

Palo Alto Baylands

Planned Future Improvements and Changes to Land Uses and Activities

Prepared for:
City of Palo Alto

June 2018



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City of Palo Alto
Open Space, Parks and Golf Administration
Daren Anderson, Project Manager, Division Manager

Prepared by:

AECOM

2020 L Street, Suite 400
Sacramento, CA 95811

Contact:

Diana Edwards, Deputy Project Manager
Petra Unger, Project Manager

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Acronyms and Other Abbreviations

Bay	San Francisco Bay
Baylands	Palo Alto Baylands Nature Preserve
BCCP	Baylands Comprehensive Conservation Plan
City	City of Palo Alto
FAA	Federal Aviation Administration
SAFER	Strategy to Advance Flood Protection, Ecosystems, and Recreation along the San Francisco Bay
SFCJPA	San Francisquito Creek Joint Powers Authority
U.S. 101	U.S. Highway 101



Planned Future Improvements and Changes to Land Uses and Activities



1. Overview

Several long-term planning projects in and around the Palo Alto Baylands Nature Preserve (Baylands) have the potential to affect future land uses at the Baylands. The following sections describe projects located within or near the Baylands. Many of the projects identified below provide opportunities for coordination with the Baylands Comprehensive Conservation Plan (BCCP).

2. Capital Improvement Projects

2.1. San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project, Highway 101 to San Francisco Bay

The San Francisquito Creek Joint Powers Authority (SFCJPA) is a regional government agency whose members include the Cities of Palo Alto, Menlo Park, and East Palo Alto; San Mateo County Flood Control District; and Santa Clara Valley Water District. To reduce flooding from San Francisquito Creek, SFCJPA's flood reduction project, covering the area from U.S. Highway 101 (U.S. 101) to San Francisco Bay (Bay), proposed to construct flood reduction facilities including an overflow terrace at marsh elevation. The project also proposed to set back the levee and complete improvements to widen the channel, construct floodwalls in the upper reach, and extend the Friendship Bridge across marshland via a boardwalk. The first phase of construction began in July 2016.

Tidal Marsh and Upland Habitat Enhancements in and around Faber Tract Marsh

The SFCJPA flood reduction project includes upland habitat enhancements in and around the Faber Tract Marsh, including high-tide refugia islands and enhancements to the



marsh's perimeter berm. In December 2017, work began on habitat restoration features in the Faber Tract and outer Faber Tract. Work planned for the 2018 construction season includes construction and planting of five high-tide refugia islands and planting on the new berm between the creek and the Faber Marsh. Because of Ridgway's rail restrictions, this work is paused until September 1 (SFCJPA Board Meeting Update, January 25, 2018).

2.2. San Francisquito Creek Flood Reduction, Ecosystem Restoration, and Recreation Project Upstream of Highway 101

SFCJPA is preparing a draft environmental impact report (EIR) that will study a range of alternatives that could be undertaken to reduce flows and reduce flood potential in the flood-prone reach of San Francisquito Creek upstream of U.S. 101. The draft EIR is expected to be completed in 2018 (SFCJPA Board Meeting Update, December 14, 2017).

2.3. San Francisquito Creek Highway 101 Bridge Widening Project

The California Department of Transportation is removing and replacing the U.S. 101 bridge, the West Bayshore Road bridge, and the East Bayshore Road bridge over San Francisquito Creek. The new bridges are designed to meet the hydraulic capacity of SFCJPA's flood protection projects proposed upstream and downstream of U.S. 101. Work on the project began in July 2015 and is scheduled to be completed by summer 2018.

2.4. Strategy to Advance Flood Protection, Ecosystems, and Recreation

SFCJPA's Strategy to Advance Flood Protection, Ecosystems, and Recreation (SAFER) along San Francisco Bay seeks to reduce the risk of coastal flooding and remove properties from areas within the Federal Emergency Management Agency 100-year floodplain and accommodate 3 feet of sea level rise. The project will restore and sustain existing marsh habitat for flood attenuation in coordination with regional flood control efforts. The project will also increase recreational opportunities by improving bayfront levees in collaboration with the Bay Trail Program. In October 2016, SFCJPA completed a bayfront levee feasibility study that described 19 alternatives over nine reaches covering 7 miles of shoreline. A draft EIR is anticipated to be released in 2018, followed by finalized designs and a final EIR by 2019. The current schedule calls for construction to begin in 2019 pending approval and permits from federal, state, and local agencies.

