 550,000 AF and at or below 950,000 AF. The 40,000 AF of EWA augmentation would be comprised of 23,000 AF from Project Supply and 17,000 AF from storage volume in UKL. An initial determination on whether the 40,000 AF of EWA augmentation would occur will be based on the March 1 Natural Resources Conservation Service (NRCS) UKL inflow forecast and the resulting UKL Supply. A final determination of EWA augmentation would be made in early April, with the April 1 NRCS inflow forecast and the resulting UKL Supply. In the rare instance that a portion of the EWA augmentation volume is utilized in March, that volume would be subtracted from that available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 EWA augmentation calculation does not provide EWA augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA.

When the EWA augmentation is triggered, it would result in a reduction to Project Supply that is limited to, and shall not exceed, 23,000 AF. The EWA augmentation would not otherwise affect Project operations, including Project diversion rates and timing other than that caused by the above-described potential reduction in Project Supply during the spring-summer period.

The 40,000 AF of EWA augmentation included in the Interim Plan is in addition to an enhanced May/June flows provision in the 2018 Operations Plan as amended in February 2019 (as analyzed in the Services 2019 BiOps; NMFS 2019 BiOp pp. 33-34 and USFWS 2019 BiOp p. 27) as well as the October 11, 2019 amendment, although slight modifications to this provision are proposed below. As described in the 2018 Operations Plan, and as will continue under the Interim Plan, Reclamation proposes to provide up to a full enhancement volume of 20,000 AF, split evenly between Project Supply and from UKL (the split is even at all enhancement volumes). Reclamation would utilize the May UKL Supply volume, based on the May 1 NRCS inflow forecast and the resulting UKL Supply, to determine whether enhanced May/June flows would occur, and the actual volume available for flow enhancement. 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 an UKL Supply volume of 950,000 AF.

As described in Reclamation's 2018 Operations Plan (as analyzed in the Services' 2019 BiOps), Reclamation would maintain a flexible approach to utilizing the proposed 40,000 AF of EWA augmentation and enhanced May/June flows. With the exception that the EWA augmentation water and enhanced May/June flows would be utilized within the March through June timeframe, Reclamation would allow for flexibility in the timing and distribution of augmentation volumes. EWA augmentation and enhanced May/June water use would be tracked separately from formulaic use of EWA during March through June. 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. The existing Flow Accounting Scheduling Technical Advisory (FASTA) process 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 maximize ecological benefits to SONCC coho and Southern Resident Killer Whales, whether those benefits be improved habitat conditions, minimized disease conditions, or both, while maintaining UKL elevations and conditions protective of Lost River and shortnose suckers.

To provide additional certainty that the EWA augmentation volumes can be utilized at the time and in the manner that address disease and habitat concerns for coho salmon, Reclamation has coordinated with PacifiCorp on potential springtime water borrowing operations. The spring operations agreed to with PacifiCorp would assist in providing augmented river flows while safeguarding against UKL elevations below those that are sufficiently protective of spawning suckers, and releases from Upper Klamath Lake would repay the PacifiCorp reservoirs later in the season. 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 4,142.0 feet in April or May, despite good faith efforts to rearrange the 40,000 AF of EWA releases within reasonable bounds, Reclamation will coordinate with the Services and PacifiCorp to best meet the needs of ESA-listed species as well as coordinate and obtain input from Yurok and other affected Klamath River Basin Tribes through government-to-government consultation on how to manage water.

If modeling shows that implementation of the EWA augmentation releases is likely to result in an annual minimum below 4,138.0 feet in a given water year, Reclamation will coordinate with the Services and PacifiCorp to ensure the annual minimum elevation in that water year is achieved as well as coordinate and obtain input from the Yurok and other affected Tribes through government-to-government consultation on how to manage water in a way that best meets the needs of Federally-listed species.

With respect to the above coordination and ensuing management of 40,000 AF of EWA augmentation releases and consequences for Upper Klamath Lake elevations, there can be no effect on Project irrigation supplies/water availability (e.g., no change in quantity, rate, timing) other than that caused by the above-

described potential reduction in Project Supply during the spring-summer period.

Hydrologic Modeling

Utilizing the Klamath Basin Planning Model (KBPM), the hydrologic modeling tool utilized in the 2019 consultation efforts, Reclamation has prepared final model output and a technical description of 40,000 AF of EWA augmentation and the enhanced May/June provisions (both enclosed). Reclamation used the final KBPM output to evaluate the Interim Plan's potential effects to Federally-listed species, which are further described below.

Evaluation

Upper Klamath Lake

Changes to UKL elevations included in the Interim Plan would alter the range of elevations that were analyzed in the USFWS 2019 BiOp. However, Reclamation closely coordinated with the USFWS in developing the Interim Plan to ensure that the resultant conditions in UKL proposed in the Interim Plan would continue to be protective of suckers. Additionally, PacifiCorp's commitment to adjust operations of the Klamath Hydroelectric Project to support river flows important to coho salmon downstream of Iron Gate Dam, while achieving certain UKL elevations, provides additional assurances that the Interim Plan would be protective of suckers in UKL.

Simulation of the Interim Plan within the KBPM results in both higher and lower end of month UKL surface elevations, but the overall trend is lower due to UKL contributions to 40,000 AF of augmented flows in years where UKL Supply is between 550,000 AF and 950,000 AF. A key hydrologic elevation for protecting sucker spawning habitat is maintaining UKL surface elevation above 4142.0 feet through the end of May, once this elevation has been achieved earlier in the spring. The 2018 Operations Plan maintains this elevation in 35 years out of the 39-year period of record. The Interim Plan would achieve this elevation in 33 years out of 39. In the additional two years that the Interim Plan would reduce UKL elevations (water year types experienced in 2005 and 2015), UKL surface elevations would be maintained above 4142.0 feet for portions of the April-May spring spawning period but would drop below this benchmark for multiple consecutive days. Even with implementation of the additional 40,000 AF of EWA augmentation included in the Interim Plan, 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).

Although KBPM simulations can help frame potential implications, in real-time operations, Reclamation would work with PacifiCorp to borrow water or modify augmentation releases in coordination with the FASTA process to ensure that UKL elevations would not fall below 4,142.0 feet during April and May during that water year.

The other key elevation is the minimum UKL surface elevation during the summer and fall. Modeling analyzed in the USFWS 2019 BiOp showed a minimum surface elevation of 4138.26 feet in water year 1981. The Interim Plan flow scenario would result in an UKL minimum surface elevation of 4138.00 feet, in water year 2016. While this is lower than the USFWS 2019 BiOp minimum of 4,138.26 feet, it exceeds the 2013 BiOp minimum of 4137.76 feet and still provides sufficient depth for suckers to access refugial habitat within Pelican Bay.

