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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.	Case No. 3:19-cv-04405-WHO Related Cases: No. C16-cv-06863-WHO No. C16-cv-04294-WHO [PROPOSED] ORDER ISSUING PRELIMINARY INJUNCTION

U.S. BUREAU OF RECLAMATION, and NATIONAL MARINE FISHERIES SERVICE,

Defendants.

This matter is before the Court on the motion for a preliminary injunction filed by plaintiffs Yurok Tribe, Pacific Coast Federation of Fishermen's Associations, and Institute for Fisheries Resources (hereinafter "Yurok Tribe"). After reviewing the briefs, declarations, record materials, and hearing oral argument and for the reasons in the Court's opinion, the Court issues this preliminary injunction in order to prevent or reduce irreparable harm to threatened Southern Oregon/Northern California Coast Coho Salmon ("Coho"), until this case is resolved. To prevent or reduce irreparable harm, defendant Bureau of Reclamation ("Bureau") is enjoined to revert to and operate the Klamath Project under its 2013-2023 Klamath Project operations plan, supplemented by the flows required by the injunction issued in *Yurok Tribe v. Bureau of Reclamation ("Yurok I")*, No. 16-cv-6863-WHO, ECF 70, specifically: (1) surface or deep flushing flows every year to disrupt the habitat supporting the polychaete worms that host *C. shasta*; and (2) emergency dilution flows when certain thresholds are met or exceeded, as set out below.

In *Yurok* I, I found that these two types of mitigation flows were supported by the best available science, which was compiled by the Fish and Wildlife Service ("FWS") in four technical memorandum that were subjected to peer review as part of a process overseen by the FWS. A Disease Technical Advisory Team ("DTAT") comprised of technical experts from the federal defendants and the Yurok, Karuk, and Hoopa Valley Tribes was convened to develop

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possible management actions to control *C. shasta* in the Klamath River. The Tribal technical experts on the DTAT relied on the technical memos to develop draft *Measures to Reduce Ceratanova Shasta Infection of Klamath River Salmonids: A Guidance Document* (Nov. 9, 2016) ("*Guidance Document*"), which was further peer reviewed in a process overseen by the Bureau. The *Guidance Document* provides the scientific rationale for these flushing and emergency dilution flows, drawing from the technical memos. The 2013 and 2019 biological opinions also provide scientific support for flushing and emergency dilution flows as needed mitigation measures to reduce *C. shasta* densities and infections. The independent peer review of the *Guidance Document* commissioned by the Bureau found both types of disease management flows to be sound and scientifically supported. Peer Review at 8, 9, 13.

The Bureau's 2019-2024 Plan is estimated to provide surface flushing flows in most years. NMFS found in the reinitiated consultation that surface flushing flows are supported by the best available science and are an effective mechanism to prevent outbreaks of *C. shasta* infections and disease. 2019 BiOp 161. Disrupting the life cycle of the *C. shasta* parasite is in keeping with the SONCC Coho recovery plan, which calls for such action. Final Recovery Plan for SONCC Coho Salmon at 6-3 (2014).

The Court finds, based on the best available science, that releasing flows in the winter-spring time frame to disrupt the life cycle of *C. shasta* by way of disturbing the habitat of the polychaete host worms is likely the most effective mitigation measure to prevent *C. shasta* infections. Accordingly, the Court enjoins the Bureau to implement either surface flushing flows modeled on management guidance 1 or the deep flushing or armor disturbing flows modeled on management guidance 2 contained the *Guidance Document*. A surface flushing flow shall have a minimum flow of 6030 cubic feet per second ("cfs") from Iron Gate Dam for 72 hours. The

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surface flushing flows are the minimum that is required. Because the deep flushing and armor disturbing flows depend on the availability of water at critical time junctures, the Court orders the Bureau to release deep flushing or armor disturbing flows when water conditions permit. The timing of such releases is left to the Bureau's discretion to enable the Bureau to take advantage of tributary accretions and snow melt and to address legitimate safety concerns.

In addition to requiring winter-spring flushing flows, the Court orders the Bureau to release emergency dilution flows between April 1-June 15 (or when 80% of wild juvenile Chinook Salmon are estimated to have outmigrated past the Kinsman Rotary Screw Trap) when the thresholds set out below are met or exceeded. The independent peer review determined that the emergency dilution flows required under the 2017 injunction are scientifically sound. Requiring emergency dilution flows is consistent with the 2013 and 2019 biological opinions, which both have a real-time disease management program that can recommend dilution flows to address *C. shasta* outbreaks. The 2019-2024 Plan, like its predecessor however, sets aside no water for emergency dilution flows. The Bureau currently locks in an irrigation allocation by April 1st and Bureau policies and the biological opinions provide that the irrigation allocation will not be reduced for the rest of the water year. In dry years, emergency dilution flows have not occurred, even when they have been needed to reduce *C. shasta* spore concentrations and infections, as in 2015. The Court orders the Bureau either to reserve a sufficient amount of water for emergency dilution flows or to condition the irrigation allocation so that emergency dilution flows will occur if conditions warrant.

