SAN FRANCISCO BAY CONSERVATION AND DEVELOPMENT COMMISSION
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February 21, 2014

Application Summary
(For Commission consideration on March 6, 2014)

Number: Material Amendment No. One to BCDC Permit No. M2013.009.01
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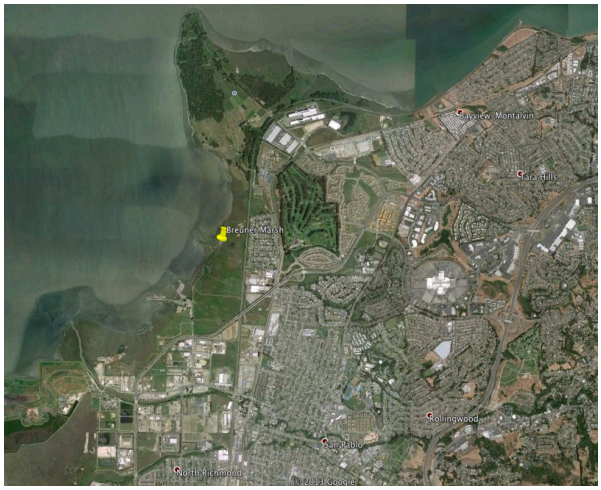
Staff Assigned: Ellie Knecht (415/352-3668 elliek@bcdc.ca.gov)

Summary

Applicant: East Bay Regional Park District (EBRPD)

Location: In the Bay and within the 100-foot shoreline band, largely within an area designated as a waterfront park priority use area in the *San Francisco Bay Plan* (Bay Plan), at the terminus of Goodrick Avenue, in the City of Richmond, Contra Costa County (Exhibit A). The 150-acre project site includes 120 acres of the Breuner Marsh property and 30 acres of the adjacent Giant Marsh. The project area is bordered by Rheem Creek and the Richmond Rod & Gun Club on the south, the Union Pacific railroad tracks and the residential community of Parchester Village on the east, and the Point Pinole Regional Shoreline on the north (Exhibit B). The privately owned Carr property abuts the project area in the southeast corner.



Project: The goals of the project are to restore tidal marsh habitat to an area that has been previously filled, enhance marsh transition zones, create seasonal and tidal wetlands and provide public access. Overall, the project would: (1) excavate upland areas to establish 6.12 acres of new tidal wetlands and 4.19 acres of new seasonal wetlands; (2) restore and enhance 4.2 acres of seasonal wetlands and 27.05 acres of tidal wetlands; and (3) provide an approximately 1.25-mile-long segment of the Bay Trail, an approximately 0.25-mile-long spur trail, and associated parking, picnic areas, overlooks, and boardwalks (Exhibit C).

The project would remove existing site structures, debris and non-native vegetation, and re-grade much of the southern portion of the site by moving approximately 105,500 cubic yards of material. Three new tidal sloughs would be excavated to facilitate drainage and provide for additional tidal marsh habitat complexity and structure. Wetland function would be improved by increasing the frequency and extent of tidal flooding, lengthening the hydroperiod in existing seasonal wetlands, and providing refugia and breeding habitat for resident small mammals and birds. Final elevations for the tidal wetland surface would range between 5.5 and 7 feet (NAVD88). Excavated material would be used to create broad transition zones and uplands, and provide areas where marsh can retreat with sea level rise. Tidal areas would be left to reestablish vegetation naturally, while upland areas would be planted with native plants.

Issues Raised: The staff believes that the application raises six primary issues: (1) whether the project is consistent with the priority use designation in the Bay Plan; (2) whether the project is consistent with the McAteer-Petris Act and Bay Plan policies regarding fill; (3) whether the project would provide the maximum feasible public access, consistent with the project; (4) whether the project is consistent with the Commission's Safety of Fills and Climate Change policies; (5) whether the project is consistent with the Commission's natural resource policies, including Fish, Other Aquatic Organisms and Wildlife; and Tidal Marshes and Tidal Flats; and (6) whether the project is consistent with the Commission's dredging policies.

Background

Habitats in the project area are degraded as a result of filling, grading and other disturbances. During the mid-twentieth century the area was graded and filled for agriculture and light industrial uses, including boat and automobile storage and repair, and warehousing. From 1939 to the late 1990s, about two-thirds of the site was significantly disturbed by off-road

vehicles, scraping, grading, and fill placement. A small model airplane facility and various small buildings were constructed on the site and have since been demolished and removed. Several development proposals for the site have been proposed (a transit village, office park, and mitigation for constructing the east span of the San Francisco to Oakland Bay Bridge). None of these proposals have been implemented. The EBRPD acquired the property by eminent domain in 2011 with the intent of preserving it for open space and public access and restoring the property to tidal marsh, seasonal wetlands, and associated coastal prairie and scrub.