In general, the differences would result in an average decrease of 0.07 feet during sucker spawning from February to May and an average decrease of 0.15 feet for August and September that results in minimal reductions of habitat available to adult suckers in late summer in the preferred depths in the northern part of UKL.

Klamath River

Based on current 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 rearing and outmigration conditions for juvenile coho salmon. 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. Additionally, the ability to optimize the utilization of the augmentation volumes (timing and distribution) could allow for the volume used to coincide with the peak outmigration timing for coho and Chinook salmon. The additional volume could potentially reduce water temperatures (depending on timing) and dilute actinospore concentrations of the parasite *Ceratanova shasta* thereby reducing disease risk for juvenile salmon. Similarly, increased habitat availability, reduced water temperatures, and reduced actinospore concentrations could benefit coho salmon and designated critical habitat as well as essential fish habitat for coho and Chinook salmon (thereby benefitting the Federally-listed Southern Resident Killer Whale).

Conclusion

The Interim Plan as described above, is expected to provide additional habitat availability for SONCC coho salmon which would contribute toward meeting the habitat conservation standard and potentially reduce disease risk for this species. As such, Reclamation believes that implementation of the proposed Interim Plan would result in reduced effects from those previously analyzed in NMFS' 2019 BiOp and therefore be consistent with NMFS' determinations that Project operations are not likely to jeopardize the continued existence of SONCC coho salmon or destroy or adversely modify their designated critical habitat.
The proposed Interim Plan may reduce sucker habitat and concentrate spawning or compel suckers to skip spawning at the shoreline areas, although these events would appear to be infrequent when examining the period of record. Regardless, for the duration of the Interim Plan, if the 40,000 AF of EWA augmentation is triggered on April 1 in any given year, UKL elevation will not drop below 4142.0 feet during the months of April and May in that water year.

Additionally, while implementation of the 40,000 AF of EWA augmentation could cause UKL minimum surface elevation to be reduced below elevation 4,138.26 to an elevation of 4138.0, that is expected to be an infrequent occurrence (modeled year 2016). This elevation would still be expected to provide sufficient depth for suckers to access refugial habitat within Pelican Bay. In general, the differences would result in an average decrease of 0.07 feet during sucker spawning from February to May and an average decrease of 0.15 feet for August and September that results in minimal reductions of habitat available to adult suckers in late summer in the preferred depths in the northern part of UKL. In addition, Reclamation believes that the ability to borrow water from PacifiCorp reservoirs provides assurances that the Interim Plan would be protective of suckers in UKL at critical life stages and associated UKL elevations (4,142.0 feet in April and May and 4,138.0 feet as an annual minimum) that avoid jeopardizing the continued existence of Lost River and shortnose suckers and does not destroy or adversely modify their designated critical habitat.

Overall, Reclamation believes this proposed Interim Plan meets Reclamation's ESA responsibility to not jeopardize Federally-listed species or destroy or cause adverse modification of their designated critical habitat.

Request for Confirmation of Reclamation's Conclusions

Reclamation requests the Services review the enclosed modeled output for the Interim Plan derived from the KBPM and provide separate responses related to confirmation of Reclamation's conclusions.

Reclamation is appreciative of the collaboration and inter-agency coordination that has taken place to date. If you have any questions, please contact Jared Bottcher at (541) 880-2544, or via e-mail at jbottcher@usbr.gov.

Attachment (1)

cc: Jim Simondet

Interim Operations Plan Technical Attachment

The purpose of this document is to provide additional technical explanation of the proposed Interim Operations Plan and the modeling done to analyze its effects on Iron Gate Dam flows and Upper Klamath Lake elevations. To the extent it restates, paraphrases, or contradicts anything in the Interim Operation Plan letter accompanying this addendum, the letter controls.

Base EWA Augmentation

As part of the Interim Plan, Reclamation proposes to provide a base EWA augmentation of 40,000 acre-feet (AF) in water years with an Upper Klamath Lake (UKL) Supply at or above 550,000 AF and at or below 950,000 AF. 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. An initial determination on whether the 40,000 AF of EWA augmentation would occur will be based on the March 1 Natural Resources Conservation Service (NRCS) UKL inflow forecast and the resulting UKL Supply. A final determination of EWA augmentation would be made in early April, with the April 1 NRCS inflow forecast and the resulting UKL Supply. If a portion of the EWA augmentation volume is utilized in March, that volume would be subtracted from the EWA augmentation available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 UKL Supply calculation does not provide EWA augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA. The EWA augmentation scheme related to UKL Supply is shown in Figure 1.

National Marine Fisheries Service (NMFS) has requested flexibility in the distribution of the 40,000 AF of EWA augmentation to optimize the use of this water, while maintaining UKL elevations/conditions necessary for listed suckers. As modeled, the 40,000 AF of EWA augmentation was released according to a NMFS-specified schedule that was unique to each year's hydrologic circumstances. Simulated release of the flexible flows started as early as March 23 and as late as May 18. Actual releases of the EWA augmentation may vary significantly in real time operations and Reclamation, NMFS, the U.S. Fish and Wildlife Service (FWS), along with input from the Flow Account Scheduling Technical Advisory (FASTA) team, will determine the final release schedule. The EWA augmentation flows can continue through June and are assumed to overlap and add to the enhanced May/June flows described in the following section.

General rules used for the modeling of the implementation of the 40,000 AF of EWA augmentation are as follows:

1. An initial calculation of EWA augmentation occurs in early March using the March 1 NRCS UKL net inflow forecast. This volume is available for use in March, subject to the rules laid out in 2.b.

2. Using the April 1 NRCS UKL net inflow forecast, calculate whether the 40,000 AF of EWA augmentation is triggered according to the relationship shown in Figure 1;

   a. May and June calculation of UKL Supply does not affect the EWA augmentation volume determined in April.
   b. If a portion of the EWA augmentation is utilized in March, that volume would be subtracted from that available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 UKL Supply calculation does not provide EWA

augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA

3. Release of the 40,000 AF of EWA Augmentation will be according to a schedule set by Reclamation, NMFS, and FWS, with input from the FASTA team;

a. As discussed above, if the March UKL Supply is within the EWA Augmentation range, the augmentation can be partially used in March under FASTA consultation

4. Project supply calculations, based on the April 1, May 1, and June 1 UKL inflow forecasts are reduced by 23,000 AF when the EWA augmentation scheme is triggered (April UKL Supply at or above 550,000 AF and at or below 950,000 AF)

