



INFORMATION ITEM

Delta Independent Science Board (ISB) Welcome and Update

Summary

Dr. Lisa Wainger, who started her term as Delta Independent Science Board (ISB) Chair in September 2022, will introduce herself and provide an update on the Delta ISB's current activities, including its workplan for the year. Pursuant to the Sacramento-San Joaquin Delta Reform Act of 2009 (Delta Reform Act), the Delta ISB provides the Delta Stewardship Council's (Council) with independent scientific advice on the Delta Plan and reports findings and recommendations from Delta ISB reviews of scientific activities that support adaptive management in the Delta.

Background

As mandated by the Delta Reform Act, California Water Code sections 85000, et seq., the Delta ISB is responsible for providing oversight of the scientific research, monitoring, and assessment programs that support adaptive management in the Delta (Water Code Section 85280(a)(3)) and providing independent advice on the Delta Plan (Water Code Section 85308(a)). The findings and recommendations of the Delta ISB inform updates to, and the implementation of the Council's Delta Plan, the Science Action Agenda, the Delta Science Plan, and other Council and Council Delta Science Program efforts.

The Delta ISB reviews programs that support adaptive management by "thematic" or topical areas to meet its legislative mandate. To date, the Delta ISB has completed and presented the following thematic reviews to the Council: restoration (2013), fish and flows (2015), adaptive management (2016), levee hazards (2016), Delta as an evolving place (2017), water quality (2018), the Interagency Ecological Program (2019), non-native species (2021), the monitoring enterprise (2022), and water supply reliability estimation (2022). In addition, the Delta ISB also reviews specific science documents related to adaptive management or the Delta Plan. These reviews can be either self-initiated or based on a specific request from an

individual or entity. Furthermore, the Delta ISB periodically prepares call-to-action letters or memos to specific agencies, such as the Council, in which the Delta ISB shares emerging insights, key findings, or recommendations that require action.

As described in the Delta ISB's operating guidelines, the comments, findings, and recommendations of the Delta ISB are expected to increase scientific credibility, improve research clarity, advance the debate about Delta issues, and seek better connectivity between science, management, and policy. The communication and relationship between the Council and Delta ISB are critical for helping to inform the Council's work.

Since the last update to the Council in June 2022, Dr. Stephen Brandt's term as Chair concluded; Dr. Jay Lund and Dr. Joe Fernando concluded their terms on the Delta ISB in October 2022 after serving 10 years. In September 2022, Dr. Lisa Wainger's term as Chair began, and in November 2022, the Delta ISB welcomed two new members: Dr. Anna Michalak and Dr. Inge Werner, who was elected Chair-elect in March 2023 and will begin her term as Chair in September 2024. At the Council meeting, Dr. Lisa Wainger will introduce herself and will provide an update on the Delta ISB's recent activities, including its workplan for the year.

Recently Completed Delta ISB Reviews

Since the last update to the Council in June 2022, the Delta ISB has conducted three reviews:

1. Draft Environmental Impact Report for the Delta Conveyance Project (Attachment 1; completed December 2022)
2. Draft Environmental Impact Statement for the Delta Conveyance Project (Attachment 2; completed March 2023)
3. Draft Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan (Attachment 3; completed March 2023)

Each completed review is attached, and highlights of each review are below.

[Draft Environmental Impact Report for the Delta Conveyance Project](#)

In July 2022, the California Department of Water Resources released its draft Environmental Impact Report for the Delta Conveyance Project, which involves constructing and operating new State Water Project conveyance facilities in the Delta. The Delta ISB assessed the scientific rigor used in the draft Environmental Impact Report and submitted its review to the California Department of Water Resources in December 2022. The Delta ISB found that the draft Environmental Impact Report shows some improvement in analytic approaches relative to past Environmental Impact Reports conducted for prior proposed Delta conveyance projects. However, the Delta ISB found that the draft Environmental Impact Report has major limitations in that it lacks the information necessary to fully support some conclusions regarding impacts.

