

## Update on Delta Science Program Activities

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**Summary:** This report describes past and upcoming key Delta Science Program activities.

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### *Past Activities*

#### **CWEMF Annual Meeting**

The 21st annual meeting of the California Water Environment Modeling Forum (CWEMF) was held March 9-11 in Folsom. This meeting brings engineers, scientists, and computer programmers together to share the latest progress on the computer models that help us understand and predict water supplies, water quality, and aquatic ecosystems. Various modeling efforts and water-related topics were presented this year including:

- integrated water resource models
- climate change impact models
- water quality models
- model calibration methods
- salmonid conservation method studies
- California water plan updates

For more information, please see: <http://www.cwemf.org/Activities/annualmtg.html>

#### **Delta Challenges Workshop**

On March 16, 2015, the Delta Science Program convened the Delta Challenges Workshop, an independent science panel workshop which focused on summarizing the state of knowledge concerning risks and challenges facing the Bay-Delta system. The workshop, held in Sacramento, consisted of panel presentations concerning three central topics and their associated challenges:

- The Delta's agricultural, land use, cultural and recreational characteristics
- Water supply reliability
- Preserving and restoring the Delta's ecosystem.

Eighteen scientists participated in presentations and discussions throughout the day. Detailed discussion topics included Delta land use demographics, levees, climate change effects on the economy of water operations and supply, hydrodynamics, water quality, salinity, food web, and the interaction of fish and birds on the ever-changing Delta habitat.

The workshop's author panel comprises the 4 previous CALFED/Science Program lead scientists (Drs. Sam Luoma, Johnnie Moore, Mike Healey, and Cliff Dahm), who are

now tasked with distilling the information presented at the workshop into a concise, readable report, which describes the complexities of the Bay-Delta system. The panel's report is expected to be released to the public by the end of May and presented to the Delta Stewardship Council at the June meeting.

### **IEP Annual Workshop**

The Interagency Ecological Program, a collaborative effort of ten member agencies working together to develop a better understand of the Bay-Delta estuary's ecology hosted its annual workshop on March 18-20 in Folsom. The workshop provides an opportunity to learn and understand the recent findings on the ecology of the Delta conducted by various agencies and research groups. This year's workshop included topics such as:

- Advancing understanding of Delta Smelt life-cycle and ecology including effects of drought, temperature, turbidity, and salinity on smelt survival and distribution
- Emerging technology to inform delta fish management including pattern recognition and high-resolution remote sensing
- Fish entrainment evaluation methods including an overview of the State water Project and Central Valley Project fish salvage facilities
- Recent advancements in monitoring techniques and comprehensive modeling approaches to understand the Delta ecosystem
- Effects of the drought on salmonid management
- Food web dynamics including effects of herbicides and nutrients on primary and secondary productivity

For more information please see: <http://www.water.ca.gov/iep/>

#### *Upcoming Activities*

### **Integrated Modeling for Adaptive Management of Estuarine Systems Workshop**

The National Science Foundation is sponsoring an Integrated Modeling Workshop from May 21-22 in Davis. This workshop, which brings together expertise from around the world and across California, will explore the problems and prospects for improving the development and application of modeling for multipurpose management of changing estuarine systems.

Topics of discussion will include:

- Community modeling
- Public domain models and data
- Integrated environmental modeling

Both scientific technique and institutional organization of modeling and data development activities will be covered, including governmental, academic, NGO, private, and stakeholder perspectives. Directions for improved management of model

and data development and use will be identified and discussed. For more information, please see: <http://IntegratedModeling.ucdavis.edu>.

### **Update on Data Summit Vision Paper**

The Delta Stewardship Council hosted an environmental data summit on June 5-6, 2014 to explore challenges identified by the Delta Science Plan regarding data management and integration with a focus on the environmental resource management sector. The summit resulted in a vision document, *Enhancing the Vision for Managing California's Environmental Information*, which synthesizes the current state of data management in California and describes examples, practices, and recommendations that focus on California's Delta as an ideal example for yielding meaningful results in the face of pressing challenges.

The goal of this vision paper is to provide a platform from which agencies may seek guidance in maintaining a sustainable data management system through collaborative data management and adoption of a robust business strategy to promote ongoing improvements. The document has gained traction among several state agencies and organizations including the Office of Planning and Research, the Energy Commission, the California Water Monitoring Council, the Department of Water Resources, and Caltrans in implementing the recommendations.

The document has just recently undergone public review and is expected to be completed within the next couple months. As the vision paper reaches its final stages, the Delta Stewardship Council looks forward to the next steps, which involve identification of champion agencies and organizations that will collectively move towards implementing this document to form an advanced system of data management.

### **State of Bay Delta Science**

*The State of Bay-Delta Science (SBDS)* is a synthesis of the current scientific knowledge of the Delta, emphasizing progress made on key research questions and remaining knowledge gaps. The document will be regularly updated and augmented by relevant science experts. The first edition of SBDS, published in 2008, became a foundational reference for people involved in research and management of the Delta. *SBDS, 2015* is planned for publication as a special issue of the San Francisco Estuary and Watershed Science online journal in spring 2016. This updated version will contain 15 chapters that reflect the most important things learned in the past decade, where we stand, and what we still need to know.

### **State of the Estuary Conference**

This conference, hosted by the San Francisco Estuary Partnership, will be held on September 17-18, in Oakland. The conference is held every two years with a focus on the management and ecological health of the San Francisco Bay-Delta Estuary and provides up to date information about research, political and scientific impacts on

environmental policy, and priority ecosystem management issues regarding the Estuary. Of note are two anticipated sessions where the lead authors of the SBDS will provide an overview of each chapter with an opportunity to receive feedback regarding the issues presented in the report from managers and scientists.

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