

Our Coast, Our Future: Planning for Climate Change in San Francisco

Project Location

San Francisco Bay National Estuarine Research Reserve, California

Project Lead

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Targeted End Users and Products

- *Final report*
- *Lifting the Fog: web portal with technical support for the use of guidance, models and tools to support sea level rise adaptation in California*

Project Partners

- *San Francisco Bay Reserve*
- *Greater Farallones National Marine Sanctuary*
- *Bay Area Ecosystems Climate Change Consortium*
- *Coravai, LLC*
- *NOAA's Office for Coastal Management*
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- *Point Blue Conservation Science*
- *USGS Pacific Coastal and Marine Science Center*
- *U.S. National Park Service*

About the Science Collaborative

The National Estuarine Research Reserve System's Science Collaborative supports collaborative research that addresses coastal management problems important to the reserves. Learn more at www.nerrs.noaa.gov.

Overview

Rising sea levels, severe storms, flooding, and erosion are reshaping the San Francisco Bay Area's coastline, threatening both natural areas and critical infrastructure. Preparing for these climate change impacts may be the greatest challenge facing local decision makers, yet often they can't access the information they need to plan effectively, and they are challenged by the uncertainty of how and when these impacts will occur. The San Francisco Bay reserve served as an advising partner to a diverse development team of partners addressing this need through user-driven science-based decision support tools that are helping stakeholders understand, visualize, and anticipate vulnerability to storms and sea level rise.

Project Benefits

- Santa Clara County used the project's sea level rise and flooding scenarios in a regional effort to help county and city staff better assess the vulnerability and risk associated with climate change.
- The State of California incorporated the sea level rise and flooding scenarios in its online climate adaptation tool, CalAdapt, as the preferred models for sea level rise in the San Francisco Bay Area.
- Point Blue Conservation Science used the project's data, climate change scenarios, and decision support tool to refine, update, and increase the capability of its existing San Francisco Bay Future Marshes online decision support tool.
- The Greater Farallones National Marine Sanctuary incorporated project data into its climate change vulnerability assessment
- The White House Council on Environmental Quality integrated project concepts into its Climate Data Initiative and Climate Resilience Toolkit.

Project Approach

The San Francisco Bay reserve served as an advising partner to a team of coastal scientists, government agencies, and environmental consultants to develop information and tools for local decision makers.

- **Stakeholder engagement:** The team established an advisory committee and held stakeholder focus groups to identify priority impacts of climate change and design decision support tools to meet the needs of local decision makers.

Project Approach (continued)

- Modeling: The team integrated and refined two climate change impact modeling efforts to assess the combined impacts of sea level rise and storms for San Francisco Bay and north-central California coast.
- Technical Assistance: The team worked with other reserves and partners to provide technical assistance for coastal decision makers who must make sense of a surge of new tools, models, and guidance that have been developed to address the impacts of coastal climate change in California. This effort, called “*Lifting the Fog*”, took place in 2014 through a series of facilitated dialogues, trainings, and collaborative product development and resulted in a web site.

