Subarea Profile

# Mission Creek

## Subarea 3-2

| SHORELINE TYPE: | SEISMIC RISK[1]: | FLOOD RISK[2]: | |
|---|---|---|---|
| **Engineered and Partially Armored:** Filled land retained by bulkhead wall mixed with partially armored shoreline along the creek banks. | **Shoreline Instability:** Not Assessed - likely High along creek | **Tipping Point Elevation:** | 47" above high tide |
| | **Liquefaction Risk:** Not Assessed - likely High | **Coastal Flood Events** | **Timing** |
| | **Shoreline Structure Vulnerability:** Not Assessed - potentially High due to age of some structures | | |
| **Subsurface Profile:** NOT ASSESSED - likely non-engineered fill, varying depth of bay mud and rock over large geography | **Unique Conditions:** Filled shoreline over deep bay mud, high potential for instability and liquefaction, mixture of aged shoreline structures in creek | 100-yr Flood + 7" SLR | Today - 2021 |
| | | High tide + 48" SLR | 2071 - 2109 |

## SUBAREA DESCRIPTION

The Mission Creek subarea covers all of Mission Creek, from its houseboats and kayak boat launch to the harbor services, new residential housing, neighborhoods and parks, restored creek vegetation and habitats, and two historic drawbridges. The Mission Creek subarea also includes most of the watershed in the South of Market, Mission and Potrero Hill neighborhoods. The subarea's range of outdoor, neighborhood, and water recreation activities, as well as the creek itself, are all important to consider when determining how to ensure that Mission Creek remains a diverse, sustainable, and resilient waterfront for generations to come.

The shoreline is mostly engineered (embankment) with some fringe wetlands along the north side of the Mission Creek Channel. Mission Creek is subdivided into the Mission Creek inlet (west of the Third Street bridge) and McCovey cove (east of the Third Street Bridge). McCovey Cove includes a ferry dock, a

[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 occurance projections.

houseboat community along the south side, and a public access walkway along the north side. Wave hazards are minimal within McCovey Cove and Mission Creek.

The primary flooding pathway is overtopping along the shoreline. Flooding first occurs along Mission Creek Shoreline Park, inundating a few streets of the adjacent residential neighborhood. Higher Bay water levels would result in overtopping along most of the Mission Creek shoreline, allowing floodwaters to extend several streets inland and comingle with flooding from the adjacent subareas.

| **COMMUNITY IDENTIFIED PRIORITIES:** | |
|---|---|
| Places<br>• Mission Creek<br>• Mission Creek Shoreline Park<br>• Fire Stations 1, 8, and 29<br>• Filipino Cultural District<br>• Caltrans Station<br>• Kaiser Permanente<br>• Houseboats | Since 2017, the Port has connected with tens of thousands of community members through the Waterfront Resilience Program. Public feedback collected about Mission Creek underscores the importance of providing neighborhood recreation, including areas for walking and biking, keeping connected to the rest of the city through bridges and infrastructure, preserving natural habitats, ensuring emergency responsive assets and services are preserved and enhanced, providing access and protection for medical facilities and maintaining and protecting housing. Further feedback highlights additional community priorities, including opportunities to restore and protect habitats and wetlands as well as improve public access to the waterfront, including trails and walkability. |

Subarea Profile

# Mission Creek

## Subarea 3-2

### FIRST FLOODING OF ASSETS

The chart below describes the vulnerability of specific assets within the Mission Creek 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 Channel Pump Station 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** | | | | | | | | | | | | |
| | Library | | | | | | | | | | | > |
| | SOMA Cultural Center | | | | | | | | | | | > |
| **Disaster Response** | | | | | | | | | | | | |
| | Fire Station 1 | | | | | | | | | | | ▭ |
| | Fire Station 29 | | | | | | | | | | | > |
| | Fire Station 8 | | | | | | | ▭ | ▭ | ▭ | ▭ | ▭ |
| **Open Space and Ecology** | | | | | | | | | | | | |
| | Bay Trail | | | | | | | ▭ | ▭ | ▭ | ▭ | ▭ |
| | Bay Water Trail Mission Creek Launch | | | | | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ |
| | Mission Creek Garden | | | | | | | ▭ | ▭ | ▭ | ▭ | ▭ |
| | Mission Creek Shoreline Park | | | | | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ |
| | Rincon Park | | | | | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ | ▭ |
| | SOMA Rec Center | | | | | | | | | | | ▭ |

Subarea Profile

# Mission Creek

## Subarea 3-2

| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Maritime** | | | | | | | | | | | | |
| | Mission Creek Harbor | | | | | | | | | | | |
| | - | - | | | | | | | | | | |
| **Transportation** | | | | | | | | | | | | |
| | Caltrain King Street Station / Transit Hub | | | | | | | | | | | |
| | Third Street Bridge | | | | | | | | | | | |
| | Fourth Street Bridge | | | | | | | | | | | |
| | Muni Light Rail (T) | | | | | | | | | | | |
| **Utilities** | | | | | | | | | | | | |
| | Berry Street Pump Station | | | | | | | | | | | |
| | Channel, Harriet-Lucerne, and Merlin Morris Pump Stations | | | | | | | | | | | |
| | North Channel Transport / Storage Box | N/A (Buried assets are not directly impacted by flooding) | | | | | | | | | | |
| | Shotwell Pump Station | | | | | | | | | | | > |
| | South Channel Transport / Storage Box | N/A (Buried assets are not directly impacted by flooding) | | | | | | | | | | |
| **Critical Facilities** | | | | | | | | | | | | |
| | Bessie Carmichael School | | | | | | | | | | | |
| | County Criminal Courts, Hall of Justice | | | | | | | | | | | |
| | Fifth Street Homeless Center | | | | | | | | | | | |
| | Recology Recycling Center | | | | | | | | | | | |
| | San Francisco City Clinic | | | | | | | | | | | > |
| | Women's Resource Center | | | | | | | | | | | > |

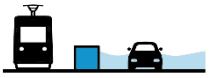
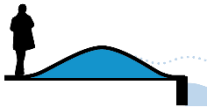
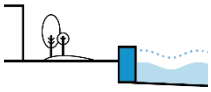
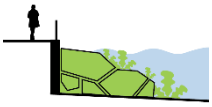
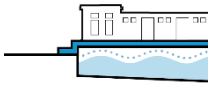
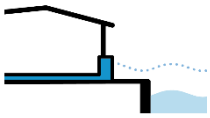
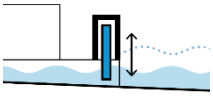
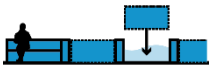
Subarea Profile

# Mission Creek

## Subarea 3-2

### 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 | | |

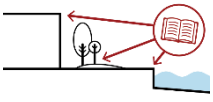
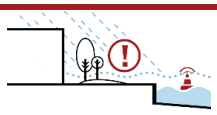
## SEISMIC MEASURES:

### Southern Waterfront Seismic Vulnerability Assessment

Further information about the potential seismic hazards and vulnerability of Mission Creek 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 | | |