SAVE WETLANDS

Citizens Committee to Complete the Refuge

Issue 50 | Advocates for the Don Edwards San Francisco Bay National Wildlife Refuge | Fall 2021

CCCR Volunteers Continue the Fight to Protect the Future Health of the Bay

***Tidal wetlands flooded at high tide** outboard of the SF2 levee. This photo provides a visual example of how tidal wetlands may be inundated and lost as sea levels rise if there is no space for them to migrate inland. Photo by Kate High.*

Our volunteers have put in countless hours over this past year fighting development projects that are holdouts from an era when we didn't recognize the extraordinary value of tidal wetlands and mudflats, or understand the ramifications of sea level rise on these critical Bay habitats.

The long-term survival of tidal wetlands and mudflat habitat is an urgent matter that requires regional coordination. We actively participated in large regional visioning and planning processes such as the Bay Conservation and Development Commission's (BCDC) Bay Adapt, MTC and ABAG's regional Plan Bay Area 2050, the State's 30x30 Program, and the State's Climate Adaptation Strategy. CCCR worked hard to create opportunities for the concerns of environmental groups to be heard in all these plans. We have succeeded in having language interjected that highlights the critical importance of protecting tidal wetlands and mudflats, the many ecological and societal benefits those habitats provide, and the threats to those habitats posed by our history of development along the edges of the Bay and sea level rise.

In the South and Central Bay, the opportunities for tidal wetlands and mudflats to move inland are limited due to our history of developing right up to the edges of the Bay and salt ponds. Potential tidal wetlands migration pathways (areas that are not wetlands currently, but are at the proper elevation to support wetlands as sea levels continue to rise) fall between federal and state regulatory gaps and are not protected from being

...continued on page 22

Inside:

What CCCR Did in 2021

CCCR advocates devoted 4000+ volunteer-hours defending potential and current Refuge lands, special-status species, wetlands, watersheds and more, at meetings and workshops, in project plan analysis, in document and field research, with written comments, and at times working with expert contractors and nonprofit partners.

Actions protecting threatened lands that lie within the Refuge Acquisition Boundary, particularly:

- BCDC Environmental Assessment for Operations & Maintenance Permit for solar salt ponds: submitted comments
- Cargill-owned ponds, Redwood City: Clean Water Act Jurisdictional Determination litigation against US EPA, EPA withdrew appeal of Court Ruling; continued bird observations to document habitat value of salt ponds
- Monitoring Menlo Park wetlands threats (Ravenswood Triangle; Adams/University): Facebook Willow Village, Dumbarton Rail
- Newark Area 4: filed a CEQA appeal to the decision issued by the Court December 2020
- Monitoring changes in Alviso Shoreline Levee plans that indefinitely delay restoration of Pond A18

Actions to avert threats to lands held by the Refuge including:

- Redwood City Ferry Terminal Financial Feasibility Study: comment letter to Redwood City Council on Transit Oriented Development near Port
- 505 E. Bayshore Road Project (Alan Steel), Redwood City: NOP comment letter on potential impacts to nearby Inner Bair Island

Actions on local projects:

- 410 Airport Blvd, Burlingame: signatory on joint letters in support of restoration/public park proposal
- Laguna Sequoia Apartment Project, Redwood City: joint comment letter to USACE and Regional Water Board on project impacts to fully tidal former salt pond
- CPUC Proceedings: comment letter to Commission on commercial ferry operator Prop SF application for expansion of service; formal protest filed with CPUC to Tideline ferry application for expansion of unscheduled service
- East Palo Alto Ravenswood Business District Specific Plan Update inclusive of multiple projects adjoining the Ravenswood Open Space Preserve and the Refuge's Laumeister Marsh
- Cooley Landing Ferry Proposal: submitted comments
- Fremont Parks and Recreation Master Plan: participated in workshops, surveys
- Fremont Climate Adaptation Plan Update: participating in workshops, surveys, providing comments
- Newark Slough Mitigation Bank Proposal: periodic check-in with agencies
- Sunnyvale Moffett Park Specific Plan Update: actions to protect existing wetlands, adjoining sloughs and creek habitat and to improve City consideration of sea level rise risks and adaptation
- Creek/riparian encroachment, Santa Clara County/ Valley Water: monitor use of publicly-owned watershed lands
- Facebook projects, Menlo Park and Redwood City: advisory role, impact avoidance and mitigation of proposed and existing real estate projects
- Google projects, Mountain View, Sunnyvale, Alviso: advisory role on development, on impact avoidance and mitigation of proposed and existing real estate and trail projects
- Palo Alto Baylands: Valley Water/USACE Sea Level Rise Levee, Valley Water Flood Basin Replacement Gate and Palo Alto Regional Water Facility horizontal levee project, Valley Water Purification Plant project – all impacting existing endangered species habitat
- TopGolf at Terra and adjoining North First Street property, San Jose: monitor development of entertainment, retail and hotel multi-owner complex, next to lower Guadalupe River
- Valley Water Calabazas Creek, San Tomas Aquino Creek and Pond A8 Reconnection and Restoration Project: letter of support
- Newby Island Landfill Berm Repair Project: comment letter on MND
- San Jose/Santa Clara Regional Wastewater Facility Outfall Update and Replacement Bridge: comment letter and public comment to City Council
- South Bay Shoreline Levee Project: monitoring and commenting on actions of Phase 1 (Alviso), Phase II (Palo Alto/Mountain View) and Potential Phase III (Moffett Field/Sunnyvale)
- Monitoring planning actions of the SAFER Shoreline levee in Menlo Park and East Palo Alto
- Monitoring management and planning actions of the MidPeninsula Regional Open Space District in the Ravenswood Open Space Preserve and the Stevens Creek Shoreline Nature Study Area
- Oyster shell mining permit: submitted comments to USACE and the RWQCB
- Proposed U-Haul project on former Oliver Brothers Plant site: submitted comments
- Integral Properties – Mowry Village: site visit and meetings

Actions commenting on Bay Region, State, and Federal Plans and Policies:

- BCDC Climate Change Policy: meetings, submitted comments
- California 30x30 Initiative: numerous meetings, workshops, comment letters
- California Climate Adaptation Strategy: participated in webinars and submitted comments
- Comprehensive Conservation Management Plan, San Francisco Bay Estuary: stakeholder
- State Water Resources Control Board Draft Restoration General Order: comments submitted
- US Army Corps of Engineers scoping period for changes to WOTUS: submitted comment letter

Actions on projects impacting special-status species and water quality impacts in the Bay Region:

- CDFW PG&E Habitat Conservation Plan (HCP) and Incidental Take Permit (ITP): comments submitted
- Tesla Park, Alameda County: Supporting efforts to permanently protect this area from OHV expansion due to many listed and special-status species and habitat
- Upper Berryessa Creek Flood Reduction Project, Milpitas: monitor mitigation outcomes of built project

Actions of CCCR as facilitators, stakeholders, representatives at meetings/conferences and on boards:

- Alviso Neighborhood Community meetings
- Baylands Comprehensive Conservation Plan
- BCDC Bay Adapt: organized and hosted meeting between BCDC Bay Adapt staff and environmental groups
- Capitol Corridor – South Bay Connect: organized and hosted meeting between South Bay Connect staff and environmental groups
- Dumbarton Rail Corridor: stakeholder meetings
- East Palo Alto and Dumbarton Corridor: stakeholder meetings
- Resilience Study, Metropolitan Transportation Authority: stakeholder
- East Bay Regional Park District planning for climate change along the Bay shoreline: attended a workshop
- Facebook Environmental Community Group Representative, Advisory role, Corporate Real Estate Planning
- Friends of the Estuary Board Member
- Google Ecology Club Member, Advisory role, Corporate Real Estate Planning
- Menlo Park stakeholder, Bedwell Bayfront Park Master Plan Oversight Committee
- Plan Bay Area 2050: submitted multiple comment letters; organized and hosted meeting between Plan Bay Area staff and environmental groups
- San Jose Environmental Services Division, Environmental Community Group representative
- Santa Clara Valley Conservation Council Member
- Santa Clara Valley Water District Reverse Osmosis Concentrate County-wide planning: stakeholder
- San Francisco Bay Joint Venture Management Board
- San Francisco Estuary Partnership Implementation Committee
- Shoreline Advocacy Workshop
- South Bay Salt Pond Restoration Project, Phase 2: organized and hosted an update meeting between the Project Management Team and environmental groups
- South Bay Salt Pond Restoration Project Stakeholder Forum, member
- Valley Water Environmentally-Focused Stakeholder Group
- Valley Water 2021 Drought Summit

Refuge headquarters, framed. *Photo by Sam High.*

***Area 4** photos courtesy of Derell Licht. Panorama stitched together by Carin High.*

Save Newark Wetlands

Since the mid-1980's CCCR has worked to protect the former Whistling Wings and Pintail duck clubs (also known as Area 4) from development. The site has long been recognized by Bay Area scientists as a place worthy of permanent protection and it was one of the reasons our founding members worked with Congressman Don Edwards to obtain bipartisan Congressional approval to expand the original boundaries of the Don Edwards San Francisco Bay National Wildlife Refuge.

