

CHAPTER 9

BIOLOGICAL RESOURCES

The biological resource evaluation of the proposed Bulk Materials Processing Center (BMPC) use permit amendment changes and related actions (Project) is presented in this chapter. Broad consideration is given for the proposed Project, though emphasis is given to the Public Access Trail (Trail) component of the Project because of its proximity to sensitive habitat and species.

A. SETTING

This section provides a discussion of the setting of the West Contra Costa Sanitary Landfill (WCCSL) relative to the vegetation and wildlife habitat characteristics of the WCCSL and immediately surrounding open space areas.

1. Biological Resources

Biological resources were identified through the review and compilation of existing information and conduct of field reconnaissance surveys of the site. The review provided information on general resources in the area and the distribution and habitat requirements of special-status species which have been recorded from or are suspected to occur in the vicinity, including: records on occurrences of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDDB) of the Department of Fish and Game (DFG); the California Native Plant Society's (CNPS) *Inventory of Rare and Endangered Plants of California*;¹⁰⁵ DFG's list of special animals and plants;¹⁰³ the *California Statewide Wildlife Habitat Relationships System*,¹⁰¹ and a study on bird activity at the site conducted for West County Landfill, Inc.¹¹⁷ Figure 9-1 provides an overview of the existing habitat conditions within and around the WCCSL.

Field reconnaissance surveys of the site were conducted for this Environmental Impact Report (EIR) on October 25, 2002, and February 28, 2003. The site was inspected by automobile, with periodic ground inspections. The reconnaissance on February 28, 2003, was conducted with the local wildlife biologist of the DFG, Mr. John Krause, to determine any specific concerns and need for any detailed surveys for special-status species. The reconnaissance surveys served to confirm vegetation and wildlife habitat, and potential for occurrence of special-status species and wetlands. No detailed surveys were conducted, or are believed necessary based on the conditions of the site and methods proposed to minimize disturbance to sensitive resources in the vicinity.¹⁰⁶

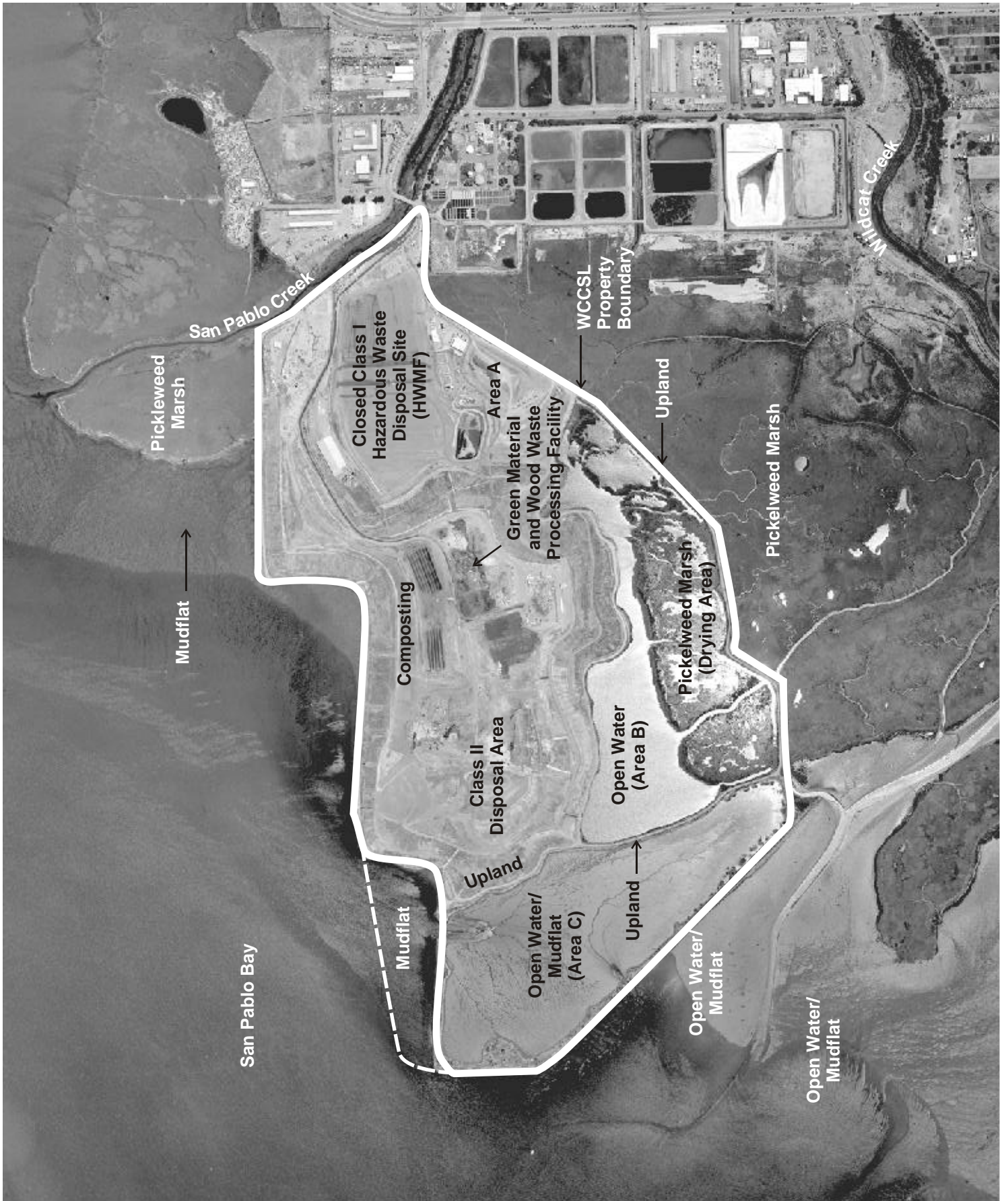


Figure 9-1 Existing Habitat Conditions

Source: LSA Associates, reference 117.

a. Vegetation and Wildlife Habitat. The site is located along the shoreline of San Pablo Bay, bordered by the open channel and tidal marshland of San Pablo Creek to the north and the more extensive marshlands found at the mouth of Wildcat Creek to the south. Although the WCCSL site has been extensively disturbed by past and on-going landfill operations, it is surrounded by sensitive marshland, mudflat, and open water habitat that support a wide variety of plant and animal species, including a number of special-status species with legal protective status under the Federal and State Endangered Species Acts (ESAs) (Figure 9-2).

