

Mission Rock



SHORELINE TYPE:	SEISMIC RISK ¹ :	FLOOD RISK ² :	
Engineered: Filled land retained pile supported bulkhead wall and wharf. Mostly original from the early 1900s.	Shoreline Instability: Not Assessed - likely High	Tipping Point Elevation:	78" above high tide
	Liquefaction Risk: Not Assessed - likely High	Coastal Flood Events	Timing
	Shoreline Structure Vulnerability: Not Assessed - potentially High due to age of structures		
Subsurface Profile: Not Assessed - likely non-engineered fill, shallow bay mud, with shallow rock outcropping at Mission Rock	Unique Conditions: Fill over deep bay mud, historic finger piers, Unique Pier 50 partially landfill (potentially liquefiable) located over rock outcropping (Mission Rock)	100-yr Flood + 36" SLR	2044 - 2060
		High tide + 77" SLR	2081 - 2133

SUBAREA DESCRIPTION



The Mission Rock subarea includes commercial tenants, historic Pier 48, and China Basin Park, combining business, maritime uses, Mission Creek and restoration areas along the creek and open public spaces. The Mission Rock project includes plans to provide new market-rate and affordable housing, mixed-use development, open space, and opportunities to create new living-wage jobs. It will also incorporate sea level rise adaptation features, ensuring that the Mission Rock subarea will be part of a thriving waterfront for generations to come.

The Subarea 3-3 shoreline is mostly engineered with piers and hardened edges, but with a section along Mission Creek that is an embankment with riprap armoring to protect the landward China Basin Park.

There is a narrow flood pathway (on Terry Francois Boulevard) that conveys floodwaters from Subarea 3-4 into this subarea. Higher Bay water levels would result in overtopping along the entire Mission Creek, McCovey Cove (east of Third Street

¹ Evaluation of seismic risk in areas outside of the Embarcadero Seawall Program are based on engineering judgement and will be updated once the Southern Waterfront Seismic Vulnerability Assessment is complete in Spring 2021.

² The timing of coastal flood events that will cause significant flooding in this subarea is provided as a range of dates based on the sea level rise projection scenarios provided by the California Ocean Protection Council (OPC) per the Likely and 1-in-200 chance of occurrence projections.

Mission Rock

Subarea 3-3



Bridge), and the Bay shoreline within this subarea (and adjacent Subareas 3-2 and 3-4), allowing for widespread inundation to occur.

COMMUNITY IDENTIFIED PRIORITIES:	
Places	Since 2017, the Port has connected with tens of thousands of community members through the Waterfront Resilience Program. Public feedback collected about Mission Rock underscores the importance of protecting bird and wildlife habitat, promoting tourism, staying connected to the rest of the city with transportation options, and keeping utilities up and running. Further feedback highlights additional community priorities including opportunities to restore bird habitats and strengthen infrastructure and preserve and enhance neighborhood assets and services, including access to City utilities and infrastructure.
<ul style="list-style-type: none">• Pier 48 Mission Rock Redevelopment Area• Third Street Muni Light Rail• Pier 50• China Basin Park	

Mission Rock

Subarea 3-3



FIRST FLOODING OF ASSETS

The chart below describes the vulnerability of specific assets within the Mission Rock subarea to flooding. These assets will be exposed to coastal flooding when the water level in the Bay reaches a certain height above the current high tide. The heights at which each asset is exposed to flooding is indicated with the shaded cells in the table. Over time and due to sea level rise these water levels can occur due to large storm events such as a 100 year flood of daily high tides. For example, the Bay Trail is exposed to flooding when the water rises 48 inches above current high tide, which could occur due to a 100 year flood with 3 ft. of sea level rise or as during daily high tide with 5.5 ft. of sea level rise.



● High Tide ○ 100 Year Flood ■ Shaded cells indicate the water levels at which assets are exposed to flood

SEA LEVEL RISE		WATER LEVEL ABOVE CURRENT HIGH TIDE										
		0"	12"	24"	36"	48"	52"	66"	77"	84"	96"	108"
Today		●				○						
1 ft. SLR			●				○					
3 ft. SLR					●				○			
5.5 ft. SLR								●				○
Historic and Cultural												
	Pier 48								■	■	■	■
	-	-										
Disaster Response												
	Assembly Area					■	■	■	■	■	■	■
	Pier 50 Emergency Operations Center								■	■	■	■
	Tugboat Facilities								■	■	■	■
Open Space and Ecology												
	Bay Trail					■	■	■	■	■	■	■
	China Basin Park				■	■	■	■	■	■	■	■
	Promenade (planned)	N/A (Flood information not available at this time)										
Maritime												
	Mariposa Hunters Point Boat Club						■	■	■	■	■	■
	Pier 50								■	■	■	■
	Pier 50.5 Admin. Bldg.						■	■	■	■	■	■

Mission Rock

Subarea 3-3



Transportation											
	Muni T-Line										
	Third Street										
Critical Facilities											
	Kaiser Permanente Mission Bay										
	-	-									



FUTURE POTENTIAL MEASURES UNDER CONSIDERATION IN THIS SUBAREA:

FLOOD MEASURES:		Ecological Infrastructure	
Physical Infrastructure		Ecological Infrastructure	
 Floodwalls	 Levees	 Ecological Marine Structures	 Ecological Features
 Seawalls	 Breakwaters	 Aquatic Habitat	 Ecological Shorelines
 Raised Marine Structures	 Building Adaptations		
 Tide Gates	 Deployables		

SEISMIC MEASURES:

Southern Waterfront Seismic Vulnerability Assessment

Further information about the potential seismic hazards and vulnerability of the Mission Rock subarea will be included in the Southern Waterfront Seismic Vulnerability Assessment. This assessment will not be at the same level as the recently completed Multi-Hazard Risk Assessment (MHRA) under the Embarcadero Seawall Program. It will be used as part of the Port’s work to better understand the waterfront risks of the entire 7.5 miles in its jurisdiction.

FLOOD AND SEISMIC MEASURES:

Policy and Emergency Preparedness			
 Policies and Zoning	 Emergency Preparedness		