This year, CCCR redoubled our efforts to protect the former duck clubs from a proposed development of 469 executive homes. We're excited to share an update.

In February, our attorney Stu Flashman filed a legal appeal with our partner, the Center for Biological Diversity, challenging the City of Newark's approval of the proposed development. We have been grateful to have been joined by several other environmental organizations, who filed an amicus brief supporting our appeal including the Environmental Defense Center, San Francisco Baykeeper, the Sierra Club, and the Ohlone Audubon Society.

Also in February, we worked with several of our partner organizations to submit nearly 4,700 signatures on a petition to the Bay Conservation and Development Commission and the Regional Water Quality Control Board urging these agencies to exert the full extent of their regulatory authority over these lands and any development proposed on Area 4.

In July, with the help of our consultant Josh Sonnenfeld, we were proud to launch our region-wide communications campaign, which we have branded "Save Newark Wetlands" to generate broad awareness and support for permanently protecting these baylands. Save Newark Wetlands includes a website (SaveNewarkWetlands.org) with a petition, background information, news, images, and more. We were also proud to simultaneously release a compelling short video about the importance of Newark Area 4, featuring two scientists from the San Francisco Estuary Institute, Letitia Grenier and Ellen Plane, and climate resilience leader Violet Saena. You can view the film at: https://tinyurl.com/newarkwetlands.

SAVE NEWARK WETLANDS

More recently we have been fortunate to work with a volunteer videographer, Mark Weaver, to release two additional short films, "Dawn at Area 4" (https://tinyurl.com/DawnArea4) sharing the sights and sounds of wildlife awakening at the site, and "Bay Rising: Voices for Area 4" (https://tinyurl.com/BayRising) which features Florence LaRiviere and Jana Sokale of CCCR, along with Zoe Siegel from Greenbelt Alliance and coastal ecologist and botanist Dr. Peter Baye.

We are so grateful to our growing list of partner organizations who have joined us in advocating for Area 4, and many individuals who have donated their time, energy, and financial support to the cause. Thank you!

We encourage you to visit SaveNewarkWetlands.org, sign the petition, and to follow CCCR on Facebook (@cccrbayrefuge), Twitter (@bayrefuge) and Instagram (@bayrefuge) for the latest news.

Carin High, cccrrefuge@gmail.com

San Francisco Bay National Wildlife Refuge Complex Staffing Updates

Matt Brown, San Francisco Bay National Wildlife Refuge Complex Manager

I wanted to take this opportunity to introduce myself to you, but more importantly to thank each of you for the incredible support the CCCR has shown the San Francisco Bay National Wildlife Refuge Complex over the years. It isn't hyperbole to say that we wouldn't be here without you! This year we have large scale conservation projects taking place across the complex that will restore thousands of acres of native habitat, protect endangered species and increase opportunities for the public to access our Refuges. Our staff and partners are also focused on knowing and relating to the communities that surround our refuges. As the largest urban National Wildlife Refuge complex in the country (in both acreage and neighboring population size), we have such an amazing opportunity to engage a diverse audience in our conservation efforts, and to share the beauty of the natural world with these urban populations.

Matt speaking at an event celebrating the successful removal of 100,000 lbs of marine debris from the reefs and beaches of Midway and Kure Atolls.

Just a little bit about myself, I got to know many of you while serving as the Refuge Manager for Don Edwards San Francisco Bay National Wildlife Refuge over the last 2 1/2 years. Prior to joining the San Francisco Bay Complex Team, I spent the majority of my 20+ year career managing National Wildlife Refuges and Marine National Monuments in the Pacific Islands – with stops on Guam, Midway Atoll, Maui, and most recently serving as Superintendent of Papahanaumokuakea Marine Monument. I believe that strong community relationships and collaborative partnerships are keys to successful conservation, and I have a deep respect for the diversity of cultures, ecosystems and wildlife found throughout the seven Refuges of the San Francisco Bay Complex.

I am so optimistic about where we are all going to go together. The Biden Administration's focus on addressing the causes and impacts of climate change, and advancing racial equity and supporting underserved communities, are perfectly aligned with the work we are doing. A great initial sign of the support we have for our efforts is that I get to share the good news that we were able to hire Melisa Amato (introduction below) as the new Refuge Manager at San Pablo Bay National Wildlife Refuge...a critical position that had been vacant for far too long.

Please feel free to reach out to me anytime, my door (virtually and literally) is always open to you. I look forward to seeing you out on the Refuges!

Matt Brown, 510-453-6695
Matthew_Brown@fws.gov

Melisa Amato, Wildlife Refuge Manager

Melisa Amato is the Wildlife Refuge Manager for Antioch Dunes, Marin Islands, and San Pablo Bay National Wildlife Refuges ("North Bay Refuges") within the San Francisco Bay NWR Complex. She has been with the U.S. Fish and Wildlife Service for 17 years. She began her USFWS career in the Habitat Conservation Division and then Endangered Species Division in Sacramento, California. She moved to refuges (Don Edwards NWR) in 2008 to be able to focus on conserving endangered and threatened species and migratory birds in the San Francisco Bay. In 2014, she moved to the North Bay to be the Assistant Manager for San Pablo Bay National Wildlife Refuge.

Melisa with the Refuge System mascot at a community outreach event.

As the new Manager for the North Bay Refuges, she will continue to build strong partnerships with the restoration community to plan and implement habitat management and restoration of tidal marsh wetlands to conserve endangered species and build climate-resilient and connected landscapes. Melisa will work with the outstanding staff in the North Bay office to continue the important work of developing and implementing public use and education programs, and creating a robust volunteer program to achieve the goals of the North Bay Refuges.

Melisa enjoys camping, cooking, weight lifting, and napping. She lives in Petaluma with her 9-year-old son and 1-year-old German shepherd.

Melisa Amato,
Melisa_Amato@fws.gov

Wetlands in the Far South Bay

There's trouble for shoreline levees.

The levee that is Phase I of the South Bay Shoreline Study runs from the Alviso Slough to Coyote Creek. Protecting the shoreline, it also allows restoration to proceed on the Don Edwards Refuge and in San Jose's Pond A18. This project of the US Army Corps of Engineers (USACE) and Valley Water was fully approved and permitted by 2018.

In 2015, the Project's 5-Reach cost estimate was $194 million. That set the Federal contribution at $124 M, the balance from Valley Water. This year costs ballooned to $524M, for just Reaches 1-3. With no identified funding nor timeline for Reaches 4-5, the Regional Wastewater Facility remains unprotected and Pond A18 unrestored.

A major factor is the cost of "clean dirt." To build super levees, horizontal levees and protect Bay water quality, extraordinary quantities of dirt that meet USACE standards are required. Clean dirt is scarce and therefore costly.

Phase II of the Shoreline Study (Palo Alto to Permanente Creek) expects its funded feasibility study to be complete in 2025, followed with new funding to commence construction at/after 2030.

What will costs be then?

Phase III has not been formally defined as a project, leaving lands south of Permanente Creek to the Guadalupe River with no target dates. If Phase I costs escalated to the point of truncation in six years, what might happen to Phases II and III?

Cost escalation goes beyond Santa Clara County. The SAFER project (Strategy to Advance Flood protection, Ecosystems, and Recreation) for Menlo Park and East Palo Alto will face the specter of ballooning costs, as will any Bay levee project. The shortage will also affect transitional/horizontal levees or any project modifying or reinforcing banks in the Bay or upstream. In Santa Clara County, plans are already being modified to reduce costs by making horizontal levees shorter, with unknown impacts to hoped-for marsh generation. Where and when can funding and clean dirt be secured?

The 5 Reaches of the Phase I Shoreline Study project, *as shown in this figure from a joint USACE/ Valley Water/State Coastal Conservancy presentation June 2018.*

In the meantime, and even as sea level rise accelerates, cities like Sunnyvale continue on course to rewrite plans in vulnerable areas and vastly increase local flood risks. Sunnyvale committed to its most expensive public works project ever, updating its shoreline water treatment facility and depending on offshore treatment ponds that will require forever-rising levees. Just inland, its Moffett Park Specific Plan Update would expand existing, largely office park usage by ~33.5 million square feet and, for the first time introduce housing, ~20,000 units. This is the path followed on the assumption that a levee of unknown timing and cost will justify City decisions.

