7.0 TERRESTRIAL RESOURCES

This chapter describes existing terrestrial wildlife and plants present, including native and nonnative terrestrial habitats, special-status communities, and special-status plant and animal species, and analyzes the potential effects on these resources that may occur with the implementation of the project. This impact assessment is limited to potential effects from the onshore portion of the project as described below, which is located within the Urban Development Area (UDA) of the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (ECCC HCP/NCCP) Inventory Area. The northern boundary of the ECCC HCP/NCCP Inventory Area excludes "current and historical tidal areas" from the City of Pittsburg (City). All project components considered within this analysis are located south of current and historical tidal areas within the City, and are, therefore, covered by the ECCC HCP/NCCP (ECCC HCP/NCCP, 2006; SFEI, 2007).

Potential effects from the marine terminal portion of the project on aquatic species and habitats, including the extensive marshlands located along the San Pablo Bay Pipeline, are described in Chapter 6.0: Aquatic Resources.

The proposed avoidance and mitigation measures are primarily taken from the ECCC HCP/NCCP approved by the U.S. Fish and Wildlife Service (USFWS) and California Department of Fish and Wildlife (CDFW; previously known as the California Department of Fish and Game). Implementation of these measures would allow project applicants to ensure "no jeopardy" to federally protected species as a result of development within the UDA of the ECCC HCP/NCCP.

Construction activities would occur in streams, ditches, and annual and ruderal grassland with the potential to support, or known to support, State and/or federally listed species, or species of special concern (collectively referred to as special-status species).

Plant and wildlife species identified in this biological evaluation to have potential to be impacted by the project are listed in Table 7-1.

This biological evaluation focuses on potential impacts associated with renovation of the storage terminal (the onshore portion of the WesPac Energy-Pittsburg Terminal [Terminal]), construction and operation of the proposed pipeline route connecting the Terminal into the existing KLM Pipeline, construction of the Rail Transload Operations Facility (Rail Transload Facility), construction and operation of the proposed pipeline connecting the Terminal and the

Table 7-1: Special-status Species with Potential to Occur in the Project Area

Common Name	Scientific Name	Listing Status[1]	ECCC HCP/NCCP Status[2]
		Federal / State / California Native Plant Society	
Wildlife			
California tiger salamander	*Ambystoma californiense*	FT, PCH/ ST, SSC/--	covered
California red-legged frog	*Rana aurora draytonii*	FT, PCH/SSC/--	covered
Western pond turtle	*Emys marmorata*	--/SSC/--	covered
Short-eared owl	*Asio flammeus*	--/SSC/--	-
Burrowing owl	*Athene cunicularia*	BCC/SSC/--	covered
Golden eagle	*Aquila chrysaetos*	BCC/FP/--	covered
Swainson's hawk	*Buteo swainsoni*	BCC/ST/--	covered
White-tailed kite	*Elanus leucurus*	--/FP/--	-
Loggerhead shrike	*Lanius ludovicianus*	--/SSC/--	-
Townsend's western big-eared bat	*Corynorhinus townsendii townsendii*	--/--/--	covered
Western red bat	*Lasiurus blossevillii*	--/SSC/--	-
Pallid bat	*Antrozous pallidus*	--/SSC/--	-
Plants			
Large-flowered fiddleneck	*Amsinckia grandiflora*	FE/SE/1B.1	-
Bent-flowered fiddleneck	*Amsinckia lunaris*	--/--/1B.2	-
Round-leaved filaree	*California macrophylla*	--/--/1B.1	covered
Mt. Diablo fairy-lantern	*Calochortus pulchellus*	--/--/1B.2	covered
Diamond-petaled California poppy	*Eschscholzia rhombipetala*	--/--/1B.1	-
Diablo helianthella	*Helianthella castanea*	--/--/1B.2	covered
Showy golden madia	*Madia radiata*	--/--/1B.1	covered

Common Name	Scientific Name	Listing Status[1]	ECCC HCP/NCCP Status[2]
		Federal / State / California Native Plant Society	
Robust monardella	*Monardella villosa ssp. globosa*	--/--/1B.2	-
Slender-leaved pondweed	*Stuckenia filiformis*	--/--/2.2	-
Saline clover	*Trifolium hydrophilum*	--/--/1B.2	-

[1]Federal Listing Status FE: Endangered; FT: Threatened; CH: Designated Critical Habitat; PCH: Proposed Critical Habitat; BCC: Birds of Conservation Concern

State Listing Status FP: Fully Protected; SE: Endangered; ST: Threatened; SSC: Species of Special Concern

California Native Plant Society (CNPS) Listing 1A: Presumed extinct in California; 1B: rare, threatened, and endangered in California and elsewhere; 2: rare, threatened, or endangered in California, but more common elsewhere; 3: CNPS review list

[2]East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan, 2006

Sources: CDFW, 2011; CNPS, 2011; USFWS, 2011

proposed Rail Transload Facility (Rail Pipeline), and operation of the existing San Pablo Bay Pipeline corridor between the project site and the City of Martinez. For this evaluation, two study areas were defined:

- a regional study area, defined as the area within 10 miles of the existing facility site and proposed pipeline routes connecting the site into the existing KLM Pipeline and the Proposed Rail Transload Facility; and

- a local study area, defined as an area incorporating terrestrial resources within the existing facility, excluding the marine terminal and shoreline[1], and incorporating a 100-foot buffer around the proposed pipeline routes connecting the Terminal into the existing KLM Pipeline and the proposed Rail Transload Facility.

Guidelines and key sources of data used in the preparation of this chapter include the following:

- East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan;

- USFWS, Sacramento Fish and Wildlife Office: Federal Endangered and Threatened Species that Occur in or May be Affected by Projects in Contra Costa County and/or United States Geological Survey (USGS) 7.5-Minute Honker Bay Quadrangle (USFWS, 2011a);

- California Natural Diversity Database (CNDDB) Geographic Information System data (CDFW, 2011);

- California Native Plant Society (CNPS) Rare Plant Database; CNPS-listed plants within the USGS 7.5-minute Honker Bay quadrangle and the surrounding eight quadrangles (CNPS, 2011); and

- Biological surveys of the Terminal site and proposed pipeline routes for the KLM Pipeline connection and Rail Pipeline, excluding the BNSF Railway Company (BNSF) right-of-way, conducted by TRC Solutions, Inc. biologists (see Table 7-2).

[1] For an evaluation of potential impacts to habitats, special-status communities, and special-status plant and animal species within the marine terminal and shoreline, refer to Chapter 6.0: Aquatic Resources.

Table 7-2: Biological Surveys Performed for the WesPac Pittsburg Energy Infrastructure Project

Dates	Survey Type	Surveyors	Survey Area
September 6, 2011	Reconnaissance-level biological survey	Michael Farmer Molly Sandomire	Terminal
April 8, June 8, August 29, 2012	Special-status plant survey	Michael Farmer	Terminal and shoreline
August 1, 2012	Swainson's hawk and golden eagle nest evaluation	Michael Farmer	Areas within 0.5 mile of the Terminal
April 20, 2013	Reconnaissance-level biological survey	Michael Farmer	Areas within 100 feet of proposed KLM Pipeline connection and Rail Pipeline routes, excluding the BNSF Railway Company right-of-way

7.1 ENVIRONMENTAL SETTING

7.1.1 Regulatory Context

7.1.1.1 Federal Regulations

National Environmental Policy Act

The National Environmental Policy Act (NEPA) of 1969 established the nation's national environmental policy. NEPA provides an interdisciplinary framework for environmental planning by federal agencies and contains action-forcing procedures to ensure that federal decision makers take environmental factors into account. NEPA establishes a process by which federal agencies must study the environmental effects of their actions and allows federal agencies broad discretion concerning the degree of substantive environmental protection they may require when approving proposed actions.

Federal Endangered Species Act

Federal Endangered Species Act (ESA) provisions protect federally listed threatened or endangered species and their habitats from unlawful take. Take is defined under ESA as, "harass, harm, pursue, hunt, shoot, wound, kill, trap,

capture, or collect, or to attempt to engage in any of the specifically enumerated conduct." USFWS regulations define harm as "an act that kills or injures wildlife." Activities that may result in take of individuals are regulated by the USFWS.

Section 7 of the ESA, called "Interagency Cooperation," is the mechanism by which federal agencies ensure the actions they take, including those they fund or authorize, do not jeopardize the existence of any listed species or adversely modify designated critical habitat. Consultation with the USFWS would be undertaken by the U.S. Army Corps of Engineers (USACE) during their permit approval process.

Section 10 of the ESA allows the USFWS to approve a Habitat Conservation Plan (HCP) that allows incidental take of listed species in a plan area during the course of economic development if the plan contains adequate avoidance, minimization, and mitigation measures to protect listed species. The USFWS must monitor the implementation of the HCP and may designate a responsible party to monitor projects conducted under the HCP for compliance. The storage terminal and proposed pipeline routes lie within the boundary of the ECCC HCP/NCCP. The party responsible for monitoring the project for compliance with the HCP would be the City of Pittsburg.

Clean Water Act (Section 404)

Areas meeting the regulatory definition of *waters of the United States* (jurisdictional waters) are subject to the jurisdiction of the USACE. The USACE, under provisions of Section 404 of the Clean Water Act (1972) and Section 10 of the Rivers and Harbors Act (1899), has jurisdiction over waters of the United States. These waters may include all waters "used, or potentially used, for interstate commerce, including all waters subject to the ebb and flow of the tide, all interstate waters, all other waters (intrastate lakes, rivers, streams, mudflats, sand flats, playa lakes, natural ponds, etc.), all impoundments of waters otherwise defined as waters of the United States, tributaries of waters otherwise defined as waters of the United States, the territorial seas, and wetlands adjacent to waters of the United States" (33 Code of Federal Regulations, Part 328, Section 328.3).