Existing habitat types include non-native annual grassland / ruderal and disturbed areas, native grasslands, salt pannes, seasonal wetlands, riparian wetlands, brackish tidal and freshwater channels, tidal marsh, tidal mudflats and open water. Tidal marsh occurs throughout Giant Marsh and along the western shoreline of the restoration site. Tidal marsh within the project area includes a low marsh zone dominated by cordgrass, a mid-marsh zone dominated by pickleweed and a high marsh zone with pickleweed marsh gumplant, and alkali heath. Only a few areas of transitional high marsh are present on the site. Current elevations at the site range from 0 to 12 feet (NAVD88). Rheem Creek, a federal flood control channel, forms the southern boundary of the site. A second channel is located at the base of the UPRR railway berm near the eastern boundary of the project area and connects the site to the Bay through Giant Marsh.

On August 6, 2013, the Commission issued an administrative permit (BCDC Permit No. M2013.009.00) for the first phase of park construction that included the installation of a fence and the remediation of contaminated soils, all within the 100-foot shoreline band.

Project Description

Project Details:

The applicant, the East Bay Regional Park District, describes the project as follows:

In the Bay:

1. Excavate approximately 28,900 cubic yards of material over approximately 653,125 square feet of the project site (15.0 acres) to create three new tidal sloughs totaling approximately 4,000 feet in length and to restore and enhance tidal wetlands by lowering site elevations to improve drainage and the frequency of tidal inundation;

2. Place, use and maintain approximately 7,500 cubic yards of excavated material over approximately 47,070 square feet of the project site (1.08 acres) to elevate areas proposed for public access and to create transitional habitat, including an approximately 700-foot-long berm covering approximately 36,400 square feet for a trail with transitional habitat on the slopes;

3. Remove an existing 200-square-foot box culvert from Rheem Creek, place, use, and maintain approximately 40 cubic yards of riprap over an approximately 300-square-foot area to protect the Creek's shoreline from erosion, and install, use, and maintain, in-kind, an approximately 16-foot-wide and 70-foot-long section of a free-span bridge over Rheem Creek;
4. Install, use, and maintain, in-kind, a 13-foot-wide, approximately 861-foot-long section of a concrete boardwalk over Giant Marsh, supported by approximately 42, 18-inch-in-diameter pilings;
5. Install temporary construction features including: (a) a construction access route using rubber matting placed on geotextile fabric (or similar method) to facilitate the construction of the boardwalk; (b) a perimeter berm around areas to be graded to prevent inundation during grading activities; (c) two coffer dams to divert water during work in Rheem Creek; and (d) other erosion and sediment control measures. All temporary construction features shall be removed upon project completion; and
6. Install, use and maintain four-foot tall fencing that would prevent intrusion into habitat areas.

Within the 100-foot shoreline band:

1. Excavate approximately 18,500 cubic yards of material from upland areas to create approximately 14,810 square feet (0.34 acres) of new seasonal wetlands and 182,950 square feet (4.20 acres) of new tidal wetlands. Use the excavated material to construct the public access trail and to create upland habitat providing area for the marsh to retreat with sea level rise;
2. Excavate approximately 15,000 cubic yards of material from seasonal wetlands to restore 369,390 square feet (8.48 acres) of tidal wetlands. Use the excavated material to construct the public access trail and to create upland habitat providing area for the marsh to retreat with sea level rise;
3. Remove an existing 16,500-square-foot asphalt road, to surrounding grade and scarify the road surface to promote plant establishment;
4. Install, use, and maintain, in-kind, an approximately 16-foot-wide and 70-foot-long section of a free-span bridge over Rheem Creek;
5. Install, use and maintain, in-kind, the following public access improvements: (a) an approximately 6,000-square-foot portion of a 24-space, approximately 12,000-square-foot parking lot, as well as a restroom and information kiosk; (b) 760 feet of a 13-foot-wide, 1.25-mile-long paved trail and a 9-foot-wide, 0.25-mile-long stabilized gravel spur trail; (c) an approximately 13-foot-wide, 432-foot-long section of concrete boardwalk adjacent to Giant Marsh; and (d) an approximately 9-foot-wide, 125-foot-long section of concrete boardwalk over a newly created slough; and
6. Install, use and maintain four-foot-high fencing to prevent intrusion into habitat and six-foot-high fencing adjacent to the Union Pacific Railroad tracks on the east side of the project area.

Bay Fill: The proposed project would involve the placement of approximately 47,370 square feet of new solid fill to create broad transition slopes for current and future habitats and public access, approximately 11,193 square feet of pile-supported fill for bicycle/pedestrian public access and approximately 752 square feet of cantilevered fill for a free-span bridge over Rheem Creek. The project would result in removal of approximately 200 square feet of solid fill to remove a culvert over Rheem Creek (Exhibit D and Table 1).

