

June 2024

Agenda Item: 8
Meeting Date: June 27, 2024

Independent Scientific Peer Review



Delta
Science
Program

DELTA STEWARDSHIP COUNCIL

Presentation overview

- Introduction to DSP peer review process
- Recent reviews
 - Department of Water Resources (DWR)
 - Delivery Capacity Report
 - U.S. Bureau of Reclamation (Reclamation)
 - Fish and Aquatic Effects Analysis
 - Water Temperature Modeling Platform
- Wrap-up

DSP Peer Review

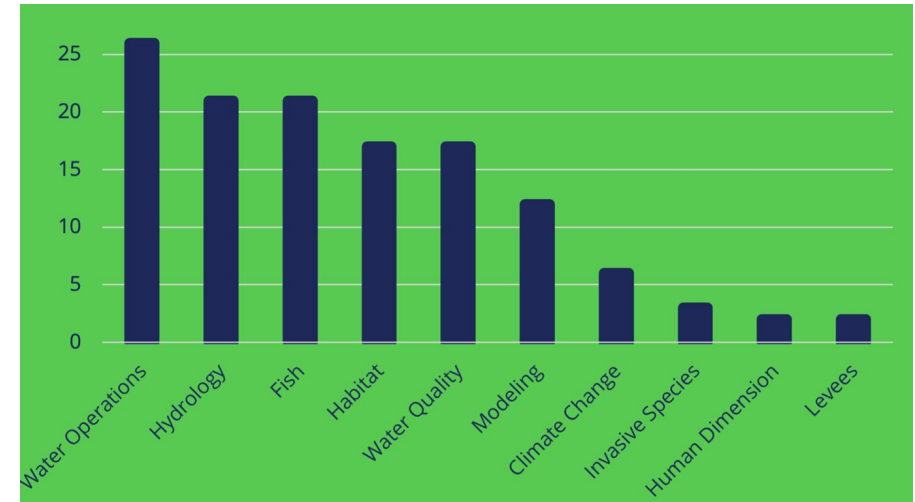
Delta Science Program's Mission

- *“provide the best possible unbiased scientific information to inform water and environmental decision making in the Delta”*
- Core functions:
 - **Independent scientific peer review**
 - Leadership in collaborative science
 - Science funding
 - Synthesis
 - Science workshops
 - Adaptive management support
 - Science communication
 - Support for the Delta Independent Science Board