2.5. Golf Course Reconfiguration Project

The Palo Alto Golf Course Reconfiguration Project was prompted by the SFCJPA project to realign the San Francisquito Creek channel for increased flood protection. The project converts 7.4 acres of current golf course land into marshland habitat within the expanded San Francisquito Creek channel to provide increased flood protection. The project also features 40 percent less turf on the remaining golf course (53 acres); creates 55 acres of native Baylands vegetation and wetland areas on the golf course; replaces aging irrigation and drainage systems and reduces potable water usage by 35 percent; and repurposes 10.5 acres of golf course lands for athletic fields or other park and recreational needs.

Baylands Athletic Center 10.5-Acre Expansion/Improvements

The City of Palo Alto capital plan includes a project in fiscal year 2019 to conduct public outreach and develop conceptual plans for the future use of a 10.5-acre expansion of the Baylands Athletic Center from land that was previously part of the golf course. The Parks, Trails, Natural Open Space, and Recreation Master Plan (2017) calls for



evaluating the optimal use for the 10.5-acre area.

2.6. Parking Lot Maintenance at the Baylands Athletic Center

The City of Palo Alto (City) plans to conduct maintenance activities in parking lots serving various City facilities, including the Baylands Athletic Center, in 2018. Maintenance activities will include repair, resurfacing, or reconstruction of parking lot surfaces and walkways to reduce safety hazards and extend the useful life of City facilities. Parking lot maintenance at the Baylands Athletic Center will be funded through the City of Palo Alto Capital Improvement Fund.

2.7. Horizontal Levee

The City is considering implementing an expanded version of an experimental levee design tested by the Oro Loma Sanitary District. The experiment used a bayside transitional slope planted with a mix of upland and hydrophytic vegetation to manage nutrient loads, remove particulates, and manage floodwater. The City and its partners are exploring the possibility of expanding the technology to a larger geographic area and connecting the experimental levee design to tidal action. This project is still in the very early conceptual planning stages.

2.8. Baylands Nature Interpretive Center/Boardwalk Improvements

The City is completing improvements to the Baylands Nature Interpretive Center and Baylands Boardwalk. The existing boardwalk at the Baylands Nature Interpretive Center has been closed since 2014 because of structural failure. This ongoing project includes updating and repairing exhibits and signage; replacing decking, railings, and exterior wood siding; and reconfiguring the restrooms to improve accessibility and better serve visitors, children, and classes. The capital project to construct a new boardwalk is planned for fiscal year 2019. The construction may need to be phased over 2 years because of the lengthy permitting process and construction window limitations established to accommodate wildlife breeding activities.

2.9. Airport

Apron, Runways, and Taxiways

The City is implementing the Airport Apron Reconstruction Project as a result of a 2015 Federal Aviation Administration (FAA) request for a pavement maintenance management plan. The plan identified 38 acres of pavement needing repairs, most critically on the airport apron. This project is expected to be completed in 2020. The Airport Apron Reconstruction Project also includes an assessment of the lighting, signage, and possible vault improvements to inform the Airfield Electrical Improvements Project. This project, scheduled to begin in 2019, follows the findings of the electrical infrastructure assessment.

The pavement maintenance management plan identified additional areas needing maintenance outside of the immediate safety concerns being addressed by the Airport Apron Reconstruction Project. These additional integrity deficiencies will be addressed by the Runway and Taxiway Reconstruction and Drainage Project, scheduled for completion in 2022.

Airport Facilities

The City will construct an automated weather observation system to provide airport users with more detailed weather information in real time. The project will provide more accurate and timely weather information to airport users when the FAA-staffed tower is closed and will contribute to the safe and economic operation of the airport. This



project is scheduled for completion in 2019 with funds from the City's Capital Improvement Project budget, combined with federal funds.

The City is completing an airport layout plan required by the FAA to ensure that the City remains eligible for federal grant funds. The City has submitted a plan to the FAA for approval that includes existing facilities and planned development, air traffic activity, noise contours, environmental documentation, and 20-year demand forecasts. This project is expected to be completed in 2021.

2.10. Byxbee Park Completion

Interim plans for Byxbee Park were developed in 2015 to complete the conversion of the closed Palo Alto Landfill to a park. A separate project to complete Byxbee Park is scheduled for fiscal year 2020. The use of \$2.8 million of park impact fees in fiscal year 2020 was included in the City Council-approved infrastructure plan. The conceptual design for completing Byxbee Park will be created during implementation of the BCCP.

Soil will be added to areas of Byxbee Park to approved grades where settling and subsidence has occurred. The work will occur in the spring of each year and will be limited to 10 acres or less per year.

2.11. Baylands Flood Protection Levees

Baylands flood protection levee improvements are in the design and environmental review stages. The project covers flood protection levees in the Baylands between San Francisquito Creek and the city of Mountain View. The flood protection levee improvement project is a component of the SAFER Bay Project, implemented by SFCJPA in coordination with the Santa Clara Valley Water District and the City of Mountain View to provide protection from a 100-year flood event. Funding for this project is scheduled for 2018.