The Oil Pollution Act of 1990

The Oil Pollution Act of 1990 provided new requirements for contingency planning by industry such that owners or operators of vessels and certain facilities that pose a serious threat to the environment must prepare Facility Response Plans.

Migratory Bird Treaty Act

The Migratory Bird Treaty Act (MBTA) (16 United States Code (USC) § 703 – 712) prohibits killing, possessing, or trading in migratory birds except in

accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, bird nests, and eggs. Nest destruction that results in the unpermitted take of migratory birds or their eggs is illegal under the MBTA. Disturbances that result in the incidental loss of fertile eggs or nestlings due to nest abandonment are considered a violation of the MBTA. The MBTA does not contain any prohibition that applies to the destruction of a bird nest alone (without birds or eggs), provided that no possession occurs during the destruction.

The Bald and Golden Eagle Protection Act

The Bald and Golden Eagle Protection Act (16 USC 668-668c), enacted in 1940 and amended several times since then, prohibits take of bald eagles and golden eagles, including their parts, nests, or eggs. The Bald and Golden Eagle Protection Act applies to incidental take caused by activities that cause an eagle to abandon an active nest.

Interstate Commerce Commission Termination Act

The Interstate Commerce Commission Termination Act preempts the railroad operations and movements described in this Environmental Impact Report (EIR) from local and State environmental regulations. Preemption does not apply to the unloading of rail cars or the transfer of oil out of the Rail Transload Facility to the storage terminal.

7.1.1.2 State Regulations

California Environmental Quality Act

The California Environmental Quality Act (CEQA) requires that State and local agencies prepare multidisciplinary environmental impact analyses and make decisions based on those studies' findings regarding the environmental effects of proposed activities. The main objectives of CEQA are to disclose, to decision makers and the public, the significant environmental effects of proposed activities and to require agencies to avoid or reduce environmental effects by implementing feasible alternatives or mitigation measures.

Under CEQA, a proposed project's potential impacts on plant or animal species must be analyzed in an EIR if the species is considered endangered or rare within the meaning of Guidelines, Section 15380 (Title 14, California Code of Regulations, Section 15380). A species is *endangered* when its survival and reproduction in the wild are in immediate jeopardy. A species is *rare* when, though not immediately endangered, it exists in such small numbers that it may become endangered if its environment worsens or it is likely to become endangered within the foreseeable future throughout all or a significant portion of its habitat range and may be considered "threatened," as that term is used in the

federal ESA. In general, an EIR for a proposed project must include analysis of potential effects to species listed as:

- Federally threatened, rare, or endangered pursuant to the federal ESA;
- Threatened or endangered pursuant to the California ESA;
- Fully Protected pursuant to California Fish and Game Code 3511 and 4700;
- Species of Special Concern as designated by the CDFW; or
- Rare or endangered in the *Inventory of Rare and Endangered Vascular Plants of California* published and maintained by the California Native Plant Society (2011).

In assigning "impact significance" to populations of non-listed species, analysts usually consider factors such as population-level effects, proportion of the taxon's range affected by a project, regional effects, and impacts to habitat features.

California Endangered Species Act

Provisions of the California ESA protect State-listed threatened and endangered species. The CDFW regulates activities that may result in *take* of individuals (i.e., "hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill"). Habitat degradation or modification is not included in the definition of take under the California Fish and Game Code. Any project that has the potential to take listed species must apply for an incidental take permit pursuant to Sections 2081 (B) and (C) of the California Fish and Game Code. The CDFW has also produced three lists (i.e., amphibians and reptiles, birds, and mammals) of species of special concern; these serve as "watch lists." Species on these lists may receive special attention during environmental review, but do not have statutory protection.

California Natural Community Conservation Planning Act of 2003

The California Natural Community Conservation Planning program provides for regional protection of species by identifying measures necessary to conserve and manage natural biological diversity within a plan area while allowing compatible and appropriate economic activity. The California Natural Community Conservation Planning Act (NCCPA) allows the CDFW to establish a list of species that are authorized for take during the execution of projects covered by an NCCP.

Other Provisions of the California Fish and Game Code

The California Fish and Game Code Sections 3511, 4700, 5050, and 5515 prohibit take of fully protected bird, mammal, reptile and amphibian, and fish species, respectively. Species that are classified as fully protected, or parts thereof, may not be taken or possessed at any time, and no licenses may be issued for their take.

Sections 3503 and 3503.5 of the California Fish and Game Code outlaw take, possession, or destruction of birds and raptors, respectively, or their nests. Disturbance during the breeding season that results in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment, is also considered take by the CDFW.

The Native Plant Protection Act (NPPA) is codified in California Fish and Game Code Sections 1900-1913. The NPPA gave the CDFW the power to designate native plants as endangered or rare and protect them from take. There are three listing categories for plants in California: rare, threatened, and endangered. Threatened and endangered plants are included in the California ESA, but rare plants are not included; thus, mitigation measures for rare plants must be specified in a formal agreement between the CDFW and the project applicant.

The CDFW also regulates activities that may substantially modify a river, stream, or lake; substantially change or use any material from the bed, channel, or bank of these waters; or dispose of debris, waste, or other material into these waters through California Fish and Game Code Sections 1600-1607. The project applicant would be required to provide the regional CDFW office with notification of the project under Section 1602 and enter into a Lake or Streambed Alteration Agreement with the CDFW.

Porter-Cologne Water Quality Control Act

Areas meeting the regulatory definition of *waters of the State* are subject to the jurisdiction of the California Regional Water Quality Control Board (RWQCB). Waters of the State means any surface water or groundwater, including saline waters, within the boundaries of the State (California Water Code, Section, 13050(e)). Any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State, other than into a community sewer system, must file a report of the discharge with the appropriate RWQCB (California Water Code, Section 13260(a)(I)).

California Native Plant Society

In addition to the above statutes, and as listed above, the CNPS maintains an inventory of special-status plant species, including species lists of varying rarity (Lists 1A and 1B, and Lists 2-4) and a ranking system of three threat code extensions. In general, species on List 1 or List 2, which have no designated status or statutory protection, are considered to meet CEQA Guidelines, Section 15380 criteria for endangered, rare, or threatened species.

7.1.1.3 Local Plans and Regulations

East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan

The ECCC HCP/NCCP provides an effective framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts on endangered species. Under the ECCC HCP/NCCP, the USFWS and CDFW have provided regional permits to the cities of Brentwood, Clayton, Oakley, and Pittsburg and to Contra Costa County authorizing take of 28 listed plant and wildlife species under the ESA and NCCPA for future urban development within an approved area. Covered activities within the approved area are broadly defined to include "all ground-disturbing activities controlled by permit holders via their land use planning process," including development of industrial facilities, transmission lines, necessary bridges, and flood-control facilities.

The ECCC HCP/NCCP requires species-specific planning surveys based on land cover types and habitat elements found on-site. Based on the results of the planning surveys, species-specific surveys for selected covered wildlife may be required and subsequent monitoring and avoidance actions necessitated if a species is detected.

Under the ECCC HCP/NCCP guidelines, all projects are required to:

- maintain hydrologic conditions and minimize erosion;
- avoid direct impacts on extremely rare plants, fully protected wildlife species, or covered migratory birds;
- establish stream setbacks; and
- avoid or minimize impacts to wetlands, ponds, and streams.

In addition, projects located adjacent to existing and projected protected natural lands, including publicly owned open space with substantial natural land cover types, are required to:

- minimize the development footprint adjacent to open space,
- establish fuel-management buffers to protect preserves and property, and
- incorporate urban-wildland interface design elements.

The ECCC HCP/NCCP is funded through the collection of fees. Land may be dedicated or USACE-jurisdictional wetlands or waters restored or created in lieu of fees.

The Implementing Agency for evaluating the project to ensure it has adopted the required conservation measures prior to issuance of coverage under the ECCC HCP/NCCP is the City of Pittsburg.

Contra Costa General Plan

The *Contra Costa County General Plan* (Contra Costa County, 2005) identifies 41 ecologically sensitive areas and includes several specific policy goals and objectives toward conservation of natural resources and open space. Relevant measures include those designed to protect significant ecological resource areas (8-11), protect mature native trees (8-28) and encourage native plant landscaping (8-21), and to reduce use of pesticides (8-22).

Contra Costa County adopted the ECCC HCP/NCCP through Ordinance No. 2007 – 53, Adoption of the East Contra Costa County Habitat Conservation Plan/Natural Communities Conservation Plan Fees and Implementation Procedures.

City of Pittsburg General Plan

The *City of Pittsburg General Plan* (City of Pittsburg, 2001) includes specific policy goals and objectives to protect the natural environment, including measures to protect special-status species (9-P-1), control the spread of invasive species (9-P-2), protect creeks and riparian areas through the establishment of setbacks (9-P-9, 9-P-10, 9-P-11), and to protect habitat and species associated with the marshes and estuaries (9-P-12).

City of Pittsburg Municipal Code

The Pittsburg Municipal Code (PMC) Chapter 15.108, Habitat Conservation Plan/Natural Community Conservation Plan Implementation Ordinance, sets forth the procedures for implementation of the ECCC HCP/NCP.

