

21. LIFE MOVES MAPLE STREET SHELTER

San Mateo County
Department of Public Works

VULNERABILITY SUMMARY

The Life Moves Maple Street Shelter (Shelter) is **moderately** vulnerable to the effects of sea level rise. The Shelter has relatively low exposure to flooding and sea level rise, but its services are moderately sensitive to flooding and its clients are a particularly vulnerable population. Flooding would require evacuation of the Shelter, further stressing already disadvantaged individuals. The asset has a low adaptive capacity as there are limited options for relocating clients in the near-term. Furthermore, permanent relocation of the facility will likely be required in order to continue to support San Mateo County's homeless populations, yet options to do so are limited.

SENSITIVITY Moderate	EXPOSURE Low	ADAPTIVE CAPACITY Low	CONSEQUENCES High
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ASSET CHARACTERISTICS

1580 Maple St | Redwood City

Asset Description and Function:

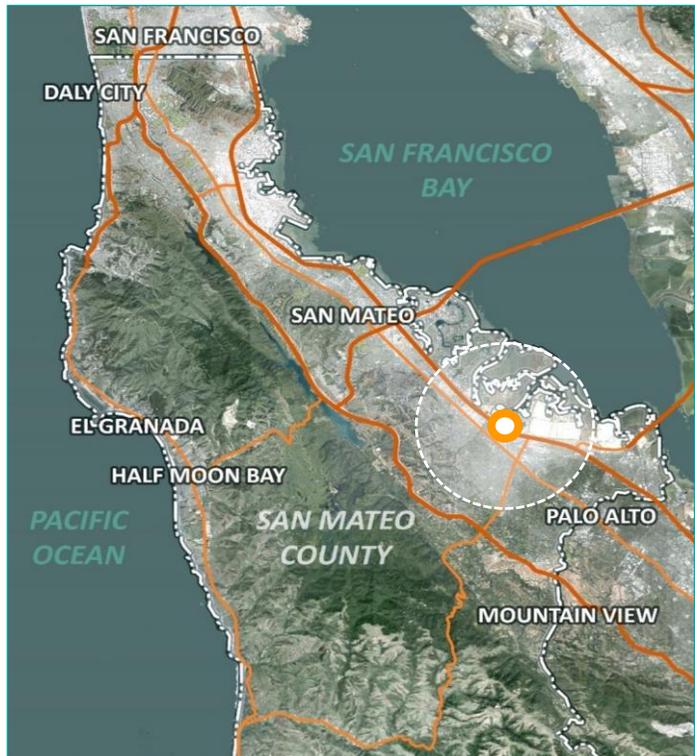
The Life Moves Maple Street Shelter is a homeless shelter serving 1,240 single adults in San Mateo County (San Mateo County Homeless Census and Survey, 2015). It is the only one of its type in the County, providing services to some of the County's most vulnerable populations. The Shelter takes referrals from across the County, which leaves it consistently at capacity (75 beds). The Shelter is currently undergoing a large remodel to double capacity and improve service.



Asset Type	Homeless Shelter
Asset Risk Class	3
Size	37,000 square feet
Year of Construction	1962
Elevation	10 feet, MSL
Level of Use	75 clients/night
Annual O&M Cost	\$127,000
Special Flood Hazard Area	Asset is in SFHA
Physical Condition	Fair
Landowner	County of San Mateo
Underground Facilities	No underground facilities were identified.

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 Shelter is moderately sensitive to flooding and the impacts of sea level rise. It has no underground facilities and can operate without electricity in the event of power outages. However, the level of service would decrease as heat and hot water would be unavailable to occupants and staff. During previous flood events, the road has flooded and shelter staff were able to bring in supplies and shuttle clients in vans. If the Shelter were flooded, it would likely be unsafe for occupancy and the level of service would be significantly reduced. Clients would have to be relocated temporarily to motels or another shelter if available as they likely have no other housing alternative.

For this reason, the clients are highly sensitive to flooding and sea level rise, as other shelters may not be available, and motels are not a viable long-term solution.

Maple Street entrance to the shelter.



