

13. SAN MATEO POLICE STATION

City of San Mateo

VULNERABILITY SUMMARY

The San Mateo Police Station (Station) is a critical facility and **moderately vulnerable** to sea level rise. Exposure is low as the Station is currently protected by the Foster City Levee system, which is 1.7 miles away from the Station. Although the Station lies at sea level, it already experiences water intrusion in the underground garage. Any overtopping of the Foster City Levee system could significantly affect the asset. Critical components (some underground) are sensitive to flooding and would be inoperable if power were lost due to flooding. Adaptive capacity is moderate, as the Station can move law enforcement, 911 dispatch, and Emergency Operation Center (EOC) operations temporarily, albeit with a reduced level of service.

SENSITIVITY Moderate	EXPOSURE Low	ADAPTIVE CAPACITY Moderate	CONSEQUENCES High
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ASSET CHARACTERISTICS

200 Franklin Parkway | San Mateo

Asset Description and Function:

The Station serves roughly 105,000 people in the City of San Mateo and Central San Mateo County. The Station houses the City's dispatch center and EOC, if activated, the EOC will support emergencies or planned events. The facility was built in 2006, employs 117 officers, and includes a temporary holding facility and a vehicle fleet garage. It also houses the controls for Caltrans signs for the San Francisco Bay Area.



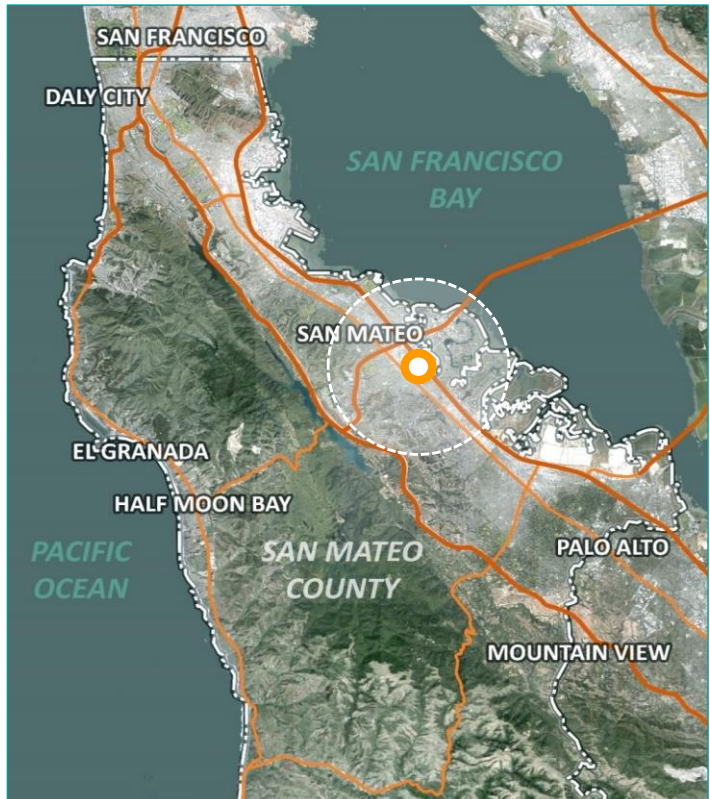
Asset Type	Police Station
Asset Risk Class	4
Size	55,000 square feet
Year of Construction	2006
Elevation	11 feet, mean sea level
Level of Use	Serves 100K+ residents
Annual O&M cost	\$85,000
Special Flood Hazard Area	Asset is not in SFHA
Physical Condition	Built in 2006
Landowner	City of San Mateo

Underground Facilities

A parking garage, shooting range, armory, storage, fleet vehicles, the main electrical room with dispatch, Uninterruptable Power Supply (UPS), and Caltrans signs controls are underground.

Environmental Considerations

Special status plants, animals, and natural communities may be present in the project area; a more detailed analysis will be needed before implementing adaptation strategies.