7.1.1.4 Permits Required

The project would be required to submit an Application Form and Planning Survey Report to comply with and receive permit coverage under the ECCC HCP/NCCP. Coverage under the ECCC HCP/NCCP for the terrestrial portions of the project would enable the project to be covered by the plan's USFWS ESA Permit 10a1b and CDFW NCCP permit. Refer to Table 7-1 for a list of the species covered under the ECCC HCP/NCCP. Table 7-3 summarizes permit requirements likely to apply to the project.

Table 7-3: Permits Required

Regulatory Authority	Agency	Jurisdiction/Purpose	Project Requirements
Federal			
Section 404 Nationwide Permit and Rivers and Harbors Act of 1899, Section 10	U.S. Army Corps of Engineers	Work in waters of the United States, including wetlands. Bridge construction over tributaries to Willow Creek and impacts to drainage ditches at the Rail Transload Facility site.	The project would be required to mitigate for impacts to intermittent stream channels and any impacts to seasonal wetlands.
State			
Fish and Game Code Section 1602—Streambed Alteration Agreement	California Department of Fish and Wildlife (CDFW)	Construction in or under the bed, channel, or bank of any river, stream, or lake.	The applicant should provide a Notification of Lake or Streambed Alteration form to the CDFW for the proposed pipeline jack and bore crossing of the drainage ditches within the BNSF Railway Company right-of-way.
Local			
Coverage under the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan	City of Pittsburg	Covered activities within the plan's inventory area.	Coverage under the plan would address impacts to special-status terrestrial species within the plan boundary

7.1.2 Existing Conditions

7.1.2.1 Regional Study Area

The project is located in the City of Pittsburg, south of Suisun Bay in northeastern Contra Costa County (refer to Figure 2-1: Project Location Map). This area includes urban and mountainous portions of Contra Costa County as well as islands, marshes, and waterways of the San Francisco Bay-Delta.

Other important ecological areas present in the regional study area include expansive grassland habitat located in the hilly region south of the City. A number of significant ecological areas occur within the regional study area, including 15 areas identified in the *Contra Costa County General Plan 2005-2020* (2005) (see Figure 7-1: Regional Biological Resources) and several marshlands known to support special-status species. High-quality marshes provide habitat for salt marsh harvest mouse, California black rail, white tailed kite, Suisun song sparrow, and a variety of endemic plants. The marshes of Suisun Bay and the lower Delta are a major stop for migrating birds along the Pacific Flyway.

Six miles east of the east end of the project, the Antioch Dunes National Wildlife Area protects a small remnant of riverine dune habitat. The dunes support at least 14 special-status species, including insects, plants, and the California legless lizard. Important habitats south of the project consist of grassland, foothill woodland, mixed evergreen forest, and chaparral. Some areas, historically mined for coal, may provide areas for bat roosts. Mount Diablo lies south of the project. The tallest mountain in the East Bay, Mount Diablo provides habitat for many rare, endangered, and unusual plants and animals.

7.1.2.2 Land Cover Types in the Local Study Area

The existing storage terminal site is located at New York Point along the south shoreline of New York Slough. On its east and south sides, land uses include residential, commercial, and industrial. West of the site, the predominant land cover type is marsh and wetland (this area is discussed in greater detail in Chapter 6.0: Aquatic Resources). The facility has existed in its current site and configuration for several decades.

Construction of a new pipeline is proposed to connect the Terminal to the existing KLM Pipeline along North Parkside Drive. The KLM Pipeline connection route would travel underground south of the Terminal through some combination of industrial, commercial, and low-quality undeveloped habitat elements. Construction of a new pipeline is proposed to connect the facility to the proposed Rail Transload Facility site. The Rail Pipeline route would travel underground directly south of the facility within the same corridor as the KLM Pipeline connection.

The Railroad Transload Facility is proposed to be built within an existing BNSF rail yard. This component would include the construction of an administration building, transloading area, stormwater management system, and landing track. The administration building, transloading area, and stormwater management system construction areas currently consist of a combination of ruderal grassland, nonnative woodland, and existing train tracks. The landing track would consist of installation of approximately 8,800 feet of new track in ruderal grassland parallel to and south of the existing BNSF main track, to the north of North Parkside Drive between Magnolia Court and the intersection of Summer Way and Seasons Drive. The landing track would require the construction of four bridge structures to cross Willow Pass Road and three unnamed tributaries to Willow Creek.

Land cover was mapped using land cover types and habitat elements as described in the ECCC HCP/NCCP. Land cover within the local study area is primarily urban. Ruderal grassland, annual grassland, nonnative woodland, seasonal wetland, and permanent wetlands are found in the local study area (see Figure 7-2: Land Cover Types and Habitat Elements). It should be noted that the ECCC HCP/NCCP erroneously classifies the South Tank Farm stormwater retention basin as a reservoir. Land cover types are described below.

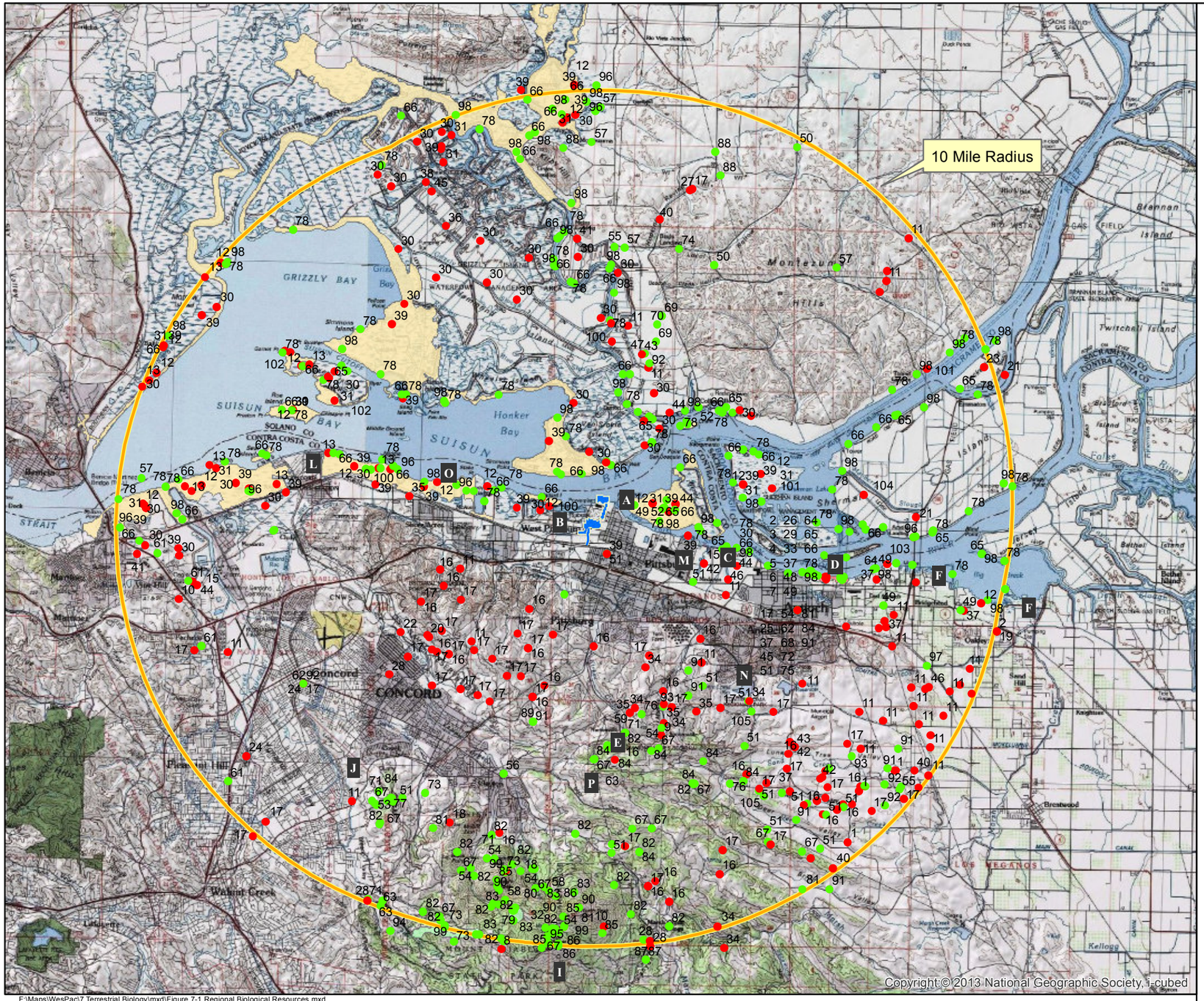
Developed

Under the ECCC HCP/NCCP, developed areas comprise all types of development for residential, commercial, industrial, transportation, landfill, landscaping, and recreational uses (e.g., ball fields and golf courses). Two subtypes of this category are found within the local study area: urban and nonnative woodland.

Urban

The site is an existing industrial facility with a predominantly developed land cover comprised of storage tanks, equipment, aboveground pipes, buildings, and paved or graveled surfaces. Vegetation in containment areas is controlled through mowing and application of herbicides. The stormwater retention basin in the South Tank Farm, which is erroneously classified as a reservoir in the ECCC HCP/NCCP[2], is kept clear of vegetation through periodic flailing with a flail chopper. A flail chopper tractor attachment contains numerous knife blades inside a hood. During flailing, the blades rotate rapidly, chopping all plants they contact into small pieces.

[2]The ECCC HCP/NCCP aerial mapping effort digitized all smooth, uniform, dark signatures of open water on aerial photographs as reservoirs. Actual reservoirs typically provide a vegetated fringe and hold water for a considerable portion of the year. They are important habitat for aquatic and terrestrial wildlife.



