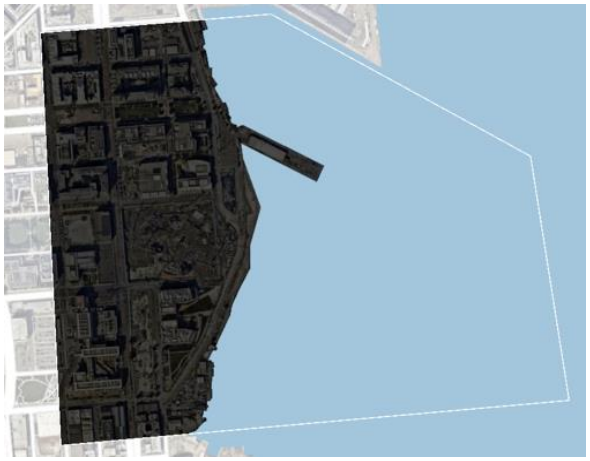
Mission Bay

Subarea 3-4

Subarea Description



Subarea 3-4: Mission Bay

Mission Bay (Subarea 3-4) is a recently developed area and site for several landmarks, including the newly opened Chase Center, Bayfront Park, the Corinne Woods Pier 52 Boat Launch, and UCSF and Kaiser medical centers.

Originally an industrial district, the Mission Bay Redevelopment Area underwent a transformation starting with the construction of the UCSF Mission Bay campus, currently in the final stages of development and construction. The UCSF Medical Center at Mission Bay provides health services for the wider area and conducts medical research. Chase Center, home of the Golden State Warries, also serves as a venue for concerts and major events.

The Corinne Woods Pier 52 Boat Launch is one of a limited number of public boat launches in the Bay Area, providing access to the bay and is the city's only public trailered / motorized boat launch. It is also a launch location for the Bay Area Water Trail, providing access to the shoreline with a high-freeboard dock, an Americans with Disability Act approved low-float dock attachment, and two boat ramps with ample parking. Port employees use the boat launch for maintenance activities and emergency response. The boat launch is also used by the Police Department Marine Unit and the U.S. Coast Guard.

Adjacent to the Corinne Woods Pier 52 Boat Launch is a large open lot with parking to serve recreational boaters and a bike path. To the south is a future Bayfront Park that will be improved and expanded as part of the Mission Bay Redevelopment Plan.

Pier 52 itself is a former freight rail ferry dock. It is a potentially eligible historic resource and serves as a wave attenuator for the boat launch. The Corrine Woods Pier 52 Boat Launch requires modifications to adapt to sea level rise. Though docks and launches are generally highly adaptable to higher water levels, landside services and support are harder to adapt and protect. Permanent inundation could eliminate launches from this location.

On the eastern side of Pier 54, an open paved area provides space where floats are built for various events and parades, including Burning Man, Carnival, and Bay-to-Breakers. Pier 54 is also the location for the Chinese Chamber of Commerce, a variety of construction consultants, and the American Red Cross. The pier has one long-term lay berth. Current uses at the site could be relocated.

Additional public spaces include Aqua Vista Park, a small landscaped park and fishing pier with picnic benches and public art. It will be redesigned and upgraded in 2020 to incorporate stormwater treatment and shoreline protection measures. While current uses and facilities are expected to remain the same, the upgrades will include elevation of the site to address sea level rise and shoreline protection features.

Further improvements are planned for Bayfront Park, currently a large open lot with parking and a bike path, which will be expanded as part of the Mission Bay Redevelopment Plan.

Fire Station 4 is located at 449 Mission Rock at 3rd Street. This station is part of the new (April 2015) Public Safety Campus that also contains the San Francisco Police Department headquarters, the Arson Task Force, and a Community Room to serve the growing Mission Bay neighborhood.

The Mariposa Street, 20th Street, and 22nd Street combined sewer discharge outfalls convey overflow from the Mariposa transport / storage box to the Central Basin in the Bay. The Mariposa transport / storage box has a capacity of 0.9 million

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gallons and drains combined wastewater and stormwater runoff from the Mariposa drainage areas. Wet weather flow is pumped downstream via the Mariposa pump station. If excess flows occur, they are discharged through the outfalls. Sea level rise can impact the discharge capacity of the outfalls. Adaptive measures, such as backflow prevention, are currently being installed to prevent the inflow of Bay water into the discharge structures during periods of elevated water levels. However, maintaining outflow capacity during extreme wet-weather events as sea levels rise will require the addition of pumps in the future.