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ASSET SENSITIVITY

The Station operations and level of service are moderately sensitive to minor flooding, and very sensitive to severe to permanent flooding. The most essential component of the facility is the electricity, without which the Station could not function. The main electrical room and the UPS for dispatch services are located in the basement and could shut down if inundated, despite the five sump pumps, which can generally keep the basement dry during minor flooding. If the Station lost power (main, backup, and/or the distribution system), the emergency 911 dispatch services provided by the department would not be available, and personnel could not respond to calls.

Though the Station has a backup generator with extra fuel on site, power distribution and the circuit board are below grade and could be exposed to deep flood water (though it is designed so minor flooding will drain away); power systems would therefore not function if the site were flooded. The police fleet cars are also stored underground and, if flooded, access and use will not be possible if warning time is insufficient to relocate them. Depending on the warning time and depth of flooding, those in holding cells and other personnel may need to evacuate the facility. The Caltrans controls signs are also sensitive to inundation.

Police department station and specialized vehicles.



SHORELINE VULNERABILITY

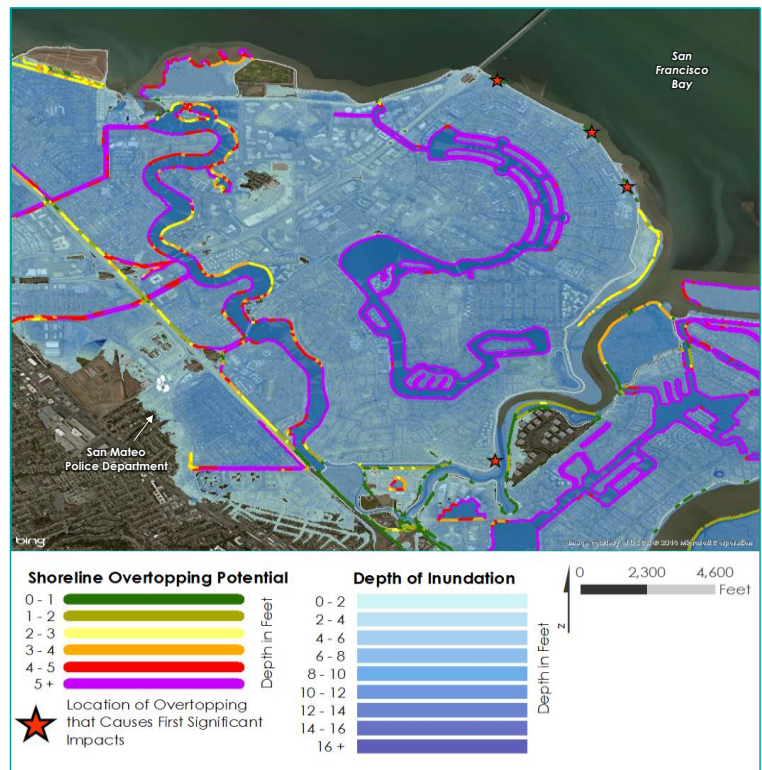
Shoreline Overtopping Analysis

The white arrow shows the location of the Station (see map on the right). The Station is projected to be below sea level when water surface elevations are 0 to 12 inches above current mean higher high water (MHHW). Because the Station is behind a levee, it will likely experience no coastal flooding until that levee overtops or fails. With water 48 to 52 inches above MHHW, water from San Francisco Bay (northeast) and Belmont Slough (southeast) will overtop the Foster City Levee (red stars on map, 2.7 miles from Station) and could reach the Station, assuming no improvements to the levee. However, Foster City is actively working to raise the height of the levee system, which will reduce the exposure of the Station to flooding once completed.

Cross-Cutting Vulnerabilities

Incoming power, fuel, and road access are critical to the function of the Station and losing these would precipitate a loss of service. This asset serves socially vulnerable populations in the region (many of whom may not have access to a vehicle or may not speak English). They would likely be disproportionately affected if the Station lost the ability to respond in an emergency.

First Significant Impacts: 52 inches of sea level rise.



