

City of Berkeley

Alameda County

Site Description

The state granted the City of Berkeley the salt marsh, and all tide and submerged lands within the city boundaries in 1913. In present day, the grant includes the Berkeley Marina, parks, trails, picnic areas, a 17-acre off-leash dog area, bird-watching, the Shorebird Park Nature Center, the Adventure Playground, unparalleled panoramic views, and amenities for boaters and non-boaters alike. Damages to the Berkeley Marina are projected to be moderate by 2030 and rise considerably by the end of the century without mitigation. By 2030, in a 100-year storm event, some roads and parking areas will experience temporary flooding, particularly on Marina Boulevard and northeast of the protected area of the Marina. By 2100, in a 100-year storm event, most of the land surrounding the protected area of the Marina, several buildings, significant parking areas, and the majority of University Avenue and Marina Boulevard will experience temporary flooding. By that time, there will be significant risk to the revetment, particularly from wave action and storms. Access to the Berkeley Marina via University Avenue will periodically be disrupted during 100-year storm events by 2030 and flooding will increase in frequency near the end of the century.



Granted Land Type:
Smaller Harbor/Marina

Public Trust Uses

Primary Uses: Recreation, Environmental Stewardship, Safety & Navigation



Coastal Hazards considered:
tidal inundation, 100-year storm

Modeling system used for mapping:
ART

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

Vulnerable Public Trust Resources

Built Facilities	Berkeley Marina (1,100 boat slips, 100 liveaboard slips), marina buildings and facilities, ferries (2), Skates on the Bay restaurant, Hs Lordships Restaurant, Seawall Drive, Marina Boulevard, Spinnaker Road, University Avenue Berkeley Municipal Pier, trails (7 miles), parking lots, hotel, nature center, revetment (around entire granted area), breakwaters (2)
Natural Assets	César E. Chávez Park, Shorebird Park, Horseshoe Park, the Berkeley Meadow

Other Site Vulnerabilities

Potential financial impacts to the Berkeley Marina caused by projected sea level rise include damage to commercial and public buildings and infrastructure, loss of public resources, loss of habitat and natural resources, and loss of berth rental revenue to the City. All below cost figures are based on the scenario of Low Risk Aversion plus 100-year extreme tide. Losses in property values were not evaluated in the AB 691 assessment.

Proposed Adaptation and Mitigation Measures

Natural or Nature-Based Adaptation Strategies

The city will monitor the ongoing full-scale pilot projects around the Bay that are enhancing protection by marsh development to evaluate whether a ‘living shorelines’ strategy could replace some or all of the rock revetment.

Building and Infrastructure Strategies

Elevate and re-grade Spinnaker Road and the Perimeter Trail (east side of César E. Chávez Park). Potentially elevate University Ave. Upgrade rock breakwater (by 2100). Revetment repair, which could include constructing an armor overlay (beginning in 2030 in some locations), raising of the revetment crest (beginning in 2050 in some locations), upgrading surface drainage, widening upgrade (by 2070). Alternatively, construct floodwalls around entire marina.



Partnerships

The City of Berkeley plans to collaborate with the East Bay Regional Park District on adaptation planning at the areas that adjoin the Eastshore State Park. The city is in an existing partnership with San Francisco Bay Ferry (WETA) on a ferry terminal planning study. If the ferry terminal is feasible, the terminal location, a replacement of a section of the existing pier on Seawall Drive, will be designed to mitigate sea level rise.

Anticipated Costs of Sea Level Rise (millions)*

	Current	2030 (6 in.)	2050 (13.2 in.)	2100 (68.4 in.) [†]
Repair and Replacement Costs	n/a	n/a	\$3.019	\$17.94
Losses in Non-Market Value	n/a	\$12/year		
Cost of Adaptation	n/a	\$1.05	\$11.05	\$15.59

* Repair etc. Costs Appendix G; Non-Market Losses section 4.4.1; SLR adaptation Appendix H. Costs in the table reflect sea level rise for 2030 and 2050, and the combined impact of sea level rise plus a 100-year extreme storm in 2100.

† The scenario for 2100 is the amount of sea level rise projected (28.8 in.) plus an estimated 40 in. temporary water level during a 100-year storm.