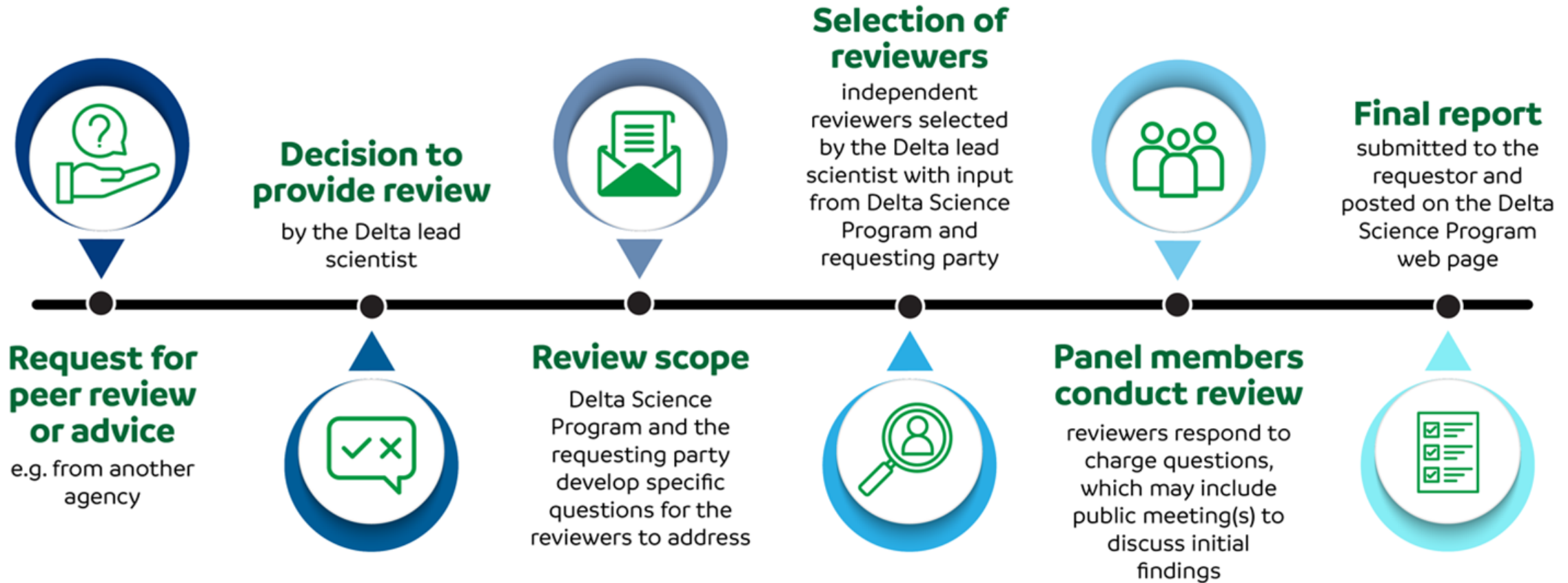


DSP Peer Review and Advice

- Since 2010, coordinated 34 peer review and advice panels
- Serve as honest broker for reviewing government science critical to decision-making
- Differing from other review efforts (e.g., Delta ISB, National Research Council), our process offers a specific charge for each review or advisory effort and full transparency



DSP peer review and advice process



Recent Reviews

DWR Delivery Capability Report (DCR)



- Goal: feedback on data and methods used to model hydrologic conditions that have changed and will continue to change as a result of climate change
- Three experts reviewed DCR in two parts:
 1. Climate Adjusted Historical Hydrology
 2. Risk Informed Future Scenarios
- May – September 2023



The DCR is used by State Water Project contractors and others to plan their water uses.

State Water Project (SWP)



- Bi-annual report of **Existing** and **Future** delivery capability over a range of hydrologic conditions
- Serves as the key planning information for SWP water users (SGMA, Integrated Regional Water Management)
- Serves as the key climate change scenario for SWP planning (Energy needs, Feasibility, CEQA)



DCR – Review Outcomes



1. Reviewers agreed that both methods were an improvement from previous methods and approaches
2. Provided important feedback on the organization and documentation of the report and analysis
3. Provided several suggestions for continued improvements that provide a “to do” list for future efforts

Why was DSP Peer Review So Useful for DCR?

- Provides users confidence that methods are sound
- Improves transparency and accountability
- Faster timeline than traditional publishing
- Greater depth of evaluation
- Greater input on scope of review and necessary expertise



Reclamation Fish & Aquatic Effects Analysis

- Goal: feedback and guidance to improve the methodology
 - Draft Environmental Impact Statement
 - Draft Biological Assessment
- Five experts co-authored a panel letter
- November 2023 – March 2024



Fish & Aquatic Effects Analysis – Key Findings

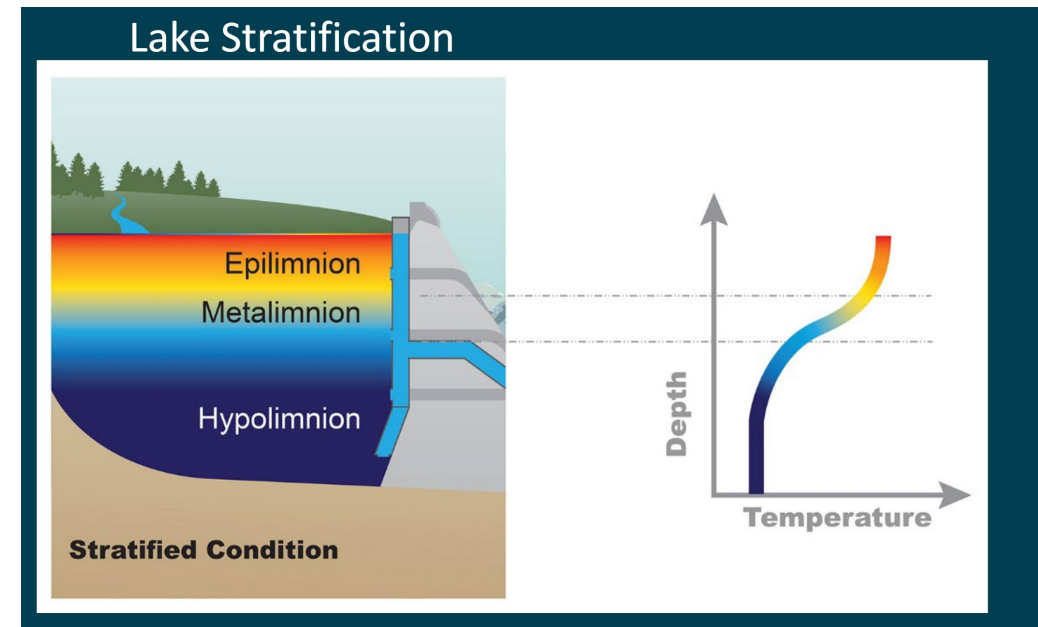
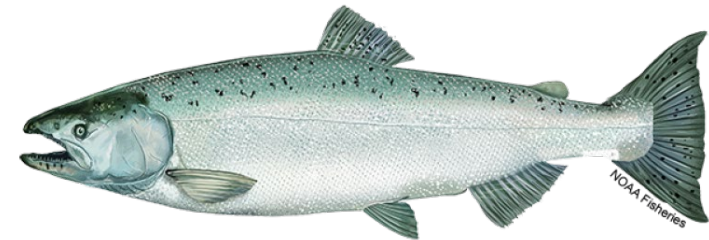
- Reclamation’s analyses could provide a sound scientific basis
- The analyses considered the major stressors on the aquatic environment and ESA-listed species
- Differences between project alternatives may have been underestimated by the models





