

A Delta Science Plan

Multiple frameworks for science in the Delta have been proposed, but a comprehensive science plan that describes how scientific research, monitoring, analysis, and data management will be coordinated among entities has yet to be developed. Currently, science efforts in the Delta are performed by multiple entities with varying missions and mandates and without an overarching plan. The National Research Council (NRC) found that “only a synthetic, integrated, analytical approach to understanding the effects of suites of environmental factors (stressors) on the ecosystem and its components is likely to provide important insights that can lead to enhancement of the Delta and its species” (NRC 2012). Therefore, a comprehensive science plan for the Delta is needed to organize and integrate ongoing scientific research, monitoring, and learning about the Delta as it changes over time.

A Delta Science Plan will guide efficient use of resources for balancing investments in addressing short-term science needs and those that build understanding over the long run. This plan will address effective governance for science in the Delta, strategies for addressing uncertainty and conflicting scientific information, the prioritization of research, near-term science needs, financial needs to support science, and more. Such a plan is essential to support the adaptive management of ecosystem restoration and water management decisions in the Delta.

More about the Delta Science Plan is provided in recommendation G R1 in this chapter.

Policies and Recommendations

Problem Statement

Currently, science efforts in the Delta are performed by multiple entities with multiple agendas and without an overarching plan for coordinating data management and information sharing among entities. Increasingly, resource management decisions are made in the courtroom as conflicting science thwarts decision making and delays action. Multiple frameworks for science in the Delta have been proposed, but a comprehensive science plan that integrates and organizes ongoing scientific research, monitoring, analysis, and data management among entities has yet to be fully formulated.

Recommendations

G R1 Development of a Delta Science Plan

The Delta Stewardship Council’s Delta Science Program should develop a Delta Science Plan by December 31, 2013. The Delta Science Program should work with the Interagency Ecological Program, Bay Delta Conservation Plan, California Department of Fish and Game and other agencies to develop the Delta Science Plan. To ensure that best science is used to develop the Delta Science Plan; the Delta Independent Science Board should review the draft Delta Science Plan.

The Delta Science Plan should address the following:

- ◆ A collaborative institutional and organizational structure for conducting science in the Delta
- ◆ Data management, synthesis, scientific exchange and communication strategies to support adaptive management and improve the accessibility of information
- ◆ Strategies for addressing uncertainty and conflicting scientific information
- ◆ The prioritization of research and balancing of the short-term immediate science needs with science that enhances comprehensive understanding of the Delta system over the long term
- ◆ Identification of existing and future needs for refining and developing numerical and simulation models along with enhancing existing Delta conceptual models (e.g., the Interagency Ecological

Program (IEP) Pelagic Organism Decline (POD) and the Delta Regional Ecosystem Restoration Implementation Plan (DRERIP) models)

- ◆ Recommendations on an integrated approach for monitoring that incorporates existing and future monitoring efforts
- ◆ An assessment of financial needs and funding sources to support science