F:\Maps\WesPac\7 Terrestrial Biology\mxd\Figure 7-1 Regional Biological Resources.mxd

Figure 7-1 Regional Biological Resources
City of Pittsburg
WesPac Pittsburg Energy Infrastructure Project

TRC

7/1/2013

Proposed Pipeline Connections

Terminal Boundary

CNDDB Element Occurence

- Plant
- Animal

1:175,000

N

1 inch = 3 miles

0 6,500 13,000 ft

Special-Status Species

1 American badger
2 Antioch andrenid bee
3 Antioch Dunes anthicid beetle
4 Antioch Dunes halcitid bee
5 Antioch efferian robberfly
6 Antioch multilid wasp
7 Antioch specid wasp
8 Berkeley kangaroo rat
9 Blennosperma vernal pool andrenid bee
10 Bridges' coast range shoulderband
11 burrowing owl
12 California black rail
13 California clapper rail
15 California linderiella
16 California red-legged frog
17 California tiger salamander
18 coast horned lizard
19 curved-foot hygrotus diving beetle
20 ferruginous hawk
21 giant garter snake
22 golden eagle
23 great blue heron
24 hoary bat
25 Hurd's metapogon robberfly
26 Middlekauff's shieldback katydid
27 midvalley fairy shrimp
28 pallid bat
29 redheaded sphecid wasp
30 salt-marsh harvest mouse
31 saltmarsh common yellowthroat
32 San Bruno elfin butterfly
33 San Joaquin dune beetle
34 San Joaquin kit fox
35 San Joaquin pocket mouse
36 short-eared owl
37 silvery legless lizard
38 Suisun shrew
39 Suisun song sparrow
40 Swainson's hawk
41 tricolored blackbird
42 vernal pool fairy shrimp
43 vernal pool tadpole shrimp
44 western pond turtle
45 western red bat
46 white-tailed kite
47 alkali milk-vetch
48 Antioch Dunes buckwheat
49 Antioch Dunes evening-primrose
50 bearded popcorn-flower
51 big tarplant
52 Bolander's water-hemlock
53 Brandegee's eriastrum
54 Brewer's western flax
55 brittlescale
56 caper-fruited tropidocarpum
57 Carquinez goldenbush
58 chaparral harebell
59 chaparral ragwort
60 coastal triquetrella
61 Congdon's tarplant
62 Contra Costa goldfields
63 Contra Costa manzanita
64 Contra Costa wallflower
65 Delta mudwort
66 Delta tule pea
67 Diablo helianthella
68 diamond-petaled California poppy
69 dwarf downingia
70 fragrant fritillary
71 Hall's bush-mallow
72 Hoover's cryptantha
73 Hospital Canyon larkspur
74 Keck's checkerbloom
75 Kings River buckwheat
76 large-flowered fiddleneck
77 Lime Ridge navarretia
78 Mason's lilaeopsis
79 most beautiful jewel-flower
80 Mt. Diablo bird's-beak
81 Mt. Diablo buckwheat
82 Mt. Diablo fairy-lantern
83 Mt. Diablo jewel-flower
84 Mt. Diablo manzanita
85 Mt. Diablo phacelia
86 Norris' beard moss
87 oval-leaved viburnum
88 pappose tarplant
89 pink creamsacs
90 rock sanicle
91 round-leaved filaree
92 San Joaquin spearscale
93 showy golden madia
94 slender-leaved pondweed
95 slender silver moss
96 soft bird's-beak
97 stinkbells
98 Suisun Marsh aster
99 woodland woollythreads
100 California least tern
101 Delta smelt
102 Sacramento splittail
103 Sacramento perch
104 Double-crested cormorant
105 shining navarretia

Areas of Concern

A Browns Island and Winter Island
B Bay Point Salt Marsh
C Mouth of Contra Costa Canal
D Antioch Sand Dunes
E Nortonville-Somersville
F Big Break
F Big Break
G Connection Slough, Quimby Island, Rhose Island, Old River Complex
H South Bank of Rock Slough
I Blackhawk Ranch Fossil Locality
J Lime Ridge
K Las Trampas and Rocky Ridges
L Shoreline Between Martinez Waterfront and Concord Naval Weapons Station
M DOW Wetlands Preserve
N Contra Loma Regional Park
O Bay Point Salt Marsh

Special Status Habitats

Coastal Brackish Marsh
Serpentine Bunchgrass
Stabilized Interior Dunes

F:\Maps\WesPac\7 Terrestrial Biology\mxd\Figure 7-2 Land Cover Types and Habitat Elements.mxd

Figure 7-2 Land Cover Types and Habitat Elements
City of Pittsburg
WesPac Pittsburg Energy Infrastructure Project

TRC

6/17/2013

- Proposed KLM Pipeline Connection
- Proposed Pipeline from Rail Transload Operation
- Existing KLM Pipeline

Land Cover Mapping
- Aerial Mapped
- Field Verified

Habitat Elements
- Building (container)
- Area with small mammal burrows

Land Cover Types
- Annual grassland
- Ruderal
- Non-native woodland
- Seasonal wetland
- Permanent wetland
- Aquatic
- Urban
- Stormwater Retention Facility

1:10,000

N

1 cm = 100 m

0 500 1,000 ft

Though plant growth is strictly managed in the existing Terminal, the absence of regular human activity allows wildlife to utilize elements of the facility. Small flocks of mourning doves (*Zenaida macroura*) congregate in the South and East Tank Farms to forage for seeds and engage in pairing activities; their presence attracts raptors, including kestrel (*Falco sparverius*) and red-tailed hawk (*Buteo jamaicensis*). Scat from coyote (*Canis latrans*) and black-tailed jackrabbit (*Lepus californicus*) was observed within the storage terminal site. Paved areas in the storage terminal provide basking places for western fence lizard (*Sceloporus occidentalis*), while small ledges in the asphalt edge provide protected areas for their retreat. Other species that likely utilize the sparse habitat at the storage terminal are those that are highly adapted to developed lands such as rats (*Rattus* spp.), raccoons (*Procyon lotor*), opossums (*Didelphus virginianus*), house sparrows (*Passer domesticus*), rock doves (*Columba livia*), and European starlings (*Sturnus vulgaris*). Although few buildings occur on the site, the existing shipping containers and storage tanks provide potential bat roosting habitat.

Portions of the proposed pipeline routes traverse urban areas, including a light industrial park, the BNSF railroad corridor, and North Parkside Drive.

Nonnative Woodland

The ECCC HCP/NCCP defines nonnative woodlands as those areas where ornamental and other introduced species of trees have grown to form a dense canopy. This land cover type is found along the east fence of the East Tank Farm, the drainage channel south of the South Tank Farm, and south of the property fence north of Willow Pass Road. At the Rail Transload Facility site, nonnative woodland is found east of the proposed administration building and transloading site.

Trees located along the perimeter of the East and South Tank Farms are routinely limbed to provide line-of-sight along the fence for security reasons. Species include Mexican fan palm (*Washingtonia robusta*), bluegum eucalyptus (*Eucalyptus globules*), blackwood acacia (*Acacia melanoxylon*), cypress (*Cupressus* sp.), Peruvian pepper tree (*Schinus molle*), crimson bottlebrush (*Callistemon citrinus*), and oleander (*Nerium oleander*).

The large trees throughout the local study area provide suitable nesting habitat for raptors, although in the past raptor nesting has not been observed. The Peruvian pepper trees along the north and east side of the East Tank Farm show signs of woodpecker foraging. The trees in the area also provide foraging and resting places for western scrub jay (*Aphelocoma californica*). A residential neighborhood lies east of the East Tank Farm; domestic cats (*Felis catus*) were observed foraging in the understory of trees in the area.

Aquatic

Seven aquatic features occur in the study area: four streams and three drainage ditches (see Figure 7-3: Wetlands and Waters). Willow Creek (AQ-1) is located west of the existing storage facility and north of the proposed pipelines. Willow Creek forms the southern boundary of a large, diked brackish-water marsh known to support several special-status species. This habitat is addressed in more detail in Chapter 6.0: Aquatic Resources. Willow Creek is a perennial stream in a natural area, but because its channel lies within a historical tidal marsh, it lies outside the boundary of the ECCC HCP/NCCP. Willow Creek is approximately 6.16 miles long, and 10 miles of unnamed tributaries drain into it. Most of the lower reaches of these tributaries have been undergrounded in culverts for the portions that flow through single-family residential neighborhoods (Contra Costa County, 2003).

Two drainage ditches are located within railroad rights-of-way. AQ-2 is a 20-foot-wide drainage ditch, approximately 10 to 15 feet deep, which supports annual grasses and herbaceous species within the BNSF right-of-way. The downstream portion of this ditch was dry during the April 2013 survey. AQ-3 is a small ditch, approximately 6 feet wide and 3 feet deep, located along the Union Pacific Railroad right-of-way north of North Parkside Drive. The ditch was dry during the inspection and supports annual grasses and herbaceous species such as ryegrass (*Lolium* sp.) and bristly ox tongue (*Picris echioides*). Both ditches appear to flow west and connect with a seasonal stream 1,900 feet west of the alignment, which flows north and eventually connects to Suisun Bay.

A drainage ditch (AQ-4) lies east of the proposed KLM Pipeline connection. The banks of the ditch have been planted with native shrubs such as willow species (*Salix* sp.), while its channel supports patches of marsh species such as cattails and sedges. The ditch provides forage and/or nesting habitat for birds such as Anna's hummingbird (*Calypte anna*), western scrub-jay, and loggerhead shrike (*Lanius ludovicianus*), and foraging habitat for mammals such as coyote, raccoon, and field mice.

