ACTION 18 Improve the timing, amount, and duration of freshwater flows critical to Estuary health

Inform elected officials and the public about the critical importance of freshwater flows from the watershed through the Estuary. Work with partners and through other CCMP actions to adjust the timing and amount of freshwater flows through the Delta and San Francisco Bay to better support all public trust uses.

TASK 18-1 Work with partners to disseminate a report highlighting the contribution of freshwater flows to the health of the lower Estuary, San Francisco Bay.

BY 2017 Disseminate report.

TASK 18-2 Assist the State Water Resources Control Board in updating the *San Francisco Bay/Sacramento-San Joaquin River Delta Water Quality Control Plan* (Bay-Delta WQCP) by providing concise, scientifically sound data to the State Board during its deliberations and by keeping the public and local officials informed.

BY 2018 Complete update of the Bay-Delta WQCP with updated flow objectives.

TASK 18-3 Work with relevant partners and agencies to more broadly incorporate integrated freshwater flow and habitat messages in public outreach materials of relevant programs.

BY 2018 Add messages to the materials of at least three partners.

BACKGROUND

The inflow of fresh water to the Estuary from the watershed, and the outflow of this water to the Pacific Ocean, is a critical hydrologic process influencing the health of many estuarine organisms. Management of these flows for human purposes has altered the amount, duration, and timing of flows left to sustain Estuary ecological processes and species.

According to the *Delta Plan*, water flow is a "master variable", driving the ecological health of rivers and their ability to support valued environmental services. In estuaries, the interaction of river flows and ocean tides produces a salinity gradient from fresh to brackish and salty water. River flows and ocean tides also deposit and erode sediment to shape the estuarine landscape and its habitats. Estuarine species are adapted to the complex natural flow, salinity, and sediment dynamics in their native estuaries. Altered freshwater flow regimes are just one of many powerful stressors affecting the health of the Estuary today.

The best available science suggests that current flows are insufficient to protect public trust resources according to the State Water Resources Control Board's Development of Flow Criteria for the Sacramento-San Joaquin Delta Ecosystem. Numerous scientific and regulatory authorities concur that existing Delta outflow conditions are insufficient for protecting the aquatic ecosystem and multiple fish species. Multiple federal and state regulatory agencies (including the California Department of Fish and Wildlife, National Marine Fisheries Service, US Environmental Protection Agency, and US Department of the Interior) have commented on the need for improvements to the current standards for freshwater flows, based on the State Water Resources Control Board's 1995 *Water Quality Control Plan for the San Francisco Bay-Sacramento/San Joaquin Delta Estuary.*

In addition, according to the *California Water Action Plan*, "The state must continue to consider how to provide water flows necessary to meet current state policy, such as significantly increasing salmon, steelhead, and trout populations while also supporting viable, self-sustaining populations of a broad range of other native aquatic species. . . [the state must] ensure sustainable river and estuary habitat conditions for a healthy, functional Bay Delta ecosystem."

This CCMP action underscores the work the San Francisco Estuary Partnership and its partners can do to advance the cause of improved flows for the Estuary in conjunction with efforts to improve ecosystem health, including enhancement of suitable habitat, reduction of adverse impacts from non-native fish and plant species, and reduction of nutrient loads.

This CCMP action is intended to be consistent with the work of the State Water Board, the *Governor's California Water Action Plan*, the *Delta Plan* and other key efforts to bring about needed changes.

OWNERS

SF Estuary Partnership (Tasks 18-1, 18-2, 18-3)

COLLABORATING PARTNERS

CA State Water Resources Control Board, Friends of the San Francisco Estuary, The Bay Institute

NEXUS

Actions 1, 3, 5, 7, 9, 11-13, 19-24, 28
Goals 1, 3, 4
Objectives a, h, j, k