The evidence – sea level rise, extreme storms, scarce available shoreline lands and costs – more than signal that responsible shoreline planning needs to include protective, adaptive Bay wetland expansion wherever it is still possible. Moffett Park includes 87 acres of native wetlands and acres more of existing subsided properties. In the City's CEQA process already released, those same subsided properties would be eligible for development.

In 2015, the Project's 5-Reach cost estimate was $194 million. This year costs ballooned to $524M, for just Reaches 1-3.

What does it take for planners and officials to remove the rose-colored glasses?

Eileen McLaughlin
wildlifestewards@aol.com

CEQA Review Lacking for Expansion of Private Commercial Ferries

Earlier this year, the California Public Utilities Commission (CPUC) approved an application from Prop SF, LLC to operate unscheduled private ferry service to undisclosed locations in San Francisco, Marin, San Mateo, Alameda and Contra Costa counties. The Commission disregarded correspondence submitted by CCCR urging this lead permitting agency to require California Environmental Quality Act (CEQA) review to ensure Bay wildlife and habitats would not be harmed by ferry operations.

In June, CCCR, Sierra Club Loma Prieta Chapter and Santa Clara Valley Audubon Society filed a joint protest with the CPUC in response to an application submitted by Tideline Marine Group, to expand their unscheduled, on-demand, private ferry service to "points and places in the San Francisco Bay and its navigable tributaries." Our primary concern was the vast increase in geographic scope from Tideline's original CPUC authorization, allowing an unlimited number of ferries to traverse waterways running through or adjacent to Don Edwards San Francisco Bay National Wildlife Refuge lands and other environmentally sensitive areas with endangered species and a variety of other wildlife. The proposed expansion would have created the potential for significant environmental impacts, and the possibility that no CEQA analysis or mitigation would be required.

In response to concerns, Tideline amended their application "to greatly narrow its request for a geographical expansion of its authority to provide unscheduled service", seeking to add only South San Francisco, specifically Oyster Point, to its existing authority. The Oyster Point Marina area is a highly urbanized shoreline with a WETA ferry terminal that underwent full environmental review. With this modification, the environmental groups no longer objected to this specific Tideline application.

In the absence of the CPUC upholding its responsibility with respect to CEQA, it falls on concerned citizens to monitor for new ferry permit applications around the Bay to ensure CEQA statutes are followed. In Redwood City, we are monitoring the meeting agendas of the Port Commission for any proposed private ferry service agreements; however, the CPUC has also authorized ferries to operate out of private marinas where new routes and landings could be initiated with minimal public notice.

The Bay Conservation and Development Commission (BCDC) has regulatory authority over the shoreline of San Francisco Bay and the agency is required to consider potential environmental impacts prior to permitting new construction, or any changes in the use of existing docking facilities. Unfortunately, a recent BCDC authorization for a private ferry operator to use the San Leandro Municipal Marina included no consideration of potential environmental impacts of the ferry service on offshore Bay diving ducks.

CCCR has serious concerns regarding the lack of environmental impact assessment by state and local agencies for private commercial ferry operations in San Francisco Bay, including the estuary's larger creeks and sloughs. Repeated disturbance, noise, and wake erosion to shoreline habitats from ferries can result in potentially significant individual and cumulative impacts to listed species and other Bay wildlife.

Private commercial ferry traversing Redwood Creek *in 2018 between the Refuge's Bair and Greco Islands. Photo by Matt Leddy.*

Gail Raabe and Matt Leddy
cccrrefuge@gmail.com

Friends of Redwood City: *Impacts from Laguna Sequoia Apartment Project and Ferry Terminal Proposal*

This 21-acre former salt pond *in Redwood City has reverted back to full tidal action after erosion resulted in a levee breach. An area with existing mudflat and wetland would be filled for construction of 350 apartments. Photo by Matt Leddy.*

Laguna Sequoia Apartment Project

The proposed Laguna Sequoia Apartment Project in Redwood City would construct a 350-unit apartment building in a 21-acre former salt pond directly adjacent to Redwood Creek. The pond is fully tidal and lies within the designated recovery boundary of the USFWS *Recovery Plan for Tidal Marsh Ecosystems*. The 2015 *Baylands Ecosystem Habitat Goals Science Update* identifies this pond as having "high potential for tidal marsh restoration".

The developer is seeking permit authorization from the U.S. Army Corps of Engineers under Section 404 of the Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act to fill wetlands and other Waters of the United States, and conduct work in jurisdictional navigable waters. The developer also applied to the San Francisco Bay Regional Water Quality Control Board for a CWA Section 401 Water Quality Certification.

In response to the public notices issued by both agencies in May, CCCR and three other local environmental groups submitted a joint comment letter urging the Corps and the Water Board to "deny the Corps permit authorization and Water Quality Certificate without prejudice". The significant concerns outlined in our letter included fill of Bay waters for non-water dependent residential housing, destruction of existing wetland and mudflat habitat which are classified as "special aquatic sites," and disturbance of potentially contaminated bay sediments. Under the CWA, the applicant must first "avoid and minimize" impacts to wetlands and waters.

Significant concerns include fill of Bay waters for non-water dependent residential housing, destruction of existing wetland and mudflat habitat which are classified as "special aquatic sites", and disturbance of potentially contaminated bay sediments.

This project is still under review by the regulatory agencies, and the developer has yet to file a formal application with the City. Allowing this non-water dependent project to move forward would set a bad precedent that could put other jurisdictional Bay salt ponds at risk from development. We will continue to monitor the progress of this project.

Intertidal mudflat off Greco Island *in the area of Terminal Option 1. The ferry landing would extend 135' into Westpoint Slough and require extensive dredging. A buoy is resting on the edge of the mudflat which is used by foraging shorebirds at low tide. Photo by Matt Leddy.*

Potential for Refuge Impacts from Redwood City Ferry Terminal Proposal

We're still awaiting the release of the Redwood City Ferry Terminal Business Plan, which must be completed before the San Francisco Bay Water Emergency Transportation Authority (WETA) and the Port of Redwood City make a final decision on moving this proposed project forward.

The public ferry terminal would be constructed on Port land near the confluence of Redwood Creek and Westpoint Slough. This is an environmentally sensitive area of the Bay due to the proximity of the Refuge's Bair and Greco Islands, and the potential for adverse impacts to bay habitats and wildlife will need to be analyzed and addressed prior to project approval. Three areas of concern stand out: ferry wake impacts, wildlife disturbance, and dredging.

- **Wakes from ferries** traversing Redwood Creek between Bair and Greco Islands can swamp tidal marsh vegetation, erode marsh edges and potentially damage rail nests. Greco Island has one of the largest breeding populations of endangered Ridgway's Rails in the South Bay. Speed restrictions or establishment of a no-wake zone will need to be examined.
- The significant increase in the number and frequency of weekday boat trips from commuter ferries could have **adverse impacts on the well-established harbor seal population** in this area. Studies have shown that harbor seals haul-out and pup along Corkscrew Slough, Greco and Outer Bair Islands. Potential impacts from noise, disturbance and boat strikes would be further magnified if private ferry operators are allowed to use the WETA terminal, increasing total ferry trips well beyond the number of daily trips outlined in the feasibility study for the public commuter ferries.

Harbor seal in Westpoint Slough *at Redwood Creek. Photo by Matt Leddy.*

- The Redwood City Ferry Feasibility Study released in 2020 outlined two options for the location of the 135-foot float where the ferries would dock. Option 1 to the north in Westpoint Slough would require **dredging an extensive area to a depth of up to -12 feet MLLW**, possibly encroaching into the mudflat off Greco Island. Initial and ongoing maintenance dredging would disturb intertidal and subtidal habitat, and increasing the channel depth in close proximity to Greco Island would create a sediment sink, potentially depleting sediment in this ecologically important tidal marsh over time. Option 2 to the west in Redwood Creek is preferred because it would require no dredging due to the existing navigational channel for vessels operating at the Port.

Proximity of proposed WETA Redwood City ferry terminal *(yellow star) to Refuge lands. Terminal Option 1 would have the ferry landing extend into Westpoint Slough; in Option 2, the landing would extend into Redwood Creek.*

Gail Raabe and Matt Leddy
cccrrefuge@gmail.com

Save Wetlands in Mayhews

The City of Newark considers sea level rise to be a Bay Area regional issue with regional solutions. No need for the city to locate future development out of harm's way. Area 2 is burdened with high density housing up to the levees

Parts of the East Coast are already seeing the effects of salt water intrusion in the regional water tables. Mature forests are dying as an indirect influence of sea level rise. Even behind levees sea level rise impacts water tables.

