INFORMATION ITEM

Lead Scientist Report

Summary

This month's Lead Scientist Report will feature a detailed look at the By the Numbers report to provide context, history and general background about the information presented monthly to the Council.

Delta Science Program Activities

Department of Water Resources (DWR) Summer-Fall Habitat Action Peer Review Final Letters

In March 2020, the California Department of Fish and Wildlife (CDFW) issued an Incidental Take Permit (ITP) to DWR for the continued operation of the State Water Project (SWP). A critical component of the adaptive management of the SWP is the Delta Smelt Summer-Fall Habitat Action (SFHA), designed to improve habitat conditions, including the overlap of key physical and biological attributes (e.g., salinity, turbidity, and food availability), to support the critically endangered Delta Smelt. The 2020 ITP required an independent review of the SFHA to assist the Delta Coordination Group and ITP Adaptive Management Team in improving the evaluation and adaptive management of the SFHA. The goal of this review was for a panel of experts to review the SFHA Monitoring & Science Plans methodology, as well as the decision approach for supporting SFHA recommendations.

The review began January 2024 and wrapped up late last month. The final letters were posted, and a Council listserv email announcement went out on Monday, June, 24. The Panel consisted of four members, including two members with food web ecology and fisheries expertise and two members with structured decision-making (SDM) expertise.

Overall, the food webs and fisheries experts found the SFHA Monitoring and Science Plans to be well-designed and provide a robust adaptive management framework. However, they noted opportunities to improve the sensitivity of monitoring methods, integrate a broader understanding of the food web and potential future conditions, and consider an integrated

adaptive management approach that emphasizes managing for multiple future scenarios. The SDM experts found that the SFHA team, generally, developed a strong framework for the SFHA decision and, for the most part, results were communicated effectively; however, the current process emphasizes the science behind the recovery of Delta Smelt and does not sufficiently address the specific decisions that resource managers need to make, which is the real strength of an SDM approach. The reviewers noted several potential improvements for the analysis, including methods for an iterative SDM framework that focuses more fully on adaptive management. For more information, check out this review's webpage on our website - https://deltacouncil.ca.gov/delta-science-program/summer-fall-habitat-action-monitoring-and-science-plans-and-structured-decision-making-approach-peer-review.

Delta Science Program and National Center for Ecological Analysis and Synthesis (NCEAS) Synthesis Working Group

The Delta Science Program and National Center for Ecological Analysis and Synthesis (NCEAS) held the final workshop for the (current) 2023 Synthesis Working Group on June 25, 2024 to share preliminary results from their applied data synthesis projects. The Synthesis Working Group consists of 16 early career scientists from several state agencies (Delta Conservancy, San Francisco Estuary Partnership, DWR, State Water Resources Control Board, CalEPA's Office of Environmental Health and Hazards Assessment, and California Department of Fish and Wildlife) and academia (UC Davis and UC Merced). Participants were invited to participate in a series of training workshops led by NCEAS staff in summer and fall 2023, and have since been working on two projects exploring multi-benefit approaches to managing the Delta as a social-ecological system and integrating human dimension data into research and management decision making.

As part of its core function of providing science synthesis, the Delta Science Program has partnered with the National Center for Ecological Analysis and Synthesis (NCEAS; https://www.nceas.ucsb.edu/) since 2021 to lead collaborative working groups focused on addressing address important science questions through synthesis approaches while providing training to early-career scientists and the broader science community. The 2023 Synthesis Working Group is focusing on addressing gaps in understanding the human dimensions of the Delta, identified in the Delta Social Science Community of Practice's Advancing Interdisciplinary Research Training and Workshop (https://deltacouncil.ca.gov/pdf/science-program/2023-02-01-air-event-summary.pdf), which took place in October 2022.

Final results from these projects are anticipated to be shared at the December 2024 Council meeting. Additional information about these synthesis working groups, including access to training materials, can be found on the Council's website: https://deltacouncil.ca.gov/delta-science-program/science-synthesis-working-group.

Delta Research Award Seminar Series

This summer, the Delta Science Program hosted a weekly, virtual seminar series to feature outcomes from the 2020-2021 Delta Research Awards, which totaled over $10 million in combined funds from the Delta Science Program, U.S. Bureau of Reclamation, and State Water Contractors. To improve the connection between research findings and the managers and decision-makers working on environmental and water issues related to the Sacramento-San Joaquin Delta, scientists presented seminars about how their projects addressed critical biophysical and social science knowledge gaps identified in the 2017-2021 Science Action Agenda. All seminars are recorded and posted on the Council's YouTube site: https://www.youtube.com/@DeltaCouncil/.

Three more projects are expected to present during a future seminar in spring 2025. Check our research funding and fellowships web page (https://rebrand.ly/rfaf) for the latest information.

On Your Radar

2024 Bay Delta Science Conference

Registration is now open for the 2024 Bay-Delta Science Conference, which will be held in-person at the SAFE Credit Union Convention Center (1401 K Street, Sacramento, CA 95814) from September 30 to October 2, 2024. This year's theme - "Cultivating Connections in a Dynamically Changing Environment" - recognizes the need for diverse perspectives to confront the multiple challenges in a dynamically changing environment such as the Sacramento-San Joaquin Delta. To cultivate this more holistic approach for conservation, the conference will include talks and sessions that encompass a wide variety of disciplines such as the use of traditional knowledge, identifying contaminants within and around the watershed, identifying needs of a variety of taxa, and exploring ways to mitigate climate change impacts, among other topics. Early bird registration rates are available through August 19, 2024.

While presentation abstracts are now closed, art abstract submissions are still being accepted through September 1. The Bay-Delta Science Conference will feature artwork relating to the estuary and/or the conference theme. Artists of all forms and media, including but not limited to painting, photography, sculpture, digital, music, and performance are encouraged to apply.

Stay tuned to the Council's listserv for updates and visit the conference website for details on registration and abstract submission (https://www.baydeltascienceconference.com/).

By the Numbers

Science Program staff will summarize current numbers related to Delta water and environmental management. The summary (Attachment 1) will inform the Council of recent counts, measurements, and monitoring figures driving water and environmental management issues.

List of Attachments

Attachment 1: By the Numbers

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