



2016 Comprehensive Conservation and Management Plan

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I. INTRODUCTION/BACKGROUND

In 1992 when the San Francisco Estuary Partnership produced its first Comprehensive Conservation and Management Plan (CCMP), the community of participants was looking largely *backward* in time, to the 19th century before massive population growth and ensuing development occurred around the San Francisco Estuary region. Goals and actions were crafted with an eye toward restoring landscapes and waterways of a less disturbed era and we cast our restoration objectives with the intent to bring our estuary back to the health and vitality of an earlier time. Twenty-five years later we know that we can never recover that estuary, because in fact, that landscape is no longer possible to recreate.

So what is to be the future of the Bay-Delta Estuary that sits at the heart of our region and serves all of California as the hub of our critical water supply? How can the people and communities that surround the Estuary best protect this economic engine while restoring the values of this greatly stressed union of water, marshes, and mudflats? With the expected impacts of climate change and continued population growth, what will the Estuary look like in 50 years? What do we need to plan for now-- and what actions can we take in the near-term to help ensure a thriving Estuary 35 years from now, despite the changes we can expect, and those which we cannot yet foresee.

These are the pressing questions that the San Francisco Estuary Partnership, working with hundreds of partners over the last 20 years has sought to answer. And it is these questions that shape the core of our new CCMP, the purpose of which is to create a working blueprint that leads to cleaner waters, enhanced habitats, healthier fish and wildlife for the San Francisco Estuary and for the people who call this place home.

About the Partnership

The National Estuary Program (NEP) was established under Section 320 of the 1987 Clean Water Act (CWA) Amendments as a U.S. Environmental Protection Agency (EPA) place-based program to protect and restore the water quality and ecological integrity of estuaries of national significance. The San Francisco Estuary Partnership, one of 28 NEPs, is a collaboration among federal-state-local agencies and NGO's working to protect and restore water quality and the natural resources of the San Francisco Bay-Delta Estuary. Section 320 of the CWA calls for each NEP to develop and implement a Comprehensive Conservation and Management Plan (CCMP). Using the CCMP as a guiding document, Partnership staff act as both implementers (taking action using grant funds and Partnership dollars) and as facilitators of projects (obtaining and passing along grants and contract dollars to other organizations, and administering funds). We directly manage dozens of important projects, including regional green infrastructure planning efforts, aquatic invasive species abatement efforts, urban pesticides and mercury pollution reduction, and estuary-wide boater education work aimed at reducing direct discharges of sewage into the bay. In addition we manage \$100 million for our partners in regional restoration, water quality and resiliency projects. Our education efforts include social media outreach, publication of the award-winning *ESTUARY* news magazine, production of State of the Estuary reports and the biennial State of the Estuary conferences, periodic symposiums on timely issues, and publication of numerous fact sheets, booklets, videos, brochures, and other materials that educate the public and decision-makers about the Estuary.

