

INFORMATION ITEM

Lead Scientist Report

Summary

This month's Lead Scientist Report will feature updates on several Delta science activities, including feedback on the draft "Grand Challenges to Delta Science" essay, a presentation to the California Invasive Species Advisory Committee on a project funded by the Delta Science Program, and a presentation on the Delta Science Program independent scientific peer review of the Long-Term Operations for the Central Valley Project and State Water Project Fish and Aquatic Effects Analysis from a member of the Delta Independent Science Board (Delta ISB).

Delta Science Program Activities

Feedback on the Draft Grand Challenges to Delta Science

The Delta Plan directs the Delta Science Program to create a Delta Science Plan that provides vision, principles, and approaches for better Delta science. The Delta Science Plan is updated every five years, with the next iteration expected in 2025. To meet the needs of the changing Delta, the 2025 Delta Science Plan will be structured to address Grand Challenges to Delta science. The term "Grand Challenge" is defined by a 2001 National Research Council report to describe a problem that is "Compelling for intellectual and practical reasons and offer the potential for major breakthroughs in science or science governance" and to be "feasible to address given current capabilities and assuming a significant infusion of resources".

The Grand Challenges were scoped through a literature review of visionary documents written on Delta science, and an essay was released for public feedback and comment in late May (the draft essay is available on the Council website at: <https://deltascienceplan.deltacouncil.ca.gov/sites/default/files/2024-05-23-draft-grand-challenges-to-delta-science.pdf>). The comment period closed July 12, and six written comments were received as well as four responses to a survey on this topic.

Additionally, Delta Science Program staff presented an interactive poster on the Grand Challenges at the 2024 State of the Estuary Conference in May and presented on the Grand Challenges essay to the Delta Independent Science Board (ISB) in June; feedback was received at both events. In general, the comments received were positive and supported the use of the Grand Challenges to frame the 2025 Delta Science Plan. Comments also provided additional tools and strategies that can be included in the 2025 Delta Science Plan to address the Grand Challenges. Over the coming months, Delta Science Program staff will be addressing comments and incorporating feedback to release a final version of the Grand Challenges essay and to build this information into the forthcoming Delta Science Plan. The draft 2025 Delta Science Plan is expected to be released in fall 2025 and the Council will be updated throughout the process.

Evaluating the Early Detection and Rapid Response Process for Aquatic Weeds

Dr. Christine Whitcraft of California State University - Long Beach gave a presentation to the California Invasive Species Advisory Committee on July 17 about "Evaluating the EDRR (Early Detection and Rapid Response) Process for Aquatic Weeds." The project was motivated by the Delta ISB's 2021 review of "The Science of Non-native Species in a Dynamic Delta," which recommended developing "a comprehensive multi-agency invasive-species coordination and implementation plan that identifies the authority that assigns responsibilities to include monitoring, rapid response, control, and science expertise." Dr. Whitcraft's research was funded by the Delta Science Program through a Directed Action and included interviews with stakeholders as well as field and laboratory research on the ecology of ribbonweed (*Vallisneria australis*), a relatively new aquatic weed in the Delta. The project incorporates a policy process assessment delineating the process from discovery of an invasive species to its declaration and treatment with detailed recommendations on how to update the draft EDRR framework for the Delta developed by DIISCT (Delta Interagency Invasive Species Coordination Team), which is co-led by Delta Science Program staff. For more information about this project please see the associated science activity on the Delta Science Tracker (available here: <https://sciencetracker.deltacouncil.ca.gov/node/53836>).

Presentation on the Delta Science Program peer review of the Long-Term Operations for the Central Valley Project and State Water Project Fish and Aquatic Effects Analysis

On July 19, 2024, Dr. Kenny Rose provided a summary of the recently completed Delta Science Program Review of the Long-Term Operations for the Central Valley Project (CVP) and State Water Project (SWP) Fish and Aquatic Effects Analysis for the U.S. Bureau of Reclamation. The online presentation was open to the public and was designed to inform the National Academy of Sciences (NAS) Committee reviewing long-term operations of the CVP and SWP. Dr. Rose recently became a member of the Delta Independent Science Board, which also undertakes influential scientific peer reviews. Dr. Rose was the lead author for the five-member panel that conducted the review of the Fish and Aquatic Effects Analysis. In his presentation, Dr. Rose highlighted key guidance for improving the analytical approach used by Reclamation in order to better interpret results of their ecological models and impacts to Endangered Species Act listed species. He also shared the panel's overarching comments for Reclamation and listed the 27 specific species and statistical models that the panel reviewed. The presentation was extremely well-received and included high praise by former Delta Lead Scientist, Dr. Peter Goodwin, who is the chair of the NAS panel. A recording of the event can be found on the National Academies webpage:

https://www.nationalacademies.org/event/43016_07-2024_presentation-on-the-delta-science-program-review-of-the-long-term-operations-for-the-central-valley-project-and-state-water-project-fish-and-aquatic-effects-analysis.

On Your Radar

2024 California Water and Environmental Modeling Forum (CWEMF) Annual Meeting

Registration is now open for the 2024 California Water and Environmental Modeling Forum (CWEMF) Annual Meeting, which will be held at the Lake Natoma Inn in Folsom, CA on September 23-25, 2024. CWEMF is a non-profit, non-partisan organization whose mission is to increase the usefulness of models for analyzing California's water & environment related problems. This annual conference supports that mission by bringing together modelers and decision-makers to discuss a wide variety of modeling issues and solutions.

The Delta Science Program is leading the organization of a session on the last day of the meeting to share information and foster conversation about the idea of building a “Collaboratory” to support model integration and collaborative data science initiatives focused on supporting decision-making and management of the Bay-Delta system. For more information about registration and to view the full program, please visit the CWEMF website (<https://cwemf.org/wp/services/annualmeeting/>).

2024 Bay Delta Science Conference

Registration is open through September 16 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. In addition, 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.

While the original call for abstracts is closed, the call for art submissions and ‘late-breaking’ poster abstracts remains open through September 1. Stay up to date and learn more about the conference by going to the Council’s website where you can sign up to receive email announcements. Also, 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

Contact

Dr. Lisamarie Windham-Myers

Delta Lead Scientist

Phone: (916) 275-6888