UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION IX
75 Hawthorne Street
San Francisco, CA 94105-3901

August 22, 2019

Ernest A. Conant
Regional Director, Mid-Pacific Region
Bureau of Reclamation
2800 Cottage Way
Sacramento, California 95825

Subject: Draft Environmental Impact Statement for Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project, California (EIS No. 20190160)

Dear Mr. Conant:

The U.S. Environmental Protection Agency (EPA) has reviewed the above-referenced document pursuant to the National Environmental Policy Act (NEPA), Council on Environmental Quality (CEQ) regulations (40 CFR Parts 1500-1508), and our NEPA review authority under Section 309 of the Clean Air Act.

Reclamation's federal action, through the Preferred Alternative, is to modify the operation of the Central Valley Project, in conjunction with the State Water Project, to maximize water supply deliveries and optimize marketable power generation. To accomplish this, Reclamation has proposed reinitiating consultation under the Endangered Species Act (ESA) to modify ESA requirements from the 2008 and 2009 Biological Opinions. This Draft EIS evaluates the environmental impacts that would result from the implementation of the modifications, pending approval by the U.S. Fish and Wildlife Service and the National Marine Fisheries Service.

The Draft EIS indicates that the proposed project would have significant impacts to water quality and aquatic resources in the Bay Delta estuary, and therefore, active management will be required to ensure water quality is not degraded. It is unclear, however, what actions Reclamation will commit to in order to prevent water quality degredation in an already stressed environment. If the proposed project contributes to a general increase in salinity in the Delta, Reclamation and the Department of Water Resources will have less flexibility for operating the system to protect beneficial uses and drinking water quality. Through the enclosed comments, EPA provides recommendations regarding these issues and others to consider while preparing the Final EIS.

We note that effective October 22, 2018, EPA no longer includes ratings in our comment letters. Information about this change and EPA's continued roles and responsibilities in the review of federal actions can be found on our website at: https://www.epa.gov/nepa/epa-review-process-under-section-309-clean-air-act.

EPA appreciates the opportunity to review this Draft EIS, and we are available to discuss our comments. When the Final EIS is released for public review, please send one hard copy to the address above (mail code: TIP-2). If you have any questions, please contact me at 415-947-4161, or contact Stephanie Gordon, the lead reviewer for this project. Ms. Gordon can be reached at 415-972-3098 or gordon.stephanieS@epa.gov.

Sincerely,

Connell Dunning

Connell Dunning, Acting Manager
Environmental Review Branch

Enclosures: EPA's Detailed Comments

cc via email: Katrina Harrison, Bureau of Reclamation
Ben Nelson, Bureau of Reclamation
Kaylee Allen, US Fish and Wildlife Service
Garwin Yip, National Marine Fisheries Service
Brett Stevens, Central Valley Regional Water Quality Control Board

EPA DETAILED COMMENTS ON THE REINITIATION OF CONSULTATION ON THE COORDINATED LONG-TERM OPERATION OF THE CENTRAL VALLEY PROJECT AND STATE WATER PROJECT DRAFT ENVIRONMENTAL IMPACT STATEMENT, CALIFORNIA – AUGUST 22, 2019

Water Quality

The Bay Delta Water Quality Control Plan (WQCP) contains electrical conductivity (EC) objectives for the Delta to protect agricultural and fish and wildlife beneficial uses, and chloride objectives to protect municipal and industrial water supply beneficial uses. The Draft EIS estimates that EC and chloride concentrations would increase under the Preferred Alternative 1 relative to the No Action Alternative for Delta locations (p. 1-3). Specifically, the Draft EIS identifies the following results for Alternative 1:

- Monthly average EC levels in the Sacramento River at Emmaton, Collinsville and the San Joaquin River at Jersey Point under the action Alternatives would be substantially higher than the No Action Alternative EC levels in September through December (p.5-7). The EC objective at Emmaton is intended to protect agricultural beneficial uses, but also has ancillary benefits to aquatic life. Increasing salinity may lead to noncompliance days that would further contribute to existing EC water quality impairments in the western Delta and degrade beneficial use protection for agricultural and aquatic life beneficial uses.

- Chloride concentrations at certain Delta locations, including Contra Costing Pumping Plant #1, San Joaquin River at Antioch, Banks and Jones Pumping Plants would be higher, particularly in September through January (p. 5-8).

The Draft EIS states that CVP and SWP would continue to be operated in real-time to meet the Bay-Delta WQCP EC and chloride objectives for protection of Delta beneficial uses. Thus, additional impairments to the Delta's beneficial uses, related to salinity, would not be expected under the action alternatives compared to the No Action Alternative (p. 5-8). Reclamation should explain how real-time operations would prevent additional impairments, given that EC concentrations in the Bay-Delta are already at or near the EC water quality objective and higher salinity under the alternatives would appear to lead to exceeding the EC objective. The Draft EIS doesn't clearly explain what additional steps could be taken during real-time operations to prevent increase of EC under the alternatives and who would be responsible for meeting the objectives.

Although the Delta outflow objective is discussed in Chapter 3 Affected Environment, the water quality chapter of the Draft EIS does not evaluate the alternatives against the full suite of Water Quality Objectives for Fish and Wildlife Beneficial Uses (included in Table 3 of the Bay Delta WQCP).

> ***Recommendations:*** Describe mitigation measures that would allow the proposed project to be implemented without increased exceedances of water quality objectives in the already-degraded Delta. These measures may include the reduction of exports to provide more outflow and mitigate salinity intrusion.
>
> Evaluate all Alternatives with respect to all water quality standards listed in Tables 1-3 of the Bay-Delta WQCP, and indicate whether each standard would be met under each alternative.
>
> Clearly identify the water quality objectives that the proponents intend to meet by fine-tuning reservoir storage and exports in real time, and clearly state this as an enforceable commitment in the Final EIS and Record of Decision (ROD).