New housing under construction *right up to the edge of saltponds. Photo by Carin High.*

surrounding Cargill Salt ponds in Newark. Developers eyeing Area 4 for executive housing planned on importing 1.67 million cubic yards of fill to raise the development out of the FEMA floodplain. While other cities are taking action to prohibit any development in areas prone to flooding in rising sea levels, Newark is taking the opposite approach. Ignoring the obvious is not the cure Newark hopes for.

Building housing on fill is not a solution when it comes to protecting developments in the future. Streets in new development will be prone to flooding. Access roads such as Thornton Avenue that runs through the Don Edwards San Francisco Bay National Wildlife Refuge, and where wetlands are found on both sides, are already in danger of high tides overlapping the roadway. Roads in and out of Area 4 may face the the prospects of flooding due to sea level rise. Predicted intensity of storm events will impact the ability of storm drains to protect developments. Lurking in the wings is another water-related scenario; the rise in water tables and salt water intrusion.

Underground utilities in housing developments are and will be negatively impacted. Soil settlement on compacted fill combined with increased levels of water tables are a recipe for disaster. This is not a regional issue Newark seeks to avoid addressing. This is an issue all cities need to address at a local level by avoiding development in areas prone to sea level rise. Levees do not protect against the rise in water tables; levees give a false sense of security.

Newark would be wise to plan for not only the projected rise in sea level but also the impacts of ground water intrusion. Be a part of the solution by providing space for flood waters instead of housing that may require protection in the future. A perfect location is Area 4. Do not complain that it is a regional problem that demands regional solutions. Be proactive to prevent future flooding in housing developments.

Margaret Lewis, (510) 792-8291

Fremont: *Parks and Recreation Master Plan and Climate Change Action Plan in Holding Pattern*

In the last edition of *Save Wetlands*, we reported that the City of Fremont was initiating an update of its Parks and Recreation Master Plan and also the City's Climate Adaptation Plan. While webinars have been held, both plans have entered a holding pattern in terms of opportunities for public review and comment.

CCCR, the Ohlone Audubon Society (OAS) and the Southern Alameda Chapter (SAC) of the Sierra Club submitted a joint letter to the City of Fremont Parks and Recreation Commission members, staff, and City Council members regarding the proposal to develop a Pacific Commons Sports Complex on a 40-acre parcel at the end of Automall Parkway. CCCR members also commented during public hearings.

This site is immediately adjacent to the Stem Parcel vernal pool mitigation site (created to replace vernal pool habitat filled during the construction of the Pacific Commons project), the Warms Springs Unit of the Refuge, and the Pacific Commons Linear Park.

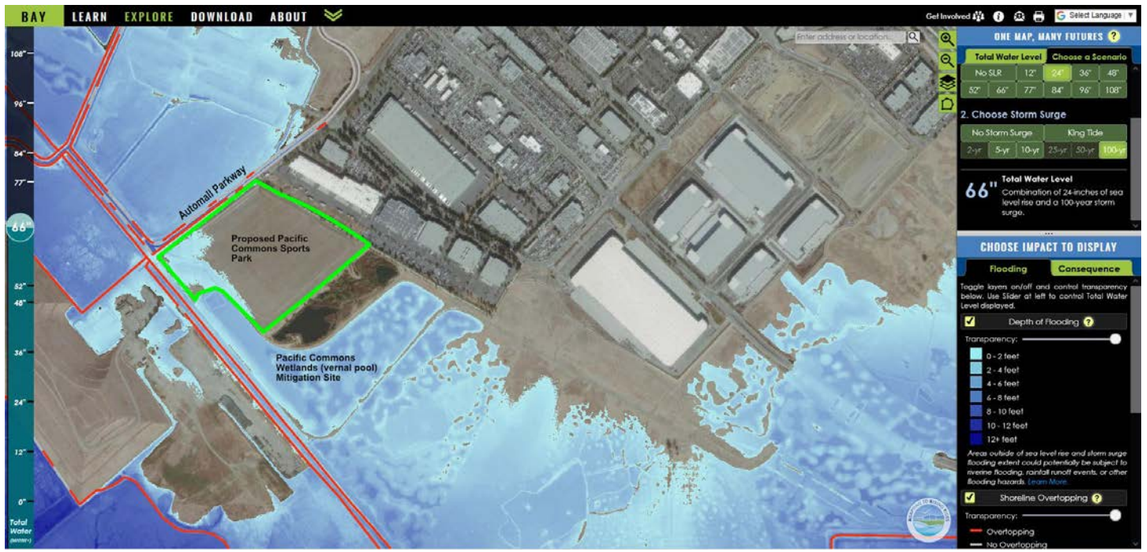
Both the Stem Parcel and the Warm Springs Unit support federal and state listed threatened and endangered vernal pool species. Adjacent Pacific Commons Linear Park is known as a fall and winter hotspot for rare and unusual birds including Ferruginous Hawks, Prairie Falcon, Greater White-fronted and Cackling Geese and occasionally a Harris' Sparrow or Swamp Sparrow.

The 40-acre parcel is listed in the 2021 Capital Investment Program (CIP) as a "Current Future Project;" however, funding was not allocated for the project in the 2021-2025/2026 CIP. As part of the Parks and Recreation update process, online and mail surveys were conducted to assess the identified needs of the community. Out of 30 identified Parks and Recreation needs, "Open space & conservation areas" ranked as the 6th highest preference by survey takers, and 22% of the residents that participated in the surveys were not supportive of the construction of a regional sports park.

CCCR, OAS, and SAC expressed concerns that such a project would result in a significant increase in vehicular traffic and human disturbance factors including noise, movement, attraction of nuisance and predatory species, trash, and trespass by humans and domestic pets into restricted areas of the Refuge. And since the site is not close to public transit, development of a sports complex in this area is not consistent with reducing greenhouse gases because people will likely get into personal vehicles to access the site. In addition, BCDC's *Adapting to Rising Tides Flood Map Explorer*, suggests it is possible the surrounding area will be vulnerable to flooding as sea levels continue to rise. Based upon all these issues, a better use of the site would be development of a passive recreation facility.

CCCR members will continue to monitor any updates on the Parks and Recreation Master Plan and the Climate Adaptation Plan and report back when opportunities for public review and comment arise.

Carin High, cccrrefuge@gmail.com



***BCDC's* Adapting to Rising Tides Explorer** *depicts potential flood conditions with 2' of sea level rise and a 100-year storm event.*

Spotlight on Horizontal Levees: Weighing Benefits and Risks of Multi-benefit "Nature-based" Climate Change Adaptation Measures

A natural groundwater seep-fed freshwater slope marsh *borders a salt pond (historic tidal marsh) at Coyote Hills, providing one of the models for horizontal levees. Photo by Peter Baye.*

Horizontal levees are a hybrid constructed shoreline feature that combine an actual flood control levee with a wide, gently sloping vegetated ramp profile (emulating a lowland transition zone to a tidal marsh), and a subsurface (seepage) water quality treatment wetland. Like any open-source design concept, it has evolved freely and been adapted to many different contexts and uses since its early days. Some of the anticipated environmental benefits of horizontal levees – namely, water quality treatment – have been recently supported by very strong evidence from published research on the pioneer (non-tidal) demonstration project of the Oro Loma Sanitary District in San Lorenzo. Other anticipated benefits, such as high tide refuge habitat, enhancement of salt marsh habitat, and flood control, remain to be tested and monitored in constructed projects connected to Bay tidal marshes. This article provides some background on the history and current status of horizontal levees in San Francisco Bay, with emphasis on marsh-related aspects that long-time CCCR newsletter readers have followed.

Origins and evolution of horizontal levees

Horizontal levees evolved from combinations of many recommendations dating back to the 1990s *Baylands Ecosystem Habitat Goals Project*. The *Goals Project* (1999) included proposals from multiple habitat and wildlife focus teams for wider, more gently sloped levees. Many of the Goals Project recommendations for wider slopes bordering tidal marshes were aimed at increasing space for transition zones that could provide more abundant and well-distributed high tide cover for wildlife during extreme high tides (refuge from predators and flooding). The Plant Focus Team also recommended including gentle slopes with seeps, and the Other Bayland Birds team recommended use of treated effluent to expand riparian habitat adjoining baylands, and natural gradual levee slopes similar to natural lowland transition zones. By the early 2000s, designs for gently sloped "habitat levees" were proposed for Suisun Marsh by Department of Water Resources and U.S. Fish and Wildlife Service. "Habitat levees" (and their many synonyms, like "ecotone levees") with gentle slopes were re-branded as "horizontal levees" by The Bay Institute in 2013, with greater emphasis on multiple ecosystem services in addition to transition zone habitat, including flood and erosion protection.