Reclamation Water Temperature Modeling Platform

- Goals:
 1. Build confidence and trust in the development of the modeling platform
 2. Review performance and validity of temperature models, model framework, and implementation of a Water Temperature Modeling Platform
- 5-person panel joint report
- June 2022-October 2023 (2 parts - public meetings)



Top image: <https://www.fisheries.noaa.gov/video/species-spotlight-sacramento-winter-run-chinook-salmon>
Bottom image: <https://www.usbr.gov/mp/bdo/docs/cvp-wtm-selective-withdrawal-2017-09.pdf>

Water Temperature Modeling Platform – Key Findings

- Model is consistent with project objectives, adequate for water temperature management.
- Model development had been open and transparent, creating opportunities for stakeholder engagement throughout the development
- Models and data are provided to the community to bolster in-house and stakeholder capabilities



How will Reclamation use the information from the Peer Review?

- **Fish and Aquatic Analysis:** Improve the analyses used to evaluate the effects of different project alternatives on the aquatic environment and ESA-listed species; key step for adaptive management process
- **Water Temperature Modeling Platform:** Feedback supports consultation activities and real-time/seasonal operations. Immediate use to improve and enhance documentation. Long-term use will shape future development plans.

Why does Reclamation continue to utilize DSP Peer Review?

- **Department:** Meets Office of Management and Budget goals for quality of information ensuring utility and integrity of products with scientific information.
- **Organization:** Meets transparency and reproducibility objectives.
- **Execution:** Positive and successful experience. Pleased with a professional and well-organized process.

Moving Forward

DWR Summer-Fall Habitat Action (SFHA)

- Goal: feedback on methods and decision approach used for the SFHA
 - Monitoring and Science Plans
 - Structured decision making
- Four individually authored letters
- January – June 2024



Delta Science Program's Mission

- Expecting three reviews in 2025
 - Agreement with DWR into 2026
 - Developing agreement with USBR into 2029
- Improving the DSP peer review process (e.g., contracts, 2025 Delta Science Plan, summarizing outcomes)

“The reviews facilitated by the Delta Science Program play an essential role in ensuring the quality and credibility of the scientific analyses informing our consideration of tradeoffs during decision-making.”