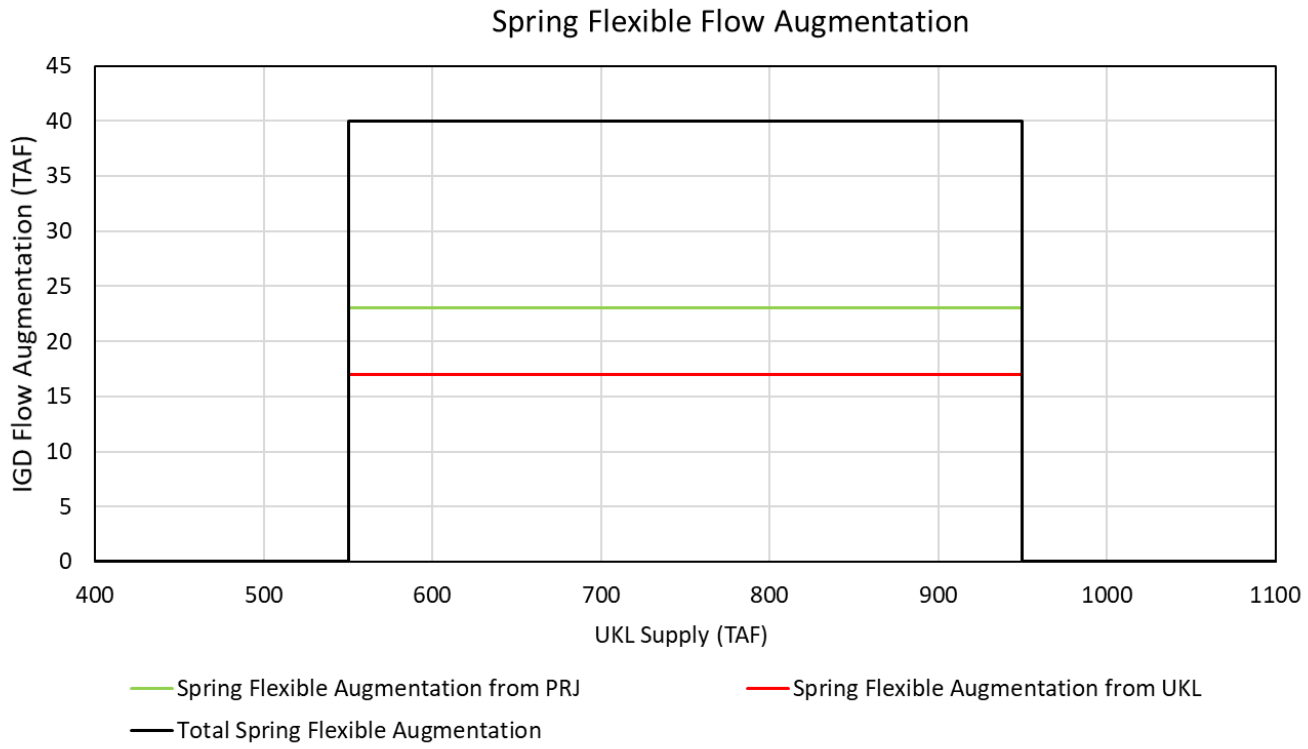

Figure 1. Base EWA Augmentation as related to UKL Supply. UKL Supply is as defined as it is in Reclamation's 2018 Operations Plan (as analyzed in the Services 2019 BiOps). Spring Flexible Augmentation is the amount of water to be contributed from Project Supply, limited to 23,000 AF, under this operation as a function of UKL Supply. Spring Flexible Augmentation from UKL is the amount of water to be contributed from Upper Klamath Lake under this operation as a function of UKL Supply. Total Spring Flexible Augmentation is the total amount of EWA augmentation to be provided as a function of UKL Supply from all sources.

Because the EWA augmentation is counted against EWA when the flows are implemented (when the intention is for this volume to be in addition to EWA), the aggregate augmentation (as determined in April) is added to the July 1 EWA to ensure proper EWA accounting for the remainder of the spring/summer season. Additionally, the default rules assume that when enhanced May/June flows are implemented and IGD flow targets would otherwise be at minimums, Reclamation would implement flow variability (up to +/- 75 cfs around enhanced IGD flow targets).

With regard to Upper Klamath Lake elevations, implementation of EWA augmentation will be carried out as described in the Interim Operations Plan letter.

Enhanced May/June Flows
In years in which May UKL Supply is greater than 625,000 AF and less than 950,000 AF, an additional volume of up to 20,000 AF (shared equally at all volumes between Project Supply and UKL) is distributed in May and June. The Enhanced May/June flows scheme as it relates to UKL Supply is shown in Figure 2. For UKL Supply values from 625,000 AF to 717,000 AF, the May/June Augmentation scheme increases linearly in relation to increasing UKL Supply from 0 AF to 20,000 AF. With UKL Supply between 717,000 AF to 858,000 AF, the May/June Augmentation is a constant 20,000 AF. May/June Augmentation decreases linearly in relation to increasing UKL Supply from 20,000 AF to 0 AF over the UKL Supply range of 858,000 AF to 950,000 AF. The May/June Augmentation is 0 AF if UKL Supply is below 625,000 AF or above 950,000 AF based on the May 1 NRCS UKL net inflow forecast. This replaces the enhanced May/June flow provision in Reclamation's 2018 Operations Plan (as analyzed in the Services' 2019 BiOps) that was dependent on EWA allocations instead of UKL Supply.

