Charge to the Long-Term Operations for the Central Valley Project and State Water Project Fish and Aquatic Effects Analysis Peer Review Panel

Objective

The intent of the review is to evaluate the analytical approach taken by the United States Bureau of Reclamation (Reclamation) to assess how the long-term operations (LTO) of the Central Valley Project (CVP) and State Water Project (SWP) affect the aquatic environment and the exposure, response, and risk to select Endangered Species Act (ESA)-listed species (individuals and populations). In addition, the review will assess whether quantitative and qualitative methods and risk assessment tools are used appropriately.

Reclamation reinitiated ESA Section 7 consultation for the LTO of the CVP and SWP based on anticipated modifications to the Proposed Action that may cause effects to ESA-listed species or designated critical habitats not analyzed in the current U.S. Fish and Wildlife Service (USFWS) and National Marine Fisheries Service (NMFS) Biological Opinions. The Fish and Aquatic Effects Analysis (Draft Effects Analysis) is a portion of the Environmental Impact Statement, a report mandated by the National Environmental Policy Act of 1969 (NEPA), that is being developed by Reclamation for the LTO of the CVP and SWP. The analyses inform a Biological Assessment, which is necessary when a Federal Agency is proposing an action that may affect a listed species under the ESA. The USFWS and NMFS will then evaluate the Biological Assessment to determine whether the Proposed Action will jeopardize listed species.

This Draft Effects Analysis includes numerous technical appendices describing the literature, models, and tools to evaluate the fish and aquatic environment effects of different project alternatives. The purpose of the analysis is to: (1) systematically evaluate the potential effects and outcomes of the LTO NEPA Alternatives on specific life stages, (2) assess the population-level consequences of LTO NEPA Alternatives on ESA-listed populations, and (3) support a biological assessment for consultation with the USFWS and the NMFS.

The document to be reviewed has been developed with additive input from state and federal fishery and water agencies and interested parties through Scoping, Initial Alternative Development, and other opportunities. Many comments were

received from these agencies and organizations. The Draft Effects Analysis has built on this input on various fish and aquatic environment analyses presented in the LTO Initial Alternatives Report and NEPA Public Draft Alternatives documents. The purpose of this independent scientific expert review of the Draft Effects Analysis is to evaluate its content and improve the science used as the basis of decisions influencing the fate of the people of California and listed species facing extinction.

Peer Review

Peer review will consist of an Independent Review Panel (Panel) that will evaluate the analytical approach used to assess how the LTO of the CVP and SWP affect the aquatic environment and the exposure, response, and risk to select ESA-listed species (individuals and populations), and whether quantitative and qualitative methods and risk assessment tools are used appropriately. In cases where models used in the analysis have undergone previous peer review, this Panel will only consider the application of these models and their derived results. The Delta Science Program will work with Reclamation to identify and provide a list of these models to the Panel. The Panel will address questions based on their expertise and are to provide comments solely based on the scientific information being reviewed and the estimated magnitude, certainty, and frequency of impacts.

Panel Letter

The deliverables of the final review will include a Panel Letter that is developed by the entire panel and will address the Review Questions based on their expertise. For the letter format, the Panel shall use a Delta Science Program template, and the letter shall contain a concise executive summary and a table of contents if the report exceeds five pages. Reclamation will submit a final Peer Review Report to Reclamation's peer review website (http://www.usbr.gov/main/qoi/peeragenda.html), which will include the Panel Letter and list the comments provided by the reviewers. Reclamation's response to the comments, actions the agency will undertake regarding the comments, and reasons why the agency believes those actions will satisfy any key concerns or recommendations will be included.

Peer Review Materials

Materials consistent with the focus of the peer review will be provided to the Peer Review Panel.

- Background documents
    - Long-Term Operation of the Central Valley Project and State Water Project Draft Biological Assessment:

        - Introduction Chapter
        - Environmental Baseline Chapter
        - State and Federal Cooperating Agency Draft LTO Proposed Action Alternative Chapter
        - Seasonal Operations Chapter
    - Long-Term Operation of the Central Valley Project and State Water Project Draft EIS Technical Appendices and Attachments:
        - Old and Middle River Flow Management
        - Winter and Spring Pulses and Delta Outflow – Smelt, Chinook Salmon, and Steelhead Migration and Survival
        - Summer and Fall Delta Outflow and Habitat
        - Shasta Cold Water Pool Management
        - Folsom Reservoir Flow and Temperature Management
        - New Melones Stepped Release Plan
        - Tributary Habitat Restoration
- Review documents
    - Long-Term Operation of the Central Valley Project and State Water Project Draft Biological Assessment:
        - Winter-Run Chinook Salmon Chapter
        - Spring-Run Chinook Salmon Chapter
        - Steelhead Chapter
        - Green Sturgeon Chapter
        - Delta Smelt Chapter
        - Longfin Smelt Chapter
        - South Resident Killer Whale Chapter
    - Long-Term Operation of the Central Valley Project and State Water Project Draft EIS:
        - Modeling Appendix and Attachments
- Supplemental Material
    - 2022 Initial Alternatives Report
    - Reinitiation of Consultation on the Coordinated Long-Term Operation of the Central Valley Project and State Water Project (2019 Final Biological Assessment):

        - Chapter 2 – Status of Aquatic and Terrestrial Species and Designated Critical Habitat
        - Chapter 4 – Proposed Action
    - Long-Term Operation of the Central Valley Project and State Water Project Draft EIS
        - Alternatives Chapter
        - Water Operations and Ecosystem Analyses Appendix
        - Species Spatial-Temporal Domains Appendix
        - Seasonal Operations Deconstruction Appendix
        - Exploratory Modeling Appendix
        - Specific Facility and Water Operations Deconstruction Appendix
        - Conservation Measure Deconstruction Appendix

Summary of Charge

An Independent Peer Review Panel is requested to convene and review the Draft Fish and Aquatic Effects Analysis to evaluate its content and improve the science used as the basis of decisions influencing the fate of the people of California and ESA-listed species facing extinction. The final Panel Letter review will address the analytical approach used to evaluate the effects of Proposed and Alternative project operations of the CVP and SWP on the aquatic environment. The focus of the review material will be on how the LTO of the CVP and SWP affect the aquatic environment and the exposure, response, and risk to ESA-listed species (individuals and populations). In addition, the panel will assess whether quantitative and qualitative methods and risk assessment tools are used appropriately. Reclamation is requesting constructive feedback that can help improve the Draft Effects Analysis.

Specific questions are identified below to guide the Independent Review Panel for the Panel Letter review. The Panel is encouraged to review each question carefully and clarify, refine, or otherwise modify questions as appropriate. Reclamation requests that the Panel evaluate the approach taken to assess the effects of project operations, as well as provide critical input and associated direction and recommendations to improve the Draft Effects Analysis.

Review Questions

1. To what extent do the draft analyses explain the exposure, response, and risk from project operations for individuals and populations of the ESA-listed

species, and physical and biological features of designated critical habitats under the approaches described by the alternatives?

2. To what extent do the draft analyses provide a scientifically defensible approach for evaluating effects on listed species and their designated critical habitats throughout the action area for different alternatives?
3. How well do the draft analyses use the best available scientific information in their analyses and findings?
4. How well do the draft analyses address data gaps and uncertainties? Are assumptions and methodologies suitable for addressing identified data gaps?
5. Of the key operations modeled, how adequate are the models for representing the effects of the different alternatives on aquatic listed species and their habitat?

Schedule

Panel Review: commences November 2023
Final Panel Letter: February 2024