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. Community feedback related to this subarea is included in the Community-Identified section as part of the Review of Landmarks, Assets, and Services listed below and incorporated in the overall POOCC analysis.

Landmarks, Assets, and Services

Land Use

The subarea is zoned as PDR (Production, Distribution, and Repair), open space, with some areas of mixed use and residential; cultural, institutional, educational; and office buildings.

Community-Identified

- UCSF Mission Bay Medical Center
- Genentech Hall
- Chase Center
- Bayview Boat Club (Pier 50.5)
- Muni T-Line (transit connections)

Historic and Cultural

- There are no historic assets.
- Pier 52 (potentially eligible historic asset)
- Chase Center (cultural resource)

Maritime

- Pier 52
- Corinne Woods Boat Launch (Pier 52)
- Red Cross Operations and Resources (Pier 54)
- Seawall Lot 337 MB1
- Seawall Lot 337 MB2
- Seawall Lot 337 – South
- Seawall Lot 343
- Seawall Lot 345 (boatyard, guest dock)
- Mission Bay Ferry (future ferry landing site, anticipated to be operational by 2022)

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Disaster Response

- Mission Bay Ferry (future ferry landing site, anticipated to be operational by 2022)
- Corinne Woods Boat Launch (Pier 52)
- Small Boat Berth (Pier 52)
- Red Cross staging and operations (Pier 54)
- Staging Area (Pier 54)
- Fire Station 4
- Bureau of Fire Investigation
- Emergency Fire Water System suction connections (4)
- Illinois Street

Utilities

Water

- Mariposa Pump Station
- Mariposa Transport / Storage Box
- Buried water supply pipes

Wastewater

- Buried wastewater and stormwater sewer pipes
- Combined sewer discharge outfall (1)
- 100-year stormwater overland flow in Agua Vista Park

Power

- Overhead and buried electric power infrastructure
- Buried PG& E supply line infrastructure

Communications

- Several telecommunication cell sites (e.g. cells on top of buildings or small cell towers on streetlights) are likely distributed throughout the subarea, but specific locations are unknown

Natural Gas

- Buried natural gas supply line infrastructure

Transportation

- Muni bus stops (14)
- Muni T-Line)

Open Space and Ecology

Open Space

- Agua Vista Park
- Bayfront Park (planned waterfront park)
- Waterfront Park (Pier 52)
- San Francisco Redevelopment Agency Promenade (planned, paved open space)
- Bay Trail / Blue Greenway
- Bay Area Water Trail Corinne Woods Boat Launch (Pier 52)

Ecology

- San Francisco Bay

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- Bay Habitat

Problems, Opportunities, Objectives, Constraints, and Considerations

Problems

- Bay water flooding from rising sea levels could cause extensive damage to public infrastructure and private property, industrial processes, and disaster response, as well as adverse changes to the social and economic character of the subarea.
- The subarea is located on Bay fill making it potentially vulnerable to seismic activity such as lateral spreading and liquefaction.
- The piers provide important maritime, industrial, and disaster response services.

Opportunities

- Enhancement and adaptation of former and current industrial spaces for city and community uses, including potential disaster response abilities.
- Increased access to the waterfront and improved public views and experience connecting to the Bay.
- Improvement to the natural environment by using nature-based features and improve soil quality, where possible.

Objectives

- Assess and protect area and assets from flooding and seismic risks.
- Reduce the risk to disaster response functionality and public safety (including loss of life) and public health from Bay storms and rising water levels.
- Reduce the risk to critical public infrastructure and private property damage from strong seismic activity and rising bay water levels.
- Retain PDR (Production, Distribution, and Repair) and maritime land uses.
- Retain and improve public access when developing project features.
- Remove environmental risks and improve the natural environment (water quality/soil) and ecological value.
- Support a sustainable economy that benefits residents, workers, and industries.