An estimated 200 acres of the 340-acre WCCSL site consists of disturbed uplands formed as part of the past and ongoing Class I and II landfill activities, which generally now support a cover of non-native grassland and ruderal species. The remainder of the WCCSL (Areas B and C) consists of open water, exposed mudflat, and disturbed northern coastal saltmarsh, with limited brackish and willow scrub along the upper banks of San Pablo Creek. Areas of well-preserved coastal salt marsh occur to the north and south of the site along the shoreline of San Pablo Bay, providing important feeding, resting and nesting habitat for numerous birds and small mammals.

Open Water and Mudflats. Open water and mudflat comprise approximately 140 acres of the WCCSL, consisting of WCCSL Area C and approximately 50 percent (40 acres) of the Drying Area in WCCSL Area B (runoff retention pond). Area C and the open water of San Pablo Bay are under tidal influence, exposing shallow mudflats along the shoreline at low tides. The Area B Drying Area is no longer under tidal influence, but the pond provides foraging opportunities as surface water slowly evaporates through summer. The remainder of the Area B Drying Area supports approximately 40 acres of common pickleweed (*Salicornia virginica*), which provides protective cover for wildlife.

The open water and mudflats provide important resting and feeding habitat for gulls, shorebirds, and waterfowl. Migratory waterfowl and shorebirds comprise the majority of the bird species using the site,¹¹⁷ due to the abundance of open water and exposed mudflat habitat available. Species observed include canvasback, scaup, bufflehead, ruddy duck, American avocet, willet, and sandpipers. Large flocks of primarily California and western gulls congregate over the landfill and use the surrounding waters for roosting and feeding. A resource of particular importance to birds is the isolated levee segment along the northwestern edge of Area C. Because this levee has been breached in two locations, human access to the isolated portion requires a boat, which contributes to its sensitivity and importance as resting, roosting, and nesting substrate for numerous birds.

Non-Native Grassland/Ruderal. The uplands on the WCCSL are either devoid of vegetation from on-going landfill operations and roadways, or are dominated by non-native grasses and forbs. Common plant species in the grassland include: Italian ryegrass (*Lolium multiflorum*), ripgut grass (*Bromus diandrus*), and wild oaks (*Avena* spp.).

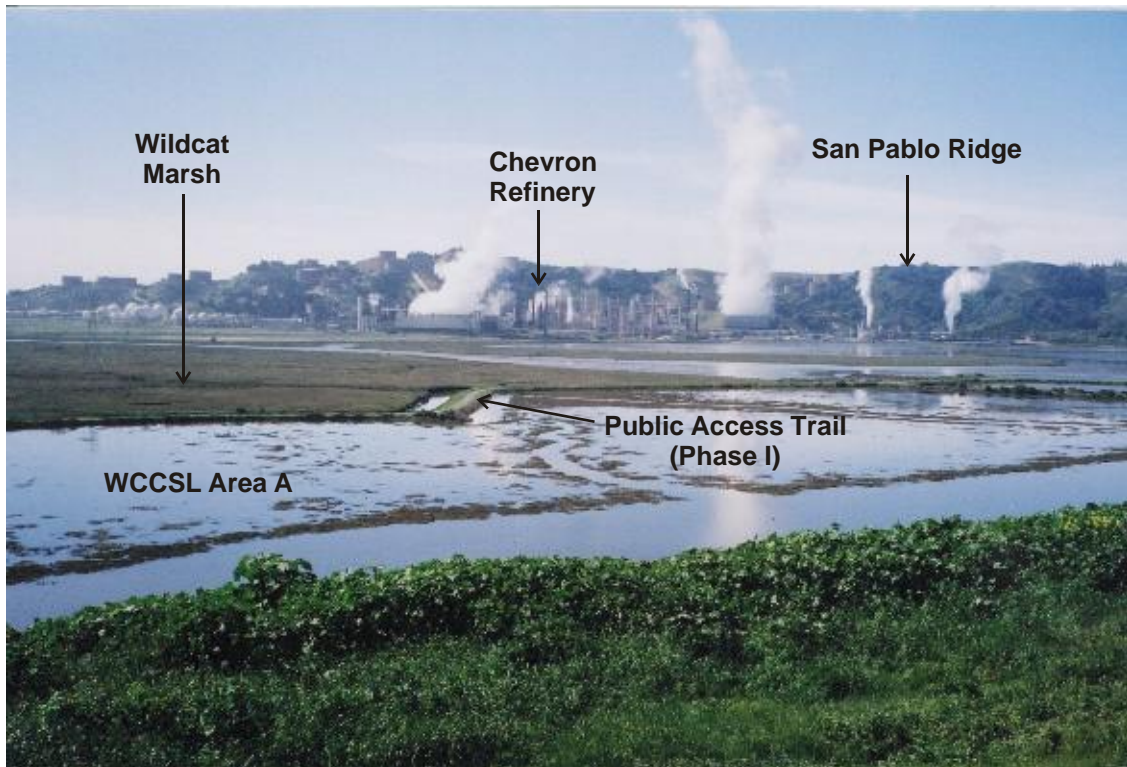


Figure 9-2 Open Space to the South. This panoramic view from the landfill central plateau shows a portion of Wildcat Marsh, a portion of WCCSL Area A, and the Phase 1 alignment of the proposed Public Access Trail.