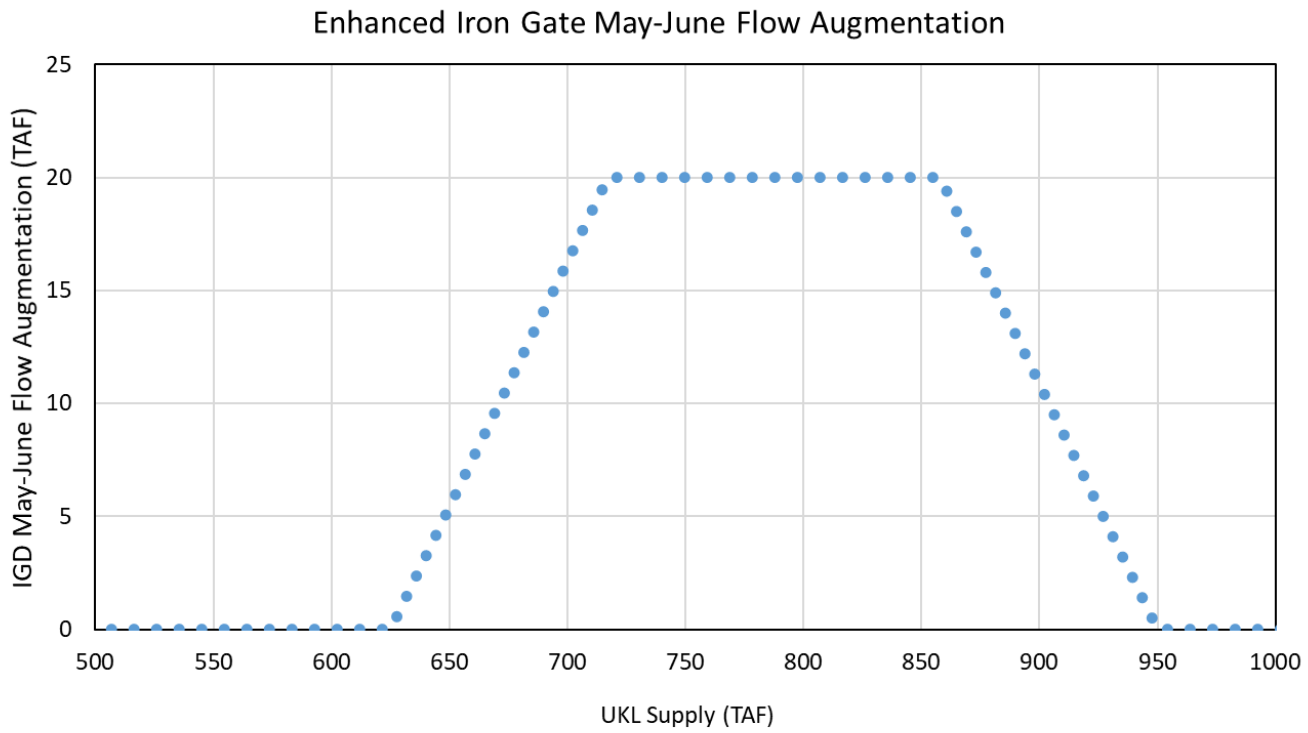

Figure 2. Enhanced May/June Flow Augmentation as related to UKL Supply. The above May/June augmentation scheme replaces the enhanced May/June provision in Reclamation's 2018 Operations Plan (as analyzed in the Services 2019 BiOps) that was dependent on EWA allocations instead of UKL Supply. The enhanced May/June augmentation volumes are shared equally (at all volumes) between Project Supply and UKL.

This action is meant to improve coho habitat in specific years of concern to NMFS. NMFS has requested flexibility in the distribution of the May/June Augmentation to maximize the benefit to listed coho, while maintaining UKL elevations/conditions necessary for listed suckers. However, for purposes of modeling effects of the enhanced May/June flows and Reclamation's planning needs

(unless NMFS requests alternative management scenarios in a given water year), the specific "default" rules for implementing enhanced May/June flows are as follows:

1. Using the May 1 NRCS UKL net inflow forecast, calculate the May/June Augmentation according to the relationship shown in Figure 2;

a. No volume of May/June Augmentation is available for release prior to May 1.
b. June calculation of UKL Supply does not affect the May-June Augmentation determined in May.

2. Sixty percent of the May-June Augmentation volume is applied uniformly as a daily increase in calculated IGD release over the month of May;

3. Forty percent of the May-June Augmentation volume is applied uniformly as a daily increase in calculated IGD release over the month of June; and

4. May and June Project Supply estimates are reduced by 50 percent of the enhanced May-June flow augmentation volume.

Because the enhanced May/June flows are counted against EWA when the flows are implemented (when the intention is for this volume to be in addition to EWA), the aggregate augmentation (as determined in May) is added to the July 1 EWA to ensure proper EWA accounting for the remainder of the spring/summer season. Additionally, the default rules assume that when enhanced May/June flows are implemented and IGD flow targets would otherwise be at minimums, Reclamation would implement flow variability (up to +/- 75 cfs around enhanced IGD flow targets).

With regard to Upper Klamath Lake elevations, implementation of EWA augmentation (including enhanced May/June flows) will be carried out as described in the Interim Operations Plan letter.

Reclamation anticipates NMFS will recommend alternative distributions to default rules 2 and 3 described above, based on information specific to environmental conditions and forecasts, as a means to optimize the use of this water. NMFS will lead annual efforts to evaluate and seek input from the FASTA team members on alternatives to deviate from default rules.

Exhibit 2

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-100
2.2.1.06 (ENV-7.00)

MAR 27 2020

VIA ELECTRONIC and USPS

Mr. Jim Simondet
Klamath Branch Supervisor
National Marine Fisheries Services
1655 Heindon Road
Arcata, California 95521

Subject: Transmittal of Proposed Interim Operations Plan for operation of the Klamath Project for Water Years 2020-2022

Dear Mr. Simondet:

The purpose of this letter is for the Bureau of Reclamation (Reclamation) to describe and transmit a proposed Interim Operations Plan (Interim Plan) developed to allow for the continued operation of the Project during the ongoing reinitiated consultation effort under Section 7 of the Endangered Species Act (ESA).

Background

On March 29, 2019, Reclamation completed reinitiated consultation with the National Marine Fisheries Service (NMFS) and the U.S. Fish and Wildlife Service (USFWS; collectively the Services) pursuant to Section 7(a)(2) of the ESA on the effects of a five-year plan of operations for the Klamath Project (Project) (2019-2024) on Federally-listed species and their critical habitats, including the listed Southern Oregon/Northern California Coast evolutionarily significant unit of coho salmon (SONCC coho), Southern Resident Killer Whales, and Lost River and shortnose suckers. As a result, the Services provided Reclamation with written biological opinions (NMFS 2019 BiOp and USFWS 2019 BiOp) concluding the proposed 2018 Operations Plan was not likely to jeopardize the continued existence of SONCC coho salmon and Lost River and shortnose suckers nor destroy or adversely modify their critical habitat.

Reinitiation of Consultation

Based on information related to Weighted Usable Area (WUA) curves provided by a third party, which were confirmed in October 2019 and revealed effects of the 2018 Operations Plan on listed species or critical habitat (specifically to SONCC coho salmon) in a manner or to an extent not previously considered, Reclamation requested reinitiation of formal consultation with both Services on November 13, 2019, under Section 7 of the ESA (50 C.F.R. § 402.16 (a)(2)). In written letters dated November 14, 2019 and December 9, 2019, NMFS and FWS, respectively, accepted Reclamation's request to reinitiate consultation.