David Mooney | Bay-Delta Office Area Manager, Reclamation



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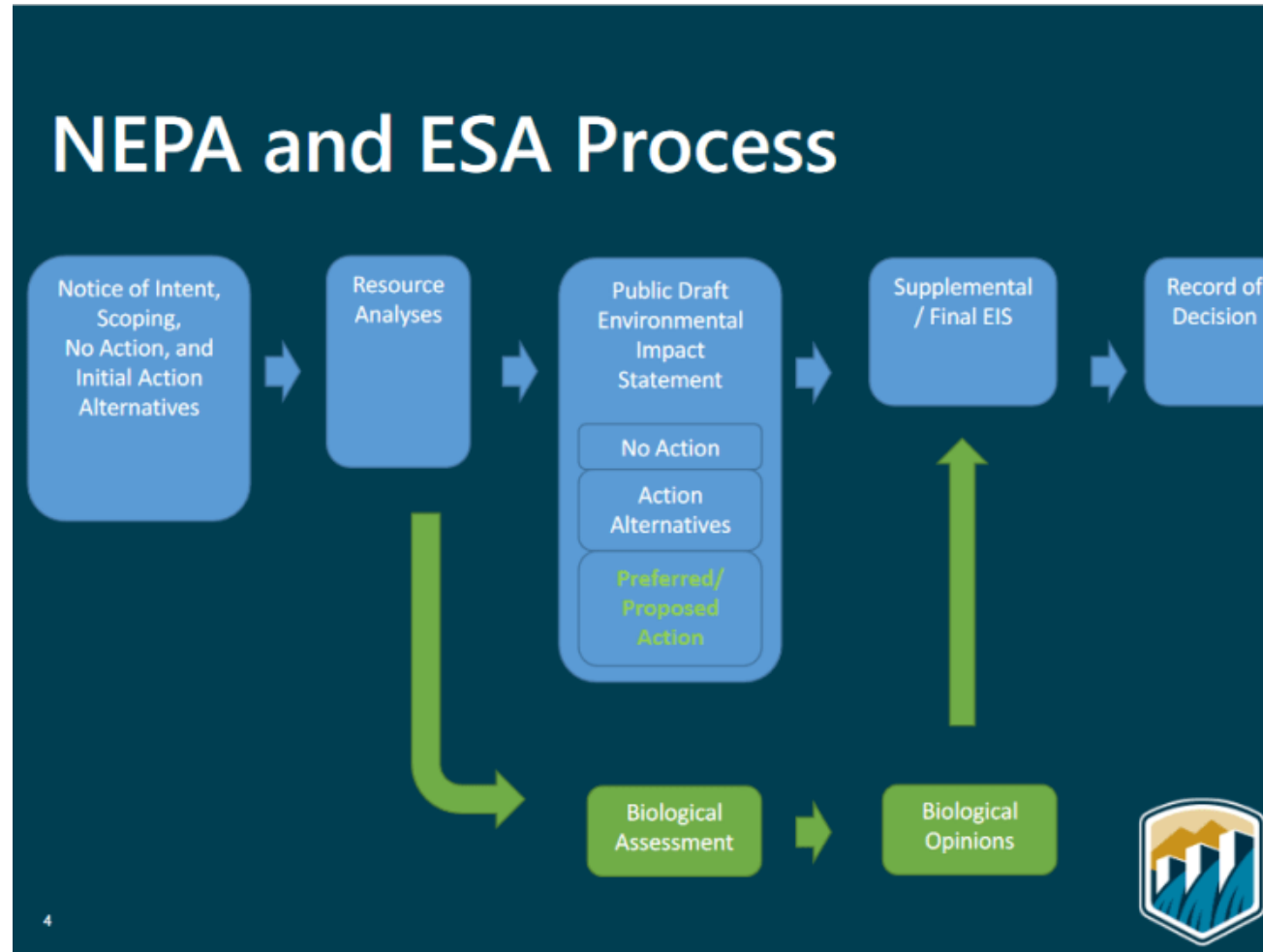
[Delta Stewardship Council](https://www.linkedin.com/company/DeltaStewardshipCouncil)



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Extra Slides

Reclamation Fish & Aquatic Effects Analysis



Source: [Maven's Notebook](#), 6/22/22

Different review services

- **Delta Independent Science Board and the National Academy of Sciences (NAS)** provide periodic, high-level reviews of programs or specific topics with broad implications for natural resource management, including adaptive management of the Delta
- **California Environmental Protection Agency** requires is required to submit their draft environmental rulemakings and scientific bases for independent scientific reviews per California's Health and Safety Code section 57004
- **California Council of Science and Technology (CCST)** follows a similar process as NAS, adapted to California; timeline and scope are adjusted as needed and the report is transmitted directly to the requesting party

Review topics

- Long-term Operations Biological Opinions (LOBO) for the Central Valley Project and State Water Project
 - Multi-step review, 2012-2015, 2017
- Bay-Delta Plan Biological Goals Scientific Advisory Panel Meeting
 - Advisory panel, 2019
- Independent Scientific Peer Review of Performance Measures for Delta Plan Ecosystem Amendment
 - Letter review, 2019