Several weedy species are also present, including sweet fennel (*Foeniculum vulgare*), wild radish (*Raphanus sativus*), mustard (*Brassica* sp.), and poison hemlock (*Conium maculatum*). Clumps of native coyote brush scrub (*Baccharis pilularis*) are scattered through the grasslands, road margins, and upper edge of the marshlands and levees.

Species associated with the uplands on the WCCSL tend to be common in grassland and disturbed habitat, including the gulls attracted to the landfill for feeding, European starlings, red-winged blackbirds, sparrows, Bottae pocket gopher, and California vole. Several species of raptors forage on the gopher and vole population in the reclaimed grasslands, including red-tailed hawk, northern harrier, and American kestrel.

Northern Coastal Salt Marsh. Marshland habitat on the WCCSL is limited to the narrow band of marshland species along the upper levee banks and the stand of pickleweed in the Drying Area of Area B. Native stands of marshland habitat extend across the tidelands to the north and south of the site, dominated by pickleweed at mid-elevations, California cord grass (*Spartina foliosa*) at the lower elevations on the bayward edge of the mudflats, and a number of transitional species such as salt grass (*Distichlis spicata*), salt bush (*Atriplex patula* var. *Hastata*), and gum plant (*Grindelia humilis*) at the higher elevations. These species also occur within their respective elevational zones on the outboard edge of the levees on the WCCSL.

The large stands of northern coastal salt marsh to the north (San Pablo Creek Marsh) and south (Wildcat Marsh) of the site have been mapped as a sensitive natural community by the CNDDDB (Figure 4-1). Sensitive natural communities are recognized as important natural habitat by the DFG because of the cumulative loss of these habitat types and their vulnerability to further loss and degradation. The stand of pickleweed in the Drying Area on the site is not included in the mapped occurrence of northern coastal salt marsh, most likely due to the artificial conditions in the diked pond and use of the area for runoff control.

Shorebirds, waterfowl, and other wildlife use the marsh and mudflats for foraging and resting. Higher elevations of the marsh typically provide important refuge for small mammals and birds during storms and high tides. However, the extent of existing adjacent development, the narrow band of cover along the levee slopes, and the intensity of human activity limits the opportunities for upland retreat habitat on the WCCSL.

b. Special-Status Species. A number of special-status animal species have been reported from the San Pablo Creek Marsh and Wildcat Marsh north and south of the WCCSL, and from the remaining grasslands along the lower segment of San Pablo Creek. These include: the State and Federally-endangered salt marsh harvest mouse (*Reithrodontomys raviventris*), the State and Federally-endangered California clapper rail (*Rallus longirostris obsoletus*), the State-threatened California black rail (*Laterallus jamaicensis coturniculus*), and many other species considered to be Federal Special Concern species and California Special Concern species.

Table 9-1 provides a list of special-status animal species known or suspected to occur in the WCCSL vicinity, together with their status and preferred habitat types.

Due to the extent of past development, essential habitat for special-status animal species on the WCCSL is considered unlikely. While many of these species may occasionally disperse or forage on portions of the site, essential breeding habitat is absent and these species are more likely to be associated with areas of well-developed marshland on the adjacent lands to the north and south, the open water habitat of the San Pablo Bay, and the aquatic habitat of the nearby creek channels.

Several special-status plant species are known from the uplands and coastal salt marsh habitats along the shoreline of San Francisco and San Pablo Bays, but none have been reported from the vicinity of the WCCSL. A single occurrence of fragrant fritillary (*Fritillaria liliaceae*) was reported from the Point Richmond area in 1900, but this occurrence is believed to have been extirpated by development, and suitable habitat is absent on the site. Other special-status plant species known from marshland habitat along the shoreline of San Pablo Bay include: the State-rare soft-haired bird's beak (*Cordylanthus mollis* ssp. *mollis*), mason's lilaeopsis (*Lilaeopsis masonii*), and San Francisco gumplant (*Grindelia hirsutula* var. *maritima*). All three of these species are maintained on List 1B of the CNPS *Inventory*,¹⁰⁵ and are considered rare under Section 13580 of the California Environmental Quality Act (CEQA) Guidelines. None have been reported from the WCCSL, and suitable habitat is absent on portions of the site proposed for improvements.

c. Wetlands. Jurisdictional wetlands and unvegetated waters exist off site that extend over the northern coastal salt marsh, open water habitat, and San Pablo Creek channel. The levees on the site have been designed and maintained to exceed flood levels and the upper portions are located outside of Corps jurisdiction. The upland portions of the site do not support wetlands, and the man-made basins designed for runoff control and leachate treatment are exempt from Corps jurisdiction. The sloughs, creek channel, and bay shoreline which border the site are not subject to jurisdiction by DFG pursuant to Section 1603 of the Fish and Game Code because all of these areas are under tidal influence.

B. REGULATORY AND PLANNING FRAMEWORK

In addition to the environmental protection provided by CEQA, other state and federal regulations have been enacted to provide for the protection and management of sensitive biological resources. Implementation of policies contained in the local general plans and specific plans also serve to regulate development and provide for conservation of important resources at the local level.