As part of the reinitiated consultations, on February 7, 2020, Reclamation transmitted a *Final Biological Assessment on the Effects of the Proposed Action to Operation the Klamath Project* (Project) *from April 1,*

2020 through March 31, 2024 on Federally Listed, Threatened, and Endangered Species (2020 Biological Assessment (2020 BA)) to both Services on Project operations during the period of April 1, 2020 through March 31, 2024. Reclamation requested that the formal consultations be completed by March 31, 2020. However, Reclamation and the Services agree that it is in the public interest that additional time be provided to complete the consultations on Project operations. Subject to Reclamation's final approval of the Interim Plan, Reclamation will develop and submit to the Services a modified or new proposed operations plan in lieu of the one set forth in the 2020 BA, informed by a collaborative process similar to the consultation process that was conducted in regards to the 2012 operations plan and Biological Assessment. Representatives of the Yurok Tribe have informed Reclamation staff that they have convened a team of individuals with demonstrated technical expertise in modeling and operations to exchange technical information and provide input to Reclamation for consideration in the development of a subsequent proposed action. Reclamation and the Services will participate and provide technical assistance, including Klamath Basin Planning Model runs and other support, to this workgroup throughout the reinitiation process.

While Reclamation completes the consultations that it reinitiated with the Services in 2019, it proposes to operate the Project in accordance with the Interim Plan, which it believes would be consistent with the Services' 2019 BiOps and the associated October 11, 2019, amendment, with the exception of specific deviations described below.

Proposal

Interim Operations Plan

Reclamation proposes an Interim Plan that would be in effect until the earlier of September 30, 2022, or the completion of reinitiated ESA Section 7 consultations on a modified or new proposed Operations Plan developed through the process described above to supersede Reclamation's 2018 Operations Plan analyzed by the Services in their 2019 BiOps and the Proposed Interim Plan, which Reclamation would request be completed by September 30th of the year preceding the start of the upcoming irrigation season to give time for a smooth transition from the Interim Plan to the new operations plan. The Interim Plan includes deviations from Reclamation's 2018 Operations Plan analyzed by the Services in their 2019 BiOps, specifically with the augmentation of the Environmental Water Account (EWA; water allocated for Klamath River flows) in certain water year types.

As part of the Interim Plan, Reclamation proposes to provide a base EWA augmentation of 40,000 acre-feet (AF) in water years with an Upper Klamath Lake (UKL) Supply at or above 550,000 AF and at or below 950,000 AF. The 40,000 AF of EWA augmentation would be comprised of 23,000 AF from Project Supply and 17,000 AF from storage volume in UKL. An initial determination on whether the 40,000 AF of EWA augmentation would occur will be based on the March 1 Natural Resources Conservation Service (NRCS) UKL inflow forecast and the resulting UKL Supply. A final determination of EWA augmentation would be made in early April, with the April 1 NRCS inflow forecast and the resulting UKL Supply. In the rare instance that a portion of the EWA augmentation volume is utilized in March, that volume would be subtracted from that available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 EWA augmentation calculation does not provide EWA augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA.

When the EWA augmentation is triggered, it would result in a reduction to Project Supply that is limited to, and shall not exceed, 23,000 AF. The EWA augmentation would not otherwise affect Project operations, including Project diversion rates and timing other than that caused by the above-described potential reduction in Project Supply during the spring-summer period.

The 40,000 AF of EWA augmentation included in the Interim Plan is in addition to an enhanced May/June flows provision in the 2018 Operations Plan as amended in February 2019 (as analyzed in the Services 2019 BiOps; NMFS 2019 BiOp pp. 33-34 and USFWS 2019 BiOp p. 27) as well as the October 11, 2019 amendment, although slight modifications to this provision are proposed below. As described in the 2018 Operations Plan, and as will continue under the Interim Plan, Reclamation proposes to provide up to a full enhancement volume of 20,000 AF, split evenly between Project Supply and from UKL (the split is even at all enhancement volumes). Reclamation would utilize the May UKL Supply volume, based on the May 1 NRCS inflow forecast and the resulting UKL Supply, to determine whether enhanced May/June flows would occur, and the actual volume available for flow enhancement. 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 an UKL Supply volume of 950,000 AF.

As described in Reclamation's 2018 Operations Plan (as analyzed in the Services' 2019 BiOps), Reclamation would maintain a flexible approach to utilizing the proposed 40,000 AF of EWA augmentation and enhanced May/June flows. With the exception that the EWA augmentation water and enhanced May/June flows would be utilized within the March through June timeframe, Reclamation would allow for flexibility in the timing and distribution of augmentation volumes. EWA augmentation and enhanced May/June water use would be tracked separately from formulaic use of EWA during March through June. 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. The existing Flow Accounting Scheduling Technical Advisory (FASTA) process 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 maximize ecological benefits to SONCC coho and Southern Resident Killer Whales, whether those benefits be improved habitat conditions, minimized disease conditions, or both, while maintaining UKL elevations and conditions protective of Lost River and shortnose suckers.

To provide additional certainty that the EWA augmentation volumes can be utilized at the time and in the manner that address disease and habitat concerns for coho salmon, Reclamation has coordinated with PacifiCorp on potential springtime water borrowing operations. The spring operations agreed to with PacifiCorp would assist in providing augmented river flows while safeguarding against UKL elevations below those that are sufficiently protective of spawning suckers, and releases from Upper Klamath Lake would repay the PacifiCorp reservoirs later in the season. 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 4,142.0 feet in April or May, despite good faith efforts to rearrange the 40,000 AF of EWA releases within reasonable bounds, Reclamation will coordinate with the Services and PacifiCorp to best meet the needs of ESA-listed species as well as coordinate and obtain input from Yurok and other affected Klamath River Basin Tribes through government-to-government consultation on how to manage water.

If modeling shows that implementation of the EWA augmentation releases is likely to result in an annual minimum below 4,138.0 feet in a given water year, Reclamation will coordinate with the Services and PacifiCorp to ensure the annual minimum elevation in that water year is achieved as well as coordinate and obtain input from the Yurok and other affected Tribes through government-to-government consultation on how to manage water in a way that best meets the needs of Federally-listed species.

With respect to the above coordination and ensuing management of 40,000 AF of EWA augmentation releases and consequences for Upper Klamath Lake elevations, there can be no effect on Project irrigation supplies/water availability (e.g., no change in quantity, rate, timing) other than that caused by the above-

described potential reduction in Project Supply during the spring-summer period.

Hydrologic Modeling

Utilizing the Klamath Basin Planning Model (KBPM), the hydrologic modeling tool utilized in the 2019 consultation efforts, Reclamation has prepared final model output and a technical description of 40,000 AF of EWA augmentation and the enhanced May/June provisions (both enclosed). Reclamation used the final KBPM output to evaluate the Interim Plan's potential effects to Federally-listed species, which are further described below.