CCCR also had a role in the evolution of horizontal levees. In the 1990s, Sonoma Baylands (tidal wetland restoration project) used upland wave-break berms and peninsulas to address excessive internal wind-wave energy, which raised CCCR concerns about upland habitat and upland predators in the interior of restored tidal marsh habitats. Wave attenuation by gradual slopes with tall, dense marsh vegetation was raised as an alternative approach to wave-break berms. CCCR comments on the South Bay Salt Pond Restoration Project also recommended consideration of alternatives that incorporated gently sloping levees with wetland slopes irrigated by treated wastewater – an alternative that was identified by Jeremy Lowe at ESA (now at San Francisco Estuary Institute) as especially applicable to the Hayward Shoreline, where the East Bay Dischargers

Horizontal levees...continued

Authority (EBDA) pipeline (and Oro Loma Sanitary District wastewater treatment facility) is located.

Natural analogs of horizontal levees

If horizontal levees are "nature-based" designs, what are they based on? The lowlands bordering most of the San Francisco Estuary include alluvial plains, fans, deltas, and river floodplains, all with shallow groundwater, and many areas of seasonal wetlands – at least, historically. Almost all of them have been converted to either agricultural uses (almost always with artificial drainage) or urban development. Before drainage and land conversions, these lowlands discharged freshwater to the bay through "subterranean estuaries" (groundwater discharge to the estuary) as well as surface streams and overland flows. Freshwater flows passing through soil, vegetation, and shallow groundwater intercepted and transformed much of the nutrient and sediment loads from the watershed. High groundwater tables of lowlands also supported extensive seasonal wet meadows and local riparian woodlands directly connected to the tidal marshes that bordered them. The habitat and hydrological connectivity between these terrestrial lowland wetland vegetation types and tidal marshes were the core of the original ecotones (transition zones) between the tidal and terrestrial ecosystems of the Bay. They were almost everywhere along the bay's landward edges, which had only a few true steep "upland" (hillslope and bluff) segments.

***Rush Ranch in Suisun Marsh** has some large remnants of natural lowland soils, some with native grassland and seasonal wetland remnants grading into tidal brackish marsh, like some portions of historic San Francisco Bay. Photo by Peter Baye.*

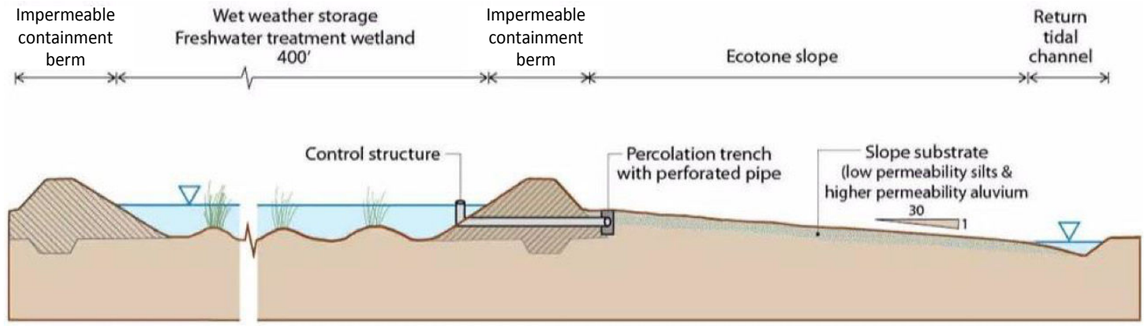
Remnants of these lowland slope wetland communities today exist today as small, vestigial fragments, with their drainage altered. Oro Loma Marsh and Coyote Hills in the South Bay have a few post-agricultural vestiges of them, and a few more occur in Point Pinole and Point Molate in Richmond, and at China Camp in San Rafael. Further north, in Suisun Marsh, Martinez marshes, and Petaluma Marsh, more vestiges occur.

Water quality treatment wetland functions of horizontal levees

The water quality treatment aspects of the horizontal levee are no longer speculative or aspirational. They are now well-tested by monitoring and research. The Oro Loma horizontal levee incorporated a subsurface treatment wetland design to remove nutrients from treated wastewater seeping through the engineered freshwater wetland slope. Nutrient removal in subsurface treatment wetlands can occur by different processes, including microbial transformation of nutrients, plant uptake, and immobilization in plant and soil biomass.

The Oro Loma demonstration project discharged pre-treated (nitrified) wastewater through engineered shallow layers of permeable, coarse-grained and organic matter-enriched wetland soil layers. The shallow saturated groundwater seepage flow was perched on relatively impermeable bay mud foundations, and capped with bay mud or mud/sand mix soils to grow native freshwater marsh and wet meadow vegetation. The anaerobic (waterlogged, near-zero oxygen) soil microbial activity of the saturated seep zone is fueled by carbon (organic) and the chemical environment of saturated bay mud. Wetland soil microbial activity performs much of the water quality treatment. Most of the nutrient removal of nitrogen (denitrification; conversion of biologically active dissolved forms of nitrogen to inert nitrogen gas) occurs around the interface between the saturated soil zone, and the near-saturated zone above it. Plant roots also absorb nutrients that are pulled upward through the plant by evaporation from leaves (transpiration "stream").

Aidan Ceccetti, David Sedlak, and colleagues from U.C. Berkeley, monitored nutrient removal processes and rates in the Oro Loma horizontal levee. They found that nearly all of the biologically active forms of nitrogen (97%) were removed by the horizontal levee. Most of the nitrogen was efficiently removed over short seepage flow distances, due to very rapid and strong denitrification by wetland soil microbial activity. They discovered that over two years, plant uptake accounted for only about 8-23% of the nitrogen "removed" (stored and immobilized in vegetation biomass) by the horizontal levee, varying among years. Wastewater viruses were also nearly



***Conceptual cross-section of the Oro Loma Ecotone Levee**, prototype pilot project for horizontal levee (from Oro Loma Wet Weather Equalization, Treatment Wetland and Ecotone Demonstration Project. Initial Feasibility Study, July 29, 2012, ESA PWA and Peter Baye).*

completely removed by the horizontal levee, and up to 83% of other major nutrients like phosphate were immobilized in slow-decaying wetland vegetation. Wastewater flows at the soil surface, however, did cause nutrients to "leak" and bypass the otherwise efficient nutrient removal processes. Plant transpiration resulted in about 25% of the water loss from the horizontal levee – water that would otherwise be discharged to the Bay, along with nutrients and other contaminants that the horizontal levee intercepts and treats.

As a subsurface water quality treatment wetland, there is little doubt that horizontal levees can exceed expectations and hopes, if wastewater discharges are kept below the surface of the wetland slope. Subsurface treatment wetlands themselves are neither new, unique to horizontal levees, nor original to the Oro Loma project. The Oro Loma project simply merged engineered freshwater subsurface treatment wetland functions with vegetation, slope, and habitat designs for wetland transition zones suitable for tidal marsh settings in San Francisco Bay.

Vegetation and habitats on horizontal levees

The Oro Loma horizontal levee was planted by staff and volunteers of Save The Bay in fall-winter 2015-2016. Save The Bay propagated all the plants on the project site in open, lined (water-tight) soil-filled raised beds for creeping plants with spreading perennial roots, rather than as root-bound container-grown nursery or greenhouse stock. Native seasonal wetland plants were sampled from many of the last vestigial lowland wetland seep ecotones bordering the East Bay. They were planted at high density in fall, and were irrigated before the horizontal levee began operation. The native vegetation is essentially freshwater wet meadow, marsh, and willow or wetland scrub thickets. It is not itself literally an "ecotone", but it can function as one if it is located between salt marsh and terrestrial habitats.

