

Our Coast—Our Future: Planning for Sea Level Rise and Storm Hazards in the San Francisco Bay Area

Preparing for Tomorrow's Coast

Climate change will increase sea levels, shoreline erosion, and the frequency and intensity of coastal flooding in many regions of the San Francisco Bay Area. To protect communities and ecosystems, managers and planners need locally relevant tools that help them understand vulnerabilities and plan for action.

Project leads Gulf of the Farallones National Marine Sanctuary, PRBO Conservation Science, and U.S. Geological Survey, along with the San Francisco Bay National Estuarine Research Reserve, National Park Service, and NOAA Coastal Services Center, have teamed up to better understand the effects of sea level rise and storms on San Francisco Bay shorelines and baylands, and the Bay Area coast, from Half Moon Bay to Bodega Head.



Our Coast—Our Future provides Bay Area natural resource managers, local governments and others with science-based decision-support tools to help Bay Area communities understand, visualize, and anticipate local coastal climate change impacts.

Benefits to Local Communities

IMPROVED municipal, county, state, and federal government capacity to plan for and respond to rising sea level and storm hazards.

INTEGRATED modeling efforts across geographic and political boundaries at a scale that is appropriate for our region.

USER-DEFINED, state-of-the-science decision support tools that provide seamless coverage for all shoreline and baylands ecosystems, communities, and jurisdictions throughout the San Francisco Bay Area.

COORDINATED approach to developing and implementing adaptive management strategies such as: determination of infrastructure vulnerability; prioritization and design of habitat restoration and protection projects; and identification of habitats for mitigation.

IMPROVED communication between climate change researchers, modelers, and managers to ensure the usefulness of decision-support tools.

Our Objectives

- Model vulnerabilities including factors such as water levels, wave heights, flooding, and erosion.
- Use a collaborative product development process to meet stakeholders' needs.
- Map infrastructure and ecosystem vulnerabilities at scales relevant to planning and management.
- Develop products in accessible, user-friendly formats that can be easily applied to local planning efforts.
- Provide training and targeted in-depth technical assistance on the use of the decision-support tools.



The Adaptive Planning Toolbox

- Seamless Digital Elevation Model (DEM) at 2 meter horizontal resolution for the San Francisco Bay Area.
- Suite of sea level rise projections between 0 - 2 meters, with a 5 meter extreme, plus storm scenarios using the Coastal Storm Modeling System (CoSMoS).
- Interactive maps overlaying infrastructure and ecosystem vulnerabilities.
- Online and downloadable data access for use in restoration, adaptation and response planning, tailored to stakeholders' information needs.
- Report presenting the project findings and assessing impacts.

For more information visit the OCOF website at <http://www.prbo.org/ocof> or contact Kelley Higgason, Project Coordinator: kelley.higgason@noaa.gov