



Building an Effective Delta Science Enterprise:

Long-Term Science Needs Assessment Workshop

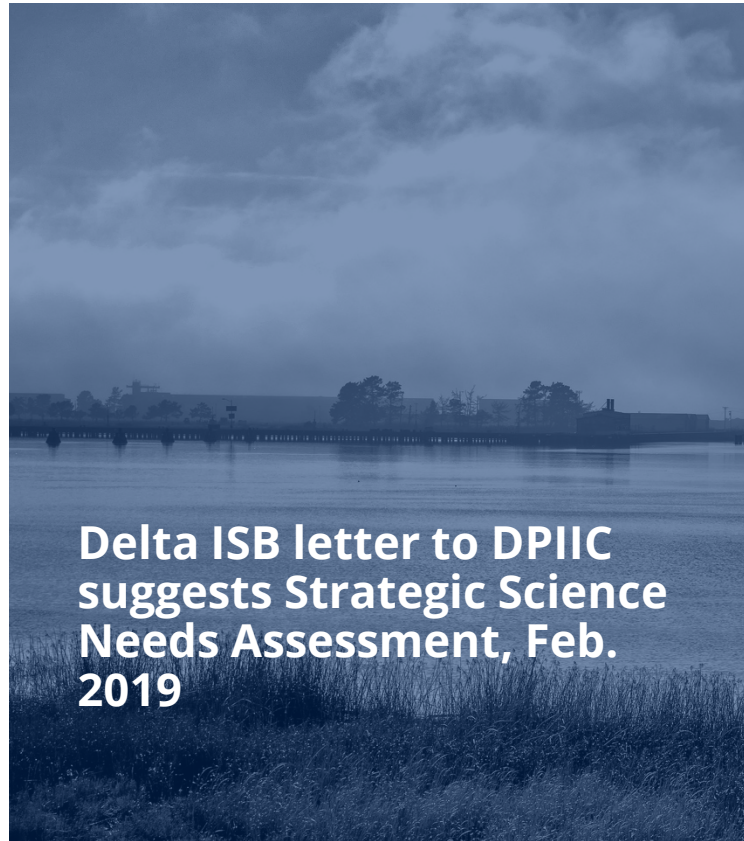
*Delta Plan Interagency
Implementation Committee
October 26, 2020*



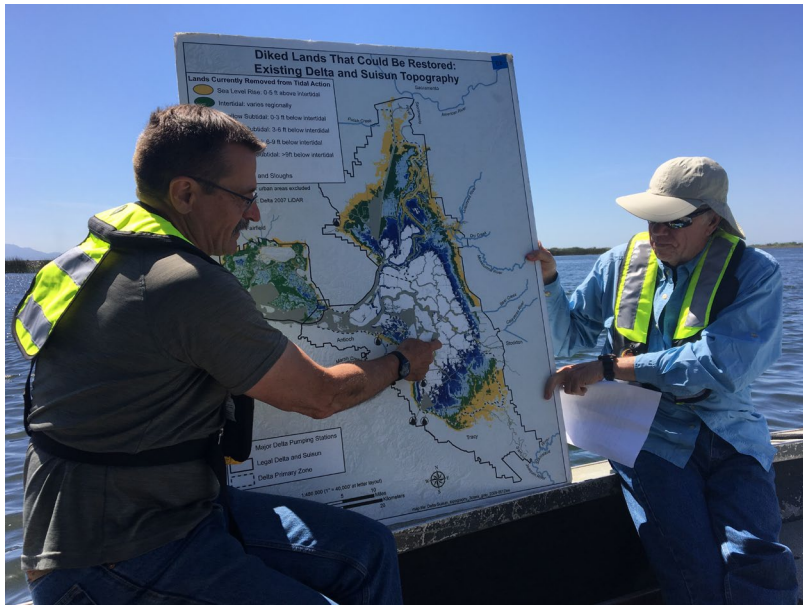
**Delta
Stewardship
Council**

A CALIFORNIA STATE AGENCY

STRATEGIC SCIENCE NEEDS ASSESSMENT ORIGINS



Delta ISB:
Urgency &
opportunities for
improving Delta
interagency science &
technology integration



Environmental conditions are changing at an increasing rate

- Climate change, sea level rise, new invasive species, shifts in land use, increasing demands for water

Bolder, forward looking and better integrated science program to address these Delta's challenges, which routinely span the mandates of multiple agencies

- Scientific Leadership and Vision
- Identification of major scientific priorities
- Structures to greatly enhance interagency science integration

Comprehensive Science Needs Assessment

- Based on fundamental system-wide scientific and management challenges facing the Delta
- Identify future Delta conditions and changes in fundamental driving forces
- Identify science needs to forecast/predict how the delta might change under these conditions
- Include stakeholder engagement
- Multi-agency effort to provide leadership and an effective structure for creative scientific and technical integration.



CURRENT PLANNING TEAM

Amanda Bohl, Delta Stewardship Council

Stephen Brandt, Delta ISB

John Callaway, Delta Lead Scientist

Michael Chotkowski, U.S. Geological Survey

Henry DeBey, Delta Science Program

Larry Goldzband, San Francisco Bay
Conservation and Development Commission

Josh Israel, U.S. Bureau of Reclamation

Rachael Klopfenstein, Delta Science Program

Mark Lubell, U.C. Davis

Jay Lund, Delta ISB

Dick Norgaard, Delta ISB

Cheryl Patel, Delta Science Program

Lynda Smith, Metropolitan Water District

Brittany Young, Delta Stewardship Council

Edmund Yu, Delta Science Program



DISCUSSION SERIES TOPICS

What do we know about projected climate change impacts on the Delta?