The growth of planted native vegetation was explosive. It dominated the horizontal levee slope faster than expected. By the time the Oro Loma demonstration project was operating with treated wastewater a year later, robust, competitive native vegetation (mostly wet meadow, but also willow, bulrush, and tule slope marsh) covered over 98%, with less than 2% wetland weeds after two years, and this remains the case today (2021). Considering that the site was over 98% wetland weeds before construction, and was surrounded by weed-dominated vegetation in diked baylands (including invasive perennial pepperweed), the rapid

***The freshwater marsh and wet meadow cells of the Oro Loma horizontal levee** remain dominated by diverse patches of native wetland vegetation in the spring of 2021. Photo by Peter Baye.*

Horizontal levees...continued

dominance of native vegetation and ongoing exclusion of weed invasion was an encouraging "proof of concept" for the project. (Actually, this isn't too surprising, since intact sods of perennial wet meadows are relatively resistant to weed invasion, unlike more familiar disturbed seasonal wetlands.) Willow thickets in some cells grew to nearly 30' high by 2018. Wildlife attracted to the horizontal levee included Pacific tree frogs, garter snakes, gopher snakes, small mammals, ground squirrels, jackrabbits, and many perching birds, including Alameda song sparrows. The horizontal levee was radically different from the typical weed-invaded old legacy non-wetland levees of the Bay.

Vegetation and wave damping

Since the Oro Loma project was built within a diked bayland, and not connected to a tidal marsh exposed to high tides and waves, there is no direct test possible for the wave-damping effects of its vegetation. Wave damping (or attenuation) is one of the more important flood control aspects claimed as benefits of horizontal levees. But the very high cover, height, and density of the vegetation itself is a strong indicator of its high potential for wave attenuation during extreme high tides and storms, when it is connected to a wide tidal marsh. The freshwater vegetation of the flat slope, however, is not adapted to direct exposure to bay wave attack without a tidal marsh in front of it. The seepage of freshwater into the landward edge of a tidal salt marsh generally causes a zone of dense, tall alkali-bulrush to push out into pickleweed marsh in San Francisco Bay. A dense, tall alkali-bulrush zone several meters wide is likely to provide very strong wave attenuation, as well as excellent high tide refuge habitat.

A remnant of lowland alluvial flat *(terrestrial soil) borders the tidally restored East Bay Regional Park District's Oro Loma Marsh in San Lorenzo (not the Oro Loma demonstration project site), with native creeping wildrye and saltgrass grading into tidal salt marsh. Photo by Peter Baye.*

Perplexing permit policies?

Given the performance of the Oro Loma demonstration project, which exceeded all reasonable expectations for water quality treatment, native vegetation, weed invasion, and wildlife, do all horizontal levee projects have a clear path for environmental review and approval in all shoreline settings, without controversy? The experimental Oro Loma project was built in a diked bayland, a "back lot," not adjacent to or within a tidal marsh, or in a diked bayland prior to tidal restoration. The ecological consequences of horizontal levees depend primarily on their environmental setting – the site they occupy, their position in relation to the shoreline, and adjacent ecosystems to which they are connected. That is the point of all "habitat levees" or "ecotone levees" – ecological connection (transition) between tidal marsh and neighboring habitats.

As the *San Francisco Bay Shoreline Adaptation Atlas* (SFEI and SPUR, Beagle *et al.* 2019) stated, "the ecotone levee only makes sense where natural rising upland is absent and where there is an existing marsh or potential to restore marsh in front of it." It is not simply a green flood control levee next to the bay.

Sustainable salt marsh transition zones or bridges to nowhere?

If the horizontal levee is to provide meaningful high tide refuge habitat for their connected tidal marshes in the long term, then the salt marsh they connect to must also be sustainable and managed along with them to sustain viable habitats and populations of wildlife species. Otherwise, if erosion reduces salt marshes to narrow strips, or if sea level rise submerges them to low-middle marsh zones (cordgrass-pickleweed transitions) with little or no internal high tide refuge habitats, horizontal levees would be "bridges to nowhere" for endangered species like salt marsh harvest mouse and California Ridgway's Rail, as well as many other salt marsh wildlife dependent on high tide cover within their home ranges. Salt marsh wildlife don't make long-distance mass migrations to high ground. They tend to seek the closest flood refuge in their home ranges within the marsh. The high tide refuge habitat potential of horizontal levees depends on the retention of well-distributed high tide refuge within the salt marshes they connect. Horizontal levee benefits of high tide refuge habitat can't be evaluated separately from the salt marshes they connect.

Site and setting related to marsh habitat

When horizontal levees are built into drained diked baylands or salt ponds restored to tidal marsh, they are essentially ecological "blank slates" for tidal marsh wetland ecosystems, with very limited potential for adverse wetland impacts. Similarly, when horizontal levees are built next to existing tidal marshes, but in degraded uplands or other non-wetland fill above the high tide line, there is no potential for direct adverse impacts to wetlands. There may be limited indirect impact of horizontal levees on some tidal marshes (such as freshwater discharge effects on brackish marsh conversion – "just right" width of alkali-bulrush zones vs. too much of a good thing?), depending on freshwater discharge and tidal flushing rates that can be modified. The proposed Palo Alto horizontal levee project, for example, is situated entirely above the high tide line, with only indirect freshwater seepage effects on existing tidal marsh, by design to enlarge alkali-bulrush transition zones.

Tidal marshes *around the Bay, like this area outboard of Ravenswood Pond R1, are threatened by future sea level rise. Photo by Matt Leddy.*

A more challenging situation exists where flood-sensitive urbanized bayland infrastructure runs right into existing tidal marshes, and horizontal levees are considered as long-term solutions. This can occur where old roads or railroads cross tidal marshes. Horizontal levees would then require direct impacts to tidal marsh, discharges of fill that replace tidal marsh with terrestrial freshwater wetland slopes mostly above high tide. In some cases, it may also include an upland flood control levee filling existing tidal marsh. Flood control levees built in tidal marsh, with or without horizontal levees, may truncate or fragment salt marsh habitats or tidal channel networks.

Construction of horizontal levees in existing tidal marsh represents a potential trade-off between existing habitat impacts, and future potential ecological benefits that only arise decades later under higher sea level. Those benefits have to presume that the existing habitats will remain large enough and in good enough condition to actually benefit from the horizontal levee in the future, enough to justify the near-term habitat loss or conversion to upland (flood control levee) and non-tidal wetland. Or, we will have to make sure we manage our marshes as well as, and in sync with, their horizontal levees. This poses difficult policy (mitigation, alternatives, and factual determination) questions for regulatory and resource agencies. Innovative solutions tested in well-monitored pilot projects, with limited environmental risks (*e.g.*, located in lower-value, isolated, small tidal marsh habitats – careful site selection), would be one approach to working out uncertain wetland policy issues like this.

Location and setting for future projects?

Potential horizontal levee project settings were analyzed in greater detail by the San Francisco Estuary Institute in a 2021 update of the 2019 *Adaptation Atlas*. The majority of these were in landward edges of diked baylands or restored tidal marshes. These locations allow for potential slight retreat of tidal marshes landward, without bayward levee encroachment, and with much flexibility in avoiding policy-laden trade-offs between existing tidal marsh fill and future tidal marsh benefits from horizontal levees. But some potential horizontal levee locations evaluated do border existing tidal marshes, or even extend into them from landward edges of baylands. Some alignments evaluated directly border the open bay mudflats. This is counter-intuitive if not inconsistent for "nature-based ecotone levees" based on lowland terrestrial slopes grading into tidal marsh.

The environmental cost/benefit analyses for contrasting settings of horizontal levees projects will necessarily rely on assumptions and policies well ahead of long-term monitoring data. We have only pending pilot projects of horizontal levees connected to actual tidal marshes. Will horizontal levees get off to a strong start by selecting the most representative best-fit settings and site locations for them to test them out, before scaling up to regional construction? That is what pilot projects and demonstration projects are normally for, of course. With pressured schedules for rapid regional climate change adaptation to flood risks, however, what is "normal" may become an open question.

Dr. Peter Baye
Coastal ecologist and botanist

REFERENCES

San Francisco Bay Shoreline Adaptation Atlas. Working with Nature to Plan for Sea Level Rise Using Operational Landscape Units. 2019, Publication #915. San Francisco Estuary Institute, Richmond, CA

Ecotone Levees and Wildlife Connectivity: A Technical Update to the Adaptation Atlas. 2021. , Publication #1037, San Francisco Estuary Institute, Richmond, CA

Alameda Wildlife Reserve

Breeding birds may have been impacted inadvertently by Covid. Volunteers were unable to assist with monitoring the Least Tern colony. It is hard to know who missed who the most, terns or volunteers. Evidence suggested falcons enjoyed young and adults terns, but this was only one of the problems. Terns also arrived and nested late. Late nesting may be the reason for inappropriately sized fish for the hatchlings. Did those tiny fish grow too big while the terns were delayed? It is hard to be sure. They may have been slow in arriving, but the number of nests was on target, and it's estimated 200 young terns were fledged.

