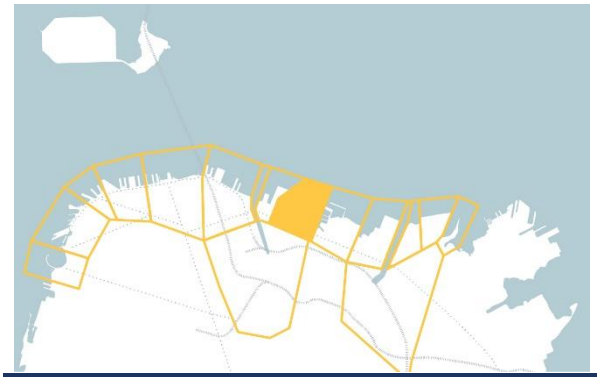
Subarea Profile

Mission Bay

Subarea 3-4

SHORELINE TYPE:	SEISMIC RISK[1]:	FLOOD RISK[2]:	
	Shoreline Instability: Not Assessed - likely Moderate to High	**Tipping Point Elevation:**	47" above high tide
Armored: Filled land primarily protected with a rip rap embankment	**Liquefaction Risk:** Not Assessed - likely Moderate to High	**Coastal Flood Events**	**Timing**
	Shoreline Structure Vulnerability: Not Assessed - potentially Moderate due to shoreline proximity of small structures		
Subsurface Profile: Not Assessed - likely non-engineered fill with shallow rock ridgeline connecting Mission Rock to Potrero Hill	**Unique Conditions:** Mostly soft riprap shoreline with small structures	100-yr Flood + 7" SLR	Today
		High tide + 48" SLR	2065 - 2095

SUBAREA DESCRIPTION



The Mission Bay subarea, originally a large bay, baylands, mudflats and home to indigeneous people and native species. The area was filled and turned into an industrial district in the 1800s and has recently been redeveloped to enhance the local community and economy and to provide high-quality waterfront access. Notable additions include the newly opened Chase Center, Corinne Woods Pier 52 Boat Launch, and the state-of-the art UCSF and Kaiser medical centers. These projects to reimagine the Mission Bay subarea speak to the way that the waterfront is ever-evolving and adapting to serve generations to come.

[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.

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The entire shoreline along this subarea is hardened, either by engineered structures or fortified with rock armoring.

The primary flooding pathway is overtopping along the shoreline. Flooding first occurs near Pier 52, resulting in localized flooding near the shoreline. Eventually overtopping of the shoreline within this subarea is conveyed by Terry Francois Boulevard into the adjacent Subarea 3-3, resulting in impacts even before the shoreline in Subarea 3-3 is overtopped. Higher Bay water levels would result in overtopping along the entire Bay shoreline within this subarea, allowing floodwaters to extend several streets inland and comingle with flooding from the adjacent subareas.

COMMUNITY IDENTIFIED PRIORITIES:	
Places • UCSF Mission Bay Medical Center • Genetech Hall • Chase Center • Bay View Boat Club • T-Third Street Muni Line • Blue Greenway	Since 2017, the Port has connected with tens of thousands of community members through the Waterfront Resilience Program. Public feedback collected about Mission Bay underscores the importance of getting people where they need to go through public transportation and bike infrastructure. Further feedback highlights additional community priorities, including opportunities to improve public safety and accessibility of key corridors like Third Street, maintain waterfront access, and prepare for sea level rise and emergency preparedness and preserving neighborhood assets and services, medical facilities and visitor serving spaces.

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FIRST FLOODING OF ASSETS

The chart below describes the vulnerability of specific assets within the Mission Bay 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, Agua Vista Park is exposed to flooding when the water rises 66 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										
SEA LEVEL RISE		**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												
	Chase Center					▭	▭	▭	▭	▭	▭	▭
	-	-										
Disaster Response												
	Fire Station 4					▭	▭	▭	▭	▭	▭	▭
	Red Cross Operations and Resources								▭	▭	▭	▭
	Pier 54 Staging Area								▭	▭	▭	▭
Open Space and Ecology												
	Agua Vista Park and Fishing Pier							▭	▭	▭	▭	▭
	Bay Trail				▭	▭	▭	▭	▭	▭	▭	▭
	Pier 52 Waterfront Park				▭	▭	▭	▭	▭	▭	▭	▭
Maritime												
	Bayview Boat Club						▭	▭	▭	▭	▭	▭
	Pier 52 Boat Launch				▭	▭	▭	▭	▭	▭	▭	▭
	Pier 52						▭	▭	▭	▭	▭	▭

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Transportation												
	Muni T-Line											
	Third Street											
Utilities												
	Mariposa Pump Station											
	Mariposa Transport / Storage Box	N/A (Buried assets are not directly impacted by flooding)										
Critical Facilities												
	Public Safety Campus											
	Kaiser Medical Center											
	UCSF Medical Center											

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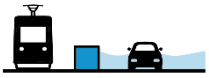
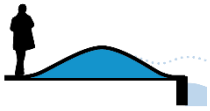
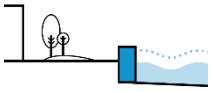
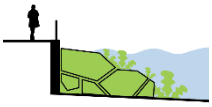
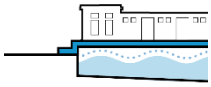
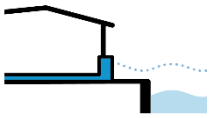
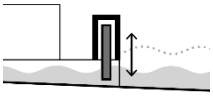
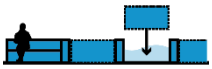
FUTURE POTENTIAL MEASURES UNDER CONSIDERATION IN THIS SUBAREA:

FLOOD MEASURES:

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		

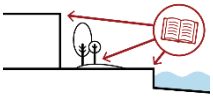
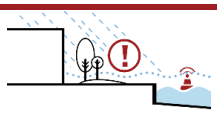
SEISMIC MEASURES:

Southern Waterfront Seismic Vulnerability Assessment

Further information about the potential seismic hazards and vulnerability of Mission Bay 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		