Three tributaries to Willow Creek would be crossed by the proposed landing track, requiring the construction of bridges upstream of existing bridge structures within the BNSF right-of-way. These three drainages are all intermittent streams that flow north to Willow Creek. South of the railroad rights-of-way, the drainages travel through underground channels beneath residential neighborhoods.

AQ-5 is an intermittent drainage hydrologically connected to a large seasonal wetland to the north, SW-1, described below. The channel is approximately 60 to 70 feet wide at the planned bridge crossing. This creek flows north through open space into Willow Creek.

F:\Maps\WesPac\7 Terrestrial Biology\mxd\Figure 7-3 Wetlands and Waters.mxd

Figure 7-3: Wetlands and Waters
City of Pittsburg
WesPac Pittsburg Energy Infrastructure Project

TRC

6/17/2013

- Proposed KLM Pipeline Connection
- Proposed Pipeline from Rail Transload Operation
- Existing KLM Pipeline
- Terminal Boundary

Land Cover Mapping
- Aerial Mapped
- Field Verified

Wetlands and waters
- Seasonal wetland
- Permanent Wetland
- Aquatic feature

Contra Costa County Watershed Atlas
- Intermittent Stream
- Perennial Stream

National Wetland Inventory
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Pond
- Lake

N

1:10,000

1 inch = 833 feet

0 410 820 ft

AQ-6 is an intermittent drainage that flows north to a seasonal wetland approximately 1.5 acres in size. The channel is approximately 40 feet wide at the planned bridge crossing. The proposed landing track lies adjacent to, and potentially within, the channel of this drainage for approximately 400 feet. This creek flows north through open space into Willow Creek.

AQ-7 is an intermittent drainage approximately 2,000 feet west of AQ-6. It is approximately 50 feet wide at the bridge crossing. The drainage ditches would be classified as "1st and 2nd order ephemeral reaches in urban and agricultural areas." The three tributaries to Willow Creek, AQ-5, AQ-6, and AQ-7, would be classified as "Perennial, intermittent, or 3rd or higher order ephemeral streams in urban areas."

Wetland

Two wetland types occur in the local study area: seasonal wetlands and permanent wetlands. Figure 7-3 depicts field-verified wetlands located within the local study area classified according to the ECCC HCP/NCCP system and wetlands identified and classified in the National Wetland Inventory and waterways included in the Contra Costa County Watershed Atlas (Contra Costa County, 2003).

Seasonal Wetland

The ECCC HCP/NCCP classifies wetlands and swales that are inundated for limited duration during the wetter months of the year as seasonal wetlands.

During the wet season, these wetlands provide forage and breeding cover for a variety of wildlife, including amphibians such as western toad (*Bufo boreas*); shorebirds such as killdeer (*Charadrius vociferus*), black-necked stilt (*Himantopus mexicanus*), and American avocet (*Recurvirostra americana*); and passerines such as Brewer's blackbird (*Euphagus cyanocephalus*), red-winged blackbird (*Agelaius phoeniceus*), brownheaded cowbird (*Molothrus ater*), and American pipit (*Anthus rubescens*). During the dry season, a variety of small mammals use the areas, including deermouse (*Peromyscus* sp.), California vole (*Microtus californicus*), and long-tailed weasel (*Mustela frenata*). Raptors such as white-tailed kites (*Elanus leucurus)*, northern harrier (*Circus cyaneus*), and red-tailed hawk (*Buteo jamaicensis*) may forage in this land cover type. Two seasonal wetlands found in the study area are described below.

- SW-1: An approximately 40-acre seasonal wetland, classified as a freshwater emergent wetland (USFWS, 2011b), lies in a topographic depression of the clay soils between Willow Pass Road and Highway 4. This wetland is associated with Willow Creek and its marshes and would not be affected.

- SW-2: An approximate 0.093-acre seasonal swale hydrologically connected to Willow Creek and its associated permanent wetlands lies north of Willow Pass Road and would not be affected.

Within the project site, the stormwater retention basin—located in the South Tank Farm—is classified by the National Wetlands Inventory as a seasonally flooded, diked/impounded, palustrine wetland with an unconsolidated shore (USFWS, 2011a). According to previous consultation with the USACE, this basin is non-jurisdictional (Mirant, 2008).

Permanent Wetland

The ECCC HCP/NCCP defines this type of wetland as inundated year-round and typically dominated by erect, rooted, herbaceous, hydrophytic plant species. In the local study area, this land cover type is found within the wetland that lies south of the South Tank Farm and between Tanks 15 and 16 (PW-1).

The vegetation is comprised of palustrine emergent species, dominated by California bulrush (*Scirpus californicus*), tule (*Scirpus acutus*), common reed (*Phragmites australis*), cattails (*Typha* spp.), and saltgrass (*Distichlis spicata*). The National Resources Conservation Service classifies the soils here as alluvial muck and clay (NRCS, 2008); however, the presence of sewer, stormwater, and pipeline easements in this area suggests the soils have been modified to make them less susceptible to piping (internal erosion), erosion, and settlement cracking. A detailed discussion of on-site soils can be found in Chapter 9.0: Geology, Soils, and Seismicity. PW-1 collects freshwater runoff from the residential neighborhoods to the east and from the area outside of the secondary containment in the adjacent Tank 16 yard. During the September 16, 2011 survey, the bank of PW-1 was observed within the fence of the Tank 16 yard.

Permanent wetlands are important for a wide variety of wildlife species. Water birds may forage and rest in permanent wetlands and associated open-water areas. Bird species observed at the permanent wetland in the local study area include red-winged blackbird (*Agelaius phoeniceus*), white-tailed kite, and killdeer. Typical reptiles in this cover type include western pond turtle (*Clemmys marmorata*) and common garter snake (*Thamnopis sirtalis*). This land cover type also provides forage and cover for fish rearing.

Grassland

Annual Grassland

Annual grasslands were mapped where grasses and forbs dominate the land cover and where trees and shrubs comprise less than 5 percent canopy cover. This land cover type occurs in the local study area between Willow Pass Road and the Rail Transload Facility. The ±375-foot-long section immediately south of Willow Pass Road is comprised of disturbed annual grassland habitat and a maintained landscape strip. During the survey, the annual grassland habitat appeared to have been recently disked. Plant species such as wild oats (*Avena* sp.), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and Italian thistle (*Carduus pycnocephalus*) were prevalent throughout this area. The landscape strip contained ornamental trees, shrubs, and groundcover.

Ruderal

Ruderal land cover types are disturbed areas characterized by sparse, nonnative, typically weedy vegetation. Within the existing storage facility, ruderal vegetation occurs next to roads, fences, and landscaped areas. Ruderal vegetation at the existing storage facility is routinely mowed, and bare soil areas in the stormwater retention basin are flailed to retard plant growth. Ruderal vegetation is also found at the Rail Transload Facility site and along the proposed landing track.

7.1.2.3 Special-status Habitats

The CNDDB identifies three sensitive habitat types that are known to occur in the regional study area: serpentine bunchgrass, stabilized interior dunes, and coastal brackish marsh. Two of these habitats, serpentine bunchgrass and stabilized interior dunes, do not occur in the local study area. Coastal brackish marsh habitat occurs west of the study area in marshes associated with Willow Creek. This area is described in detail in Chapter 6.0: Aquatic Resources.

7.1.2.4 Special-status Plant Species

No special-status plant species were observed during surveys conducted September 16, 2011; April 6, 2012; June 8, 2012; or April 30, 2013 (see Table 7-4 for observed plant species). Plant communities in the local study area with some potential to support special-status plant species include the annual grassland, seasonal wetland, and permanent wetland. However, as determined by field visit and aerial interpretation, the majority of grasslands and wetlands in the local study area are either highly disturbed or are surrounded by highly disturbed land and, therefore, are considered poor habitat for most special-status species.

Table 7-4: Observed Plant Species

Scientific Name	Common Name
Acacia melanoxylon	Blackwood acacia
Amaranthus albus	Tumbleweed
Arundo donax	Giant reed
Asclepias fascicularis	Narrow-leaved milkweed
Avena fatua	Wild oats
Baccharis pilularis	Coyote brush
Brassica nigra	Black mustard
Brassica rapa	Field mustard
Bromus diandrus	Ripgut brome
Bromus hordeaceus	Soft chess
Callistemon citrinus	Bottlebrush
Carduus pycnocephalus	Italian thistle
Centaurea solstitialis	Yellow star-thistle
Centromadia pungens	Common spikeweed
Conium maculatum	Poison hemlock
Convolvulus arvensis	Field bindweed
Conyza canadensis	Horseweed
Cortaderia jubata	Pampas grass
Cupressus sp.	Cypress
Cynodon dactylon	Bermuda grass
Cyperus eragrostis	Nutsedge
Distichlis spicata	Saltgrass
Epilobium sp.	Willowherb
Eremocarpus setigerus	Dove weed
Erodium botrys	Stork’s bill
Eucalyptus globulus	Blue gum eucalyptus
Foeniculum vulgare	Fennel
Frankenia salina	Alkali heath
Fraxinus latifolia	Oregon ash
Hemizonia fitchii	Fitch’s tarweed
Hordeum murinum	Foxtail barley
Juglans hindsii	California black walnut

