



● Bay-Delta Management Report

Summary

This report provides a summary of activities related to the Bay-Delta for March 2018.

Purpose

Informational

Detailed Report

Long-Term Delta Actions

California WaterFix

Staff continues to work with the California Department of Water Resources (DWR) and other state and federal public water agencies to consider finance options for implementation of the CA WaterFix program, including possible staged construction. Staff continues to evaluate and analyze the options to advance informed decision-making by Metropolitan's Board.

The CA WaterFix Petition proceedings before the State Water Resources Control Board are ongoing. Part 2 of the hearings, which consider the effects of the proposed project on fish and wildlife, resumed on February 22 2018. Staff is continuing to review the information presented by hearing participants and is coordinating with other State Water Project contractor agencies to participate in the hearings.

Near-Term Delta Actions

Science Activities

Bay-Delta Initiatives staff attended the Interagency Ecological Program (IEP) annual science workshop in Folsom on March 6-8. Science projects linked to Metropolitan's Delta science efforts were well represented at the conference. Highlights of the conference linked to Metropolitan's science efforts included the following:

- The IEP workshop included a session on recent longfin smelt research. Most of the presentations represented a science effort supported or funded by Metropolitan. Topics included the results of longfin smelt sampling efforts in San Pablo Bay and South Bay, otolith analysis of longfin smelt to understand movement, and comparisons of longfin smelt genetics in the San Francisco Bay versus longfin smelt populations farther north. Corey Phillis, from Metropolitan's Bay-Delta Initiatives staff, gave a presentation showing how data on larval smelt habitat in the upper San Francisco Bay could be extrapolated to suggest areas on the lower Bays where longfin smelt larvae might be caught.
- Staff co-authored several poster presentations addressing predation hot spots for salmon; fish misidentification and potential implications for monitoring within the San Francisco Estuary; analysis of historical variation in chlorophyll concentration and zooplankton abundance in the Bay-Delta Estuary; and monitoring activities during 2017 fall outflow conditions.
- Other poster presentations addressed science projects funded by Metropolitan, including estimating effective population size of Delta smelt and evaluating changes in the pelagic fish community structure throughout the day and night within San Pablo Bay.

Staff attended the California Nevada Chapter of the American Fisheries Society 2018 Annual Meeting in San Luis Obispo, held February 28 to March 3. The meeting included presentations and posters of new and upcoming research regarding aspects of the ecology in the San Francisco Estuary. Research on listed species and species of special concern was presented such as for green sturgeon, Delta smelt, chinook salmon, and pacific lamprey.

Board Report (Bay-Delta Management Report)

Researchers at Oregon State University published a paper commissioned by Metropolitan. The paper is entitled, “Fitting N-mixture models to count data with unmodeled heterogeneity: Bias, diagnostics, and alternative approaches” and it was published in the Journal *Ecological Modeling*. The paper is an analysis of statistical methods for evaluating fish survey data and identifies drawbacks in analysis of fish survey data when detectability and sample sizes are low.

Metropolitan staff participated in planning and development of the Disease in Pacific Salmonids: Research, Monitoring, and Management workshop, which took place on March 14-15, and was sponsored by the Delta Science Program, UC Davis Coastal and Marine Science Institute, and Metropolitan. On March 14, the workshop included a series of presentations by researchers leading their field in disease ecology research on salmonids from the Central Valley, Klamath Basin, Columbia Basin, Fraser River in British Columbia Canada, Ireland, and Chile. Some of the take home points include: disease has been linked to population level declines of salmonids in other systems; there is poor monitoring of disease in the Central Valley despite the fact that there is evidence that disease plays a role in juvenile salmon mortality in certain rivers (Feather and Sacramento Rivers) under certain environmental conditions (drought); understanding disease impacts requires using multiple methods and approaches (pathology, histology, molecular techniques, water sampling, fish sampling, etc); it is difficult to tease apart prevalence vs mortality (many fish carry disease but are not negatively affected); disease when combined with other stressors (warm water temperatures, containments) can reduce a fish physiology status and lead to direct or indirect mortality (e.g. predation); and it is important to be transparent about disease data and communicate studies and results to stakeholders, managers, and policy makers.

Staff continued participation in the Collaborative Science and Adaptive Management Program, including participation on the Collaborative Adaptive Management Team (CAMT). March activities focused on review of draft technical work products and initiation of CAMT projects for 2018. Staff reviewed and provided comments on the CAMT draft Delta Smelt Entrainment Study report. The study suggests that factors of exports, hydrology, precipitation, and abundance correlate with Delta smelt salvage. With funding contributions from the State Water Contractors, CAMT initiated a project to develop a long-term monitoring and science plan to assess the effects of ambient conditions and management actions on Delta smelt habitat quality and vital rates. CAMT also submitted a proposal to the Delta Conservancy to request funding for a project to identify near-term and long-term priorities for habitat restoration in the Delta to benefit juvenile salmonids.

Staff provided comments on the Draft Delta Nutrient Research Plan, January 2018, developed by the Central Valley Regional Water Quality Control Board. The purpose of the plan is to identify priority nutrient related science and monitoring activities that are needed to inform future nutrient management decisions by the Regional Water Board. The Regional Water Board is planning to consider the research plan in August 2018, and then Regional Water Board staff will be working with interested agencies and stakeholders to identify funding sources to implement the plan.

Delta Emergency Preparedness

Delta Flood Emergency Management Plan

The California Office of Emergency Services (CalOES) completed their Northern California Catastrophic Flood Response Plan (NCCFRP) in January, defining coordinated federal, state and local roles in major emergencies. CalOES has included DWR Delta emergency response components and related FEMA roles in the Plan. CalOES states that the NCCFRP has been validated by the 2017 winter storms.

A revision to the DWR Stockton materials storage infrastructure contract was executed in February 2018 to provide an additional 160,000 tons of rock, for a total of a half million tons of rock for emergency response in the Delta. DWR plans to use remaining Proposition 1E funding under the DWR Delta Risk Reduction Program to bid a contract for large sheet pile for levee breach closures.

In February 2018, DWR executed a second round of Delta Flood Emergency Response Grant contracts with local management agencies to build response capabilities and awareness with flood and emergency managers in the Delta region. The grants also support improved communications and working relationships between DWR and local governments during emergency response and recovery activities.

Board Report (Bay-Delta Management Report)

California WaterFix 2017 Program Budget and Commitments

With completion of the planning phase in 2017, the Bay Delta Conservation Plan Expenditures report that was a regular section in the monthly Bay Delta Management Report was closed out in October 2017 and will no longer be included. In its place, the California WaterFix 2017 Program Budget and Commitments was established and reports were included in this monthly Board Report from the month of November 2017. The commitments and expenditures following the completion of the planning phase in 2017 have been for post-Environmental Impact Report work not classified as planning. Expenditures under this 2017 Program Budget were lower than planned, and most of the 2017 Budget was carried forward into the 2018 Program Budget. The funding is being provided by DWR and none of these state funds are State General Funds. The 2018 Program Budget table below shows the budget and commitments as of the end of February 2018:

California WaterFix Program Budget & Commitments (in millions)		
2018 Budget	Commitments	Remaining
\$ 133.69	\$ 6.14	\$ 127.55