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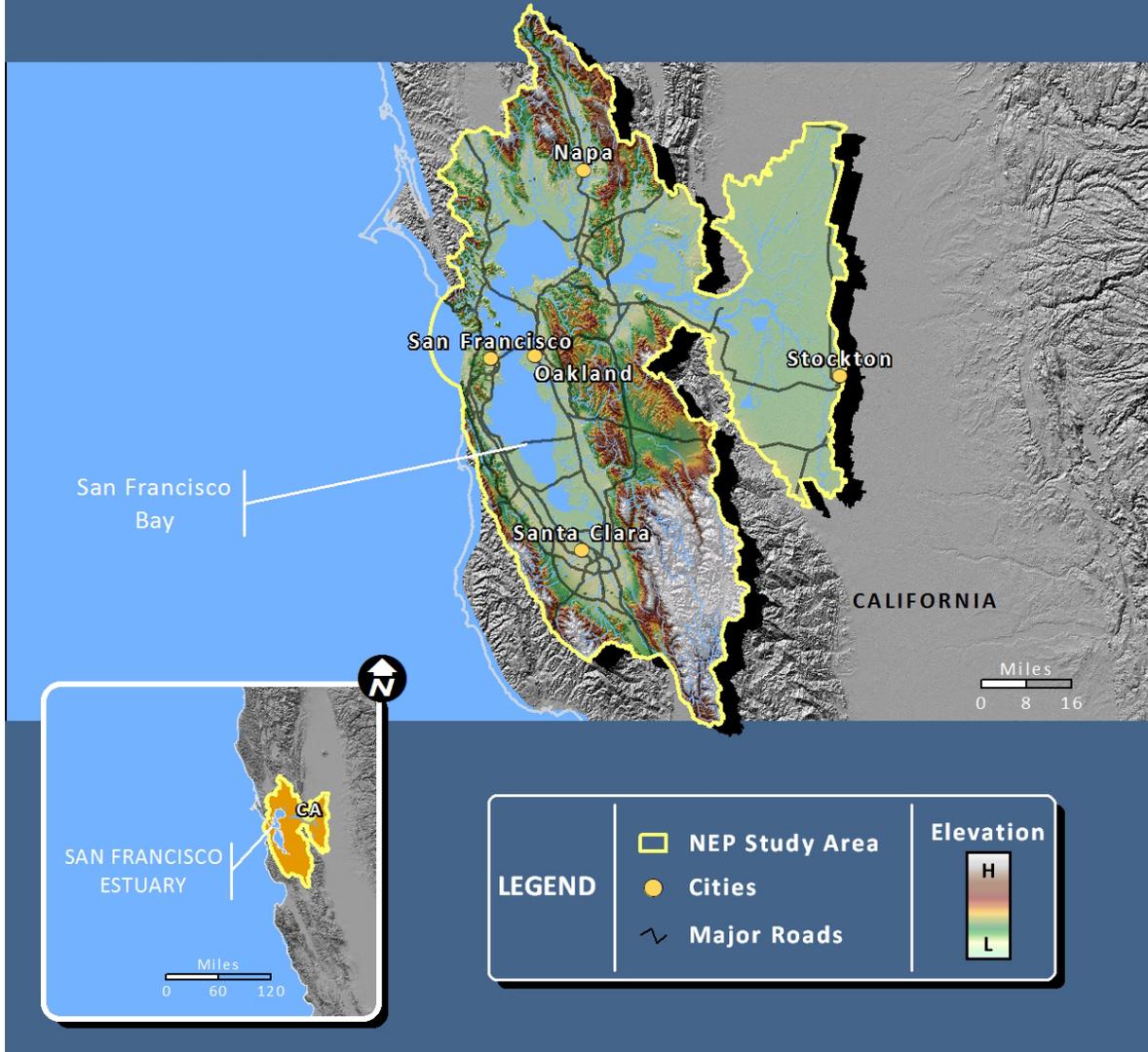


Figure 1. SFEP Planning Area

About the San Francisco Estuary

Our Estuary, the largest in western North America, extends from the mouth of San Francisco Bay to the upstream portion of the San Joaquin-Sacramento River Delta southwest of the city of Sacramento. The Estuary's watershed extends to the ridgeline of the Sierra Nevada, including almost 60,000 square miles and nearly 40 percent of California. The Estuary's waters are a biological resource of tremendous importance—providing critical winter feeding habitat for over a million migratory birds, a productive nursery for many species of juvenile fish and shellfish, and a year-round home for a vast diversity of plants and animals. Half of California's surface water supply falls as rain or snow within this region.

San Francisco Bay includes four smaller bays. Suisun Bay and the diked wetlands of Suisun Marsh are the least salty of these, just downstream of the Delta. Saltier San Pablo Bay is west of Carquinez Strait. The saltiest basins are the Central Bay, which connects with the ocean through the Golden Gate, and the South Bay, a large, shallow lobe extending off the Central Bay, south of the Dumbarton Narrows.

Upstream from the Bay, the San Joaquin-Sacramento River Delta is a thousand-square-mile triangle of diked and drained wetlands. Only small remnants of once-extensive tule marshes still fringe the sloughs and channels that wind between flat, levee-rimmed farmlands on the Delta islands. Before it was diked and drained, the Delta gathered in the fresh waters of the Sacramento, San Joaquin, Mokelumne, and Cosumnes rivers, and moved them all downstream, through a complex array of tidally influenced channels, into salty San Francisco Bay. Today, the Delta and its rich farmland is the engineered junction of one of the world's largest plumbing systems, where much of the system's fresh water is diverted to supply California's population centers and Central Valley agriculture.