Scientific Name	Common Name
Lactuca serriola	Prickly lettuce
Lepidium latifolium	Pepperweed
Lolium perenne	Perennial ryegrass
Malva sp.	Mallow
Medicago polymorpha	Burclover
Melilotus albus	Sweetclover
Nerium oleander	Oleander
Paspalum dilatatum	Dallis grass
Phoenix sp.	Date palm
Photinia sp.	Photinia
Phragmites australis	Common reed
Picris echioides	Bristly ox tongue
Pinus sp.	Pine
Plantago lanceolata	English plantain
Polygonum lapathifolium	Willow weed
Polypogon monspeliensis	Rabbit-foot grass
Raphanus sativus	Wild radish
Rubus discolor	Himalayan blackberry
Rumex crispus	Curly dock
Salicornia virginica	Pickleweed
Salix gooddingii	Goodding’s black willow
Salsola kali	Russian thistle
Schinus molle	Peruvian pepper tree
Scirpus acutus	Tule
Scirpus californicus	California bulrush
Scirpus maritimus	Bulrush
Silybum marianum	Milk thistle
Solanum elaeagnifolium	Silverleaf nightshade
Sonchus oleraceus	Sow thistle
Taxus sp.	Yew
Typha angustifolia	Narrow-leaved cattail
Typha latifolia	Broad-leaved cattail
Washingtonia robusta	Mexican fan palm
Xanthium strumarium	Cocklebur

Based on the presence of annual grassland and wetland habitats within the proposed project, planning surveys for 13 covered plant species are required by the ECCC HCP/NCCP. Lists comprising an additional 40 species were obtained as part of the CNDDB, USFWS, and CNPS database queries. Special-status plant species with potential to occur within the local study area are described and their potential for presence is analyzed in Appendix G: Sensitive Plant Species. Species that lack suitable habitat in the local study area were determined by the biologists' site assessment to not be likely to occur in the local study area and are not analyzed further in this document. Two special-status plants found along the shoreline are discussed in Chapter 6.0: Aquatic Resources.

7.1.2.5 Special-status Wildlife Species

The project site is generally comprised of land used for industrial purposes such as tanks and paved lots/roads, which have little biological value. Grassland and ruderal vegetation in the local study area is fragmented and subject to frequent disturbance, though it is possible that less-disturbed areas provide forage and nesting habitat for resident and migratory raptors such as white-tailed kite, red-tailed hawk, and American kestrel, which prey on small mammals (e.g., shrews, moles, mice, ground squirrels) and reptiles (e.g., snakes, lizards) that inhabit the grasslands and ruderal areas.

Grasslands are also occupied by a variety of seed-eating and insectivorous migratory and resident birds. Common seed-eating birds include mourning dove, house finch (*Carpodacus mexicanus*), and white-crowned sparrow (*Zonotrichia leucophrys*). Insect eaters include western scrub jay, tree swallow (*Tachyneta bicolor*), northern mockingbird (*Mimus polyglottos*), and loggerhead shrike (*Lanius ludovicianus*).

Piscivorous (i.e., fish eating) birds, wading birds, shorebirds, gulls, and terns can be found in the seasonal wetlands at certain times of the year. Wading birds such as killdeer are commonly observed in the upland areas adjacent to wetlands. While riparian vegetation is poorly developed in the local study area, common riparian birds may occur in association with riparian vegetation, including finch species, white crowned sparrow, and red-winged blackbird. Birds that nest in wetland vegetation include red-winged blackbird (*Agelaius phoeniceus*). Western pond turtles sometimes occur in the open-water portions of freshwater marshes.

Several special-status animal species have potential to occur in the local study area. Western pond turtle is known to be present in Willow Creek west of the South Tank Farm. The Kirker Creek watershed east of the project supports the federally listed California red-legged frog, and marginal habitat for this species does occur in the local study area. A pair of white-tailed kites was observed foraging over grassland areas south of the East Tank Farm near the east gate and in the marshes associated with Willow Creek west of the project site. Additional special-status wildlife species with potential to occur within the regional study

area, or that have the potential to migrate through the local study area, are described in more detail in Appendix H: Sensitive Wildlife Species. Species that lack suitable habitat in the local study area per the biologists' site assessment were determined not likely to be present in the local study area are not analyzed further in this document.

Wildlife species observed during site visits and surveys are listed in Table 7-5. These species may use habitats within the existing facility site or immediately adjacent to it.

7.2 IMPACT ANALYSIS

7.2.1 Methodology for Impact Analysis

The existing conditions discussion for the regional and local study areas was developed by reviewing available information on special-status species known to occur or with potential to occur in the project vicinity. This review was supplemented with a field survey and aerial interpretation of habitat to determine if any special-status species or their potential habitats are present in the local study area.

The information review included maps and species accounts included in the ECCC HCP/NCCP; and queries of the USFWS species list databases, the CNDDB, and the CNPS inventory. Results of the CNDDB and USFWS queries are provided in Appendix I: CNDDB and USFWS Queries. A list of species with potential to occur in and/or be affected by the project was derived from these queries, and is provided in Appendix G and Appendix H. Habitat requirements and known or modeled ranges for potential species were obtained from the CDFW's California Wildlife Habitat Relationships Program (CDFW, 2011) and Appendix D of the ECCC HCP/NCCP Final EIR (2006). Species that either have no suitable habitat in the project area per the biologists' site assessment or whose known or modeled range does not include the project site are not addressed further in this document.

Table 7-5: Observed Wildlife Species

Scientific Name	Common Name
Agelaius phoeniceus	Red-winged blackbird
Aphelocoma californica	Western scrub jay
Bubo virginianus	Great horned owl (pellets only; species assumed)
Buteo jamaicensis	Red-tailed hawk
Canis latrans	Coyote (scat and skeleton)
Calypte anna	Anna's hummingbird
Carpodacus mexicanus	House finch
Cathartes aura	Turkey vulture
Charadrius vociferus	Killdeer
Columba livia	Pigeon
Corvus brachyrhynchos	American crow
Elanus leucurus	White-tailed kite
Falco sparverius	American kestrel
Felis catus	Domestic cat
Lanius ludovicianus	Loggerhead shrike
Larus californicus	California gull
Lepus californicus	Black-tailed jackrabbit
Melanerpes formicivorus	Acorn woodpecker (granary tree)
Mimus polyglottos	Northern mockingbird
Pacifastacus sp.	Crayfish
Passer domesticus	House sparrow
Phalacrocorax auritus	Double-crested cormorant
Sayornis nigricans	Black phoebe
Sceloporus occidentalis	Western fence lizard
Tyto alba	Barn owl (pellets only; species assumed)
Spermophilus beecheyi	California ground squirrel
Zenaida macroura	Mourning dove
Zonotrichia leucophrys	White-crowned sparrow

Biological surveys of the Terminal and proposed pipeline routes are listed in Table 7-2. In accordance with ECCC HCP/NCCP guidelines, the surveys included the identification of the following biological resources:

- land cover type;
- suitable breeding habitat for Swainson's hawk, California tiger salamander, California red-legged frog, covered shrimp species, and no-take wildlife species (golden eagle, white-tailed kite);
- suitable breeding, roosting, or denning habitat for Townsend's big-eared bat;
- suitable habitat for San Joaquin kit fox and western burrowing owl;
- suitable habitat for giant garter snake;
- covered and no-take plants;
- rare vegetation and landscape features; and
- jurisdictional wetlands and waters.

Land cover types within the BNSF right-of-way were assessed from 2010 aerials. Potential impacts of the project on these resources were identified by comparing the habitat requirements of those species identified during the review with the habitat available within the local study area. A determination was then made as to what effect the proposed project would have on those species.

7.2.2 Significance Criteria

For the purposes of this analysis, an impact was considered to be significant and to require mitigation if it would result in any of the following:

- Substantial effect on threatened or endangered species, or protected species (including candidate, sensitive, or special-status species)

- Substantial effect on sensitive native plant communities, as defined by the CDFW

- Substantial effect on protected wetlands or other waters of the United States under the Clean Water Act, 40 Code of Federal Regulations, Section 404

- Isolate wildlife populations and/or substantially disrupt wildlife migratory or movement corridors, or impede use of native wildlife nursery sites

- Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance

- Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or State habitat conservation plan

7.2.3 Impacts and Mitigation Measures

7.2.3.1 Proposed Project

Construction-related Impacts

Impact Terrestrial Resources (TR)-1: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species). (Less than significant with mitigation.) Construction activities would be conducted to avoid and minimize impacts on special-status species, including timing those project activities that could affect special-status species to coincide with times when special-status species are likely to be absent, using work-exclusion areas, and confining work activities to previously disturbed and developed areas (Environmental Commitment TR-1; refer to Chapter 2.0: Proposed Project and Alternatives).

The project proponent would seek coverage for covered activities under the terms of the ECCC HCP/NCCP (Environmental Commitment TR-2; refer to Chapter 2.0: Proposed Project and Alternatives). Construction activities within the local study area would take place within the UDA and would be considered "covered activities" under the ECCC HCP/NCCP. Within the UDA, covered activities broadly include all ground- and habitat-disturbing activities and projects, including construction, maintenance, and use of industrial facilities and public and private utilities (ECCC HCP/NCCP Final EIR Section 2.3.1: Activities within the Urban Development Area [2006]). The ECCC HCP/NCCP has evaluated and complied with avoidance and minimization requirements at a regional scale to eliminate the need for individual projects to evaluate avoidance and minimization at the project scale. To receive coverage under the ECCC HCP/NCCP, the project proponent would be required to submit a Planning Survey Report (PSR) to the City of Pittsburg (Environmental Commitment TR-2). The PSR would be reviewed and approved by the City prior to the issuance of a grading permit and all avoidance and minimization measures from that final PSR would be included on the grading (or site development) permit. The project proponent would be required to comply with all relevant avoidance and minimization measures from the final approved PSR to reduce impacts to covered species under the ECCC HCP/NCCP, including conducting planning surveys, preconstruction surveys as necessary, and implementing best management practices (Environmental Commitment TR-3). A summary of survey requirements and best management practices for wildlife species covered under the ECCC HCP/NCCP is provided in Table 7-6.