In particular, the Delta ISB found that it lacks 1) clear illustrations of how the proposed project achieves the water supply and environmental benefits claimed; 2) clear evidence to support some of the findings of less than significant impacts; and 3) clear descriptions of uncertainty stemming from climate effects, mitigation effectiveness, analytic methods, and incomplete quantitative and mechanistic understanding of some underlying processes and relationships. For the full review, please refer to Attachment 1.

[Draft Environmental Impact Statement for the Delta Conveyance Project](#)

In March 2023, the Delta ISB submitted its review of the Environmental Impact Statement for the Delta Conveyance Project to the United States Army Corps of Engineers, who released it for public review in December 2022. For this project, an Environmental Impact Statement is required for the National Environmental Policy Act, while an Environmental Impact Report is required for the California Environmental Quality Act.

The Delta ISB found that the Environmental Impact Statement relies heavily on the analyses and conclusions of the draft Environmental Impact Report and that major comments and concerns from the Delta ISB's review of the draft Environmental Impact Report apply to the draft Environmental Impact Statement. Relative to the draft Environmental Impact Report, the draft Environmental Impact Statement showed several improvements. The cumulative analysis was somewhat more comprehensive, and the presentation of the material was clear and concise,

although the scope of results is narrower than in the draft Environmental Impact Report. However, there were some specific concerns specific to the Environmental Impact Statement. For example, the draft Environmental Impact Statement emphasizes the impacts of construction, rather than project operations, on outcomes. This concern is particularly acute for understanding the projected impacts on the aquatic ecosystem and for evaluating the effectiveness of mitigation efforts. For the full review, please refer to Attachment 2.

Draft Scientific Basis Report Supplement in Support of Proposed Voluntary Agreements for the Sacramento River, Delta, and Tributaries Update to the San Francisco Bay/Sacramento-San Joaquin Delta Water Quality Control Plan

The State Water Resources Control Board is in the process of updating the Bay-Delta Water Quality Control Plan for the Sacramento River, Delta and tributaries. In 2022, the State Water Resources Control Board received a Memorandum of Understanding for proposed Voluntary Agreements for updating and implementing the Bay-Delta Water Quality Control Plan from various water users in the watershed, and several state and federal agencies. The first step in considering the Voluntary Agreements is the development of a scientific basis report, which was released by the State Water Resources Control Board in January 2023. The draft scientific basis report supplement documents the science supporting the provisions included in the proposed voluntary agreements. The Delta ISB completed its review of the scientific basis for implementing the Voluntary Agreements, which covers both the MOU and the draft scientific basis report in March 2023, which can be found in Attachment 3.

Overview of the Delta ISB Workplan

In 2023, the Delta ISB plans to continue its work on three thematic reviews: (1) subsidence reversal, (2) food-webs, and (3) decision-making under deep uncertainty. Prior to undertaking a major review, the Delta ISB will prepare a brief prospectus describing the review purpose and process based on engagement with interested parties including agencies and stakeholders. The topic and scope of these thematic reviews may change, as the Delta ISB considers public input prior to finalizing the prospectus for each review.

In addition, the Delta ISB plans to continue its work on the Science Needs Assessment. Throughout 2023, the Delta ISB will also consider other requests from the Delta Stewardship Council and other entities in the region. Full details can be found in the workplan in Attachment 4, and highlights are below. The workplan, including the scope of the activities, is subject to change, as the Delta ISB continues discussing the efforts and solicits public comments on draft prospectuses.

[Subsidence Reversal](#)

Subsidence is particularly pronounced in the Central Delta where approximately 50,000 acres of agricultural land lie several meters below sea level, protected by over 1,000 miles of levees. A broad cross-section of stakeholders, including both public agencies and private sector parties, are developing approaches to mitigate subsidence. The purpose of this review is to support ongoing and future subsidence management efforts by summarizing, examining, and assessing the existing or planned programs, barriers and opportunities, state of scientific understanding, and the scientific gaps and deficiencies of interconnected areas of subsidence. This review will be based on synthesizing information from panel presentations and public discussions with invited experts at a two-day public workshop.