An emergency dilution flow shall meet the parameters set out in paragraph 14(a) of the Order Modifying February 8, 2017 Injunction in *Yurok I*, ECF 70.

> Water releases to achieve 3,000 cfs at IGD shall be implemented immediately if the disease thresholds are met and flows at IGD are below 3,000 cfs. If flows at

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> IGD already exceed 3,000 cfs, and have been at or above 3,000 cfs for at least seven days, flows to achieve 4,000 cfs at IGD shall be implemented. Flows at IGD shall be maintained or increased from 3,000 cfs to 4,000 cfs if disease levels remain above disease threshold criteria. If disease levels become reduced below the paragraph 14.c. thresholds, flows at IGD shall be reduced slowly while disease rates are monitored. Release of Reserve Water shall not count against the EWA and Reserve Water volume shall be capped at 50 TAF. If the 50 TAF of Reserve Water is expended before the 80% outmigration date as described in paragraph 14.d. below, the Bureau shall confer with the Parties to evaluate the feasibility and desirability of utilizing other water sources to prolong emergency dilution flows.[1]

It is further ordered that the mitigation measures shall not interfere with conditions necessary to protect endangered sucker fish as determined by NMFS in either the 2013 or 2019 biological opinions.

The 2017 injunction had two alternative disease threshold criteria that triggered the requirement to provide emergency dilution flows when exceeded: (1) infection rates; and (2) spore concentrations. Yurok Tribe has submitted a technical analysis of scientific advances since issuance of the 2017 injunction and recommended changes to the thresholds made by the independent peer review and by FWS in a technical memorandum responding to the 2018 motion to modify the 2017 injunction. I conclude that the emerging science supports modifying the thresholds to make them more precise. The modifications make it less likely the thresholds will be met or exceeded and emergency dilution flows required. Accordingly, the 2017 injunction will be modified to incorporate the following thresholds, in place of the thresholds in that injunction:

Emergency dilution flows of 3,000 cfs for one week (or an increase of 1,000 cfs if flows are above 2,000 cfs as specified in the biological opinion) shall be implemented when the

[1] Paragraph 14(d) describes the methodology that FWS was developing to estimate when the 80% outmigration has occurred.

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following threshold criteria are met:

1. Either
   a. Spore concentrations at any point exceed 5 spores per liter for genotype 2 (Coho-infecting), or 10 spores per liter of genotype 1 (Chinook-infecting) in any single weekly sample event, OR
   b. spore concentrations of any genotype exceed 10 spores per liter in aggregate for two consecutive weekly sampling periods; OR
   c. Prevalence of infection with a DNA copy of at least log 2 of all captured juvenile Chinook Salmon (both wild and hatchery) exceeds 20% in aggregate for the preceding week at the Kinsman Rotary Screw Trap.

AND

2. Maximum daily water temperatures exceed 16ºC as measured at Iron Gate Dam or Seiad real-time stations.
3. The thresholds described in (1) and (2) apply only to sites located at Seiad Valley and upriver. If these thresholds are exceeded further downriver, the Bureau will provide a dilution flow unless the FASTA team determines that the additional flow is not likely to measurably reduce *C. shasta* risks.
4. In the event that Iron Gate Dam flows are already above 2,000 when threshold criteria are met, Iron Gate Dam flows will be increased by 1,000 cfs over baseline biological opinion values, but shall not fall below 3,000 cfs for the duration of the dilution flow event.

Yurok Tribe technical staff have developed these more precise thresholds to respond to the emerging science and to comments made by FWS experts and in the independent peer review. In order to provide the parties an opportunity to discuss other ways to respond to the emerging science and refine the thresholds, it is ordered that the technical experts for the parties will confer and submit to the Court within three weeks any changes to the proposed order based on the best available science to refine the parameters of the required emergency dilution flow mitigation measures and in particular modifications to the thresholds.

It is further ordered that the Bureau will work with the Tribes and other technical experts on *C. shasta* in the Klamath River to develop and fund research and monitoring activities

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associated with the mitigation measures required by this injunction in order to assess their efficacy and ascertain whether other mitigation measures or modifications are needed. The Bureau will provide a written report on these research and monitoring activities to the Court on a quarterly basis.

IT IS SO ORDERED this ____ day of _____, 2019.

_____
WILLIAM H. ORRICK
United States District Judge

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