Evaluation

Upper Klamath Lake

Changes to UKL elevations included in the Interim Plan would alter the range of elevations that were analyzed in the USFWS 2019 BiOp. However, Reclamation closely coordinated with the USFWS in developing the Interim Plan to ensure that the resultant conditions in UKL proposed in the Interim Plan would continue to be protective of suckers. Additionally, PacifiCorp's commitment to adjust operations of the Klamath Hydroelectric Project to support river flows important to coho salmon downstream of Iron Gate Dam, while achieving certain UKL elevations, provides additional assurances that the Interim Plan would be protective of suckers in UKL.

Simulation of the Interim Plan within the KBPM results in both higher and lower end of month UKL surface elevations, but the overall trend is lower due to UKL contributions to 40,000 AF of augmented flows in years where UKL Supply is between 550,000 AF and 950,000 AF. A key hydrologic elevation for protecting sucker spawning habitat is maintaining UKL surface elevation above 4142.0 feet through the end of May, once this elevation has been achieved earlier in the spring. The 2018 Operations Plan maintains this elevation in 35 years out of the 39-year period of record. The Interim Plan would achieve this elevation in 33 years out of 39. In the additional two years that the Interim Plan would reduce UKL elevations (water year types experienced in 2005 and 2015), UKL surface elevations would be maintained above 4142.0 feet for portions of the April-May spring spawning period but would drop below this benchmark for multiple consecutive days. Even with implementation of the additional 40,000 AF of EWA augmentation included in the Interim Plan, 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).

Although KBPM simulations can help frame potential implications, in real-time operations, Reclamation would work with PacifiCorp to borrow water or modify augmentation releases in coordination with the FASTA process to ensure that UKL elevations would not fall below 4,142.0 feet during April and May during that water year.

The other key elevation is the minimum UKL surface elevation during the summer and fall. Modeling analyzed in the USFWS 2019 BiOp showed a minimum surface elevation of 4138.26 feet in water year 1981. The Interim Plan flow scenario would result in an UKL minimum surface elevation of 4138.00 feet, in water year 2016. While this is lower than the USFWS 2019 BiOp minimum of 4,138.26 feet, it exceeds the 2013 BiOp minimum of 4137.76 feet and still provides sufficient depth for suckers to access refugial habitat within Pelican Bay.

In general, the differences would result in an average decrease of 0.07 feet during sucker spawning from February to May and an average decrease of 0.15 feet for August and September that results in minimal reductions of habitat available to adult suckers in late summer in the preferred depths in the northern part of UKL.

Klamath River

Based on current 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 rearing and outmigration conditions for juvenile coho salmon. 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. Additionally, the ability to optimize the utilization of the augmentation volumes (timing and distribution) could allow for the volume used to coincide with the peak outmigration timing for coho and Chinook salmon. The additional volume could potentially reduce water temperatures (depending on timing) and dilute actinospore concentrations of the parasite *Ceratanova shasta* thereby reducing disease risk for juvenile salmon. Similarly, increased habitat availability, reduced water temperatures, and reduced actinospore concentrations could benefit coho salmon and designated critical habitat as well as essential fish habitat for coho and Chinook salmon (thereby benefitting the Federally-listed Southern Resident Killer Whale).

Conclusion

The Interim Plan as described above, is expected to provide additional habitat availability for SONCC coho salmon which would contribute toward meeting the habitat conservation standard and potentially reduce disease risk for this species. As such, Reclamation believes that implementation of the proposed Interim Plan would result in reduced effects from those previously analyzed in NMFS' 2019 BiOp and therefore be consistent with NMFS' determinations that Project operations are not likely to jeopardize the continued existence of SONCC coho salmon or destroy or adversely modify their designated critical habitat.
The proposed Interim Plan may reduce sucker habitat and concentrate spawning or compel suckers to skip spawning at the shoreline areas, although these events would appear to be infrequent when examining the period of record. Regardless, for the duration of the Interim Plan, if the 40,000 AF of EWA augmentation is triggered on April 1 in any given year, UKL elevation will not drop below 4142.0 feet during the months of April and May in that water year.

Additionally, while implementation of the 40,000 AF of EWA augmentation could cause UKL minimum surface elevation to be reduced below elevation 4,138.26 to an elevation of 4138.0, that is expected to be an infrequent occurrence (modeled year 2016). This elevation would still be expected to provide sufficient depth for suckers to access refugial habitat within Pelican Bay. In general, the differences would result in an average decrease of 0.07 feet during sucker spawning from February to May and an average decrease of 0.15 feet for August and September that results in minimal reductions of habitat available to adult suckers in late summer in the preferred depths in the northern part of UKL. In addition, Reclamation believes that the ability to borrow water from PacifiCorp reservoirs provides assurances that the Interim Plan would be protective of suckers in UKL at critical life stages and associated UKL elevations (4,142.0 feet in April and May and 4,138.0 feet as an annual minimum) that avoid jeopardizing the continued existence of Lost River and shortnose suckers and does not destroy or adversely modify their designated critical habitat.

Overall, Reclamation believes this proposed Interim Plan meets Reclamation's ESA responsibility to not jeopardize Federally-listed species or destroy or cause adverse modification of their designated critical habitat.

Request for Confirmation of Reclamation's Conclusions

Reclamation requests the Services review the enclosed modeled output for the Interim Plan derived from the KBPM and provide separate responses related to confirmation of Reclamation's conclusions.

Reclamation is appreciative of the collaboration and inter-agency coordination that has taken place to date. If you have any questions, please contact Jared Bottcher at (541) 880-2544, or via e-mail at jbottcher@usbr.gov.

Sincerely,

JEFFREY NETTLETON Digitally signed by JEFFREY NETTLETON Date: 2020.03.27 09:31:52 -07'00'

Jeffrey Nettleton
Area Manager

Enclosure (1)

cc: Daniel Blake
Adam Johnson

Interim Operations Plan Technical Attachment

The purpose of this document is to provide additional technical explanation of the proposed Interim Operations Plan and the modeling done to analyze its effects on Iron Gate Dam flows and Upper Klamath Lake elevations. To the extent it restates, paraphrases, or contradicts anything in the Interim Operation Plan letter accompanying this addendum, the letter controls.

Base EWA Augmentation

As part of the Interim Plan, Reclamation proposes to provide a base EWA augmentation of 40,000 acre-feet (AF) in water years with an Upper Klamath Lake (UKL) Supply at or above 550,000 AF and at or below 950,000 AF. 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. An initial determination on whether the 40,000 AF of EWA augmentation would occur will be based on the March 1 Natural Resources Conservation Service (NRCS) UKL inflow forecast and the resulting UKL Supply. A final determination of EWA augmentation would be made in early April, with the April 1 NRCS inflow forecast and the resulting UKL Supply. If a portion of the EWA augmentation volume is utilized in March, that volume would be subtracted from the EWA augmentation available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 UKL Supply calculation does not provide EWA augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA. The EWA augmentation scheme related to UKL Supply is shown in Figure 1.