SHORELINE VULNERABILITY

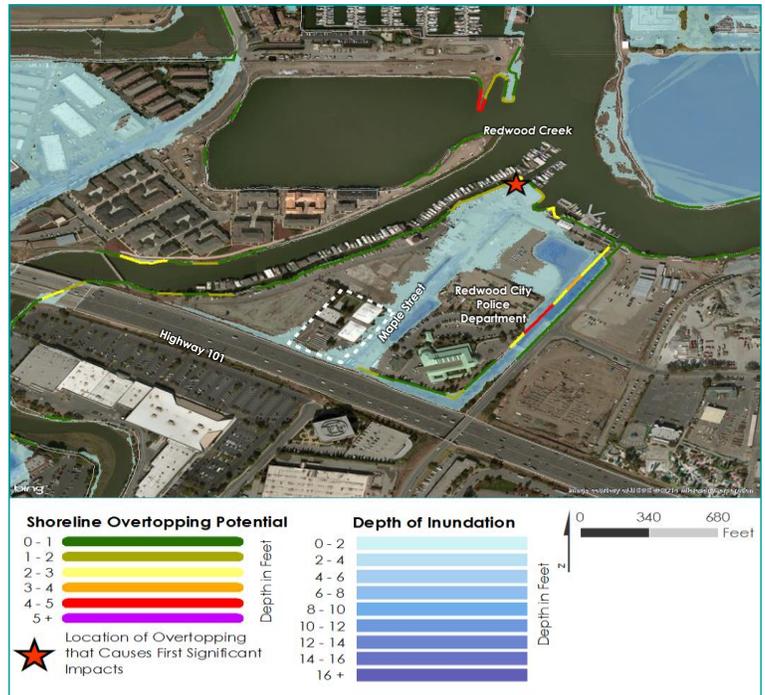
Shoreline Overtopping Analysis

Redwood Creek is a likely source of coastal flooding at the Shelter. When water surface elevations reach 0-12 inches above the current mean higher high water (MHHW) level, the creek overtops the embankment roughly 900 feet northeast of the Shelter (red star on map), creating a potential flow path to the asset. The first damaging inundation is likely to occur when water reaches 12-24 inches above MHHW.

Cross-Cutting Vulnerabilities

The access road (Maple Street) floods before the Shelter is impacted. This can limit ingress and egress for supplies (food or fuel) and for clients who need to travel to commute to jobs. This could lead to these clients missing work and being laid off, worsening their prospects in an already disadvantaged community. Additionally, the drainage ditch in front of the Redwood City Police Department, which serves stormwater and road runoff, can also overflow and flood the Shelter.

First Significant Impacts: 24 inches above MHHW.



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SEA LEVEL RISE EXPOSURE ANALYSIS

Exposure Discussion

The Shelter has a low level of exposure to present-day coastal flooding and sea level rise. It has not experienced flooding in recent years, though flooding of Maple Street used to reach up to the door of the Shelter, most recently in 1986.

The Shelter is at grade, and it is exposed to flooding when high water levels in San Francisco Bay prevent stormwater from discharging to the bay, and instead force it to back up on site. Following days of rain, saturated soils prevent the low-lying site from draining and cause ponding on site. With rising sea levels, these two events are likely to coincide more often, leading to more frequent floods at the Shelter. If floodwater did submerge the site, water could enter the Shelter through doors on the perimeter.

Baseline Scenario: Asset not yet inundated.



Mid-Level Scenario: Inundation up to 6 feet deep.



High-End Scenario: Inundation up to 9 feet deep.



Exposure Analysis Results

Potential Inundation Depth (feet)		
Scenario	Minimum	Maximum
First Significant Impacts (24 inches)	0	2
Baseline 1% Flood	0	0
Mid-Level 1% + 3.3 feet	3	6
High-End 1% + 6.6 feet	6	9

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ADAPTIVE CAPACITY, CONSEQUENCES, AND POTENTIAL ADAPTATION

Adaptive Capacity

Adaptive capacity of the facility is low, as there are no pumps or barriers on site to minimize or prevent flooding. Flooding would require clients to evacuate, and the County of San Mateo has an agreement with the Redwood City Police Department to allow evacuation through the station parking lot in emergency situations. Relocating the Shelter's clients would be difficult, as many shelters in the area are already at capacity. If the Shelter were forced to temporarily close, the County would finance temporary housing solutions such as motels or apartments. If the Shelter were permanently closed, however, an alternate location for the Shelter would be required, and there are likely limited options available.

Consequences

Flooding at the facility would cause damage to furniture and other office items. The Shelter's 75 clients could also be subject to injury, and would likely need to be evacuated and housed elsewhere until the facility could be drained and repaired for re-occupancy, absent mold and other hazards that can be caused by flooding. These potential impacts could be experienced more frequently with sea level rise. Evacuating already vulnerable clients adds stress and disruption to their lives—stresses unique to homelessness that are likely not experienced by the general public. For example, the clients likely do not have access to a vehicle, alternate places to stay, means of replacing damaged personal property, or social support networks critical to response during and recovery after disasters. Relocating clients could create overcrowding at other facilities or incur high rental costs for the Shelter. If the facility were permanently damaged, replacement costs have been estimated at nearly \$5.5 million (as of 2000).

Additional Important Information

Adaptation poses a particular challenge to this facility. Elevating the facility could be cost-prohibitive, and there are limited options for relocation. There is also often a public stigma attached to homeless and other vulnerable populations, which makes finding a location (on high ground) difficult because other neighborhoods would prefer it be located elsewhere. Overall, the County is committed to working with Redwood City on strategies to protect its assets within the tidal floodplain.

Asset-Specific Adaptation

Vulnerability of the road and shelter could be reduced using nonstructural measures including elevation and dry floodproofing. This would enable clients to safely shelter in place or get to and from work. Improvements to the adjacent wetlands could reduce wave action along the shoreline and alleviate some flood risk.

Vulnerable Homeless Shelters

This is the only Asset Vulnerability Profile on vulnerable homeless shelters in the County. An inventory of vulnerable homeless shelters in the project area was not available at the time of this assessment.

Parking and rear of shelter; Planned site for expansion.



View of water entry point at dorm room door to garden.