Table 1. Fill Areas for the Project (in square feet)

Description	Type of Fill	To Be Removed	To Be Placed	Total Net Area
Free-span bridge over Rheem Creek	Cantilevered	0	752	752
Total Cantilevered Fill		**0**	**752**	**752**
Areas Elevated to Support Public Access Features and Transitional Habitat	Solid	0	47,070	47,070
Riprap in Rheem Creek	Solid	0	300	300
Culvert Removal in Rheem Creek	Solid	(200)	0	(200)
Total Solid Fill		**(200)**	**47,370**	**47,170**
Boardwalk in Giant Marsh	Pile-Supported	0	11,193	11,193
Total Pile-Supported Fill		**0**	**11,193**	**11,193**
TOTAL FILL		**(200)**	**59,315**	**59,115**

Public Access: Currently the site is not open to the public. The project would result in constructing an approximately 1.25-mile-long segment of the Bay Trail and approximately 160,000 square feet (3.67 acres) of associated public access, of which approximately 42,325 square feet (0.97 acres) would be located within the Commission's jurisdiction (Exhibit C). Public access improvements would include:

(1) A 24-space parking lot, restroom, and information kiosk at the northern terminus of Goodrick Avenue;

(2) An approximately 1.25-mile-long, 13-foot-wide paved extension of the Bay Trail for bicycle and pedestrian use, spanning existing and proposed wetlands on elevated boardwalks;

(3) A pedestrian-only, approximately 0.25-mile-long gravel spur trail leading to a vista overlook and interpretive point;

(4) A temporary (likely to be inundated with anticipated sea level rise), unimproved pedestrian-only trail extending past the spur trail to the shoreline spit along an existing footpath; and

(5) A small picnic area, two overlook areas, a minimum of six interpretive signs, and six benches.

Priority Use: The proposed project is located in an area designated as a Waterfront Park Priority Use Area on Bay Plan Map No. 4.

Schedule and Cost: The EBRPD proposes to begin the project by April 1, 2014 and complete all proposed activities by December 31, 2017. Public access improvements would be constructed in the second year of a three-year construction schedule. Following completion of the marsh restoration work, the EBRPD would continue to monitor the site over a ten-year period. The EBRPD estimates that the total project cost to be approximately $5,000,000.

Staff Analysis

A. **Issues Raised**: The staff believes that the application raises six primary issues: (1) whether the project is consistent with the priority use designation in the Bay Plan; (2) whether the project is consistent with the McAteer-Petris Act and Bay Plan policies regarding fill; (3) whether the project would provide the maximum feasible public access, consistent with the project; (4) whether the project is consistent with the Commission's Safety of Fills and Climate Change policies; (5) whether the project is consistent with the Commission's natural resource policies, including Fish, Other Aquatic Organisms and Wildlife; and Tidal Marshes and Tidal Flats; and (6) whether the project is consistent with the Commission's dredging policies.

1. **Bay Plan Priority Use Area.** The project site is largely within an area designated as a Waterfront Park Priority Use Area in the Bay Plan (Bay Plan Map No. 4). The goals of the project are to create and enhance Bay habitat and provide the public opportunities to enjoy these habitats while assuring that Bay wildlife is buffered from potential impacts posed by increased public access. The Commission must determine whether the project is consistent with the site's Waterfront Park Priority Use Area designation.

2. **Fill.** The Commission may allow fill only when it meets the requirements identified in Section 66605 of the McAteer-Petris Act, which states, in part, that: (a) the public benefits from fill must clearly exceed the public detriment from the loss of water areas, and fill should be limited to water-oriented uses or minor fill for improving shoreline appearance and public access; (b) no alternative upland location is available; (c) the fill authorized should be the minimum necessary to achieve the purpose of the fill; (d) the fill should minimize harmful effects to the Bay including the water volume, circulation, fish and wildlife resources, and marsh fertility; and (e) the fill should be authorized when the applicant has valid title to the properties in question.

   The project would result in the net placement of approximately 59,115 square feet (1.36 acres) of fill in the Bay for a variety of uses, all related to creating habitat and providing improved public access at the site. Solid fill would be placed primarily in areas of isolated, infrequently flooded tidal marsh south of Giant Marsh. This area is only flooded by storm surges and a few extreme high tides each year due to varied topography from past fill placement. The goal of the proposed fill in these areas is to provide public access, create more contiguous wetlands, provide transitional habitat, and provide areas for tidal marsh to colonize with future sea level rise. Specifically, the fill would include the following elements: a) a free-span bridge over Rheem Creek to provide access to the site (the bridge would cover approximately 752 square feet of water surface and the associated riprap would cover approximately 300 square feet); b) solid earth fill would be placed on a total of approximately 47,070 square feet (1.08 acres) of marshlands to both elevate areas supporting public access and to create transitional habitat, including a constructed berm for a trail just south of Giant Marsh covering approximately 36,400 square feet (0.84 acres) of infrequently flooded tidal marsh; and c) a pile-supported public access boardwalk would be constructed on approximately 11,193 square feet of Giant Marsh.