National Marine Fisheries Service (NMFS) has requested flexibility in the distribution of the 40,000 AF of EWA augmentation to optimize the use of this water, while maintaining UKL elevations/conditions necessary for listed suckers. As modeled, the 40,000 AF of EWA augmentation was released according to a NMFS-specified schedule that was unique to each year's hydrologic circumstances. Simulated release of the flexible flows started as early as March 23 and as late as May 18. Actual releases of the EWA augmentation may vary significantly in real time operations and Reclamation, NMFS, the U.S. Fish and Wildlife Service (FWS), along with input from the Flow Account Scheduling Technical Advisory (FASTA) team, will determine the final release schedule. The EWA augmentation flows can continue through June and are assumed to overlap and add to the enhanced May/June flows described in the following section.

General rules used for the modeling of the implementation of the 40,000 AF of EWA augmentation are as follows:

1. An initial calculation of EWA augmentation occurs in early March using the March 1 NRCS UKL net inflow forecast. This volume is available for use in March, subject to the rules laid out in 2.b.

2. Using the April 1 NRCS UKL net inflow forecast, calculate whether the 40,000 AF of EWA augmentation is triggered according to the relationship shown in Figure 1;

   a. May and June calculation of UKL Supply does not affect the EWA augmentation volume determined in April.
   b. If a portion of the EWA augmentation is utilized in March, that volume would be subtracted from that available beyond March. If a volume of EWA augmentation is used in March and the subsequent April 1 UKL Supply calculation does not provide EWA

augmentation, then all water utilized in March above and beyond formulaic release of EWA (i.e., augmentation volume) would be counted against the EWA

3. Release of the 40,000 AF of EWA Augmentation will be according to a schedule set by Reclamation, NMFS, and FWS, with input from the FASTA team;

a. As discussed above, if the March UKL Supply is within the EWA Augmentation range, the augmentation can be partially used in March under FASTA consultation

4. Project supply calculations, based on the April 1, May 1, and June 1 UKL inflow forecasts are reduced by 23,000 AF when the EWA augmentation scheme is triggered (April UKL Supply at or above 550,000 AF and at or below 950,000 AF)

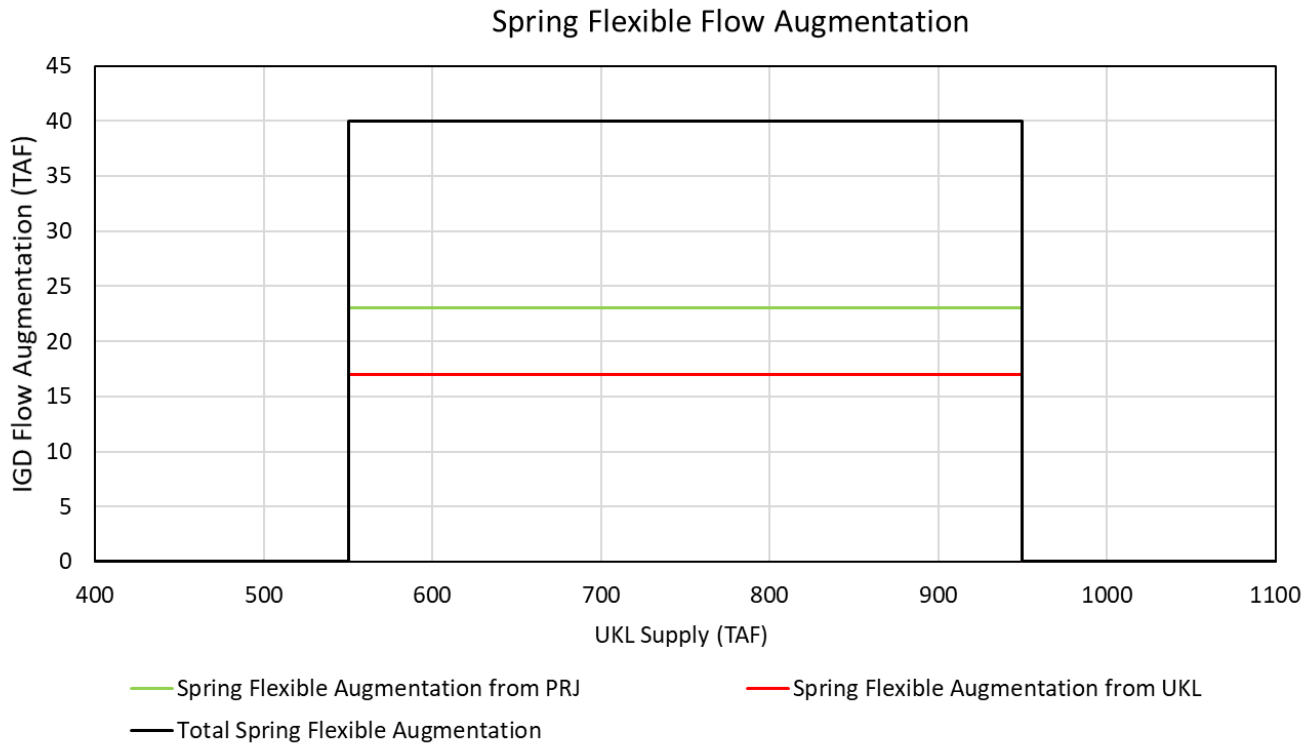

Figure 1. Base EWA Augmentation as related to UKL Supply. UKL Supply is as defined as it is in Reclamation's 2018 Operations Plan (as analyzed in the Services 2019 BiOps). Spring Flexible Augmentation is the amount of water to be contributed from Project Supply, limited to 23,000 AF, under this operation as a function of UKL Supply. Spring Flexible Augmentation from UKL is the amount of water to be contributed from Upper Klamath Lake under this operation as a function of UKL Supply. Total Spring Flexible Augmentation is the total amount of EWA augmentation to be provided as a function of UKL Supply from all sources.

Because the EWA augmentation is counted against EWA when the flows are implemented (when the intention is for this volume to be in addition to EWA), the aggregate augmentation (as determined in April) is added to the July 1 EWA to ensure proper EWA accounting for the remainder of the spring/summer season. Additionally, the default rules assume that when enhanced May/June flows are implemented and IGD flow targets would otherwise be at minimums, Reclamation would implement flow variability (up to +/- 75 cfs around enhanced IGD flow targets).

With regard to Upper Klamath Lake elevations, implementation of EWA augmentation will be carried out as described in the Interim Operations Plan letter.