Table 9-1. List of Special Status Animal Species Known or Suspected to Occur in the WCCSL Vicinity

Species	Status Federal/State ^a	Preferred habitat type
<u>Reptiles/fish:</u>		
Northwestern pond turtle	FSC/CSC, CP	Freshwater ponds, rivers, and streams
Steelhead	FT/-	Open water of Bay and Delta, tributary rivers and streams
Winter- run chinook salmon	FE/SE	Open water of Bay and Delta, tributary rivers and streams
<u>Birds:</u>		
White-tailed kite	-/CP	Grassland
Burrowing owl	FSC/CSC	Grassland
California black rail	FSC/ST, CP	Salt marsh
California clapper rail	FE/SE	Salt marsh
Cooper's hawk	-/CSC	Riparian and grassland
Double-crested cormorant	-/CSC	Bays, rivers and lakes (communal roosts protected)
Loggerhead shrike	-/CSC	Grassland with shrubs
Northern harrier	-/CSC	Salt marsh and grassland
Peregrine falcon	Delisted/SE,CP	Open water and grassland
Prairie falcon	-/CSC	Grassland
Salt marsh common yellowthroat	FSC/-	Salt and brackish water marsh
Sharp-shinned hawk	-/CSC	Riparian and grassland
Short-eared owl	-/CSC	Grassland and open marshland
Suisun song sparrow	FSC/CSC	Salt and brackish water marsh
Tricolored blackbird	FSC/CSC	Freshwater marsh and fields
<u>Mammals:</u>		
Salt marsh harvest mouse	FE/SE	Salt marsh and adjacent grassland
San Pablo vole	-/CSC	Salt marsh and adjacent grassland
Suisun shrew	FSC/CSC	Salt marsh
Salt marsh wandering shrew	FSC/-	Salt marsh

a. Federal Status:

FE = Listed as "endangered" under the FESA.

FT = Listed as "threatened" under the FESA.

C = A candidate species under review for federal listing. Includes species for which the USFWS currently has sufficient biological information to support listing as endangered or threatened. No candidate species are known to occur on the WCCSL site.

FSC = Federal Special Concern species.

State Status:

SE = Listed as "endangered" under CESA.

ST = Listed as "threatened" under CESA.

CP = California fully protected or protected species; individual may not be possessed or taken at any time.

CSC = California Special Concern species by the DFG; taxa have no formal legal protection but nest sites and communal roosts are generally recognized as significant biotic features.

Source: Environmental Collaborative, April 2003.

State and federal agencies have a lead role in the protection of biological resources under their permit authority set forth in various statutes and regulations. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the Federal ESA and the Migratory Bird Treaty Act, while the U.S. Army Corps of Engineers (Corps) has primary responsibility for protecting wetlands under Section 404 of the Clean Water Act. At the State level, the DFG is responsible for administration of the California ESA, and for protection of streams, waterbodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601-1606 of the California Fish and Game Code. Certification from the California Regional Water Quality Control Board (RWQCB) is also required when a proposed activity may result in discharge into navigable waters, pursuant to Section 401 of the Clean Water Act and Environmental Protection Agency (EPA) 404(b)(1) Guidelines.

1. Special-Status Species and Sensitive Natural Communities

Special-status species are plants and animals that are legally protected under the State and/or Federal ESAs or other regulations, as well as other species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. Species with legal protection under the ESAs often represent major constraints to development, particularly when they are wide ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species. "Take" as defined by the Federal ESA means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture or collect" a threatened or endangered species.

The primary information source on the distribution of special-status species in California is the CNDDDB inventory, which is maintained by the Natural Heritage Division of the DFG. Occurrence data are obtained from a variety of scientific, academic, and professional organizations, private consulting firms, and knowledgeable individuals, and entered into the inventory as expeditiously as possible. The presence of a population of species of concern in a particular region is an indication that an additional population may occur at another location within the region, if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, only that no data have been entered into the CNDDDB inventory. Where suitable habitat is present, detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location.

In addition to species-oriented management, protecting habitat on an ecosystem-level is increasingly recognized as vital to the protection of natural diversity in the State. The DFG maintains occurrence information in the CNDDDB inventory of those natural communities which are considered particularly rare or threatened. Although these natural communities have no legal protective status under the State or Federal ESAs, they are provided some level of protection under the CEQA Guidelines. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on the relative abundance, quality and degree of

past disturbance, and the anticipated impacts to a known occurrence of a specific community type with a high inventory priority.

2. Wetlands

Although definitions vary to some degree, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or ground water, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and flood waters, and water recharge, filtration, and purification functions. Technical standards for delineating wetlands have been developed by the Corps and the USFWS, which generally define wetlands through consideration of three criteria: hydrology, soils, and vegetation.

The DFG and Corps have jurisdiction over modifications to stream channels, river banks, lakes, and other wetland features. Jurisdiction of the Corps is established through the provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into "waters" of the United States without a permit, including wetlands and unvegetated "other waters". All three of the identified technical criteria must be met for an area to be identified as a wetland under Corps jurisdiction, unless the area has been modified by human activity. The USFWS classification system is used by DFG to determine wetlands. This classification system is generally more encompassing than that used by the Corps, requiring that only one of the criteria be met for an area to be considered wetlands, rather than all three as required by the Corps. Jurisdictional authority of DFG over wetland areas is established under Section 1601-1606 of the Fish and Game Code, which pertains to activities that would disrupt the natural flow or alter the channel, bed, or bank of any lake, river, or stream. The Fish and Game Code stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the Department, incorporating necessary mitigation, and obtaining a Streambed Alteration agreement.