April 28

What questions does that raise for management decisions? What do managers need to know? **June 3**

What science needs to be done to give management answers? **July 28**

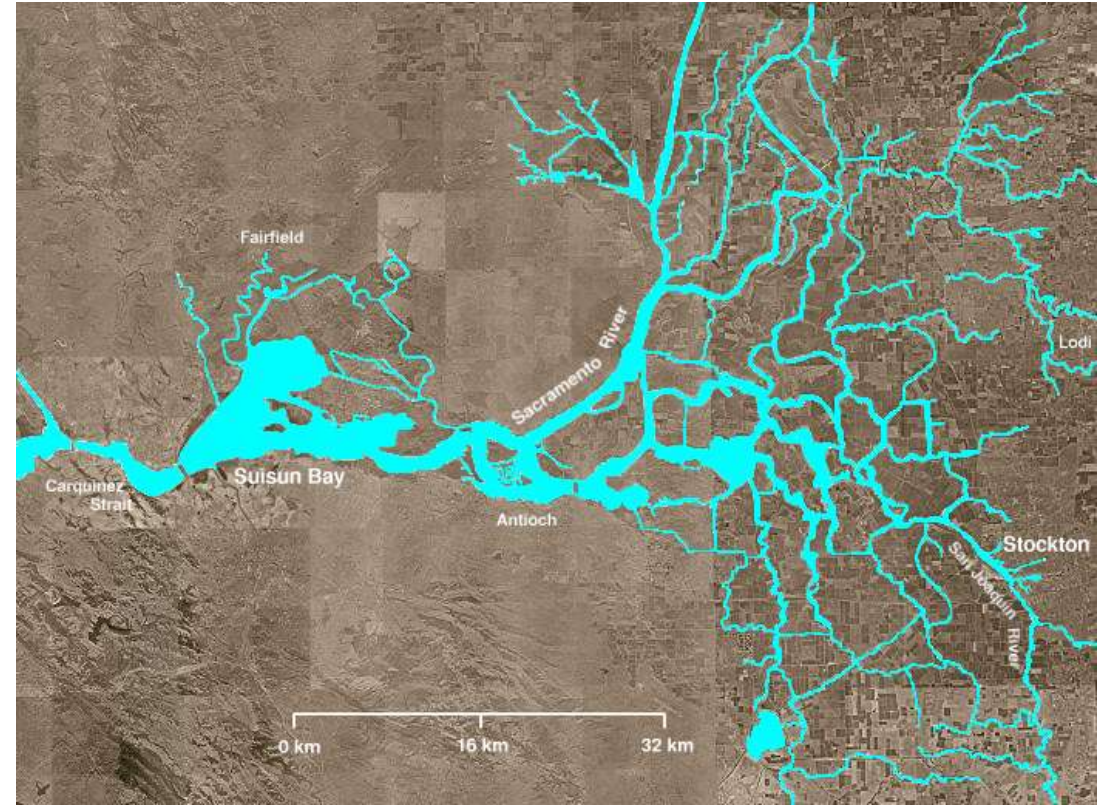
What changes are needed for science governance, funding, and necessary integration? **September 9**



Workshop: October 5-6, 2020

Identify key science needs/capacity/tools that will provide answers and insights for likely management questions under a changing Delta.

Discuss how to organize the science enterprise to better address these complex and changing problems.



Plenary Panel

1. What is your advice on developing a science needs assessment?
2. How can we make the science needs assessment effective for policy makers?

Felicia Marcus

William C. Landreth Visiting Fellow at Stanford University's Water in the West Program and Former Chair, State Water Resources Control Board

Ernest Conant

Mid-Pacific Regional Director, U.S. Bureau of Reclamation

Peter Goodwin

Professor and President of Maryland Center for Environmental Science and former Delta Lead Scientist

Breakout Sessions Day One

What do we need to know to support the future decisions?

1. Water supply management
2. Flood management
3. Habitat management
4. Native species management
5. Non-native/invasive species management
6. Water quality management
7. Land use management
8. Delta as an evolving place



Breakout Questions

1. In the long-term (>10 to 15 years), rapid environmental change might cause crises in management. What can we do to better prepare our science enterprise to support decision-making in such crises?
2. Do we have the monitoring, research, modeling, and decision-support capabilities or approaches that are needed at this time to effectively inform future decision makers? If not, what is missing? If so, what capabilities and approaches do we have?
3. What scientific capabilities do we need, so that science can prepare for problems that will arise with future environmental change?



Breakout Sessions Day Two: Scientific Enterprise

We do we develop a structure to support, encourage and accomplish our science needs?

1. Coordination opportunities
2. Funding
3. Institutional change
4. Science enterprise leadership
5. Data management



Next Steps:

Now: Review Workshop and Discussions input

October 26: Brief DPIIC (Brandt – Delta ISB and Chotkowski – USGS)

Fall: Draft Report

Early 2021: Final Report

Recommendations to DPIIC and to the **Science Action Agenda** for strategic priorities