a. **Alternative Upland Location.** There is no alternative upland location for the project because the purpose of the project is wetland enhancement, restoration and creation. There is no feasible Bay Trail alignment that does not include some portion of the trail within the Commission's Bay jurisdiction because the Commission's Bay jurisdiction extends nearly to the eastern property boundary in the northern portion of the site; any public access connection to the neighboring Point Pinole Regional Shoreline Park would require fill.

b. **Minimum Amount Necessary.** Overall the project would result in approximately 59,115 square feet (1.36 acres) of Bay fill. Approximately 47,070 square feet of solid fill would be used to elevate areas supporting public access trails and to create gradual transition zones between uplands and existing, created, and graded wetlands. Solid fill materials would be generated from creating new tidal and seasonal wetlands on-site. The EBRPD states that the quantity of solid fill is the minimum necessary to serve the dual purpose of providing public access and creating transitional habitat zones. The design also takes into account projections of sea level rise by elevating all public access areas above projected flood and sea level rise elevations and establishing broad slopes to allow room for future marsh migration. The project involves approximately 11,193 square feet (0.26 acres) of pile-supported fill for a boardwalk over Giant Marsh and approximately 752 square feet of cantilevered fill for a free-span bridge over Rheem Creek. According to the EBRPD the bridge and the boardwalk have been designed to result in the minimum amount of Bay fill to provide access through the site.

   EBRPD was asked whether the quantity of solid fill could be reduced by constructing a boardwalk in the area south of Giant Marsh in place of the berm currently proposed in this area. The EBRPD responded that extending the boardwalk would add significant costs related to constructing the boardwalk and off-hauling materials excavated to improve tidal circulation in the new and existing wetlands. Further, a boardwalk would not achieve the dual purpose of providing public access and creating transitional habitat. The EBRPD also explained that the berm is proposed in an area of historic fill, which, although within the Commission's Bay jurisdiction, is infrequently inundated and has marginal habitat value due to reduced hydroperiod and dominance by non-native grasses. Public access through the much more frequently inundated Giant Marsh would be on a boardwalk.

c. **Effects on Bay Resources.** The project would involve filling tidal marsh areas to improve existing habitat and create a mosaic of wetland, transition and upland habitat typical of natural Bay marshes. The project would result in creating far more tidal marsh than would be filled with the project. The applicant is developing a Habitat Mitigation and Monitoring Plan for the project to assess the project's potential impacts to natural resources, to allow adaptive management of the restoration efforts over time, and to increase the likelihood that the marsh restoration efforts are successful.

   In addition to Section 66605 of the McAteer-Petris Act regarding effects of fill on water volume and circulation, the Bay Plan policies on Water Surface Area and Volume state that, "[w]ater circulation in the Bay should be maintained, and improved as much as possible. Any proposed fills, dikes or piers should be thoroughly evaluated to determine their effects on water circulation and then modified as necessary to improve circulation or at least to minimize harmful effects." The proposed project would improve tidal circulation throughout the site, increasing plant health and improving habitat conditions for marsh-dependent species.

d. **Valid Title**. The EBRPD owns the Breuner Marsh and Giant Marsh properties. The shallow offshore area and two man-made spits are owned by the State Lands Commission and are managed by the EBRPD.

The EBPRD proposes to align a portion of the Bay Trail in the vicinity of Giant Marsh on lands currently owned by Union Pacific Railroad east of property currently owned by the EBRPD. It is the intent of the EBRPD to secure easements for the eastern trail alignment prior to construction of the Bay Trail (in the second year of construction). This preferred alignment is desired because it would locate the Bay Trail closer to the Union Pacific Railroad line (and the edge of the marsh), thereby minimizing the adverse impacts of the trail on the enhanced and newly created habitat. Should these easements not be secured at the time of construction, an alternative alignment is proposed entirely within property owned by the EBRPD. The difference in alignment is approximately 15 horizontal feet and would not substantially alter the dimensions of the project.

The Commission should determine whether the project is consistent with its law and policies regarding fill in the Bay.

3. **Public Access**

a. **Maximum Feasible Public Access.** Section 66602 of the McAteer-Petris Act states that "…existing public access to the shoreline and waters of the…[Bay] is inadequate and that maximum feasible public access, consistent with a proposed project, should be provided." The Bay Plan Public Access policies state that "a proposed fill project should increase public access to the Bay to the maximum extent feasible…" and that "access to and along the waterfront should be provided by walkways, trails, or other appropriate means and connect to the nearest public thoroughfare where convenient parking or public transportation may be available."

Currently the site is not open to the public. According to the EBRPD there has been some unauthorized use of the area, including dog walkers and temporary encampments. The EBRPD proposes to formally open the site to the public and provide opportunities for passive recreation and public education that are compatible with the existing and restored habitats. The project is projected to generate approximately 9,000 to 10,000 visits per year, a maximum of 43 vehicle trips per hour, and approximately 57 bicycle users per day (of which 40 are projected to be commuters).