3. Local Plans and Policies

Policies in the Conservation Element of the Contra Costa County (County) General Plan, the City of Richmond (City) General Plan, and the North Richmond Shoreline Specific Plan are all relevant to the protection and management of sensitive biological and wetland resources on the site.^{5,7,12} Relevant policies are summarized in the Hazardous Waste Management Facility (HWMF) EIR,³³ (State Clearinghouse No. 95063005) which is incorporated by reference pursuant to Section 15150 of the CEQA Guidelines.

In summary, the General Plan goals, policies, and implementation measures relate to preservation and restoration of significant habitats, and protection of rare, threatened and endangered plant and animal species. Policies and implementation measures address new

development and resource protection; the use of setbacks from the edge of any wetland area, creek, or stream for any new structure; the protection of marshes, wetlands, and riparian corridors from the effects of potential industrial spills; and County/City review of development applications.

C. SIGNIFICANCE CRITERIA

Appendix G of the CEQA Guidelines identifies potentially significant environmental effects on biological resources to include:

- A substantial adverse effect, either directly or through habitat modifications, on any special-status species;
- A substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the DFG or USFWS.
- A substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act through direct removal, filling, hydrological interruption, or other means;
- Substantial interference with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a creek preservation policy or ordinance.

D. IMPACTS AND MITIGATION MEASURES

1. Habitats and Special-Status Species

IMPACT 9-1. The proposed Project could have a substantial adverse effect on habitat for special-status species. This impact is considered potentially significant.

Proposed BMPC operations and the Class II landfill height increase are not expected to have any significant adverse impacts on essential habitat for special-status species. No special-status plant species are suspected to occur on portions of the WCCSL site proposed for improvements, including the levee system where the Phase 1, 2, and 3 segments of the Trail are proposed. The activities associated with the continuance of landfill activities would be contained on previously disturbed upland portions of the

WCCSL that do not provide important habitat for special-status species. Raptors and other bird species that may forage on the uplands of the WCCSL are acclimated to human activity associated with the ongoing landfill and BMPC operations. No significant impacts on these species are anticipated.

Portions of the Trail would be located adjacent to sensitive marshlands and riparian areas known to support special-status species. The improvements associated with Phases 1, 2 and 3 of the Trail would follow the existing maintenance road on the levee along the south and west edge of Area B, the maintenance road along the north side of the Class II landfill, and the south side of San Pablo Creek. No direct impacts on special-status species are anticipated as a result of Trail improvement construction for Phases 1, 2, and 3. However, the indirect effects of increased human activity, and particularly any access by dogs accompanying Trail users, could result in a significant impact to sensitive species that utilize the marshland and open water habitat. Measures are required to control possible disturbance and take of a listed species.

An existing slough south of, and adjacent to, the Phase 1 alignment serves as a barrier to human access to Wildcat Marsh (Figure 9-3). The San Pablo Creek channel prevents human access to the sensitive marshlands north of the creek. A segment of the Phase 3 Trail on the north side of the WCCSL site borders sensitive marshlands in the San Pablo Creek Marsh for a distance of approximately 600 feet. This marsh is known to support salt marsh harvest mouse, salt-marsh wandering shrew, San Pablo vole, California clapper rail, and other sensitive wildlife species. Unless adequate measures are taken to secure the area, informal access may lead to increased disturbance, trampling of marsh vegetation, and possibly loss of listed species.

Several control measures have been proposed by the Applicant, as part of the Project to address potential indirect impacts on sensitive habitat and wildlife associated with the Trail. These include a prohibition on any dogs along the trail, an interpretive program explaining the sensitivity of the surrounding marshland habitat, and implementation of *Bayside Trail (Barrier) Planting Recommendations* intended to control the spread of invasive exotics and establish a protective buffer of native vegetation between the proposed trail and adjacent marsh and open water habitats (Appendix 9-A). The barrier plantings would be installed along the upper elevations of the levee along the south side of Areas B and C to discourage any access into the adjacent marsh and mudflats at low tide. Species used in the plantings would include thorny shrubs and vines such as wild rose and blackberry, and possibly poison oak, to discourage human access and also provide protective cover for wildlife. No specific measures have been proposed as part of the Project to prevent access to the San Pablo Creek Marsh area north of the WCCSL along the south side of San Pablo Creek. However, adequate controls are provided for by Mitigation Measure 9-16 pertaining to this segment of the Trail system; therefore, no significant adverse impacts on special-status species are anticipated for the Phases 1, 2 and 3 portions of the alignment.

