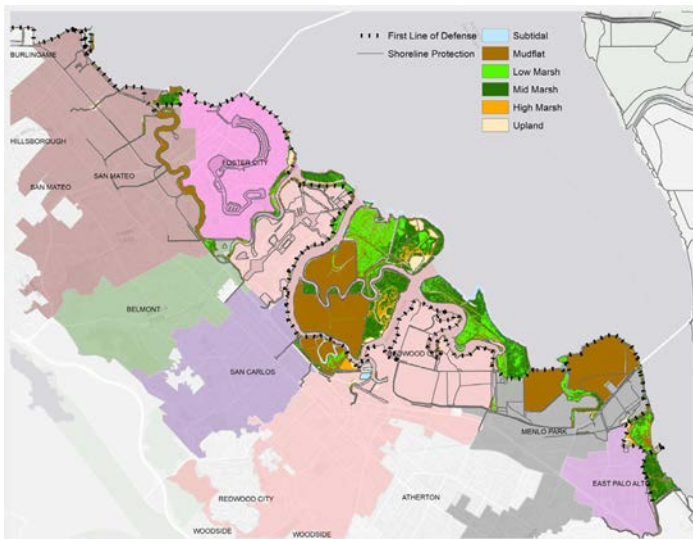


SAN MATEO BAYSIDE WETLANDS VULNERABILITY ASSESSMENT

Point Blue Conservation Science, in partnership with San Mateo County's Office of Sustainability, the California State Coastal Conservancy, and local stakeholders, is quantitatively evaluating the broader ecosystem functions and services of tidal marshes along San Mateo County baylands, and modeling how services are projected to change with sea level rise. The goal is to provide actionable information to support decisions on where to prioritize adaptation efforts to maximize ecological and human community benefits. The team is engaging with decision-makers to integrate this more detailed risk assessment of tidal wetlands in parallel with vulnerability and adaptation planning efforts occurring at local and regional scales. The assessment is expected to provide additional information on the risks of wetland loss and value to ecosystems and communities as sea levels rise and marsh heights change.

Area Map

The Study area includes existing tidal wetlands along the bayside of San Mateo County, which are concentrated south of the San Mateo bridge.



Timeline

The assessment is occurring from February 2017 through September 2018

Partners

The project and modeling lead is Point Blue Conservation Science.

The planning/design/stakeholder engagement and integration of project results includes Point Blue Conservation Science, San Mateo County Office of Sustainability, and the State Coastal Conservancy.

The local stakeholder Steering Committee includes San Mateo County (Sustainability, Public Works, Board of Supervisors), City of Menlo Park, City of Redwood City, City of East Palo Alto, Coastal Conservancy, San Francisco Creek Joint Powers Authority, South Bay Salt Ponds, United States Fish and Wildlife Service Refuge, and the Natural Capitol Project.

Results

The project assessed six future sea level rise and sediment scenarios that supported needs identified by the Steering Committee. Ecosystem benefits quantified included projected changes in tidal marsh habitat, abundance of tidal marsh indicator bird species, coarse-level changes in above ground carbon stock, and wave reduction benefits. The team is currently developing wave reduction metrics linked to the first line of defense (typically a levee or berm behind a fronting wetland) and then a combined index that spatially integrates the bird, carbon, and wave attenuation ecosystem benefits.

The project will produce maps that show the change from current conditions, and highlight areas that are valuable (i.e., retain high function across a breadth of future scenarios) as well as areas projected to be vulnerable. Results will be presented over the summer of 2018 at various local and regional forums, and disseminated online. For example, the maps will be incorporated into San Mateo County's planned StoryMap platform for communicating about the broader sea level rise vulnerability assessment and adaptation planning activities.