The proposed project would provide a critical Bay Trail link by constructing an approximately 1.25-mile-long bike and pedestrian trail between a new, gated entrance at the terminus of Goodrick Avenue and existing trails within Point Pinole Regional Shoreline. Once completed, the new Bay Trail segment would provide access between north Richmond and urban areas in the south. The park's entrance would include a 24-space parking lot, restroom, and information kiosk. An approximately 0.25-mile-long pedestrian-only gravel spur trail would lead to two Bay overlooks. A temporary (until inundated with anticipated sea level rise) unimproved pedestrian-only trail would allow the public access to a shoreline spit along an existing informal footpath. A small picnic area and at least six interpretive signs and six benches would be located along the trail.

For comparison, the Commission concurred with the USFWS's Consistency Determination No. CN5-04, for Cullinan Ranch, a marsh restoration project near the City of Vallejo, Solano County involving restoration of 1,549 acres of marshland and 26 acres of upland habitat that two kayak launches, an overlook, a viewing platform, a fishing pier, an ADA-accessible trail, and interpretive signs provided maximum feasible public access consistent with the project. The Commission also concurred with the US Army Corps of Engineers' Consistency Determination No. 7-05 for the

Hamilton restoration project in the City of Novato, Marin County involving the placement of 7.1 million cubic yards of dredged material to restore 630 acres of tidal and seasonal wetlands, tidal pannes, and transitional uplands that 2.66 miles of paved Bay Trail and five overlooks provided maximum feasible public access, consistent with the project.

b. **Minimize Impacts to Wildlife.** The Bay Plan Public Access policies state, "[p]ublic access to some natural areas should be provided to permit study and enjoyment of these areas. However, some wildlife are sensitive to human intrusion. For this reason, projects in such areas should be carefully evaluated in consultation with appropriate agencies to determine the appropriate location and type of access to be provided…" The policies further state, "[p]ublic access should be sited, designed and managed to prevent adverse effects on wildlife…" and "…[p]ublic access improvements provided as a condition of any approval should be consistent with the project and the physical environment, including protection of Bay natural resources, such as aquatic life, wildlife and plant communities, and provide for the public's safety and convenience. The improvements should be designed and built to encourage diverse Bay-related activities and movement to and along the shoreline…" Finally, the policies state, "[p]ublic access should be integrated early in the planning and design of Bay habitat restoration projects to maximize public access opportunities and to avoid significant adverse effects on wildlife."

   The Breuner marsh restoration project's proposed public access has been designed to avoid or minimize potential adverse effects on wildlife from public access through a variety of design considerations and management actions. The park entrance and parking area would be sited at the perimeter of the property away from the most sensitive habitats. Trails would be located and configured so the most heavily used segments are as far from tidally influenced areas as possible and would not bisect major sections of the marsh. The staging area and Bay Trail would be paved to incorporate water quality swales to reduce erosion and impacts to adjacent habitats. The spur trail would be stabilized with decomposed granite. Perimeter fencing and gates would restrict access to designated trails, picnicking, and viewing areas throughout the site. Habitat fencing would protect restored areas while also allowing for wildlife movement underneath the fencing. Some vegetation would be planted at strategic locations to screen the trail system from sensitive habitat where such habitat occurs near the trail. Interpretive signs would be located at the parking area and along the trail to educate the public about the need to protect sensitive wetland habitat.

c. **Barrier Free Access.** The Bay Plan polices state that public access improvements "should permit barrier free access for the physically handicapped to the maximum extent." All proposed public access improvements would be accessible, as defined by the Americans with Disabilities Act (ADA). The parking area would include two ADA van-accessible spaces. The picnic area would include four tables, two of which would be ADA-compliant. The Bay Trail and spur trail would be ADA-compliant. The existing volunteer footpath along the shoreline spit (opened to the public as part of this project, but not improved) would not be ADA-compliant because it would require additional Bay fill and would not be sustainable with anticipated sea level rise. The management plan anticipates that at some point in the future, the access route will be closed to the public for safety reasons due to sea level rise.

d. **Appearance, Design, and Scenic Views.** The Bay Plan policies on appearance, design and scenic views state that "… maximum efforts should be made to provide, enhance, or preserve views of the Bay and shoreline, especially from public areas, from the Bay itself, and from the opposite shore."

Public access features are designed to take advantage of views of the Bay. This is accomplished by elevating portions of the trail on fill along the east side of the project area and by locating observation points on existing mounded high points.

The Commission should determine whether the proposed project is consistent with the Bay Plan policies regarding public access and appearance, design and scenic views.

4. **Safety of Fills and Climate Change.** The McAteer-Petris act requires "[t]hat public safety, and welfare require that fill be constructed in accordance with sound safety standards." The project is designed to use nonstructural methods of shoreline protection, including tidal marsh and transitional vegetation, to protect the site from tidal erosion and to allow the site to naturally adapt to rising tides. The EBRPD states that the fill for the Rheem Creek bridge, pedestrian/bicycle boardwalks, and elevated berms would meet public safety standards.

