Moss Landing Harbor District

Monterey County

Site Description

In 1947, the State of California granted the Moss Landing Harbor District the submerged and tide lands of the Old Salinas River channel below the Potrero and Moss Landing tide gates, including the main channel of Elkhorn and Bennet sloughs and the coastal tide lands to the north and south of the Moss Landing Harbor entrance.

The Moss Landing Harbor is the number one commercial fishing harbor in Monterey Bay with 600+ slips for recreational boaters and commercial vessels. Partnering with marine research and education institutions, the Moss Landing Harbor District provides full public access to the marine environment. Designated as a year-round port of safe refuge, Moss Landing Harbor provides safe, reliable marine refuge and services to members of the boating public. Moss Landing Harbor supports the research and educational endeavors of the Monterey Bay Aquarium Research Institute and Moss Landing Marine Laboratories. Proximity to the Monterey Bay National Marine Sanctuary and the open ocean makes Moss Landing Harbor a valuable maritime resource that is also vulnerable to periodic impacts from ocean storms that will be exacerbated by sea level rise.

Coastal Hazards considered:
tidal inundation, 100-year storm shoreline change erosion, river flooding

Granted Land Type:
Smaller Harbor/Marina with Recreational Amenities or Natural Assets

Public Trust Uses

Primary Uses: Fishing, Recreation

Secondary Uses: Navigation

Modeling system used for mapping:
in-house model

Sea level rise scenarios/elevations
LINK TO FULL ASSESSMENT

Vulnerable Public Trust Resources	
Built Facilities	Harbor buildings, docks and entryways to docks, electric meters, storm drains, trash enclosures, lift stations, bathrooms, roads and parking, coastal armoring, harbor jetties, culverts, and tide gates
Natural Assets	Wetlands, eelgrass beds, marine mammal haul-out areas, beaches and dunes, parks, coastal access points

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Other Site Vulnerabilities

Because Moss Landing Harbor will likely no longer function under predicted 2100 sea levels of 6.9 feet (due to the loss of the barrier beach), estimating impacts from higher rates of sea level rise (10 feet—i.e., H++ sea level rise scenario) are not necessary or useful for planning purposes. Also, most adaptation measures identified within the document support the incremental resiliency of in-place harbor infrastructure rather than the development of new coastal amenities and therefore may not be classified as high stakes or long term.

Proposed Adaptation and Mitigation Measures

Policy Adaptation Strategies

Do not build new infrastructure within projected hazard zones that will not be resilient (for the expected life of the infrastructure) to the predicted impacts of that hazard; work with Monterey County and Moss Landing Community to ensure road access to harbor infrastructure and docks.

Natural or Nature-Based Adaptation Strategies

Design and build low relief berms (with drainage infrastructure) along harbor waterfront and restore coastal beach and dunes to help reduce winter storm flooding to Harbor District property and adjacent roads and infrastructure.

Building and Infrastructure Strategies

Upgrade harbor infrastructure within and adjacent to tidelands to be resilient to 2060 predicted tidal range (>2.6−3.8 feet); raise public parking and access areas of Harbor District property to above the predicted 2060 tidal range; draft long-range plan in partnership with Monterey County to relocate the harbor infrastructure (in tandem with the Moss Landing community, local roads and highway alignment) inland to serve 2100 community needs. Negotiate modified tidal lands lease agreement with State Lands Commission.

Strategic Relocation

Moss Landing Harbor District recognizes the impending threat posed by sea level rise and proposes to completely relocate its operations before the year 2100, as the harbor in its current state will be effectively nonfunctional after 2060 under a medium high sea level rise scenario.

Anticipated Costs of Sea Level Rise (millions)*

	Current	2030 (4 in.)	2050 (28 in.)	2100 (63 in.)
Assets at Risk or Repair and Replacement Costs	**$30**	**$3.5**	**$13.8**	**n/a**
Losses in Non-Market Value	**$107**	**$0.2**	**$53.6**	**n/a**
Cost of Adaptation				**n/a**

* NMV from Table 9, p. 38, Nature based recreation, beach visitation, recreational boating; Lost Revenue from Table 9, p. 38, commercial fishing, commercial passenger fishing, recreational boating fees, research and conservation budget.