

Delta Challenges Report

Summary: This briefing includes a summary of the recently released report, *Challenges Facing the Sacramento-San Joaquin Delta: Complex, Chaotic, or Simply Cantankerous?* written by four former CALFED/Delta Science Program lead scientists: Sam Luoma, Cliff Dahm, Mike Healey, and Johnnie Moore.

Background

At the request of the California Natural Resources Agency, US Department of the Interior and the National Marine Fisheries Service, the Council's Delta Science Program convened the [Delta Challenges Workshop](#) in March 2015. The purpose of this effort was to have an independent panel summarize the risks and challenges facing the Bay-Delta system in a single, concise report. Numerous reviews, reports and articles describe the stressors and risks facing the contemporary Delta, but the information is spread across diverse publications, journal articles, and lengthy technical reports. The information had not previously been presented in a highly concise, readable way accessible to members of Congress, legislators, their staff and the public who may have thought the issues in the California Delta were contentious but not necessarily complex.

The four former CALFED/Delta Science Program lead scientists – Drs. Sam Luoma, Cliff Dahm, Mike Healey, and Johnnie Moore – were invited to participate in the workshop and coauthor the summary report. The workshop featured a series of panels with experts from federal, state and local agencies and non-governmental organizations. Each panel had a separate focus, including 1) the Delta's agricultural, land use, cultural, and recreational characteristics and their challenges, 2) water supply reliability and its challenges, and 3) protecting, restoring, and enhancing the Delta ecosystem and its challenges.

Today's Briefing

Today's briefing will provide a summary of the report from Dr. Dahm, current Delta Lead Scientist and one of the report's coauthors.

The report details challenges facing the Bay-Delta system within the context of the physical, water supply, water quality, ecological and institutional complexity of the Delta – and how this complexity makes it impossible to address challenges individually. According to the report, “managing the water supply system alone is complicated, but add in the imperative to sustain the ecological and social values of the Delta and every decision becomes unimaginably complex.” This complexity led the authors to call the Delta's problems “wicked,” meaning they have “no single correct characterization and no single correct solution, only better or worse approaches to management of the situation.”

California's water supply is over-allocated, its water management infrastructure is decaying and overtaxed, and native ecosystems and species are declining. The Delta is the hub of the state's water distribution system, but challenges in the Delta have cascading consequences not just within California, but throughout the nation and the world because of the dependence of California's economic output and agricultural production on water supplied from the Delta.

The authors note that throughout decades of conflict over water issues in the Delta there has been a strong recognition of the importance of advancing the state of scientific knowledge. While the Delta is one of the most intensively studied systems in the world, key uncertainties remain not only in predicting responses of at-risk species, particularly as baseline conditions shift with both natural cycles and climate change, but also of the kinds of watershed management approaches to be taken.

Current management of the Delta is unsustainable and the current drought highlights the limitations of traditional approaches that consider solutions in isolation. The report makes a call for "more nimble and better coordinated management" of the Delta, noting that "any management action typically leads to new complexities that must also be managed." However, the authors are optimistic that "California has the tools and the intellectual resources to manage the multiple dimensions of the problem and thereby achieve the state's twin goals of a reliable water supply and an ecologically diverse Delta ecosystem."

In addition to producing a print publication, the report underwent peer review and was published in the [September 2015 issue](#) of *San Francisco Estuary and Watershed Science*. The report also will form the first chapter for the upcoming *State of Bay Delta Science, 2016*.

The Delta Challenges Report will be presented and discussed by the leaders of 17 state and federal agencies at the upcoming Delta Interagency Implementation Committee (DPIIC) meeting on Nov. 16, 2015.

List of Attachments

Attachment 1: *Challenges Facing the Sacramento-San Joaquin Delta: Complex, Chaotic, or Simply Cantankerous?* <http://deltacouncil.ca.gov/docs/delta-challenges>

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