   The Bay Plan policies on Safety of Fills state that "[a]dequate measures should be provided to prevent damage from sea level rise and storm activity that may occur on fill or near the shoreline over the expected life of a project…. New projects on fill or near the shoreline should…be built so the bottom floor level of structures will be above a 100-year flood elevation that takes future sea level rise into account for the expected life of the project." The Bay Plan policies on Climate Change state, "within areas that a risk assessment determines are vulnerable to future shoreline flooding that threatens public safety, all projects… should be designed to be resilient to mid-century sea level rise projection" and "[i]f it is likely the project will remain in place longer than mid-century, an adaptive management plan should be developed to address the long-term impacts that will arise…" The Climate Change policies go on to state that, "[u]ntil a regional sea level rise adaptation strategy can be completed, the Commission should evaluate each project proposed in vulnerable areas on a case-by-case basis to determine the project's public benefits, resilience to flooding, and capacity to adapt to climate change impacts." The policies also state that natural resource restoration projects "should be encouraged, if their regional benefits and their advancement of regional goals outweigh the risk from flooding."

   The East Bay Regional Park District evaluated a rise in sea level of 16 inches by 2050 and 55 inches by 2100 in the project design. The estimated 100-year tide elevation based on the Federal Emergency Management Agency's Flood Insurance Rate Map and 2014 sea levels is 9.2 feet (NAVD88). The current mean high water elevation at the project area is 5.3 (NAVD88). By 2050, assuming a 16-inch rise in sea level, the 100 year flood elevation would be 10.5 feet (NAVD88). This is a still water elevation; storm surge and wave runup could add an additional 2 to 2.5 feet (12.5 – 13.0 feet NAVD 88).

   All public access improvements would be constructed at a minimum elevation of 12 feet (NAVD88). With the exception of the existing unimproved footpath along the shoreline spit, all public access improvements are designed above projected high tide elevations accommodating sea level rise past 2050, although storm surge and wave runup could result in occasional flooding of some public access amenities by 2050. The effects of a storm surge on public access facilities would be partially buffered by the presence of wetlands. The bridge, boardwalks and asphalt pathways would be constructed using durable, non-erosive material in order to withstand occasional flooding. The existing unimproved footpath would likely be subject to flooding prior to 2050, at which time it would be closed to the public if changing shoreline conditions and/or sea level rise renders it unsafe for access. In the event that future sea level rise inundates all or portions of the proposed public access paths, picnic and viewing areas, the applicant has stated their intent to elevate or relocate such areas inland in consultation with the Commission.

During the latter half of the century, the project design for the marsh allows wetlands to gradually shift inland with low-lying areas reverting to mudflats and high marsh reverting to low marsh. The restoration design would establish gradual transition zones with 10:1 slopes between newly graded tidal wetlands and adjacent habitats. A portion of the transition zone would become future tidal marsh as sea level rises in line with predictions.

Table 2. Water Surface and Public Access Elevations

	Elevation (NAVD88)
Current Mean High Water (2014) *(Based on tidal datum at Point Pinole)*	5.3 feet
100-Year Tide (2014) *(Based on the Federal Emergency Management Agency's Flood Insurance Rate Map)*	9.2 feet
Projected High Tide Level 2050 (100-Year Tide + 16 inches sea level rise)*	10.5 feet
Projected High Tide Level 2100 (100-Year Tide + 55 inches sea level rise)*	13.8 feet
Minimum Design elevation of Public Access Improvements	12.0 feet

* **Storm surge and wave runup could add an additional 2 to 2.5 feet.**

As the table indicates, with 55 inches of sea level rise and a 100-year flood, many of the public access areas would be inundated. However, the most recent National Science projections predict that by 2100, sea level is projected to rise from 17-66 inches. Within that range, it is thought that most likely sea level rise will fall within the mid-to high-end of that range, or 42 to 66 inches (3.5 to 5.5 feet). The proposed public access improvements would be constructed just below the low end of that range. As the design life of many of the public access improvements is far less than 100 years, the applicant is intending to adjust the elevations of public access areas and improvements in response to actual sea level rise and the obsolescence of the authorized public access improvements.

The Commission should determine whether the fill proposed for the project, and the fill proposed for the proposed public access improvements, are consistent with the Commission's safety of fills and sea level rise policies.

