

Sea Level Rise Adaptation and Mitigation

NATURE-BASED SHORELINE RESILIENCY



*Unusually high water levels cause tidal flooding.
Martinez Regional Shoreline, Martinez*

The East Bay Regional Park District regularly addresses climate-related impacts on parks, trails and communities. These include wildfire, extreme heat, sea level rise, flooding, drought and pest issues. The agency is committed to monitoring the effects of climate change on District resources. The District utilizes adaptive management techniques, including adjusting stewardship methods and priorities, to preserve the natural, cultural and scenic values of the parks and trails. In 2018, the Park District's elected Board of Directors passed a policy framework for managing park resources in a changing climate. The public recognizes the Park District is part of the solution to climate change. Sea-level rise is threatening shoreline parks, trails and communities, many lakes are suffering from toxic algae blooms, and the prolonged drought has had severe impacts on forests and woodlands. In a November 2021 scientific survey, 70 percent of respondents agreed nature-based solutions are required to ensure the East Bay's resilience to a changing climate.

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CLIMATE FRAMEWORK AT THE PARK DISTRICT

The Park District's approach to climate adaptation and mitigation is guided by its *Policy Framework for Managing Park Resources in a Changing Climate* which commits to:

- Integrating climate in all policy decisions, including development of nature-based protection from the impacts of climate change
- Supporting climate readiness through adaptation and enhancement of nature-based services
- Leading climate smart practices at the state, Federal and local levels in support of nature-based solutions on public lands
- Advancing science in response to a changing climate whenever possible
- Ensuring environmental sustainability whenever possible

Rooted in experience, the Park District recognizes the pace of implementing climate smart projects, such as protecting against catastrophic fires or mitigating sea level rise, is determined by availability of resources.

The Park District requests strong support for climate smart investments on a local, state and national level.

SEA LEVEL ADAPTATION STRATEGIES

Hold the Line

Upgrading flood protection infrastructure and limited use of natural and nature-based adaptation approaches.

Create a Buffer with Public Open Space

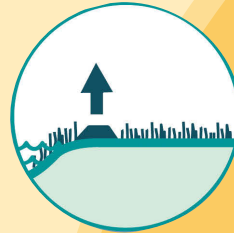
Minimal reconfiguration of existing vulnerable infrastructure plus use of nature-based adaptation measures.

Maximize Habitat and Realignment

Realignment of vulnerable shoreline infrastructure to restore and enhance natural processes.

Hybrid Approach

Combines different strategies over time and/or space to balance objectives for infrastructure, open space and habitat.



Overtopping of the San Francisco Bay Trail at Hayward Regional Shoreline.

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HAYWARD MARSH NATURAL HABITAT RESTORATION PROJECT

A multi-benefit project currently underway which would advance the goals of Governor Newsom's 30 by 30 Executive Order is the Hayward Marsh Natural Habitat Restoration Project. The benefits provided by this project include planning for sea level rise and habitat enhancement, improving public access, enhancing wildlife habitat, increasing shoreline resilience and improving the ability of the Park District to adapt to future conditions. Hayward Marsh provides critical habitat for the endangered salt marsh harvest mouse and Ridgway's rail (California clapper rail). The marsh provides important nesting grounds for birds such as the California least tern, the western snowy plover and the black skimmer. The Hayward Marsh Natural Habitat Restoration Project will preserve and improve the marsh's benefits to wildlife while bolstering the shoreline's resilience to sea level rise and expanding the area's public access – including improvement of the Bay Trail.

Photo: Joe DiDomato



*Above: Hayward Marsh before restoration.
Left: an endangered salt marsh harvest mouse.*