CCMP History

The San Francisco Estuary Project's CCMP is a collaborative agreement about what should be done to protect and restore the Estuary-- a road map for restoring the Estuary's chemical, physical, and biological health. The first CCMP, required under a reauthorization of the Clean Water Act in 1987, was produced in 1993 after several years of status assessment and policy discussions which included over 100 different stakeholder groups. After 14 years of implementation, the CCMP was updated in 2007 to include new and revised actions while maintaining many actions from the original.

The 2016 CCMP is an entirely new document. While this version incorporates many of the original CCMP goals, a new emphasis on the need to plan and adapt to climate change is a new focus. In addition, the structure of the new CCMP better reflects our 2015 *State of the Estuary* report assessments which look at five attributes of a healthy estuary: water, living resources, habitats, ecological processes and people. This restructure will allow a more direct evaluation of the outcome of our CCMP actions. This CCMP is also more streamlined, with less than 40 priority actions-- highlighting the intent for the CCMP to include 35 year goals while focusing on urgent actions that will be reviewed and updated every five years.

II. FINDINGS

In September of 2015, the State of the Estuary Report was released. The State of the Estuary Report is the most comprehensive health report ever completed for the San Francisco Bay-Delta Estuary. It uses the best available science and most recent data contributed by over 100 scientists to assess the status of various parts of the ecosystem. The purpose is to identify problems with estuarine health, so that conservation and restoration efforts can focus on solutions.

The following findings come from the Executive Summary of the 2015 State of the Estuary Report, and form the basis for the goals, objectives and actions of the 2016 CCMP.

HOW HEALTHY IS THE ESTUARY?

- The Upper Estuary (Suisun Bay and the Delta) is in fair to poor condition and getting worse, while the Lower Estuary (San Francisco Bay) is in better health but jeopardized by climate change
- We have severely altered the physical processes that create and maintain habitats
 - Freshwater inflows and beneficial floods now exert such a small fraction of their former influence that they no longer build and maintain the physical structure of habitats in the Estuary, nor support critical ecological functions.
 - In the Lower Estuary, similar changes to the hydrology of Bay watersheds and the diking of tidal areas have deprived estuarine wetlands of the sediment they need to build up their elevation in relation to sea-level rise
- This impairment of critical physical processes is intertwined with habitat loss, degradation and fragmentation.
- These losses of physical processes and habitats have reverberated through biological systems, contributing to unproductive food webs, small and declining native wildlife populations, and the dominance of invasive species.

CAN WE IMPROVE THE HEALTH OF THE ESTUARY?

- Improvements in the status of several parts of the ecosystem show that we are very successful at restoring ecosystem health when we choose to make that investment
 - Water quality has improved over the last few decades due to better management and regulation, though some legacy contaminants remain a problem
 - Focused collaboration along with significant funding have resulted in large gains in tidal marsh restoration over the last two decades and improvements in marsh-dependent wildlife populations are now detectable
 - Investments in water conservation and recycling in urban areas are reducing demand for potable water, even while our population is increasing
- Despite these gains, impacts from climate change jeopardizes the health of all parts of the Estuary

WHAT WILL IT TAKE TO ACHIEVE A HEALTHY ESTUARY?

- A bolder approach will be needed to recover from past and ongoing impacts
- The Upper Estuary will require significant investment in restoring critical physical processes and habitats, as well as managing nonnative species and preventing new arrivals
- Protecting the Estuary will require greater efficiencies in human use of the system's fresh water, as well as changes in upstream water management
- The Bay's wetlands are at risk unless we take a watershed-based regional approach to managing sediment and fresh water as essential resources, and allow for tidal wetlands to migrate landward
- Wildlife conservation efforts should aim to ensure successful reproduction and habitat connectivity over time as climate change alters landscapes
- Management actions must all occur in the context of change, requiring collaborative planning for rising seas and other climate change impacts.

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