5. **Natural Resources**

a. **Tidal Marshes and Tidal Flats.** The Bay Plan policies on tidal marshes and tidal flats state, "where and whenever possible, former tidal marshes and tidal flats that have been diked from the Bay should be restored to tidal action in order to replace lost historic wetlands or should be managed to provide important Bay habitat functions…" The policies also state, "[a]ny ecosystem restoration project should include clear and specific long-term and short-term biological and physical goals, and success criteria, and a monitoring program to assess the sustainability of the project. Design and evaluation of the project should include an analysis of: (a) how the system's adaptive capacity can be enhanced so that it is resilient to sea level rise and climate change; (b) the impact of the project on the Bay's sediment budget; (c) localized sediment erosion and accretion; (d) the role of tidal flows; (e) potential invasive species introduction, spread, and their control; (f) rates of colonization by vegetation; (g) the expected use of the site by fish, other aquatic organisms and wildlife; (h) an appropriate buffer, where feasible, between shoreline development and habitats to protect wildlife and provide space for marsh migration as sea level rises; and (i) site characterization. If success criteria are not met, appropriate adaptive measures should be taken." The policies further state that "[b]ased on scientific ecological analysis and consultation with the relevant federal and state resource agencies, a minor amount of fill may be authorized to enhance or restore fish, other aquatic organisms or wildlife habitat…"

The proposed project would restore previously filled historic and existing tidal marsh habitat, enhance marsh transition zones, and create seasonal and tidal wetlands. Overall the project would establish 6.12 acres of new tidal wetlands and restore and enhance 27.05 acres of tidal wetlands (Table 3).

Post-construction, the EBRPD would conduct a 10-year monitoring program of physical processes, vegetation establishment, and invasive vegetation on the site to determine if restoration performance criteria are met. If success criteria have not been met, the EBRPD would analyze the cause of failure and propose remedial actions. The applicant would consult with the Commission to determine whether the proposed adaptive mitigation measures are consistent with the Commission's laws and policies and whether additional Commission authorization would be required.

Table 3. Proposed Habitat Restoration-Related Activities

Habitat Activities	Acres
New Tidal Wetland – Created	6.12
New Seasonal Wetland – Created	4.19
Tidal Wetland – Restored / Enhanced	27.05
Seasonal Wetland – Restored / Enhanced	4.20
Tidal Wetland – Preserved	42.14
Seasonal Wetland – Preserved	14.78
TOTAL:	**98.48**

b. **Fish, Other Aquatic Organisms and Wildlife.** The Bay Plan policies on Fish, Other Aquatic Organisms and Wildlife state that "[T]o assure the benefits of fish, other aquatic organisms and wildlife for future generations… the Bay's tidal marshes, tidal flats, and subtidal habitat should be conserved, restored, and increased." These policies also state that "[t]he Commission should consult with the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service or the National Marine Fisheries Service whenever a proposed project may adversely affect an endangered or threatened plant, fish, other aquatic organism or wildlife species…and give appropriate consideration of (their) recommendations in order to avoid possible adverse impacts of a proposed project on fish, other aquatic organisms and wildlife habitat."

The federally-endangered California clapper rail and salt marsh harvest mouse and the state-threatened California black rail may be affected by the project. The project is not likely to affect the Green sturgeon, Central California Coast steelhead, and Central Valley Spring-run Chinook salmon because no direct impacts to fish-bearing waters are anticipated. While the project would temporarily affect some tidal marsh habitats, those closest to the Bay margin would not be impacted. Impacted tidal marsh habitats would be largely limited to pickleweed-dominated habitats that are farther inland and infrequently subject to tidal action. Several new tidal sloughs would also be created as part of the project, but they would not be connected to the Bay until they have been completely graded. These new tidal habitats would create new nursery habitat for all fish species.

On September 5, 2013, NOAA National Marine Fisheries Service (NMFS) issued a consultation letter, pursuant to Section 7 of the Clean Water Act, for the project. The letter made a determination that the proposed project "is not likely to adversely affect listed fish and designated critical habitat under the jurisdiction of NMFS" and overall is likely to "result in long-term beneficial effects to designated critical habitat by expanding tidal marsh habitat along the southeastern shoreline of San Pablo Bay." On November 1, 2013, the U.S. Fish and Wildlife Service (USFWS) issued a Biological Opinion that states the "level of anticipated take is not likely to result in jeopardy to the salt marsh harvest mouse and the California clapper rail." On March 6, 2013, the California Department of Fish and Wildlife (CDFW) issued a Streambed Alteration Agreement for the project. Both the Biological Opinion and Streambed Alteration Agreement recommend specific conservation measures to be employed during construction to avoid impacts to special-status species and their habitats.

c. **Water Quality.** The Bay Plan policies on Water Quality state that "Bay water pollution should be prevented to the greatest extent feasible. The Bay's tidal marshes, tidal flats, and water surface area and volume should be conserved and, whenever possible, restored and increased to protect and improve water quality." The policies also state that "[w]ater quality in all parts of the Bay should be maintained at a level that will support and promote the beneficial uses of the Bay as identified in the San Francisco Bay Regional Water Quality Control Board's (RWQCB) Basin Plan and should be protected from all harmful or potentially harmful pollutants." The policies, recommendations, decisions, advice, and authority of the State Water Resources Control Board and the Regional Board should be the basis for carrying out the Commission's water quality responsibilities." Finally, the Bay Plan policies on Water Quality state that "new projects should be sited, designed, constructed, and maintained to prevent or, if prevention is infeasible, to minimize the discharge of pollutants into the Bay by: (a) controlling pollutant sources at the project site; (b) using construction materials that contain nonpolluting materials; and (c) applying appropriate, accepted, and effective best management practices; especially where water dispersion is poor and near shellfish beds and other significant biotic resources."

