Subarea 3-3



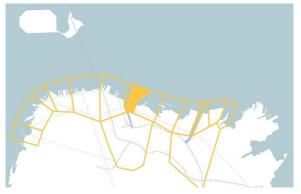






SHORELINE TYPE:	SEISMIC RISK <sup>1</sup> :	FLOOD RISK <sup>2</sup> :		
	Shoreline Instability:	<b>Tipping Point</b>	78" above	
	Not Assessed - likely High	Elevation:	high tide	
<b>Engineered:</b> Filled land retained pile supported bulkhead wall and wharf. Mostly original from the early 1900s.	Liquefaction Risk:			
	Not Assessed - likely High			
	Shoreline Structure	Coastal Flood	Timing	
	Vulnerability:	Events	111111118	
	Not Assessed - potentially High			
	due to age of structures			
Subsurface Profile:	Unique Conditions:	100-yr Flood + 36"	2044 - 2060	
Not Assessed - likely non-engineered fill,	Fill over deep bay mud, historic finger	SLR		
shallow bay mud, with shallow rock outcropping at Mission Rock	piers, Unique Pier 50 partially landfill (potentially liquefiable) located over rock outcropping (Mission Rock)	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

<sup>&</sup>lt;sup>2</sup> 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.





<sup>&</sup>lt;sup>1</sup> 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.

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**

- Pier 48 Mission Rock Redevelopment Area
- Third Street Muni Light Rail
- Pier 50
- China Basin Park

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.





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									
	WATER LEVEL ABOVE CURRENT HIGH TIDE											
A LEVEL RISE	0"	12"	24"	36"	48"	52"	66"	77"	84"	96"	108"	
						0						
								0				
											0	
l Cultural	ı		I	ı								
Pier 48												
-						-						
sponse												
Assembly Area												
Pier 50 Emergency Operations Center												
Tugboat Facilities												
and Ecology												
Bay Trail												
China Basin Park												
Promenade (planned)	N/A (Flood information not available at this time)											
Mariposa Hunters Point Boat Club												
Pier 50					_		_					
Pier 50.5 Admin. Bldg.												
	Cultural Pier 48  - Sponse Assembly Area Pier 50 Emergency Operations Center Tugboat Facilities and Ecology Bay Trail China Basin Park Promenade (planned) Mariposa Hunters Point Boat Club Pier 50	A LEVEL RISE  O"  Cultural  Pier 48  -  Sponse  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50	A LEVEL RISE  O" 12"  Cultural  Pier 48  -  Sponse  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50	A LEVEL RISE  O" 12" 24"  Cultural  Pier 48  -  Sponse  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50	A LEVEL RISE  O" 12" 24" 36"  Cultural  Pier 48  - Sponse  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50	A LEVEL RISE  O" 12" 24" 36" 48"  Cultural  Pier 48  -  Sponse  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50	WATER LEVEL ABOVE C A LEVEL RISE  O" 12" 24" 36" 48" 52"  Cultural  Pier 48	WATER LEVEL ABOVE CURREN  A LEVEL RISE  O" 12" 24" 36" 48" 52" 66"  Cultural  Pier 48  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  Mariposa Hunters Point Boat Club  Pier 50  Mariposa Hunters Point Boat Club  Pier 50	WATER LEVEL ABOVE CURRENT HIGH ALEVEL RISE  O" 12" 24" 36" 48" 52" 66" 77"  Cultural  Pier 48  Assembly Area  Pier 50 Emergency Operations Center  Tugboat Facilities  and Ecology  Bay Trail  China Basin Park  Promenade (planned)  N/A (Flood information not available at the Mariposa Hunters Point Boat Club  Pier 50  Mariposa Hunters Point Boat Club  Pier 50  Mariposa Hunters Point Boat Club  Pier 50  Mariposa Hunters Point Boat Club	WATER LEVEL ABOVE CURRENT HIGH TIDE A LEVEL RISE  O" 12" 24" 36" 48" 52" 66" 77" 84"  Cultural  Pier 48	WATER LEVEL ABOVE CURRENT HIGH TIDE     A LEVEL RISE	





Subarea 3-3



Transportation											
	Muni T-Line										
	Third Street										
<b>Critical Faci</b>	Critical Facilities										
8	Kaiser Permanente Mission Bay										
	-	•									





Subarea 3-3



### **FUTURE POTENTIAL MEASURES UNDER CONSIDERATION IN THIS SUBAREA:**

<b>FLOOD MEASURES:</b>			
Physical Infrastructure			Ecological Infrastructure
Floodwalls	Levees	Ecological Marine Structures	Ecological Features
Seawalls	<u>Breakwaters</u>	Aquatic Habitat	Ecological Shorelines
Raised Marine Structures	Building Adaptations		
<b>1</b>			
<del>Tide Gates</del>	Deployables		

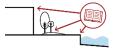
### **SEISMIC MEASURES:**

### **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**







**Emergency Preparedness** 