Ospreys at the Seaplane Lagoon appeared to be disturbed by trespassers. They arrived, courted, nested, and were a couple of weeks into incubation when they disappeared. We had seen young men on the gated jetty and felt alarmed, but had no way to better secure fencing which seemed more than adequate. The pair returned to the nest; we hoped for a second attempt, but female eventually made the decision to skip breeding this year. She refused mating attempts. It was interesting that the pair stayed together for a large part of the summer.

One of the beautiful Peregrine Falcons at AWR. *They remind us of life's wonders and challenges. Photo courtesy of Leora Feeney.*

Heron nesting in cypress trees this spring. *Photo courtesy of Leora Feeney.*

Double-crested Cormorants had 23 nests in one tree along a residential lagoon.

The colony has expanded to residential yards and is causing alarm for one home owner whose treasured redwood tree had five cormorant nests this year. After seeing what rookeries can do to a tree, I found myself sympathizing with them. Any advice is welcome.

The Alameda Wildlife Reserve (AWR) Great Blue Heron rookery in cypress trees that can be seen through the fence had 8 nests with some 14 fledged youngsters. It is fun to watch house finches nesting inside the heron nests. These trees are dead due to years of nesting herons and we worry how long they will remain standing.

Other nesting birds such as our Fruitvale Bridge peregrine falcons, Western Bluebirds using boxes located at Crown Beach grasslands, and egret rookery did well.

Part of the early plans for redevelopment around Alameda Point's Seaplane Lagoon included De-Pave Park, where concrete would be removed and replaced with wetlands and a trail. This 19-acre project would be adjacent to AWR wetlands and complement restoration wetlands there. The project is again coming into hopeful fruition. The dream is kept alive by several devoted organizations who managed to sway a hesitant City Council to support a grant search with a $50,000 base fund. We know these projects aren't easy, but given all the important functions this parcel offers and an inspiring name that survived a comic reference, how can it not get grant funds. We'll keep you posted.

Hopefully, the end game for Covid is near. The public must volunteer in wild places and give nature support while giving people the needed experiences to develop endearment for the very system that supports us all.

Leora Feeney
Co-chair, Friends of Alameda Wildlife Reserve
leoraalameda@att.net

Citizens for East Shore Parks:
Fighting Reckless Shoreline Development in Richmond

Citizens for East Shore Parks (CESP) is fighting two reckless shoreline development plans in Richmond: Point Molate, converting public shoreline into a large-scale luxury housing enclave, and Zeneca toxic waste site (Zeneca is a subsidiary of AstraZeneca Inc.), building thousands of housing units on a hazardous waste site without adequate cleanup of toxins.

Bad land use practices damage our planet, degrade natural resources, exacerbate climate change, and ignore environmental justice. CESP uses every tool to combat these destructive land use practices – organizing, educating, advocating, meeting with decisionmakers. When all else fails, we go to court. We are currently in both federal and state court over these two terrible projects.

Point Molate

Despite concerns voiced by the community and experts for years about risks of building a housing development at Point Molate, the former Richmond City Council approved a large-scale luxury housing enclave in 2020. CESP, with community allies and residents, is challenging this project in two separate ongoing lawsuits: one at the federal level for violations of public transparency requirements (Brown Act) and land use law and a second at the state level for violations under the California Environmental Quality Act (CEQA).

Point Molate*. Photo by Alix Mazuet, courtesy of CESP.*

In a remarkably honest move, the Richmond City Council in a 4-3 vote in October instructed the City Attorney to concede the points made by the community in the federal case and acknowledge the City violated the Brown Act and state planning and zoning laws.

In addition to fighting the legal challenges, CESP is working with Point Molate Alliance and other community groups to push instead for a regional shoreline park at Point Molate. This is an important last chance to maintain this sensitive shoreline ecosystem; protect carbon-sequestering eelgrass and our Bay; protect and honor sacred Ohlone land; and ensure that the public has access to recreation, open space, and sports fields.

Zeneca Toxic Waste Site

In another destructive decision along the Richmond shoreline, the former Richmond City Council put through an approval for up to 4,000 residential units on the Zeneca toxic waste site – without an adequate plan to remove the hazardous waste. More than 100 types of hazardous chemical compounds and radioactive material have been identified as being present on the site. Yet, it was approved for residential use.

The boundaries of the Zeneca site *are approximated in orange on this Google Earth image.*

CESP and local community groups, including the Richmond Shoreline Alliance, filed a CEQA lawsuit against Richmond in December 2020 to stop this toxic housing plan. The lawsuit points out health risks and the ecological risks to the shoreline and Bay.

In August 2021, CESP, along with community groups, brought a lawsuit against the Department of Toxic Substances Control (DTSC) and California Environmental Protection Agency (CalEPA) for signing a Prospective Purchaser Agreement with the new owners of the Zeneca site without performing a proper environmental review and failing to consider current information on sea level rise and the serious health risks posed by toxic chemicals remaining at the site.

These local efforts occurring here in the Bay Area, and across the State, to ensure environmental protections are adhered to are an important part of protecting our planet from years of destructive land use planning and point the way to healthier and safer alternatives for residents and the Bay. It's time to turn our backs to exploiting and degrading our shoreline land.

Learn more at CESP's website: www.eastshorepark.org.

Shirley Dean,
Board President, Citizens for East Shore Parks

Robert Cheasty,
Executive Director, Citizens for East Shore Parks
cespmanager@eastshorepark.org

***Black-necked Stilts** at sunset. Photo by Kate High.*

Baylands Conservation Committee

Byxbee Park

On 11/8/2011 Palo Altans undedicated 10 acres of Byxbee Park for the "exclusive purpose" of building an anaerobic compost digester. If the 10 acres are not used for that purpose, the Council may rededicate them as of 11/8/2021. The acreage includes the vital wildlife corridor between the Bay and the Renzel Wetlands. Under it is a pipeline supplying salty bay water to a salt marsh harvest mouse habitat on the Renzel Wetlands. A 125' strip of the area was required landscaping for the Regional Water Quality Control Plant expansion decades ago (1970's) with the purpose of screening the Plant from Byxbee Park. Currently in limbo, the 10 acres should be rededicated as parkland to protect them as was originally intended.

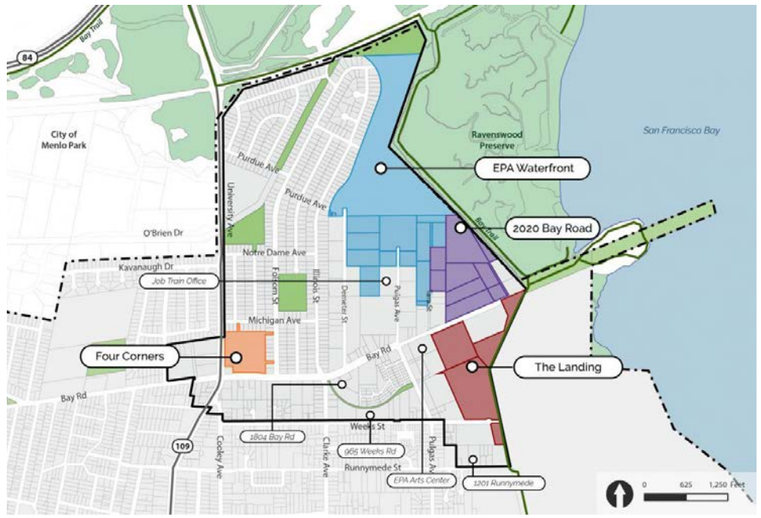
***The salt marsh harvest mouse**, an endangered species endemic to the San Francisco Bay, could benefit from rededication of 10 acres as parkland in Palo Alto. Public domain photo by M. Bias, US Department of the Interior.*

Palo Alto Shoreline Levee

We have concerns about decisions being considered for the Palo Alto sea-level-rise levee. The Shoreline Study Phase II underway is the US Army Corps of Engineers and Valley Water project for a levee in Palo Alto, extending to Permanente Creek in Mountain View. Its feasibility studies are expected to complete by 2025, construction to begin in 2030+. Palo Alto was part of the SAFER levee with those plans utilized as the proposed levee flood control project. Phase II changes have not been published but we are concerned that the SAFER proposal to protect the airport by filling wetlands to extend the runway may be included. Golf course protection was also proposed rather than what has been done in other parts of the country where recreational facilities such as golf courses also function as areas that can provide space for flood waters. As levee costs are ballooning (see the *Wetlands in the Far South Bay* article for an example), what will be the additional costs of protecting the airport and golf course, compared to an alternative of a shorter levee wrapping around the water treatment plant in the Baylands area?

