



South San Francisco Bay Shoreline Phase II Feasibility Study Area

PRIORITY E Provide flood protection to homes, businesses, schools, streets and highways.

PROJECT E7

YOUR TAX DOLLARS AT WORK



Valley Water



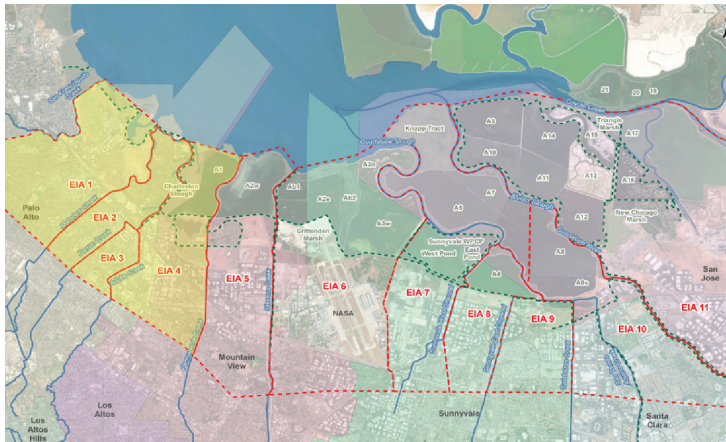
and Natural Flood Protection

Study Objectives:

The study analyzes solutions that would achieve multiple objectives along the South San Francisco Bay Shoreline in Santa Clara County, including:

- reducing risk from tidal flooding and sea level rise.
- restoring tidal marsh and related habitats.
- offering recreational and public access opportunities.

The study was conducted in partnership between the U.S. Army USACE of Engineers (USACE), Valley Water, and the California State Coastal Conservancy, with input from regional stakeholders including the Cities of Palo Alto and Mountain View, Caltrans, other local regulatory agencies, organizations, and community groups.



The Shoreline project area is divided into 11 Economic Impact Areas (EIAs). The Phase II Study includes EIAs 1-4.

Study Area:

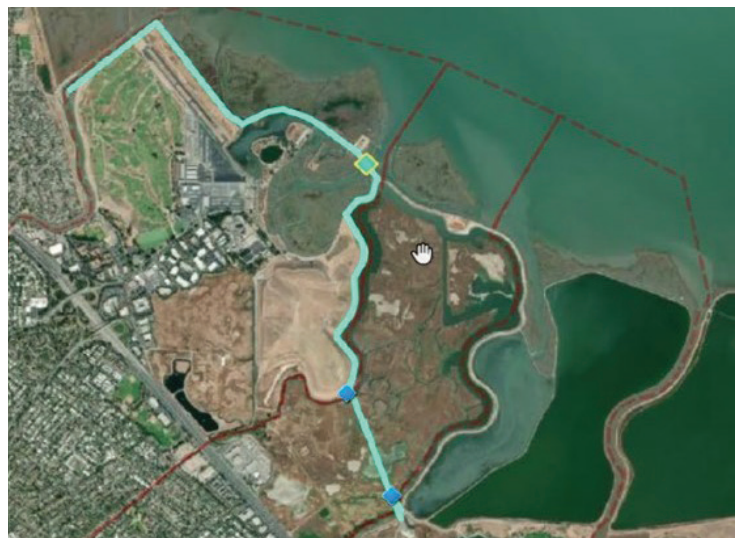
In 1976, the U.S. Congress authorized the USACE to study the coastal flood risk of the entire 18-mile South San Francisco Bay Shoreline in Santa Clara County. Due to its size and complexity (multiple jurisdictions, land uses and ecosystems), the original project area was broken up into more manageable pieces, known as Economic Impact Areas (EIAs), shown in the above image. The Phase II Study area includes EIAs 1-4 and is home to some of our region's most economically important assets, including leading global businesses such as Google and Intuit, and critical infrastructure like the Palo Alto Airport and Regional Water Quality Control Plant that serves six communities, including the disadvantaged community of East Palo Alto. The USACE is now studying EIAs 5-11 under a third phase, known as the Sunnyvale Study. Additional information on EIAs 5-11 is available online: valleywater.org/shoreline.



The Baylands Nature Preserve in Palo Alto provides 15 miles of trails, in addition to unique tidal and freshwater habitat.

Overview:

The study, which the USACE initiated in September 2019, evaluated coastal flood risk in the study area over a 50-year period (2030-2080) and modeled several scenarios for coastal and riverine flood events, along with sea level rise. Researchers also estimated the cost of damages to structures in the areas expected to flood, in addition to identifying several alternative levee alignments to protect the coastal area, such as the one shown in the below image. The Shoreline II Study built upon some of the alignments previously identified as part the Strategy to Advance Flood Protection Ecosystems and Recreation Project, managed by the San Francisquito Creek Joint Powers Authority (sfcjpa.org/safer-bay-project).