COYOTE HILLS RESTORATION AND PUBLIC ACCESS PROJECT

An example of a multi-benefit and multi-sector project which would advance climate smart goals is currently underway – the Coyote Hills Restoration and Public Access Project. This project, led by the Park District in partnership with the San Francisco Estuary Institute (SFEI), will restore rare, high-value habitat along the Bay. Restoration features include wet meadow, seasonal wetland, moist grasslands, coastal prairie, willow thicket, mixed riparian forest and oak savanna habitat. The project will provide public access on about 205 acres, expanding the eastern park boundary of Coyote Hills Regional Park. This project will positively impact the preservation, enhancement and

expansion of a unique and integrated ecosystem. This large and extremely valuable habitat complex is adjacent to the Eden Landing Preserve and Don Edwards National Wildlife Refuge tidal marsh. It sits in transition zone habitats, as well as the freshwater, saline emergent marsh and upland habitats of Coyote Hills Regional Park. Together they form one of the most important wildlife habitat complexes in the greater San Francisco Bay Area. This integrated system provides many additional ecosystem functions and benefits, including buffering urban areas

to the east from sea level rise, flood water detention and stormwater water quality treatment. The project includes public education displays along its four-plus-mile trail network. The displays will highlight climate smart solutions, resiliency, adaptation and migration.

With additional funding investments and policy direction from Federal and State governments, the Park District is ready to implement similar large-scale climate projects across the East Bay region.

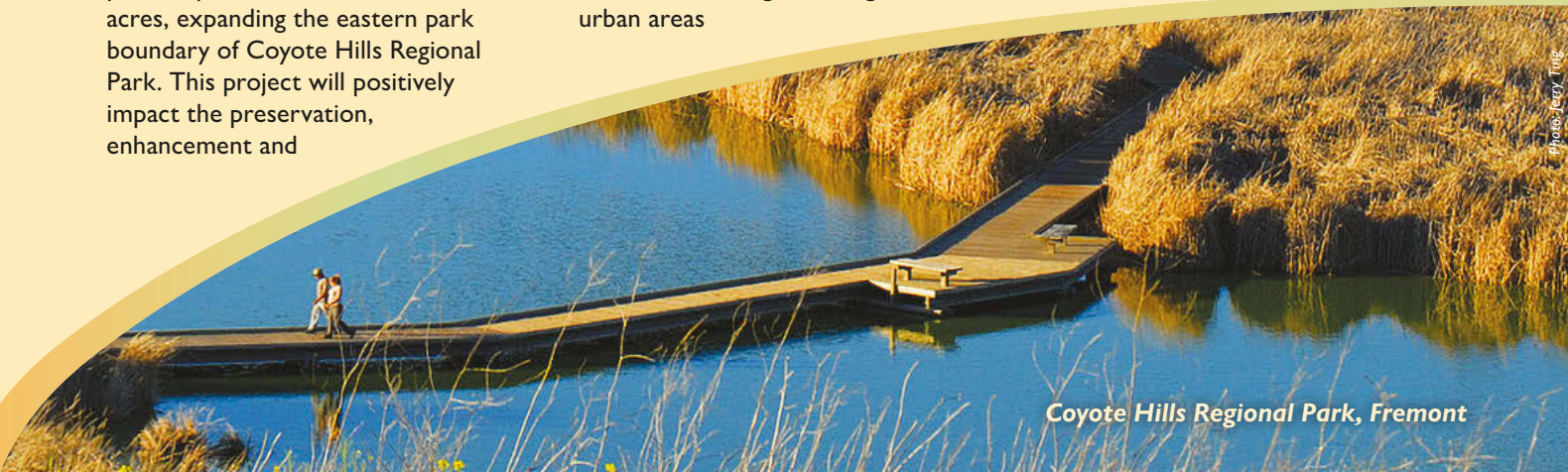


Photo: Jerry Ting

Coyote Hills Regional Park, Fremont

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FUNDING AND POLICY PROGRAMS SUPPORT FOR NATURE-BASED SHORELINE RESILIENCY

Local

- MTC Active Transportation – San Francisco Bay Trail
- MTC Priority Conservation Areas
- San Francisco Bay Restoration Authority – Measure AA

State

- California Greenhouse Gas Reduction Fund
- Urban Rivers Grant Program, Prop 1
- Coastal Conservancy Climate Adaptation and Resilience
- Delta Conservancy, Prop 1
- Natural Resources Agency – nature-based solutions
- River Parkways
- WCB Climate Adaptation and Resiliency Program

Federal

- Environmental Protection Agency/Bay Program
- U.S. Army Corps of Engineers/Water Resources Development Act

Coyote Hills Regional Park, Fremont