Enhanced May/June Flows
In years in which May UKL Supply is greater than 625,000 AF and less than 950,000 AF, an additional volume of up to 20,000 AF (shared equally at all volumes between Project Supply and UKL) is distributed in May and June. The Enhanced May/June flows scheme as it relates to UKL Supply is shown in Figure 2. For UKL Supply values from 625,000 AF to 717,000 AF, the May/June Augmentation scheme increases linearly in relation to increasing UKL Supply from 0 AF to 20,000 AF. With UKL Supply between 717,000 AF to 858,000 AF, the May/June Augmentation is a constant 20,000 AF. May/June Augmentation decreases linearly in relation to increasing UKL Supply from 20,000 AF to 0 AF over the UKL Supply range of 858,000 AF to 950,000 AF. The May/June Augmentation is 0 AF if UKL Supply is below 625,000 AF or above 950,000 AF based on the May 1 NRCS UKL net inflow forecast. This replaces the enhanced May/June flow provision in Reclamation's 2018 Operations Plan (as analyzed in the Services' 2019 BiOps) that was dependent on EWA allocations instead of UKL Supply.

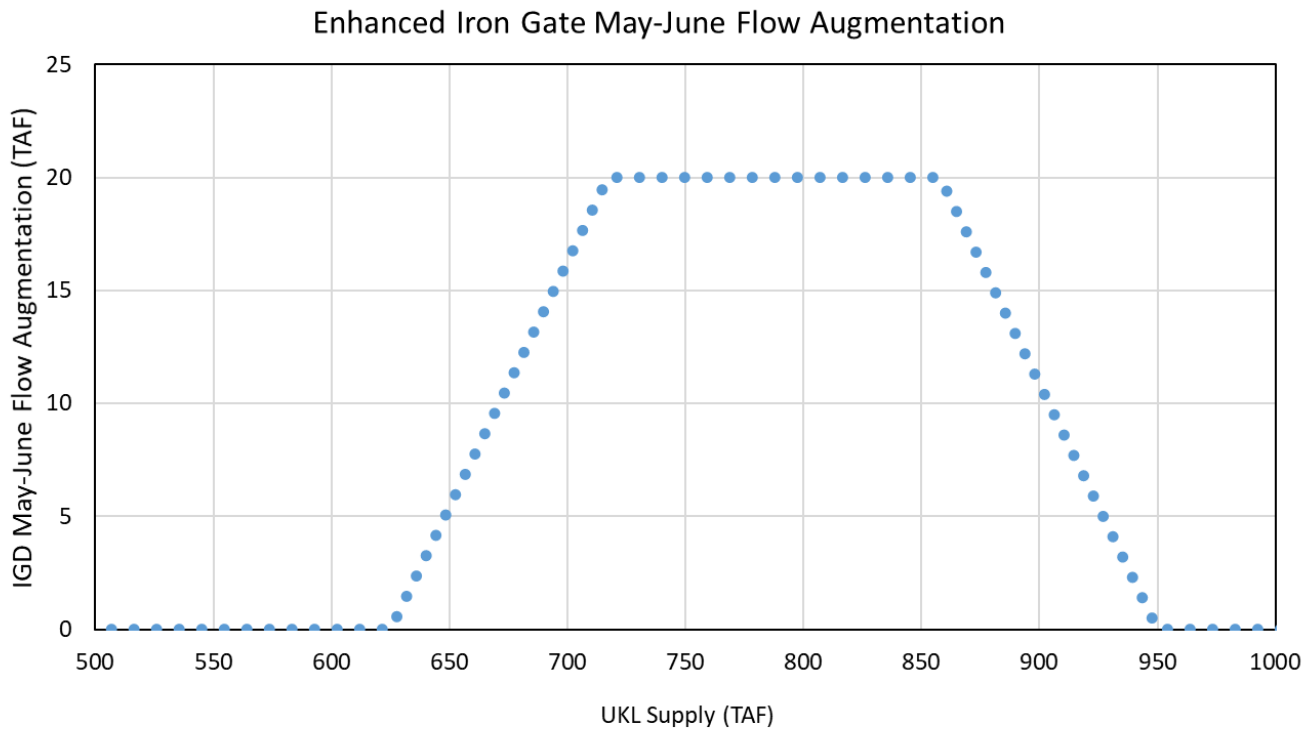

Figure 2. Enhanced May/June Flow Augmentation as related to UKL Supply. The above May/June augmentation scheme replaces the enhanced May/June provision in Reclamation's 2018 Operations Plan (as analyzed in the Services 2019 BiOps) that was dependent on EWA allocations instead of UKL Supply. The enhanced May/June augmentation volumes are shared equally (at all volumes) between Project Supply and UKL.

This action is meant to improve coho habitat in specific years of concern to NMFS. NMFS has requested flexibility in the distribution of the May/June Augmentation to maximize the benefit to listed coho, while maintaining UKL elevations/conditions necessary for listed suckers. However, for purposes of modeling effects of the enhanced May/June flows and Reclamation's planning needs

(unless NMFS requests alternative management scenarios in a given water year), the specific "default" rules for implementing enhanced May/June flows are as follows:

1. Using the May 1 NRCS UKL net inflow forecast, calculate the May/June Augmentation according to the relationship shown in Figure 2;

a. No volume of May/June Augmentation is available for release prior to May 1.
b. June calculation of UKL Supply does not affect the May-June Augmentation determined in May.

2. Sixty percent of the May-June Augmentation volume is applied uniformly as a daily increase in calculated IGD release over the month of May;

3. Forty percent of the May-June Augmentation volume is applied uniformly as a daily increase in calculated IGD release over the month of June; and

4. May and June Project Supply estimates are reduced by 50 percent of the enhanced May-June flow augmentation volume.

Because the enhanced May/June flows are counted against EWA when the flows are implemented (when the intention is for this volume to be in addition to EWA), the aggregate augmentation (as determined in May) is added to the July 1 EWA to ensure proper EWA accounting for the remainder of the spring/summer season. Additionally, the default rules assume that when enhanced May/June flows are implemented and IGD flow targets would otherwise be at minimums, Reclamation would implement flow variability (up to +/- 75 cfs around enhanced IGD flow targets).

With regard to Upper Klamath Lake elevations, implementation of EWA augmentation (including enhanced May/June flows) will be carried out as described in the Interim Operations Plan letter.

Reclamation anticipates NMFS will recommend alternative distributions to default rules 2 and 3 described above, based on information specific to environmental conditions and forecasts, as a means to optimize the use of this water. NMFS will lead annual efforts to evaluate and seek input from the FASTA team members on alternatives to deviate from default rules.