One of several potential levee alignments evaluated in the study.



South San Francisco Bay Shoreline

Outcome:

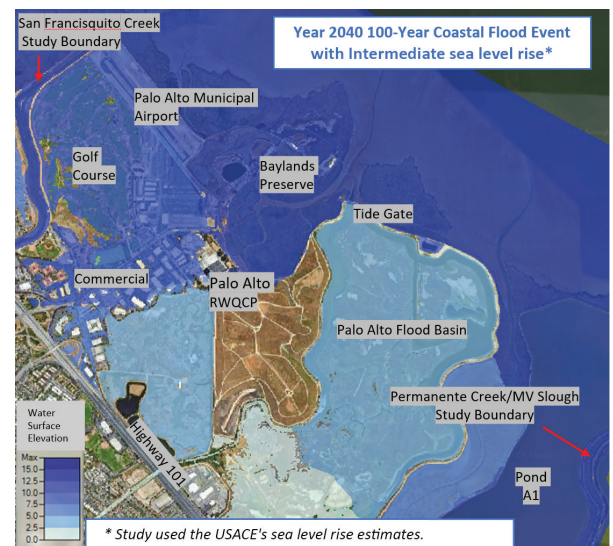
The USACE's analysis concluded that there is "no federal interest" in constructing a coastal flood protection levee in the study area at this time because the costs of building a levee, approximated at over \$280M, far outweighs the estimated damages the project could prevent. The study area is not predicted to experience flood damages significant enough to justify federal investment in a shoreline levee until approximately the year 2060, when sea levels are projected to be high enough to cause more significant damages. The USACE's criteria for federal interest is intended to help prioritize how limited federal funds are spent nationwide by identifying projects in communities with the most urgent need for flood protection. One example of near-term coastal flood risk as modeled for the study is shown in the below image. Valley Water and the other stakeholders worked closely with the USACE over several months to examine the USACE's analysis, suggest smaller alternatives, and discuss ways the study might be held open and re-scoped. Despite these efforts, the USACE decided that concluding this study was the best way to move forward as it would allow for local partners to pursue other opportunities for future USACE investment such as a new or smaller study. Additionally, regional agencies will continue working to address any specific near-term flood risks.

Next Steps:

Although there is no federal interest in funding a USACE coastal flood protection project at this time, there is a possibility of future federal interest closer to the time when sea levels are projected to be higher and consequently cause greater flood damages. The study partners and stakeholders will continue to work both independently and collaboratively to identify near-and long-term solutions and funding opportunities for potential high-risk coastal flooding and sea level rise. Regional efforts currently underway include:

- **South Bay Salt Pond Restoration Project (Regional):** The goal of this effort is to restore former salt ponds to tidal marsh habitats that can be adaptive to rising sea levels. southbayrestoration.org
- **Shoreline Adaptation Planning (Regional):** Senate Bill 272 is a statewide bill that requires local governments to develop "sub-regional shoreline resiliency plans" by 2034. bayadapt.org/regional-shoreline-adaptation-plan
- **Palo Alto Flood Basin (PAFB) Tide-Gate Retrofit (Valley Water):** This project will rehabilitate the PAFB tide gate structure so it continues to manage flood risk for the next several decades. valleywater.org/project-updates/palo-alto-flood-basin-tide-gate-structure-replacement-project
- **Palo Alto Airport Long-Range Facility and Sustainability Plan (City of Palo Alto):** This plan includes sea level rise protection for the airport. cityofpaloalto.org/Departments/Public-Works/Palo-Alto-Airport/Palo-Alto-Airport-Long-Range-Facilities-Sustainability-Plan-LRFSP
- **The Regional Water Quality Control Plant Long Range Facilities Plan Update (City of Palo Alto):** This plan will consider sea level rise protection from inundation and shallow groundwater changes.
- **Palo Alto Horizontal Levee Pilot Project (City of Palo Alto):** This project includes a pilot of nature-based solutions for sea level rise adaptation. cityofpaloalto.org/Departments/Public-Works/Watershed-Protection/Palo-Alto-Horizontal-Levee-Pilot-Project
- **City of Mountain View Sea Level Rise Capital Improvement Program (City of Mountain View):** The City developed a Sea Level Rise Capital Improvement Program that incorporates a collection of infrastructure and environmental projects that will prepare the City for anticipated sea level rise impacts. mountainview.gov/our-city/departments/city-managers-office/sustainability/climate-resilience

Meanwhile, Valley Water and stakeholders will continue to explore ways to leverage the findings from the concluded study to re-scope the project and garner federal interest and potential federal investment in the community for long-term shoreline resilience.



Modeled coastal flooding images indicated that projected sea level rise was not great enough to justify the cost of constructing a shoreline levee.