In addition, mitigation measures, detailed below, are proposed to reduce impacts for species not covered under the ECCC HCP/NCCP to levels that are less than significant. Therefore, with the implementation of Mitigation Measures TR-1, TR-2, TR-3, TR-4, TR-5, and TR-6, the project would have a less-than-significant impact on special-status species.

Table 7-6: Summary of Survey Requirements and Best Management Practices for Key Covered Wildlife Species

Land-Cover Type	Specific Habitat Elements	Species	Requirements			
			Planning Survey	**Preconstruction Survey**	**Best Management Practices**	**Construction Monitoring**
Grasslands	All	Western burrowing owl	Identify and map potential habitat	Establish presence/absence (pellets, whitewash, prey remains) Determine status and map all burrows Document use of habitat (e.g., breeding, foraging)	Avoid occupied nests during breeding season; (Feb to Sep) Avoid occupied burrows during nonbreeding season (Sep to Feb) Install one-way doors in occupied burrow (if avoidance not possible) Monitor burrows with doors installed	Establish buffer zones (250 feet) around nests Establish buffer zones (160 feet) around burrows
Aquatic (ponds, wetlands, streams, and marshes)	Ponds and wetlands in grassland	California tiger salamander	Identify and map potential breeding habitat Document habitat quality and features Provide City with photo documentation and report	Provide written notification to the USFWS and CDFW regarding timing of construction and likelihood of occurrence on-site	Allow agency staff to translocate species, if requested	None

Land-Cover Type	Specific Habitat Elements	Species	Requirements			
			Planning Survey	**Preconstruction Survey**	**Best Management Practices**	**Construction Monitoring**
Aquatic (ponds, wetlands, streams, and marshes)	Slow-moving streams, ponds, or marshes	California red-legged frog	Identify and map potential breeding habitat Document habitat quality and features Provide City with photo documentation and report	Provide written notification to the USFWS and CDFW regarding timing of construction and likelihood of occurrence on-site	Allow agency staff to translocate species, if requested	None
Any	Buildings	Townsend's big-eared bat	Map and document potential breeding/roosting habitat	Establish presence/ absence Determine if potential sites were recently occupied (guano)	Seal hibernacula before November Seal nursery sites before April Delay construction near occupied sites until the hibernation or nursery seasons are over	None
Any	Potential nest sites (trees within species range usually below 200 feet in elevation)	Swainson's hawk	Inspect large trees for presence/absence of nest sites	Determine whether potential nests are occupied	No construction within 1,000 feet of occupied nests within breeding season (March 15 to Sep 15) If necessary, remove active nest tree after nesting season to prevent occupancy in second year	Establish 1,000-foot buffer around active nest and monitor compliance

Land-Cover Type	Specific Habitat Elements	Species	Requirements			
			Planning Survey	**Preconstruction Survey**	**Best Management Practices**	**Construction Monitoring**
Any	Potential nest sites (secluded cliffs with overhanging ledges; large trees)	Golden eagle	Document and map potential nests	Establish presence and/or absence of nesting eagles	No construction within 0.5 mile near active nests (most activity late January through August)	Establish 0.5-mile buffer around active nest and monitor compliance

Modernization and reactivation of the existing fuel storage and distribution systems would take place within currently developed portions of the existing Terminal, where any vegetation present is confined to ruderal types. A permanent wetland located south of the South Tank Farm and between Tanks 15 and 16 has the potential to support special-status plant and wildlife species; however, work would not take place in this wetland.

The proposed pipeline alignments would avoid impacting seasonal wetlands (refer to Environmental Commitment TR-4 in Chapter 2.0: Proposed Project and Alternatives. They do cross annual grassland, which has the potential to support sensitive plant and wildlife species. In addition, small-mammal burrows located throughout the Terminal site and along the proposed pipeline alignments provide nesting and cover habitat for a number of species. The impacts to annual grassland would be temporary and, under the terms of the ECCC HCP/NCCP and as detailed in Chapter 2.0: Proposed Project and Alternatives, appropriate requirements for returning the land to its preconstruction condition would be attached as conditions to the grading or site permit issued by the City. Potential impacts to plants and wildlife are analyzed separately below.

The Railroad Transload Facility would impact three intermittent streams and two drainage ditches with the potential to support sensitive plants and wildlife. The proposed landing track would require the construction of three bridges across intermittent streams. In addition, small-mammal burrows located within ruderal vegetation have potential to provide nesting and cover habitat for a number of species. Impacts to aquatic features and ruderal grasslands would be permanent. The project would comply with all the requirements of the ECCC HCP/NCCP (refer to Environmental Commitments TR-2 and TR-3 in Chapter 2.0: Proposed Project and Alternatives) and would be required to pay a per-acre fee for impacts to ruderal grasslands, a per-foot fee for impacts to streams and drainages, and a per-acre fee for any fill in stream channels, as set forth in the ECCC HCP/NCCP and the City's implementing ordinance, which has been codified as PMC Chapter 15.108.

Special-status Plants

Ruderal and annual grasslands and seasonal wetlands along the proposed pipeline alignments may support sensitive plant species, including:

- Diamond-petaled California poppy (*Eschscholzia rhombipetala*)
- Large-flowered fiddleneck (*Amsinckia grandiflora*)
- Mt. Diablo fairy-lantern (*Calochortus pulchellus*)
- Round-leaved filaree (*California macrophylla*)
- Showy golden madia (*Madia radiata*)
- Bent-flowered fiddleneck (*Amsinckia lunaris*)
- Diablo helianthella (*Helianthella castanea*)
- Robust monardella (*Monardella villosa* ssp. *globosa*)

If populations of these plants were to occur in areas subject to soil-disturbing activities during construction, then these populations could be extirpated. Such impacts would be significant. However, the condition of the ruderal and annual grasslands and seasonal wetlands on the project site are highly disturbed and degraded. In addition, focused surveys for special-status plants performed in 2012 in adjacent annual grasslands found no special-status plant species. With the exception of the large-flowered fiddleneck, the species listed above are "covered species" under the ECCC HCP/NCCP. With implementation of Mitigation Measure TR-1, potential impacts to covered species would be less than significant.

The large-flowered fiddleneck is not a covered species under the ECCC HCP/NCCP. However, all natural populations in Contra Costa County have been extirpated (ECCC HCP/NCCP, 2006); thus, large-flowered fiddleneck is not likely to be impacted by the project and potential impacts to this species are considered less than significant.

Mitigation Measure TR-1: Blooming period surveys for special-status plants species and impact avoidance. If required by the ECCC HCP/NCCP, additional surveys during the blooming period shall be conducted for large-flowered fiddleneck (April to May), bent-flowered fiddleneck (March to June), round-leaved filaree (March to May), Mt. Diablo fairy-lantern (April to June), diamond-petaled California poppy (March to April), Diablo helianthella (March to June), showy golden madia (March to May), robust monardella (June to July), and slender-leaved pondweed (May to July). Two field surveys shall be conducted to capture ground conditions during the blooming period. A report documenting the results of the rare plant surveys shall be submitted to the City of Pittsburg prior to the start of construction. Due to the degraded and disturbed conditions of the ruderal and annual grasslands and seasonal wetlands in the project site, and the resulting low potential for special-status plants to be present in these areas, the requirement for blooming period surveys may be waived by the City of Pittsburg in accordance with the ECCC HCP/NCCP.

In the event that any special-status species are found, impacts shall be avoided where practicable through the use of 100-foot exclusion buffers. In the event that impacts are unavoidable, plant salvage measures for covered species shall be undertaken as outlined in ECCC HCP/NCCP Conservation Measure 3.10.

Special-status Animals

Sensitive animal species that may rest, breed, forage, or migrate through the Terminal, the proposed pipeline alignments, or the area adjacent to the project could be impacted by construction. Indirect impacts to sensitive animal species could occur if species are disturbed by construction noise or increased human presence during the breeding or nesting season. Direct impacts to sensitive wildlife species that could be present in or move through the construction area could be caused by habitat disturbance or increased vehicle traffic during construction. Based on the results of planning surveys, foraging and/or breeding habitat for the following key wildlife species covered under the ECCC HCP/NCCP was identified: western burrowing owl, California red-legged frog, Townsend's big-eared bat, Swainson's hawk, and golden eagle. Additional survey requirements, best management practices, and construction monitoring measures from the ECCC HCP/NCCP would be incorporated into this project and are summarized in Table 7-5.

The CDFW-designated "no-take" white-tailed kite could forage in the grasslands south of Willow Pass Road. This species is not covered under the ECCC HCP/NCCP. The following CDFW Species of Special Concern may forage, rest, or migrate through the wetlands at the facility: pallid bat, western red bat, western pond turtle, and short-eared owl.

Potential project impacts to special-status species associated with marsh lands are discussed in Chapter 6.0: Aquatic Resources. Specific impacts to the species listed above are described below.

Mammals

Townsend's western big-eared bat, western red bat, and pallid bat have potential to occur at the project site. The security lights at the storage terminal attract insects, providing foraging opportunities for bats, and the nonnative trees along the east perimeter of the project provide resting area and low-quality roosting habitat. Removal of storage containers and large trees, along with the retrofitting of the storage tanks on the project site, would remove potential roosting habitat. With the implementation of Mitigation Measure TR-2, impacts to sensitive bat species would be less than significant.