Constraints

- Must not increase the unmitigated risk of flooding from any source (bay, creek, or surface waters) outside of the subarea.
- Must protect disaster response functionality of the piers.
- Must not cause an increase in response time for emergency responders, nor cause an increase in flood risk to critical facilities, such as the only San Francisco rail-ship connection.
- Must comply with all applicable federal, state, and local laws and policies. The project must comply with applicable executive orders (EOs), including EO 11514 (Environmental Quality), EO 11593 (Protection of Cultural Environment), EO 11988 (Floodplain Management), EO 11990 (Protection of Wetlands), EO 12898 (Environmental Justice), EO 13007 (Indian Sacred Sites), EO 13045 (Environmental Health & Safety Risks to Children), EO 13122 (Invasive Species), EO 13783 (Promoting Energy Independence and Economic Growth), EO 13807 (Establishing Discipline and Accountability in the Environmental Review and Permitting Process) and EO 13834 (Efficient Federal Operations).

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Considerations:

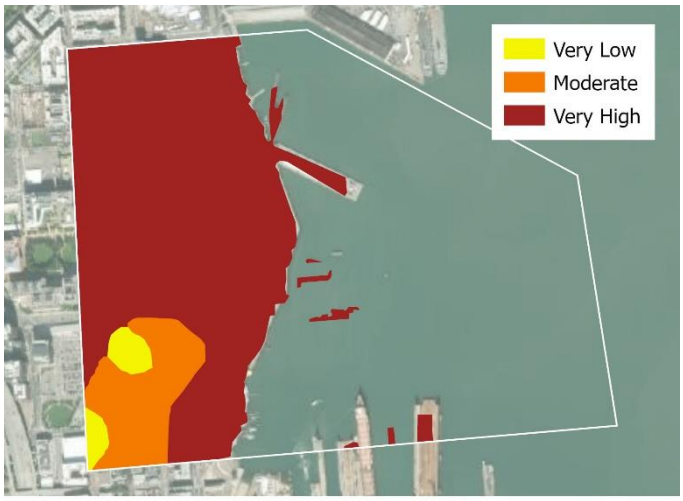
- **Tenants:** The Port leases land to tenants including private companies, City agencies, and the U.S. military. Coordination with all tenants will be important. While the Port owns these lands, many are operated by tenants that invest private capital for infrastructure improvements to the facilities. Management decisions related to addressing the consequences of flooding and planning for future sea level rise adaptation could complicate lease terms and will require additional coordination with tenants.
- **USACE Environmental Operating Principles:** Incorporate as part of the planning process.
- **Stakeholder engagement:** Ongoing public outreach by the Port and additional efforts has generated many location specific comments from the community. Community priorities cited in feedback include opportunities to improve public safety, accessibility of key corridors like Third Street, public access to the waterfront, and preparation for sea level rise.

Seismic Summary

The seismic hazard and vulnerability within Mission Bay (Subarea 3-4) is currently being evaluated through the Initial Southern Waterfront Seismic Study, therefore comprehensive accounting of liquefaction and lateral spreading hazards cannot currently be provided.

From a regional perspective, USGS provides a high level rating of seismic hazard in Mission Bay (Subarea 3-4) as an VIII on the Modified Mercalli intensity (MMI) scale. The intensity scale consists of a series of certain key responses such as people awakening, movement of furniture, damage to chimneys, and finally – total destruction – on a scale of I (not felt) to X (extreme).

An MMI of VIII (severe) could cause slight damage in specially designed structures, considerable damage in ordinary substantial buildings including partial building collapse, and major damage in poorly built structures. Fall of chimneys, factory stacks, columns, monuments, and walls are likely, and heavy furniture may be overturned.



Source: Esri, Maxar, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community

Subarea 3-4 includes areas with Very High, Moderate, and Very Low susceptibility to liquefaction. The scale considers historical liquefaction occurrences, geotechnical analyses of limited borehole data, and the estimated depth to the shallow groundwater table. The susceptibility ratings are based on existing conditions and do not consider potential increases to the groundwater table that may occur with sea level rise and climate change.

Our understanding of seismic hazard and vulnerability in this subarea will continue to be refined with the completion of the Initial Southern Waterfront Seismic Study and used to develop appropriate risk mitigation measures as part of the Waterfront Resilience Program.