The Baylands Emergency Access Levee Repair Project funds improvements to the earthen levee between Harbor Road near the Baylands Interpretive Center and the perimeter levee of the airport to 6 inches above the levee's original height. This project is necessary to mitigate the effects of subsidence and restore the width and height of the earthen flood protection levee. The permitting process has been delayed because of concerns regarding potential mitigation measures and is scheduled for funding in 2018.

2.12. Highway 101 Pedestrian/Bicycle Overpass Project

The Highway 101 Pedestrian/Bicycle Overpass Project is a priority project in the City's Bicycle & Pedestrian Transportation Plan (2012), providing safe, year-round access across U.S. 101 in South Palo Alto to the Baylands and regional employment centers. This ongoing project is funded by the City's Capital Improvement Project and \$4 million in grants, one each from the Santa Clara County Recreation Trails Program and the One Bay Area Grant Program, and a \$1 million contribution from Google. Construction is currently funded for 2019 through 2020.

2.13. Regional Water Quality Control Plant—Effluent Outfall Pipe Project

The Regional Water Quality Control Plant is pursuing the potential construction of an additional outfall pipe to convey effluent (cleaned and treated wastewater) to San Francisco Bay. The new pipe would run adjacent to the existing outfall pipe, which releases effluent near the Palo Alto Airport. Construction efforts would also include maintenance for the existing 52-year-old outfall pipe, and pump replacement for effluent discharged to nearby



Renzel Marsh adjacent to East Bayshore Road. The project would ensure reliable transport of treated effluent under projected climate change and sea level rise scenarios. The new, larger outfall pipeline would increase capacity to counteract sea level rise, while the new Renzel Marsh Pump would allow for increased flows to the marsh.

2.14. Former Los Altos Treatment Plant

Existing buildings (except for the digester) at the former Los Altos Treatment Plant have fallen into disrepair and are scheduled to be removed during summer 2018. Efforts are underway to find opportunities for recycling materials that may be acceptable for reuse.

3. Maintenance Projects

3.1. Regional Water Quality Control Plant/Renzel Marsh

In April, 2018, the City began maintenance activities to repair the constructed freshwater pond. Since 1992, when the pond was built, cattails and sediment have filled in the pond, restricting the flow of water through the site, and the berm constructed nearly three decades ago requires repairs to stop leaks and ensure long-term integrity. To reduce maintenance costs associated with leak repairs, the site will be drained, excess sediment and cattails will be removed, and the berm will be repaired.

Work is anticipated to be completed in two phases. The first phase will be completed in fall 2018, at which time approximately half of the pond will be refilled with water. Additional work under consideration at the Renzel Marsh includes enhancing the levee top trail with base rock, installing a new bridge over the saltwater channel, cleaning out the saltwater channel, enhancing and enlarging the freshwater pond, constructing a trail from Byxbee Park to the Renzel Marsh across the saltwater channel, and removing fences around the former ITT property. These proposed activities are in the planning stage and are subject to change.

4. Public Art Installations

The City's Public Art Master Plan called for setting aside funds to be allocated for a Social Practice Artist to engage the public and help inform the BCCP's public art elements. The \$10,000 that has been allocated will fund an artist-in-residence at the Baylands. The Palo Alto Public Art Program is seeking input to help identify opportunities and potential sites for future public art engagement.

5. Restoration Efforts

5.1. Save the Bay

In 2018 Save the Bay is focusing on restoration of four subsites in the Palo Alto Baylands: along the shoreline in front of the Baylands nursery, along Byxbee Trail, along the Adobe Creek Trail, and in an area adjacent to the ranger station and Lucy Evans Baylands Interpretive Center. Save the Bay has allotted 3,600 plants for the entirety of the Baylands in the next planting season and is growing approximately 14,000 plants this year for a restoration site along San Francisquito Creek north of the Baylands.



Save the Bay will continue to run education programs in the Baylands and expects more than 1,600 youth to participate in education and public restoration programs at Baylands sites in 2018.

5.2. Baylands Rangers

Baylands rangers have planned several near-term projects. In summer 2018 the rangers will repair and re-deck the “upper” dock of the sailing station. The project is projected to take 2–3 weeks and is scheduled for completion in June. The rangers also plan to replace rails and repair the bridge near Lucy Evans Baylands Nature Interpretive Center in 2018. Other projects include revegetation at the location of the recently removed “Compass” sculpture in the sailing station parking lot. The revegetation project is planned for summer 2018 and is scheduled for completion in September 2018. The Baylands rangers plan to plant native trees, shrubs, and other plants throughout the Baylands, particularly near the ranger station, picnic areas, and duck pond, as volunteer projects and volunteer opportunities arise.