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SEA LEVEL RISE EXPOSURE ANALYSIS

Exposure Discussion

Exposure of the Station to the effects of present day coastal flooding and sea level rise is low. The Station is not yet subject to any coastal-influenced flooding because the area is protected by Foster City's levee system (see AVP #24) and the levees on Seal Slough. It will not experience coastal flooding until the levee that protects it is overtopped or fails, at which point the asset could experience significant damage (assuming no action). The facility experiences only temporary flooding (recently in December 2014) from stormwater that flows from street level into the garage entrance ramps. In addition, the Station's underground garage experiences some minor water intrusion through the multiple cracks in the basement wall.

Under future conditions, sea level rise will increase the likelihood of flooding from groundwater intrusion and from San Francisco Bay. The Station is at mean sea level, and with rising sea levels, it will be permanently below sea level, making it dependent on the protection of the Foster City levee. Flooding will not be incremental as the sea level rises, because the asset is protected by a levee. On the contrary, the Station will experience no flooding until the levee overtops, which could occur with water levels between 48-52 inches. Assuming no intervention, this water level could likely flood the Station and any subsurface facilities. It may be possible if this occurred that many other areas in Foster City and the City of San Mateo are flooded as well.

Baseline Scenario: Asset is protected by levees.



Mid-Level Scenario: Asset is fully inundated.



High-End Scenario: Asset flooded 16 feet deep.



Exposure Analysis Results

Scenario	Potential Inundation Depth (feet)	
	Minimum	Maximum
First Significant Impacts (52 inches)	0	12
Baseline 1% Flood	0	0
Mid-Level 1% + 3.3 feet	1	13
High-End 1% + 6.6 feet	4	16

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ADAPTIVE CAPACITY, CONSEQUENCES, AND POTENTIAL ADAPTATION

Adaptive Capacity

The Station has moderate adaptive capacity in a short duration, less severe flood, and moderate adaptive capacity in a severe or permanent flood. Sump pumps in the basement keep the below-ground infrastructure dry during minor flood events, and sandbags are available if needed. The Station has a UPS for dispatch operations and a generator with extra fuel, but these are below and at-grade (respectively) and would not function if inundated. In the case of a severe flood, the vehicle fleet could be moved or relocated at the first signs of flooding. Though unlikely, if not able to be relocated, the Station can rent cars to support basic functions, and the level of service would likely be reduced. If dispatch operations are interrupted due to inundation, staff can forward 911 calls to Burlingame Police Department (elevated, very low vulnerability) and move EOC services to Fire Station 23 in San Mateo to maintain service.

Consequences

Should the Station be flooded from a future storm and lose function, the consequences could be high. However, the County of San Mateo has an emergency operations plan that would be activated if a major flood occurred, which would help minimize impacts to the community from a loss of service of the Station. The Station provides law enforcement services to over 100,000 people, and loss of the ability to respond to calls due to either flooded vehicles or a loss of power at the Station could affect the public health and safety of the entire city. Should a flood occur without time to evacuate, onsite injuries from flooding are possible, although there is not a large staff onsite and there are only a few holding cells. If the police department were permanently damaged, it would cost over \$22.5 million to replace.

Additional Important Information

To improve the resilience and preparedness of the citizens in the City of San Mateo in the event of a major emergency (where emergency services are unable to respond), the local fire department provides Community Emergency Response Training. Security threats constrain the location of electrical systems to the basement.

Asset-Specific Adaptation

To reduce the likelihood of losing power, the power system and backup could be floodproofed and elevated above grade. In the near-term, additional flood mitigation measures could be implemented, such as floodproofing the entire facility, blocking water access to the basement, and relocating the fleet. Regionally, Foster City has plans to elevate the levee nearby to address sea level rise, which means that the likelihood with which the Station could be exposed to coastal flooding would be further reduced.

Vulnerable Police Stations

This is the only Asset Vulnerability Profile on vulnerable police stations. The vulnerability assessment analysis shows there are three vulnerable police stations in the project area, including those in Foster City, Millbrae, and Half Moon Bay.

Power systems in the basement of the station.



Minor pooling of water in police station garage.