***View of the East Palo Alto shoreline** from Ravenswood Open Space Preserve, Cooley Landing, continuing along Laumeister and Faber Marshes, the Palo Alto golf course and airport, the Palo Baylands, Byxbee Park, and the Palo Alto Flood Basin to Charleston Slough.*

In East Palo Alto, proposals for 4.15 million square feet of 4- to 8-story office buildings would line the shoreline for about a mile.

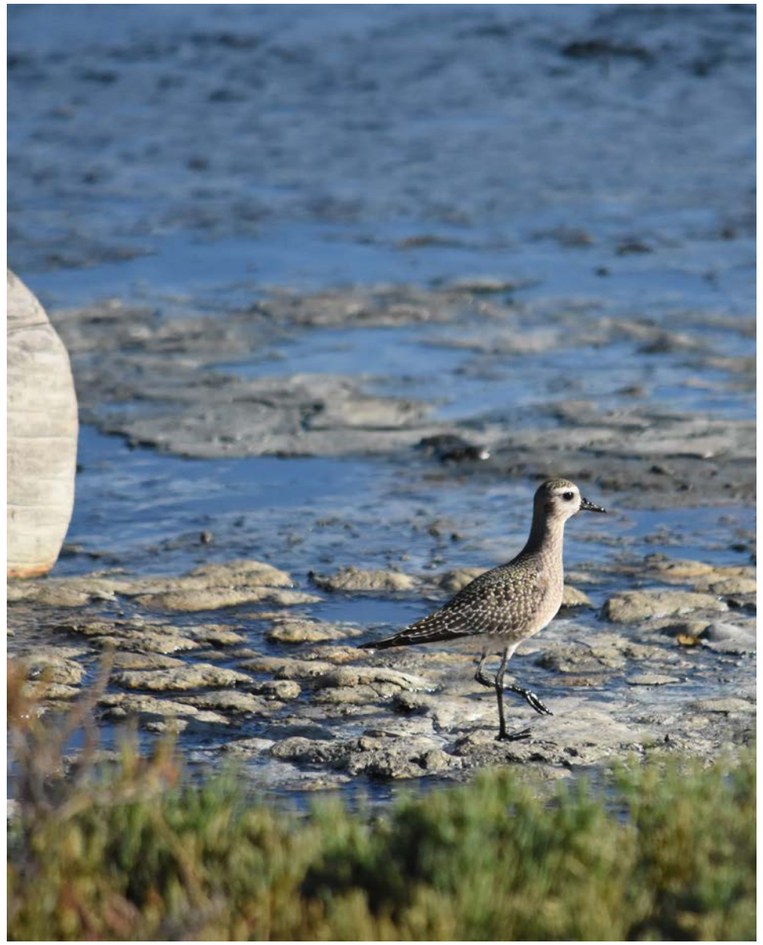


***Development proposed** within the Ravenswood Business District/ 4 Corners Specific Plan Update.*

East Palo Alto

An Update to the Ravenswood Business District Specific Plan introduces potential for significant impacts to marshes and wildlife along the Bay Trail and in the inner marsh near the City boundary defined by the old railroad ROW. Developers' proposals for adding 4.15 million square feet of office space in 4- to 8-story buildings triple the existing Specific Plan limit. Most of those buildings would line the shoreline as a massed wall of about a mile of obstacles to birds, breezes, and sun to birds, marshes, and community alike. We are monitoring City actions closely, attending meetings, commenting and working with both the community and environmental partners.

Emily Renzel,
marshmama2@att.net
Eileen McLaughlin,
wildlifestewards@aol.com



Juvenile Black-bellied Plover *at Charleston Slough. Photo by Kate High.*

Continuing the fight

...continued from front page

developed. If we care about the future resiliency of the Bay, we will need to find ways to protect such areas from development and quickly.

We'd like our readers to also be aware of a study released earlier this year by Scott Dusterhoff of the San Francisco Estuary Institute (SFEI) which analyzed whether there is sufficient sediment to maintain existing and restored tidal wetlands in the Bay as sea levels continue to rise. The bottom line of the study, *Sediment for Survival*, is that there is an urgent need for regional coordination of what will increasingly become a limiting resource and that collectively we need to find solutions that will increase the delivery of suitable sediment to the Bay.

This edition of *Save Wetlands* features a special insert on horizontal levees by Dr. Peter Baye, coastal ecologist and botanist that clarifies when and where they are an appropriate nature-based solution that will be capable of successfully providing tidal wetlands migration space and wildlife habitat.

We feel so fortunate to have dedicated volunteers working to protect the future health of our Bay, and supporters like you who enable us to continue our fight to Save Wetlands.

Sign up for monthly email updates!

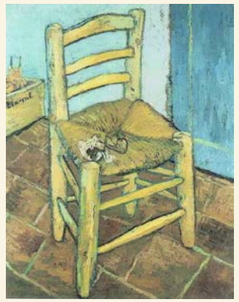
If you would like to stay informed throughout the year about CCCR activities, sign up for our monthly updates. It's easy! Just provide your name and email address in the space on the enclosed return envelope. Be sure and check the "Monthly Email Update" box.

You can also sign up by sending an email to **cccr.update@gmail.com** with "Update Request" in the subject, and your name included in the text.

CCCR will not share your email address with other groups or individuals, and the updates will be the only email you receive from us unless you sign up for our action alerts.

Thank you for your support – you make it all possible!

American White Pelicans preening. *Photo by Carin High.*



The Uneasy Chair

People in the know were not surprised last month when the U.S. Fish and Wildlife Service made the dreadful announcement that that big squawking bird of the southern swamplands, the Ivory-billed Woodpecker was gone forever, extinct. Why should the news be so heartbreaking to me?

When we moved to the South Bay many years ago, the warm climate that was new to us led us to head for the edges of the bay in the evening. We loaded the station wagon with the kids and a dinner basket and escaped to the marshes. Little did we know we would fall in love with them. What a magical place, filled with cool breezes, clear skies, and peace. One evening we noticed a black and white feathered character with super long red legs eyeing us and he flew off, screeching at the sight of us. I barely knew what a species was, let alone an endangered one. I learned fast.

Night school classes at San Jose State taught me quite quickly that if I cared about those creatures that I had watched in the Palo Alto marshes, I had better pay attention, because some of them were in big trouble.

Although our little Black-necked Stilts with their bright red legs that we often saw stepping along the water's edges turned out to be in pretty good shape for the moment, the biologists described plenty of species at risk. Our endangered Ridgway's Rail and the captivating salt marsh harvest mouse became quite familiar to the press and even to the public.

Some months after the acquisition of the Warm Springs site it revealed a surprise—it contained tadpole shrimp, California tiger salamanders and Contra Costa goldfields. I realized with delight that land we had prevented from becoming concrete and asphalt with the acquisition of this Refuge, was home to creatures that might be close to extinction. If the public and USFWS working together can ensure the continuation on earth of fellow inhabitants, we have left a precious gift for those who come after us.

Can you imagine what our lives would be like without the trill of birds, the colorful flight of butterflies, the footprints of mammals? I am reminded of a comment in *The Washington Post* (9/25/21) by the actress/environmentalist Jane Alexander who said, "If we save the birds, we save everything."

My life is brightened beyond measure by the gift of time from my family and friends. Besides all those Citizen Committee coworkers, there are Anne, Celia, Ginny, Kate, and Pratim. The latter reads me every word of Carin and Gail's multipage comment letters. I cannot thank you adequately, but I think you know what you mean to me.

Florence M. LaRiviere
Uneasy Chair Emerita

Black-necked Stilts. *Photos above and left by Sam High.*

Citizens Committee to Complete the Refuge
P.O. Box 23957
San Jose, CA 95153

Nonprofit
Organization
U.S. Postage
PAID
Permit No. 164
Palo Alto, CA

RETURN SERVICE REQUESTED

SAVE WETLANDS

Newsletter Issue 50, Fall 2021

A Great Egret in LaRiviere Marsh at sunrise. Photo by Kate High.

Save Wetlands is the annual newsletter of the **Citizens Committee to Complete the Refuge**, an all-volunteer nonprofit public benefit corporation.

Our mission is to save the Bay's remaining wetlands by working to place them under the protection of the Don Edwards San Francisco Bay National Wildlife Refuge, and to foster worldwide education regarding the value of all wetlands.

Support is welcome from anyone interested in saving wetlands; a tax-deductible contribution of $10 per issue is appreciated.

cccrrefuge@gmail.com | www.BayRefuge.org