5.3. South Bay Salt Pond Restoration Project

The South Bay Salt Pond Restoration Project is the largest tidal wetland restoration project on the West Coast and consists of restoration at three pond complexes. The Alviso Complex is immediately southeast of the Baylands and the Ravenswood Complex is north of the Baylands in East Palo Alto and Menlo Park. The final environmental impact statement/EIR for the project was published in 2016. Phase 1 of the South Bay Salt Pond Restoration Project constructed tidal and muted wetlands and enhanced managed ponds, trails, and access features. Phase 2 will restore additional former salt ponds and enhance the project’s long-term goals of restoration. The goal of Phase 2 is to restore 50 percent of the acreage to tidal marsh. Activities at the Alviso ponds in Phase 2 include breaching levees to open ponds A1 and A2W to tidal action; constructing habitat islands for birds; constructing upland transitional habitat along Mountain View Shoreline Park; building public access trails and viewing platforms; and raising levees along the Coast Casey Forebay and the southern end of Charleston Slough.

6. Land Use Changes

6.1. Resilient By Design

The Resilient by Design Bay Area Challenge is a yearlong design challenge to build resilient communities and shorelines in the face of climate change and sea level rise. South Bay towns including Palo Alto, East Palo Alto, Sunnyvale, and Mountain View were chosen as sites for the design challenge. Each team designs an implementable project. After designs are completed, the initiative and partners will work with teams to develop finance plans for implementation. The initiative is currently in the design phase.

6.2. Lagunita Diversion Dam Removal

Lagunita Diversion Dam is owned by Stanford University and located on the Stanford University campus, upstream of the Baylands on San Francisquito Creek. The dam is scheduled for removal in 2018. The project will remove the dam and sediment behind the dam, restore the stream reach, and improve fish passage and enhance access to 14.6 river miles of habitat upstream of the dam.



7. References

- California Department of Transportation. 2015. *US-101—San Francisquito Creek Bridge Replacement Project Fact Sheet*. Available: <http://www.dot.ca.gov/dist4/projects/sanfrancisquito/docs/San-Francisquito-fact-sheet-1-23-15.pdf>. Accessed February 1, 2018.
- City of Palo Alto. 2012. *City of Palo Alto Bicycle + Pedestrian Transportation Plan*. Final. Prepared by Alta Planning + Design. Palo Alto, CA.
- . 2015. *Department of Public Works Strategic Plan Fiscal Year 2016–2018*. Available: <https://www.cityofpaloalto.org/civicax/filebank/documents/50085>. Accessed February 1, 2018.
- . 2016 (May 12). *City of Palo Alto Public Art Master Plan*. Revised Draft. Created in cooperation with Barbara Goldstein & Associates with Gail M. Goldman Associates. Palo Alto, CA.
- . 2017a (August). *Palo Alto Parks, Trails, Natural Open Space, & Recreation Master Plan*. Final. Palo Alto, CA.
- . 2017b (August). *Fiscal Year 2018 Adopted Capital Budget*. Available: <https://www.cityofpaloalto.org/civicax/filebank/documents/61331>. Accessed February 1, 2018.
- San Francisquito Creek Joint Powers Authority (SFCJPA). *Projects: S.F. Bay to Highway 101*. Available: <http://sfcjpa.org/web/projects/active/s.f.-bay-to-highway-101/>. Accessed February 1, 2018.
- . *Projects: Caltrans Highway 101 Project*. Available: <http://sfcjpa.org/web/projects/active/caltrans-highway-101-project/>. Accessed February 1, 2018.
- . *Projects: Upstream of U.S. Highway 101*. Available: <http://sfcjpa.org/web/projects/active/101-to-el-camino-real/>. Accessed February 1, 2018.
- . 2017. Board Meeting Update, December 14, 2017. Available: <http://sfcjpa.org/web/meetings/page/meetings-december-14-2017-regular-sfcjpa-board-meeting/>. Accessed February 15, 2018.
- . 2018. Board Meeting Update, January 25, 2018. Available: http://www.sfcjpa.org/documents/1.25_.18_SFCJPA_Board_meeting_packet_.pdf. Accessed February 15, 2018.
- Stanford University. 2017. *Stanford Lagunita Diversion Dam Removal Project CDFW Proposition 1 Proposal CDFW Proposition 1 Proposal Solicitation Notice 2017, Attachment 11*. Available: <https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=152340>. Accessed March 20, 2018.