The project would provide important functions and values including improving water quality of run-off entering local waters through the natural water-filtering capability of native wetland vegetation. As is typical for construction projects, the applicant may use small quantities of hazardous materials such as fuels, oils, paints and varnishes, concrete and asphalt in the construction of the proposed facilities. The applicant has stated that chemicals would be handled in compliance with OSHA health and safety regulations and in accordance with the requirements of a Stormwater Pollution Prevention Plan (SWPPP). During construction a number of measures would be implemented to avoid violating water quality standards or waste discharge requirements related to sediment-laden runoff from disturbed work areas entering the Bay, increasing turbidity, or preventing fuel or other construction chemicals from accidentally spilling or leaching into the water. In addition, newly constructed tidal sloughs would not be connected to the Bay until they have been completely graded and stabilized to minimize impacts to water quality from the release of newly excavated and graded soils.

On February 19, 2014, the San Francisco Bay Regional Water Quality Control Board issued a conditional Water Quality Certification for the project which finds that the project does not violate state water quality standards.

The Commission should determine whether the project is consistent with its laws and policies regarding natural resources and water quality.

6. **Dredging.** The Bay Plan policies on Dredging state that "[d]redging and dredged material disposal should be conducted in an environmentally and economically sound manner." They also state that the Commission should authorize dredging when it can find that (a) it serves a water-oriented use or other important public purpose; (b) the materials to be dredged meet the water quality requirements of the San Francisco Bay Regional Water Quality Control Board; (c) important fisheries and Bay natural resources would be protected through seasonal restrictions; (d) the project will result in the minimum dredging volume necessary; and (e) that dredged materials, if feasible, would be reused or disposed outside the Bay and certain waterways. Except when reused in an approved fill project, dredged material should not be disposed in the Bay…"

   As part of the proposed project, sediment would be dredged from the Commission's Bay jurisdiction to extend newly created tidal channels into the Bay and to lower marsh elevations in areas of historic fill. Most of the excavated material would be deposited and used to create transitional and upland habitat in the southern portion of the site. Some of this material would be beneficially reused in the Commission's Bay jurisdiction to raise portions of the site that would support public access features and to create transitional habitat. The proposed dredging is a water-oriented use, namely the enhancement of tidal wetlands. The permittee completed soil sampling investigations of the property, focused on disturbed areas and areas where fill had previously been placed. A narrow upland area was found to contain arsenic and other metals. The contaminated soils will be removed and appropriately disposed of in 2014 under BCDC Permit No. M2013.009.00

   On February 19, 2014, the San Francisco Bay Regional Water Quality Control Board issued a conditional Water Quality Certification for the project which does not require the permittee to perform further testing of the sediment proposed for dredging and finds the proposed dredging activities are consistent with the provisions of the Clean Water Act.

   The Commission should determine whether the project is consistent with its laws and policies regarding dredging.

B. **Review Boards**

1. **Engineering Criteria Review Board.** The Commission's Engineering Criteria Review Board will not review the proposed project.

2. **Design Review Board.** The Commission's Design Review Board (DRB) reviewed the proposed project on March 27, 2013. The DRB commented that the public access was in keeping with the natural setting of the site and appeared to be consistent with the anticipated use of the site.

C. **Environmental Review.** On July 2, 2012, EBRPD, acting as lead agency under the California Environmental Quality Act, certified the Final Environmental Impact Report for the project. A summary of the Final EIR is attached as Exhibit K.

D. **Relevant Portions of the McAteer-Petris Act**

1. Section 66602
2. Section 66605
3. Section 66632

E. **Relevant Portions of the San Francisco Bay Plan**

1. *San Francisco Bay Plan* Policies on Fish, Other Aquatic Organisms, and Wildlife
2. *San Francisco Bay Plan* Policies on Water Quality
3. *San Francisco Bay Plan* Policies on Water Surface Area and Volume

4. *San Francisco Bay Plan* Policies on Tidal Marshes and Tidal Flats
5. *San Francisco Bay Plan* Policies on Subtidal Areas
6. *San Francisco Bay Plan* Policies on Safety of Fills
7. *San Francisco Bay Plan* Policies on Climate Change
8. *San Francisco Bay Plan* Policies on Public Access
9. *San Francisco Bay Plan* Policies on Appearance, Design and Scenic Views

Exhibits

A. **Area Context**
B. **Site Context**
C. **Illustrative Site Plan**
D. **Fill Plan**
E. **Sections and Area Plan Key**
F. **Goodrick Avenue Parking Area**
G. **Picnic Area and Overlooks**
H. **Sections A, B and C**
I. **Sections D, E and F**
J. **Flooding and Adaptive Management**
K. **CEQA Summary**