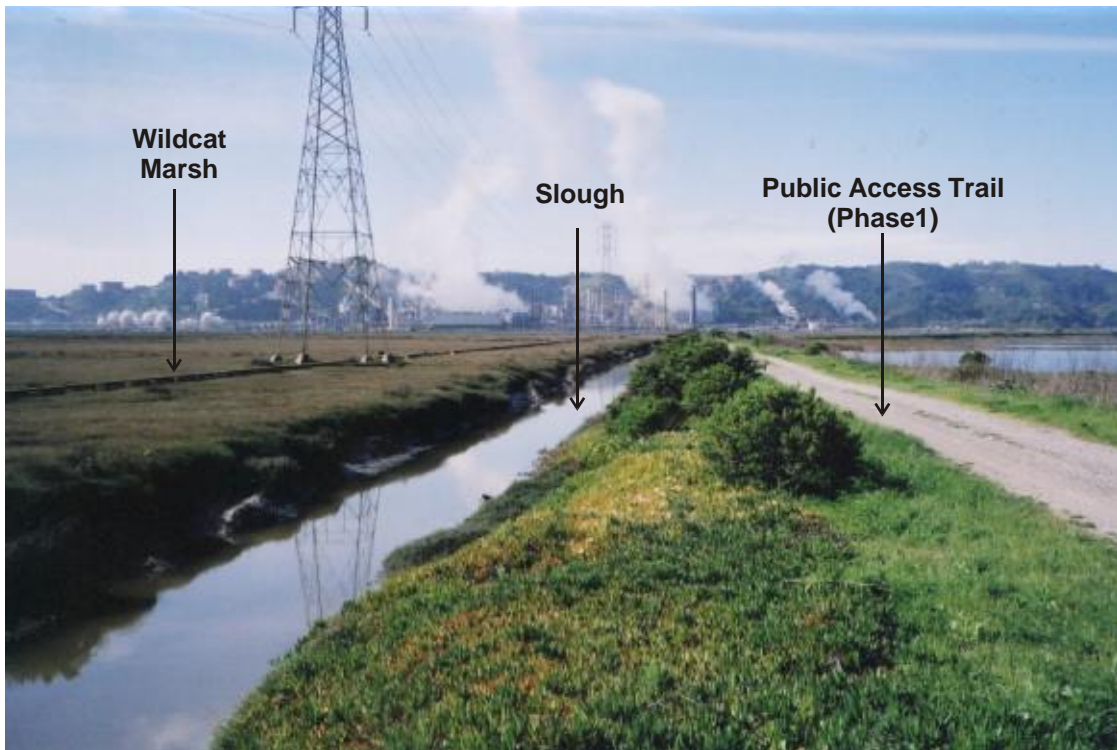


Figure 9-3 Slough Protects Wildcat Marsh. This slough, bordering the Phase I Public Access Trail alignment, would be an effective barrier to unwanted access by humans to the Wildcat Marsh.

The Phase 4 Trail alignment would follow the outer levee around the southwest and north sides of Area C, and would require two new bridge crossings over existing breaches in the levee system. While details on this segment of the trail plans have not yet been developed, it would most likely require some modifications to the shoreline to improve the levee and accommodate the new bridge structures. It would also allow human access to the portion of the levee now separated from the mainland that is used as protected resting, roosting, and nesting habitat by a large number of birds. Human access along this segment of the Trail would have a significant impact on the habitat value of the isolated levee to wildlife, as discussed under Impact 9-4.

Control Measures Incorporated by Applicant:

- a) Dogs would not be permitted on the Trail.
- b) An interpretive program would be implemented explaining the sensitivity of the surrounding marshland habitat.
- c) The Trail (Barrier) Planting Recommendations developed by Environmental Stewardship & Planning would be implemented to control the spread of invasive exotics and to establish a protective buffer of native vegetation between the proposed Trail alignment and adjacent marsh and open water habitats.¹⁰⁹

EIR Recommendations:

MITIGATION MEASURE 9-1

- a) The interpretive program proposed by the Applicant would be developed in consultation with the Bay Conservation Development Commission (BCDC) and DFG to educate Trail users of the sensitivity of the marshland and open water habitat to wildlife, the prohibition on take and harassment of special-status species, and the requirement of staying on the Public Access Trail to minimize disturbance to sensitive wildlife.
- b) Adequate controls would be developed as part of the interpretive program to prevent human access into the San Pablo Creek Marsh habitat along 600 feet of the Phase 3 segment of the Trail north of the WCCSL. This may require use of exclusionary fencing, and shall at minimum include installation of permanent signage at 100 foot intervals which states:

<p>No Trail Access Sensitive Wildlife Habitat Visitor Access Prohibited</p>

- c) As currently proposed, dogs would be prohibited from using the Trail. Permanent signage would be installed as part of the interpretive program at the trailhead and as separate permanent signs within 100 yards of the beginning of the northern and southern trail segments explaining the sensitivity of the area and clearly state “No Dogs Allowed.” Signage would refer users to other local shoreline parks where dogs are permitted (e.g. Berkeley Shoreline Park, Point Isabel). Experience gained from operation of the Trail would be used by the appropriate entities to determine whether additional enforcement measures are necessary and possible funding mechanisms.
- d) As directed by appropriate agencies, the Applicant would cooperate with efforts on predator control of feral cats, dogs, and red fox.
- e) All construction activities on the levees, including installation of any Trail improvements and the barrier landscape plantings, would be prohibited during the nesting season for salt marsh dependent bird species, from February 1 through July 31.
- f) Trail improvements would be restricted to uplands, the tops of existing levees, and the existing roadway along the south side of San Pablo Creek to minimize further disturbance in the adjacent marsh and riparian habitats.

Implementation of these measures would reduce potential impacts to habitat for special-status species to less-than-significant levels.

IMPACT 9-2. The proposed Project could adversely affect sensitive natural communities. This impact is less than significant.

The proposed Project is not expected to directly affect any riparian habitat, northern coastal salt marsh or other natural communities considered sensitive by the DFG, County, or City. San Pablo Creek Marsh and Wildcat Marsh to the north and south of the WCCSL are recognized as sensitive natural communities by the CNDDDB, but no disturbance or modification are proposed to these areas. Trail improvements and barrier plantings would be restricted to the upper elevations of the levee avoiding any salt marsh habitat, and along the existing entrance to the road along the northern edge of the site outside the brackish marsh and riparian scrub along San Pablo Creek.

Control Measures Incorporated by Applicant: None.

EIR Recommendation:

MITIGATION MEASURE 9-2. None required. Mitigation Measure 9-1 a through h would ensure that disturbance to the local sensitive natural communities (salt marsh and riparian habitat) is avoided.

IMPACT 9-3. The proposed Project could adversely affect wetlands. This impact is considered to be less than significant.

