



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
West Coast Region
650 Capitol Mall, Suite 5-100
Sacramento, California 95814-4700

AUG 24 2016

Mr. David Murillo
Regional Director
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Re: 2016 Lower Klamath River Late-Summer Flow Augmentation From Lewiston Dam

Dear Mr. Murillo:

This letter is in response to the U.S. Bureau of Reclamation's (Reclamation) August 22, 2016, letter, wherein Reclamation proposes to implement the 2016 Lower Klamath River late-summer flow augmentation from Lewiston Dam (Proposed Action). Specifically, Reclamation proposes to augment river flows in the lower Klamath River with the release of up to 84 thousand acre-feet (TAF) of water from Lewiston Dam into the Trinity River (tributary to the Klamath River) during the late summer and early fall of 2016 to avert a fish kill due to a combination of factors related to the volume and quality of water in the river and the prevalence of an *Ichthyophthirius multifiliis* (*Ich*) epizootic. This volume would comprise a preventive base flow (40 TAF) as a primary flow augmentation response, a preventive pulse flow (10 TAF) as a secondary augmentation response, and an emergency flow (34 TAF) as a tertiary augmentation response. The volume of each flow, up to the identified limits, are determined from the need to meet certain flow requirements in the Lower Klamath River over certain periods of time¹. As in past years, real-time environmental and biological monitoring would be used to inform the decision on implementation of each component.

Reclamation has requested NOAA's National Marine Fisheries Service (NMFS) concurrence that the 2016 Lower Klamath River late-summer flow augmentation from Lewiston Dam is consistent with NMFS's biological and conference opinion on the long-term operation of the Central Valley Project (CVP) and State Water Project (NMFS 2009 BiOp) and its reasonable and prudent alternative (RPA) Action I.2.4. To support the Proposed Action, Reclamation provided an August 16, 2016, CVP forecast and August 5, 2016, temperature model runs comparing water temperatures of water diverted through the Clear Creek Tunnel, from Keswick Dam on the Sacramento River, from Whiskeytown Dam to Clear Creek, and from Lewiston Dam to the Trinity River. The modeling results indicate that the average change in water temperatures from August 15 to September 28 would likely be a 0.1°F reduction through the Clear Creek Tunnel, and less than 0.01°F reduction at both Keswick Dam and releases to Clear Creek from Whiskeytown Dam.

¹ See Reclamation's draft EA at http://www.usbr.gov/mp/nepa/documentShow.cfm?Doc_ID=26519.



The release of up to 84 TAF could affect water storage in the remainder of water year 2016 and beyond. However, the Sacramento River temperature management plan (TMP)² included the prospective need for a flow augmentation action from Trinity Reservoir through Lewiston Reservoir into the Trinity River in the amount of approximately 35 TAF that would be discharged in August and September. In addition, inflows into Trinity Reservoir were higher than those provided in the forecast as part of the Sacramento River TMP. As a result, the forecast in the Sacramento River TMP, which contemplated a 35 TAF augmentation flow, resulted in an end of September Trinity Reservoir storage of 900 TAF, compared to an end of September Trinity Reservoir storage of 893 TAF, including implementation of the Proposed Action (pers. comm. between Garwin Yip, NMFS, and Paul Zedonis, Reclamation, on August 23, 2016).

Compared to the base operations in the Sacramento River TMP, the Proposed Action will not measurably change water temperatures in the Sacramento River and any associated effects on the Sacramento River winter-run and Central Valley spring-run Chinook salmon and California Central Valley steelhead spawning, egg incubation, and rearing in the Sacramento River. The Proposed Action is also not expected to negatively affect the Southern distinct population segment of North American green sturgeon. In conclusion, the temperature modeling analysis shows that the water temperatures are no greater than those identified in the approved Sacramento River TMP.

NMFS has reviewed the analysis, and concurs with its conclusions. In summary, NMFS concurs that the Proposed Action is consistent with the NMFS 2009 BiOp and RPA Action I.2.4. We are making this finding in consideration of Reclamation's updated modeling and analysis of the proposed flow augmentation.

As always, we look forward to continued close coordination with you and your staff throughout this extremely challenging water year. If you have any questions regarding this letter, please contact Garwin Yip, of my staff, at garwin.yip@noaa.gov or (916) 930-3611.

Sincerely,



FOR

William W. Stelle, Jr.
Regional Administrator

cc: Copy to file: ARN 151422SWR2006SA00268

² Reclamation's proposed Sacramento River TMP at http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/bureau_of_reclamation_s_sacramento_river_temperature_management_plan_-_june_27_2016.pdf, supported by NMFS's concurrence on the TMP at http://www.westcoast.fisheries.noaa.gov/publications/Central_Valley/Water%20Operations/nmfs_concurrence_on_the_bureau_of_reclamation_s_sacramento_river_temperature_management_plan-june_28_2016.pdf.

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