Our Coast–Our Future

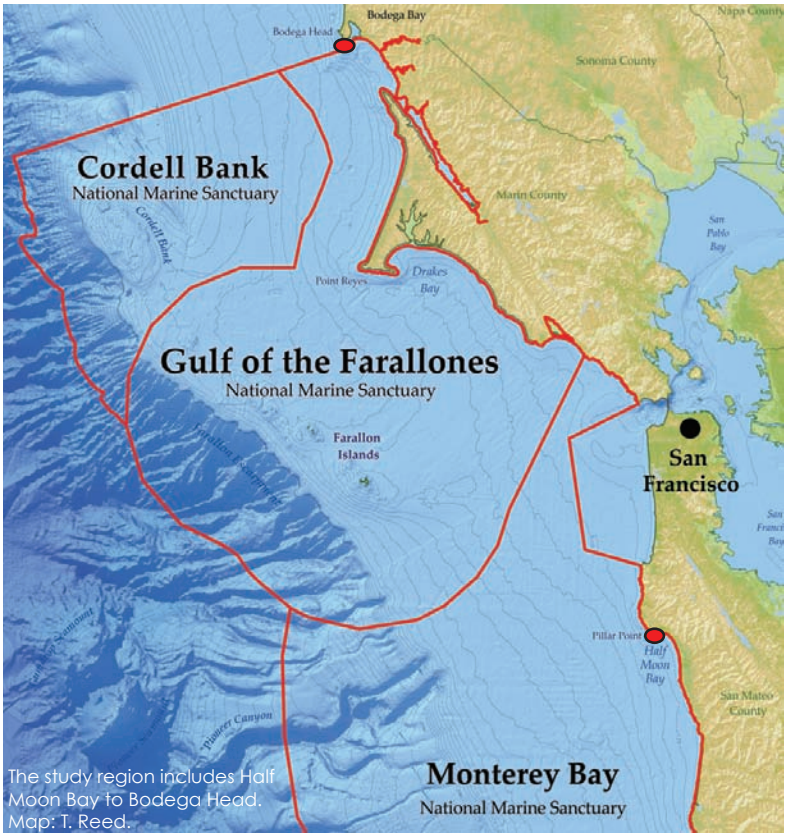
Planning for Sea Level Rise and Storm Hazards Along the Bay Area's Outer Coast

Preparing for Tomorrow's Coast

With a changing climate, the California coast faces impacts from sea level rise, increased storm frequency and intensity, and coastal erosion.

To prepare for these impacts, coastal managers and planners need to understand how these future changes affect local ecological systems and human infrastructure.

Gulf of the Farallones National Marine Sanctuary, PRBO Conservation Science, U.S. Geological Survey, and the National Park Service have teamed up to help address the affects of sea level rise and storm hazards from Half Moon Bay to Bodega Head.



The study region includes Half Moon Bay to Bodega Head. Map: T. Reed.

Our Coast–Our Future provides Bay Area natural resource managers, local governments and others with science-based, decision-support tools to plan for and respond to sea level rise and storm hazards along the region's outer coast.

Benefits to Our Coast

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

IMPROVED communication between climate change researchers, modelers, and managers.

COORDINATION in developing and implementing adaptive management strategies.

COORDINATION of San Francisco Bay Area outer coast and bay modeling efforts.

ENHANCED use of modeling information to ensure long-term effectiveness for local planning and management decisions such as: determination of infrastructure vulnerability; prioritization and design of habitat restoration and protection projects; and identification of habitats for mitigation.

High tide versus low tide on January 19, 2011 at the location of the Golden Gate NOAA tide gauge. An increase of 8 inches in mean sea level over the last century has been recorded at this location. Buildings such as this risk flooding in the future during high tides coupled with storms and increasing mean sea level.

The Two-Year Project

Between 2010 and 2012, Our Coast–Our Future (OCOF) will:

- Model vulnerabilities from sea level rise and storm hazards, including factors such as water levels, wave heights, flooding, and erosion.
- Obtain insight and feedback on stakeholder information needs through regional workshops.
- Map infrastructure and ecosystem vulnerabilities to sea level rise and storm hazards at the scale needed for management action.
- Communicate the products in accessible, user-friendly formats to apply to local planning efforts.
- Provide training on the use of the decision-support tools and interactive maps.

The Resulting Toolbox

OCOF will provide stakeholders with a variety of information and tools needed to plan for a changing coastline, including:

- Seamless Digital Elevation Model (DEM) at 2 meter horizontal resolution from Half Moon Bay to Bodega Head.
- Suite of 10 year interval sea level rise and storm scenarios applied using the Coastal Storm Modeling System (CoSMoS) developed by USGS.
- Interactive maps overlaying infrastructure and ecosystem vulnerabilities on the scenario suite.
- Online decision-support tools for use in adaptation and response planning, tailored to stakeholder information needs.
- Report presenting the project findings and assessing impacts to our built and natural coastal environment based on these findings.

Visit the OCOF website:
http://www.prbo.org/ocof

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