No jurisdictional wetlands would be affected by the proposed Project. Improvements associated with the BMPC and the Class II landfill height increase would be restricted to the existing landfill area. Improvements for the Phase 1, 2, and 3 segments of the Trail would be sited along the top of the existing levee system, service road along the north side of the landfill, and existing access road along the south side of San Pablo Creek, avoiding direct disturbance to jurisdictional habitat. Implementation of a required Stormwater Pollution Prevention Plan for the proposed Project, as discussed in Chapter 6, Section A.7, would serve to adequately mitigate any potential indirect impacts on wetlands as a result of proposed Project activities.

If Phase 4 of the Trail were to be implemented in the future, improvements would include modifications to the shoreline to accommodate two new bridge crossings and possibly improvements to the existing levee segment which has not been maintained. Fill may be required to increase the top of the levee and protect this segment of the Trail from erosion. Implementation of the Phase 4 alignment would have a significant impact on wildlife use of this area, as discussed under Impact 9-4. Any modifications to the shoreline would require authorization from the Corps and BCDC.

An interpretive program is currently being developed in conjunction with the Trail as part of the Project that would provide access to the shoreline at the southern end of Area C. A staging area is proposed at this location for use by kayakers as part of an educational program for school children administered by the Save the Bay Association. School children would be escorted by guides on kayaks through the surrounding tidal sloughs and open water of the San Pablo Bay. No dock or pier is currently proposed as part of the staging area. If these types of improvements are proposed in the future they would require modifications to the jurisdictional waters along the shoreline of the San Pablo Bay. The proposed staging area currently has little or no wetland vegetation and the levee slope is covered with concrete riprap. Any modifications to the shoreline and open water of San Pablo Bay must be coordinated with the Corps and BCDC.

Control Measures Incorporated by Applicant. None.

EIR Recommendations:

MITIGATION MEASURE 9-3

- a) Any modifications to the shoreline of San Pablo Bay required as part of the construction of the staging area for the interpretive program at the southern end of Area C, would be coordinated with the Corps and BCDC and appropriate authorizations obtained prior to any modifications to the shoreline and open water of San Pablo Bay.

Implementation of this measure would reduce potential impacts to wetlands to less-than-significant levels.

IMPACT 9-4. The proposed Project could have significant impacts on wildlife habitat and wildlife movement opportunities. This impact is considered potentially significant.

Proposed BMPC operations and the Class II landfill height increase are not expected to have any significant adverse impacts on wildlife use of the WCCSL. Improvements associated with the BMPC and landfill operations would be restricted to the disturbed uplands on the site. Wildlife associated with this portion of the site are relatively common and are already acclimated to intensive human and vehicle activity in this area, and no significant adverse impacts are anticipated.

Most of the proposed Trail improvements would be limited to the existing levees, maintenance roads and access road onto the site. Although some segments of the Trail system would border sensitive marshland habitat, the interpretive program, prohibition on dog use, and barrier plantings described under Impact 9-1 would serve to minimize any disturbance to special-status animal species and other wildlife associated with the adjacent marshland and the riparian corridor of San Pablo Creek. With appropriate controls that are either proposed as a part of the Project or included as mitigation measures, no long-term significant adverse impacts on wildlife use are anticipated with the Phase 1, 2, and 3 Trail alignments.

As discussed under Impacts 9-1 and 9-3, improvements associated with the Phase 4 segment of the Trail would require construction of two new bridges and would create new human access to the currently isolated levee. This isolated levee provides important resting, roosting, and nesting habitat for birds. Human access associated with the Phase 4 Trail improvements would greatly diminish and possibly eliminate use of this levee by many species, which would be a significant adverse impact of the Project (Figure 9-4).

The proposed staging area and education program at the southern end of Area C would be supervised by interpretive guides associated with the Save the Bay Association. Kayaking in the sloughs and open water of San Pablo Bay could result in birds flushing and moving to another location further from the disturbance. However, the program would be supervised by interpretive guides explaining the sensitivity of the surrounding marsh and San Pablo Bay ecosystems, would be of short duration and relatively infrequent in occurrence, and is not expected to have a significant impact on wildlife use in the area.

Control Measures Incorporated by Applicant. None.