Provide historical data to illustrate how D-1641 standards have been met in the past, including modifications of requirements of D-1641 because of drought conditions.

Reclamation currently operates to a 7 milligrams per liter dissolved oxygen requirement at Ripon in the Stanislaus River from June 1 to September 30 to protect salmon, steelhead, and trout in the river. Reclamation has proposed to move the compliance location from Ripon to Orange Blossom Bridge because the species are primarily located there at that time of year (p. 3-40). EPA recommends that Reclamation use a point that characterizes the overall condition of the waterbody. If Orange Blossom Bridge reflects conditions that are significantly better than average conditions in the waterbody, additional compliance points should be referenced. California beneficial uses are expected to occur generally across a waterbody and not just at high quality locations.

Recommendations: Discuss all changes affecting implementation of water quality standards (including changes to compliance locations) under the Alternatives.

Conduct, if applicable, a sensitivity analysis to show the impact of changing the site of water compliance sampling locations and what impact such changes would have on the water bodies.

Consult with the State Water Board and the Central Valley Regional Water Quality Control Board to ensure that any changes under the Alternatives are consistent with Porter-Cologne Water Quality Control Act and Clean Water Act requirements.

Biological Resources

Freshwater flow is one of the best tools available in the short term to improve fish populations and protect aquatic life beneficial uses, given its widely cited importance to ecosystem recovery. Relative fish abundance responses to freshwater flow can be estimated using regression equations provided in peer reviewed literature and government reports.[1] Reclamation identifies models that were developed to predict impacts of outflow on survival, but indicates that these models do not provide enough certainty for use in the Draft EIS, suggesting that Delta outflow is not a critical factor in evaluation of the Alternatives. However, we note that a lack of absolute certainty in available models doesn't mean that Delta outflow doesn't impact survival. Conceptual models consistently identify Delta outflow as a significant factor on salmon and smelt survival.

The Draft EIS indicates that because salmon use multiple cues (outflow, temperature, salinity, DO) for migration, the disruption of one cue type (i.e., outflow) will not lead to adverse impacts, and, therefore, any additional reductions of outflow from Alternative 1 would have no impact on salmon survival (p.1-11). However, reliance on multiple cues does not necessarily mean that flow reductions under Alternative 1 won't lead to a disruption in migration. Also, the Draft EIS states "…the fact that survival has remained extremely low despite positive tidally-averaged net flows (Buchanan et al. 2018, SJRG 2011, SJRG 2013) clearly contradicts expectations articulated in the 2009 NMFS Biological Opinion"

[1] United States Fish and Wildlife Service, September 27, 2005, Recommended Streamflow Schedules To Meet the AFRP Doubling Goal in the San Joaquin River Basin (FWS 2005), pp. 27 *available at:* http://www.waterboards.ca.gov/waterrights/water_issues/programs/bay_delta/bay_delta_plan/water_quality_control_planning/docs/sjrf_spprtinfo/afrp_2005.pdf;
Jassby AD, Kimmerer WJ, Monismith SG, Armor C, Cloern JE, Powell TM, Schubel JR, Vendlinski TJ. 1995. Isohaline position as a habitat indicator for estuarine applications. Ecological Applications 5(1): 272-289;
Kimmerer, W. J. 2002. Effects of freshwater flow on abundance of estuarine organisms: Physical effects or trophic linkages? Marine Ecology Progress Series 243:39-55;
Kimmerer WJ, Gross ES, MacWilliams ML. 2009. Is the response of estuarine nekton to freshwater flow in the San Francisco Estuary explained by variation in habitat volume? Estuaries and Coasts 32: 375-389.

(p. 1-11). In making this statement, the Draft EIS does not demonstrate that it considered a long enough period (i.e., a sufficient number of wet and dry years) in evaluating the flow-survival relationship.

Further, the biological resource evaluation in the Draft EIS appears to be based on visual review of the figures rather than a comprehensive analysis of the state of the species on a watershed scale and the project area as a whole. It is therefore not clear what the actual impacts to the species are.

> ***Recommendations:*** Use a quantitative method to evaluate whether adverse impacts to aquatic life are determined to be significant. Include endpoints associated with ecological impact, test metrics, effects thresholds, and tests of significance associated with ecological impact.
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> Conduct the evaluation by water year type rather than across all water types, as this facilitates identification of issues during dry years when the frequency or magnitude of exceedance are more pronounced or critical to species survival.
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> In the Biological Resources section, include a horizontal line in the figures depicting temperature thresholds and life stage presence to better demonstrate the context and intensity of the values presented.
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> Consider a large and diverse (i.e., a full range of water year types) review period in evaluating whether there are impacts from Delta outflow. The data review period is important in determining whether a response is observed between survival and outflow. If a review period includes mostly dry years, it is less likely to observe a response because the range of response likely will be minimal.

General

This document is a combined project-specific and programmatic document and defines each action type in Table 3.4-1. Even when considering Appendix D: Alternative Development, it is unclear what actions are a part of the Proposed Action. Most of the restoration actions are programmatic actions whose funding, assurance, benefits, and drawbacks are unknown. Some actions are a part of other separate projects, such as the San Joaquin River Restoration Program (p. 3-41). In addition, the Final EIS would benefit from a more clear description of what the significance criteria are for evaluating impacts.

> ***Recommendations:*** In the Final EIS, clarify what actions (programmatic and/or project-level) this environmental review process is supporting. Specifically, when the ROD is signed, clarify what actions will be supported by the ROD. Please identify if specific actions are identified and described because they will be offsetting negative impacts from the proposed action.
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> Define significance for each environmental impact considering both context and intensity (40 CFR Part 1508.27).