

City of Benicia

Solano County

Site Description

The City of Benicia is a waterfront community in the San Francisco Bay Area, located on the north bank of the Carquinez Strait and the north side of Suisun Bay. The granted state lands are along the city's shoreline, extending from the Benicia State Park in the west to the city's eastern extent, just past the east end of the Benicia Industrial Park. The city was originally granted the state lands within the original city boundaries in 1855. Today, the granted area is a patchwork because some lands were privately sold (before the practice was outlawed in the early 1900s), and in some areas, the Public Trust has been terminated through quitclaims and title actions (mostly within the marina). The shoreline is relatively flat and encompasses a variety of land uses, including natural areas (e.g., marshes, wetlands, parks, beaches), park areas (some of which contain natural habitats), industrial/commercial developments, critical infrastructure including stormwater system and the wastewater treatment plant, the Union Pacific Railroad, and a privately operated port. Benicia will have to prepare for new conditions, by implementing proactive strategies to lessen the impacts of climate change and reduce risk to key areas and assets throughout the city.

Coastal Hazards considered:
tidal inundation, 100-year storm, earthquakes



Granted Land Type:
Smaller Harbor/Marina
with Recreational
Amenities or Natural
Assets

Public Trust Uses

Primary Uses: Fishing, Recreation
Secondary Uses: Safety & Navigation



Modeling system used for mapping:
NOAA

Sea level rise scenarios/elevations
[LINK TO FULL ASSESSMENT](#)

Vulnerable Public Trust Resources	
Built Facilities	Waterfront properties in city's commercial district, Turnbull Park (0.5 acres), parts of the Benicia Industrial Park (4,000 acres), Benicia Marina Harbor, East 2 nd Street, East 5 th Street, Bayshore Road, East B Street, Industrial Way, the Port of Benicia (645 acres), the Benicia Wastewater Treatment Plant, stormwater outfalls at East 2 nd Street and East 5 th Street, parts of Union Pacific railroad, waterfront bike and pedestrian trails
Natural Assets	Benicia State Recreation Area (469 acres, marsh and 2.5 miles of trails)

Other Site Vulnerabilities

The costs below represent Benicia's plans to prepare a downtown sea level strategy that includes near-term redevelopment and a Master Plan, and a long-term process to study, develop, and implement a flood control system for the downtown and waterfront area. The Port of Benicia and private property along the shore owned by the oil company Valero are also highly vulnerable to sea level rise, but no cost estimates of their protection and adaptation strategies were specified. It is difficult to determine costs directly associated with Public Trust assets because this assessment was not developed for AB 691. However, because many costs were listed as unknown, it is likely that the total value of sea level rise impacts will be much higher than what is recorded below.



Proposed Adaptation and Mitigation Measures

Policy Adaptation Strategies

Prepare a downtown sea level rise adaptation strategy. Incorporate consideration of sea-level rise into the city's Capital Improvement Program, and into the design and funding of future infrastructure projects. Incorporate additional climate change considerations into city plans and codes. Incorporate sea level rise and coastal flooding potential into existing and future recover plans. Track extreme weather costs.

Natural or Nature-Based Adaptation Strategies

Invest in green infrastructure. Coordinate flood planning along Sulphur Springs Creek.

Building and Infrastructure Strategies

Limit new development in mapped hazard area. Develop a "Maintain-A-Drain" program and increase emergency preparedness for the wastewater collection system. Train public works department employees in flood response. Increase pre-event stormwater infrastructure maintenance. Monitor the need to expand the wastewater treatment plant's flood protection measures. Coordinate with the Port of Benicia on sea level rise and flood planning.

New Sea Level Rise Adaptation Strategy in Development

The city is developing a strategy to reduce temporary and permanent flooding in the downtown and waterfront area, between East 5th Street on the east and I Street (includes the ballfields used for stormwater retention, Rancho Benicia, where flooding already occurs during a storm event and where older, more vulnerable individuals live, and most of the historical salt marsh footprint) First Street and the Marina. These areas include granted state land and Public Trust assets. It will help avoid near-term disruption and long-term loss of recreational amenities, residential buildings, and economic activity in the downtown area.

Anticipated Costs of Sea Level Rise (millions)*

	Current	2030 (12 in.)	2050 (24 in.)	2100 (60 in.)
Assets at Risk or Repair and Replacement Costs	n/a	\$9.525		
Cost of Adaptation	n/a		\$12.78	

* Costs are from Chapter 5, pp. 45-80, and represent the sum of estimated costs of adaptation strategies relevant to sea-level rise. Very few specific costs were available.