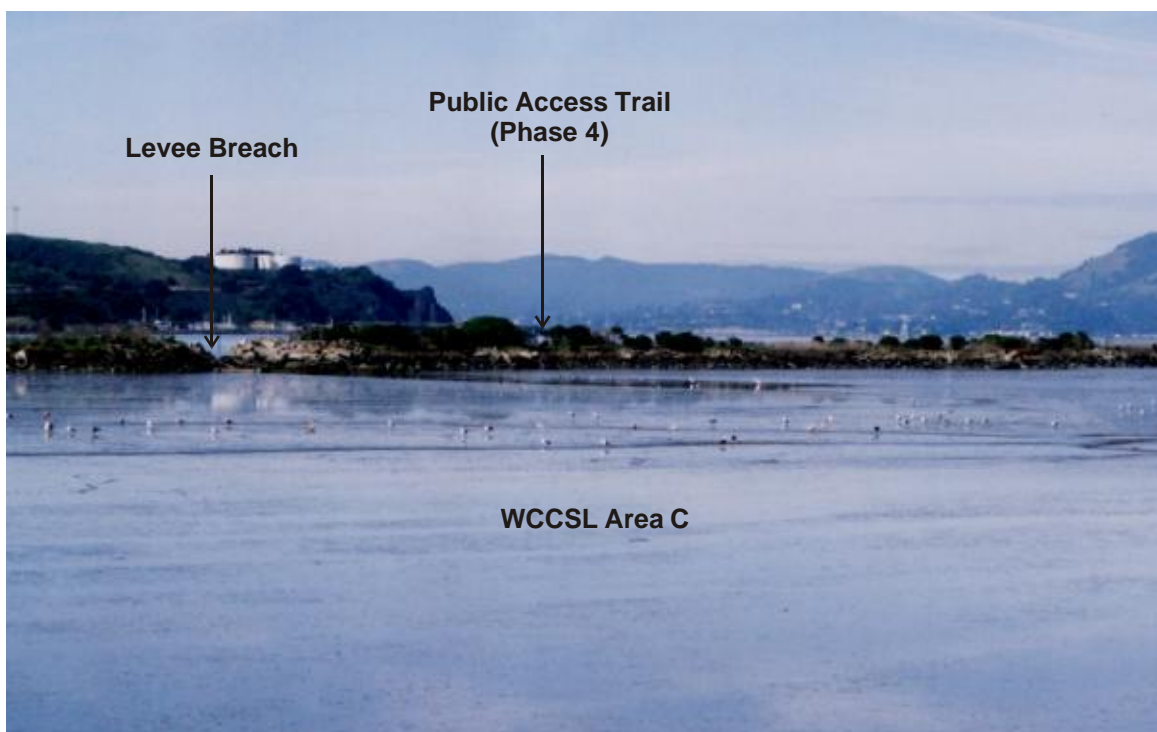


Figure 9-4 Elimination of Phase 4 Alignment. The levee breach shown is one of two that has restored tidal action to WCCSL Area C, limited human access, and helped create an area of value for numerous birds. This EIR recommends the Phase 4 Public Access Trail alignment be eliminated.

EIR Recommendations:

MITIGATION MEASURE 9-4

- a) The Phase 4 alignment of the Trail would be eliminated from the proposed Project to avoid the required disturbance to shoreline habitat on this portion of the site and prevent the potential disruption to wildlife habitat and movement along the existing isolated levee segment.
- b) Permanent signage would be installed as part of the required interpretive program at the southern end of the levee along the west side of Area C which deters visitor access to this segment of the levee. The signage would be installed at 20-foot intervals across the width of the levee, within 10 yards of the point where the levee narrows north of the proposed kayak staging area. The signage would state:

No Trail Access Sensitive Wildlife Habitat Visitor Access Prohibited

Implementation of these measures would reduce potential impacts to wildlife habitat and movement to less-than-significant levels.

2. Local Plans and Policies

IMPACT 9-5. The proposed Project is consistent with local plans, policies or ordinances protecting biological resources or an adopted Habitat Conservation Plans or Natural Community Conservation Plans. This impact is considered to be less than significant.

The proposed Project is consistent with the biological resources goals and policies of the County and City General Plans, and the North Shoreline Specific Plan. The proposed Public Access Trail alignment is a refinement of the shoreline trail alignment included in the Specific Plan as a result of additional planning by the Applicant, local organizations, and agencies.

Several goals and policies in the County General Plan, City General Plan and the North Richmond Shoreline Specific Plan address protection of marsh habitat and avoidance of sensitive wetlands and ecologically significant habitats. The proposed Project is not expected to conflict with the intent of these goals and policies. Mitigation measures recommended above to avoid sensitive habitat and minimize potential adverse effects of the Project (including elimination of the Phase 4 alignment of the Trail) are consistent with adopted goals and policies. The Trail would implement policies intended to

promote nature study such as Policy OSC-Q in the City General Plan. The prohibition of dogs on the Trail exceeds the mitigation requirements specified in Mitigation Measure BIO-6 from the EIR on the North Richmond Shoreline Specific Plan.⁶

The Project would not conflict with any adopted Habitat Conservation Plan, Natural Community Conservation Plan or other approved conservation plan. No such conservation plans have been adopted encompassing the site vicinity, and no impact is therefore anticipated.

Control Measures Incorporated by Applicant: None.

EIR Recommendations:

MITIGATION MEASURE 9-5. None required.

3. Impacts of Mitigation Measures

Mitigation measures have been developed to avoid sensitive habitat and minimize potential adverse effects of the Project. Thus, these measures are beneficial in nature and would not have adverse impacts. Elimination of the Phase 4 alignment of the Trail would not be consistent with the Trail alignment in the North Richmond Shoreline Specific Plan and would reduce the total trail length available to users; however, it is necessary to ensure protection of documented wildlife values. The trail would still encircle the WCCSL and provide new recreational opportunities and increased shoreline access without adversely impacting biological resources. As mentioned above, elimination of the Phase 4 Trail alignment as a mitigation measure is consistent with wildlife protection goals and policies of the North Richmond Shoreline Specific Plan.

E. CUMULATIVE IMPACTS

The proposed Project without recommended mitigation measures would contribute to cumulative impacts on biological resources, including salt march and riparian natural communities and the associated habitat of these areas provide to sensitive wildlife and special-status species. Construction of the Trail would increase human activity along the shoreline of San Pablo Bay and could contribute to increased disruption to wildlife in the area. However, research conducted on the effects of public access on wildlife use along segments of the San Francisco Bay Trail Project indicate little or no correlation between trail use and bird abundance or change in species diversity.⁹⁸ With adequate controls, increased public access to the shoreline of San Pablo Bay should not contribute to any significant adverse impacts on sensitive biological and wetland resources. Mitigation measures recommended above in conjunction with Applicant-proposed control measures would serve to mitigate any project contribution to cumulative

impacts on sensitive resources on the site and surrounding marshland and open water habitat of San Pablo Bay. Potential cumulative impacts to biological resources could occur with additional projects planned for the Point Pinole/Goodrick Avenue/Richmond Parkway area as described in Chapter 4, Section A3(b). However, while these projects are extensive, they predominantly involve lands which are not now natural habitats and the cumulative impact is considered less than significant.¹²⁸