[Food-webs](#)

Food web interactions are central to understanding how environmental drivers and management actions affect the abundance of individual species. The purpose of this review is to assess the importance of food web interactions in the Delta and to identify where improved understanding and tools (e.g. primarily food web models) might substantially improve predictions of species' responses to environmental drivers and management actions. This review will be based on synthesizing information from panel presentations and public discussions with invited experts at a two-day public workshop, which will be informed by a literature review and stakeholder discussions.

[Decision-making under Deep Uncertainty](#)

This review will build an understanding of scientific tools and concepts that can inform management and policy decision-making under rapid change and increasing uncertainty of future forecasts. Deep uncertainty is system variability that cannot

be well characterized with existing data, models, and understanding. Activities will include public seminars and workshops, a survey and analysis of current uncertainty and scenario planning efforts in the Delta, and discussions with members of the Delta scientific and management communities. Insights gained through these activities will be summarized in a report with recommendations to help the Delta science and management community better characterize, prepare for, and adapt to uncertainty for a range of management needs such as salinity management, water supply, and ecosystem goals.

To help inform the review, the Delta ISB, with support from the Delta Science Program, is hosting a seminar series to explore concepts from decision-making under deep uncertainty and present tools that can help managers and stakeholders evaluate and plan for a wide range of plausible futures in the Sacramento-San Joaquin Delta. The series will kick off on **April 26 from 12:00 PM-1:00 PM** with a presentation by Alice Hill from the Council on Foreign Relations, who formerly served as a special assistant to President Barack Obama. Hill will provide an overview of the challenges and benefits of planning for extreme events and effective ways to organize government entities around these issues. [See the flyer for more information](https://deltacouncil.ca.gov/pdf/isb/flyer/2023-04-23-isb-dmdu-save-the-date-flyer.pdf) (<https://deltacouncil.ca.gov/pdf/isb/flyer/2023-04-23-isb-dmdu-save-the-date-flyer.pdf>).

Science Needs Assessment

Based on the [recommendations from the Delta ISB](https://deltacouncil.ca.gov/pdf/isb/products/2019-02-11-isb-letter-to-dpiic.pdf) (<https://deltacouncil.ca.gov/pdf/isb/products/2019-02-11-isb-letter-to-dpiic.pdf>) and the endorsement of the Delta Plan Interagency Implementation Committee (DPIIC), a long-term Science Needs Assessment (SNA) is being developed, as part of the [DPIIC Delta Science Funding and Governance Initiative](https://www.deltacouncil.ca.gov/pdf/dpiic/meeting-materials/2020-03-03-final-dsfgi.pdf) (<https://www.deltacouncil.ca.gov/pdf/dpiic/meeting-materials/2020-03-03-final-dsfgi.pdf>). The SNA will identify key science efforts to provide long-term management insights in the context of rapid environmental change and recommendations for organizing the science enterprise to better address complex and changing problems. In 2023, a discussion summary will be developed based on a 2020 workshop and seminar series, as well as the post-workshop discussions. Subsequently, the discussion summary will be provided to the Delta ISB for review and possible next steps on the SNA.

Fiscal Information

Not applicable.

List of Attachments

Attachment 1: Review of the Draft Environmental Impact Report of the Delta Conveyance Project

Attachment 2: Comments on the Delta Conveyance Project Draft Environmental Impact Statement

Attachment 3: Comments on the Scientific Basis for Implementation of Voluntary Agreements in the California Delta

Attachment 4: 2023 Delta Independent Science Board Annual Workplan

Contact

Lisa Wainger, Ph.D.

Chair, Delta Independent Science Board

Phone: (916) 902-6571