Port of Long Beach

Los Angeles County

Granted Land Type:
Large Port

Public Trust Uses

Primary Uses: Commerce
Secondary Uses: Navigation

Site Description

The Port of Long Beach, which became a trustee under the City of Long Beach in the early 1900s, manages granted Public Trust lands within the Long Beach Harbor District in San Pedro Bay. The port's granted lands includes approximately 3,200 acres of submerged lands and tidelands, 25 miles of waterfront, and acts as a major gateway for trans-Pacific trade. Handling trade valued at $170 billion annually and supporting 2.6 million jobs across the nation, the Port of Long Beach is the second busiest container seaport in the United States. Being such an important economic engine for both southern California and the country, it is critical that the Port be proactive in its effort to combat sea level rise impacts. The Port is particularly vulnerable to storm surge and wave hazards, affecting coastal infrastructure, transportation, energy, water, water quality, and coastal ecosystems within the area. The Port intends to make sound, science-based decisions as it invests in maritime infrastructure, and to prioritize its resource allocations in a way that considers near-term and long-term climate change vulnerabilities and risks.

Coastal Hazards considered:
tidal inundation, 100-year storm

Modeling system used for mapping:
In-house

Sea level rise scenarios/elevations
LINK TO FULL ASSESSMENT

Vulnerable Public Trust Resources	
Built Facilities	**2030**: Pier S, Pier D, Pier A, Pier B, Pier C, Railways and road of Piers E, F, G, J, and T; Freeway Route 47— Some areas partially and temporarily inundated **2050**: 2 more areas of Pier D inundated **2100**: Partial permanent inundation of buildings and tanks and permanent inundation of railway on Pier A; loss of rail access on Piers F, G, and J.
Natural Assets	

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Other Economic Vulnerabilities

The Port provided qualitative cost estimates due to the extent and proprietary nature of some operations. The estimates consider 1) potential cost of repair of damage and 2) the value of lost use of assets, 3) the anticipated cost to implement adaptation strategies, and 4) the anticipated benefits from adaptation at the Port. See Appendix B – Cost of Sea Level Rise: A High-Level Financial Analysis for more information about the financial impacts of sea level rise at the Port of Long Beach.

No direct financial impacts or cost estimates were released with this analysis due to the confidential nature of the value of cargo, port functions, and facility/equipment damage considerations, though these impacts and costs were considered in developing the cost classification for each scenario at an order of magnitude level. Even without direct financial or cost estimates, the relative relationship of losses under a no-action scenario compared to the cost of mitigation can be used to provide a threshold to estimate the relationship of costs and avoided losses, or benefits. This approach protects proprietary data, and allows for some level of cost variance within an order of magnitude context.

Proposed Adaptation and Mitigation Measures

Policy Adaptation Strategies

Address climate change impacts through port policies, plans, and guidelines (completed); add sea level rise analysis to the Harbor Development Permit (completed); develop a port climate change policy; add climate change considerations to terminal/ tenant leases; modify additional design criteria guidelines to include climate change; understand potential climate change impacts and protect critical security systems.

Natural or Nature-Based Adaptation Strategies

None identified at this time, not feasible at this location.

Building and Infrastructure Strategies

Piers A and B Study—Combined impacts of riverine and coastal flooding; Pier S shoreline protection; Pier S substation protection—evaluation of multiple strategies; modify existing stormwater drainage model design parameters to include climate change; develop Dominguez Channel shoreline protection concept design (follow-up to Strategy #3).

Anticipated Costs of Sea Level Rise

	Current	2030 (16 in.)	2050 (36 in.)	2100 (55 in.)
Assets at Risk or Repair and Replacement Costs		**Medium–Low**	**Medium**	**High**
Losses in Non-Market Value		**Medium–High**	**High**	**High**
Cost of Adaptation		**Medium**	**High**	**High**