> **Mitigation Measure TR-2: Preconstruction surveys for Townsend's western big-eared bat and sensitive bat species, and impact avoidance.** A preconstruction survey is required to determine whether the sites are occupied immediately prior to construction, or whether they show signs of recent previous occupation. Preconstruction surveys are used to determine what avoidance and minimization requirements are triggered before construction and whether construction monitoring is necessary. A report documenting the results of the preconstruction survey shall be submitted to the City of Pittsburg prior to the start of construction.

If the species is discovered, or if evidence of recent prior occupation is established, construction shall be scheduled such that it minimizes impacts on bats. Hibernation sites with evidence of prior occupation shall be sealed before the hibernation season (November to March), and nursery sites shall be sealed before the nursery season (April to August). If the site is occupied, then the action shall occur either prior to or after the hibernation season for hibernacula and after August 15 for nursery colonies. Construction shall not take place as long as the site is occupied.

Birds

Raptors such as short-eared owl, western burrowing owl, golden eagle, ferruginous hawk, Swainson's hawk, and white-tailed kite have potential to occur at the project site and adjacent areas. Construction of the proposed pipeline alignments through annual grassland south of Willow Pass Road would potentially temporarily reduce foraging habitat for short-eared owl, western burrowing owl, golden eagle, Swainson's hawk, and white-tailed kite, and potential nesting habitat for western burrowing owl and short-eared owl. The disturbance to foraging habitat caused by pipeline construction would be short-term and temporary. The proposed work area represents only a fraction of the locally available foraging areas. As described in Chapter 2.0: Proposed Project and Alternatives and under the terms of the ECCC HCP/NCCP, the grassland would be returned to preconstruction conditions following placement of the pipelines and conditions to ensure this would be attached to the grading and/or site permit.

With the implementation of Mitigation Measure TR-3 and Mitigation Measure TR-4, impacts to raptors would be less than significant. Mitigation Measures TR-8 and TR-9 require preconstruction surveys for raptor nests; these surveys can also be used to determine the presence or absence of other nesting birds within the project area. In addition, Mitigation Measure TR-9, which outlines measures to reduce impacts during nesting season, would reduce impacts to special-status bird species not covered under the ECCC HCP/NCCP to levels that are less than significant.

Mitigation Measure TR-3: Golden eagle, Swainson's hawk, and white-tailed kite nest surveys and impact avoidance. Prior to construction, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey for potential golden eagle, Swainson's hawk, and white-tailed kite nests. The survey area shall include tall trees and other potential nesting sites within 0.5 mile of the project site. The presence of golden eagle nests within 0.5 mile or Swainson's hawks within 1,000 feet of the project shall trigger preconstruction surveys to determine nest occupancy. A report documenting the results of the preconstruction survey shall be submitted to the City of Pittsburg prior to the start of construction.

If nests are occupied during the nesting season (approximately January to March for golden eagle; March 15 to September 15 for Swainson's hawk; February to August for white-tailed kite), the project proponents shall mitigate according to the standards of the ECCC HCP/NCCP, which include guidelines for impact avoidance and biological monitoring. Per Section 3503 of the California Fish and Game Code, nests of white-tailed kite shall not be disturbed or destroyed. Per Section 6.4.3 of the ECCC HCP/NCCP, construction activities shall be prohibited within 0.5 mile of active golden eagle or Swainson's hawk nests. This buffer may be reduced by the City of Pittsburg in coordination with the CDFW and/or USFWS to accommodate limited construction activities.

Mitigation Measure TR-4: Western burrowing owl preconstruction surveys and impact avoidance. No more than 30 days prior to construction of the proposed pipelines, a USFWS/CDFW-approved biologist shall conduct a preconstruction survey in the annual grassland south of Willow Pass Road according to guidelines in Section 6.4.3 of the ECCC HCP/NCCP to identify burrows and owls. During the breeding season (February 1 to August 31), surveys shall document whether burrowing owls are nesting in or directly adjacent to disturbance areas. During the nonbreeding season (September 1 to January 31), surveys shall document whether burrowing owls are using habitat in or directly adjacent to any disturbance area. Survey results shall be valid only for the season (breeding or nonbreeding) during which the survey is conducted. A report documenting the results of the preconstruction survey shall be submitted to the City of Pittsburg prior to the start of construction, and all mitigation measures required by the ECCC HCP/NCCP shall be attached as conditions to either the grading or site development permit issued by the City.

If burrowing owls are found during the breeding season, the project proponent shall avoid all nest sites that could be disturbed by project construction during the remainder of the breeding season or while the nest is occupied by adults or young. Avoidance shall include establishment of a 160-foot buffer zone. Construction may occur during the breeding season if a qualified biologist monitors the nest and determines that the birds have not begun egg laying and incubation or that the juveniles from the occupied burrows have fledged.

During the nonbreeding season (September 1 to January 31), the project proponent shall avoid the owls and the burrows they are using, if possible. If occupied burrows for burrowing owls are not avoidable, passive relocation shall be implemented. Owls shall be excluded from burrows in the immediate impact zone and within a 160-foot buffer zone by installing one-way doors in burrow entrances. These doors shall be in place for 48 hours prior to excavation. The area shall be monitored daily for one week

to confirm that the owl has abandoned the burrow. Whenever possible, burrows shall be excavated using hand tools and refilled to prevent reoccupation (CDFW, 1995). Plastic tubing or a similar structure shall be inserted in the tunnels during excavation to maintain an escape route for any owls inside the burrow.

Reptiles

Western pond turtles may occur in the permanent wetland between Tanks 15 and 16 and in the drainage ditches and intermittent streams in the BNSF right-of-way during the rainy season. If pond turtles are present during construction at these locations, then excavation and operation of heavy equipment during the rainy season could result in incidental take of this species. With the implementation of Mitigation Measure TR-5, impacts to western pond turtles would be less than significant.

Mitigation Measure TR-11, designed to protect sensitive plant habitats in the permanent wetland between Tanks 15 and 16, would also protect western pond turtles. Project activities would have direct impacts on wetlands, stream channels, and drainage ditches, and, therefore, pond turtles. If the Rail Transload Facility is constructed during the summer and early fall when water is typically absent in seasonal wetlands, intermittent streams, and drainage ditches along or adjacent to construction, then western pond turtles would not be impacted.

Mitigation Measure TR-5: Western pond turtle avoidance and minimization. Preconstruction surveys shall be conducted by a qualified biologist no more than 30 days prior to construction. Should a western pond turtle be identified, construction shall not commence until the biologist translocates the turtle or until the turtle leaves the construction site. A report documenting the results of the preconstruction survey shall be submitted to the City of Pittsburg prior to the start of construction, and all mitigation measures required by the ECCC HCP/NCCP shall be attached as conditions to either the grading or site permit by the City.

Amphibians

California red-legged frog and California tiger salamander may occur in the permanent wetland between Tanks 15 and 16 and in the intermittent streams and drainage ditches in the BNSF right-of-way during the rainy season. Project activities are expected to have direct impacts on drainage ditches and streams, and, therefore, these species. With the implementation of Mitigation Measure TR-6, the project would ensure impacts to sensitive amphibian species would be less than significant.

Mitigation Measure TR-6: California red-legged frog and California tiger salamander habitat assessment and notification. Following guidelines in Section 6.4.3 of the ECCC HCP/NCCP, no preconstruction surveys are required for these species. The project proponent shall provide

written notification to the USFWS, CDFW, and the Implementing Entity (City of Pittsburg), including photos and a breeding habitat assessment, prior to disturbance of any suitable breeding habitat for California red-legged frog and California tiger salamander. The project proponent shall also notify these parties of the approximate date of removal of the breeding habitat at least 30 days prior to this removal to allow USFWS or CDFW staff to translocate individuals, if requested by either agency. Should the USFWS or CDFW communicate their desire to translocate individuals, the project proponent must coordinate the timing of disturbance of habitat to allow the USFWS or CDFW to translocate individuals. The USFWS and CDFW shall be allowed 45 days to translocate individuals from the date the first written notification is submitted by the project proponent, unless a longer period is agreed to by the project proponent, USFWS, and CDFW. Construction monitoring is not required.

Impact TR-2: Cause the loss of sensitive native plant communities, as defined by the CDFW. (Less than significant with mitigation.) A permanent wetland occurs within the footprint of the existing facility at the north fenceline of Tank 16. Contractor encroachment into this area could degrade or destroy this habitat, causing a direct significant impact. Indirect significant impacts could occur if sediment from on-site construction were allowed to enter the wetland. With the implementation of Mitigation Measure TR-7, potential impacts to sensitive native plant communities would be less than significant.

Mitigation Measure TR-7: Environmentally sensitive area avoidance and education. Environmentally sensitive area information shall be shown on contract plans and demarcated in the field for work avoidance. Environmentally sensitive area provisions could include, but are not limited to, the use of temporary orange fencing to delineate the proposed limit of work in areas adjacent to sensitive resources, or to delineate and exclude sensitive resources from potential construction impacts. Specific measures to protect aquatic and wetland features are detailed in Mitigation Measure TR-8 and shall be attached as conditions to either the grading or site development permit issued by the City.

A qualified biologist shall create a Worker Environmental Awareness Program (WEAP) for work on the terrestrial portions of the project to provide construction workers with training in identification and avoidance of environmentally sensitive areas. Training material shall be sent to the City of Pittsburg for review two weeks prior to construction. Proof of training in the form of sign-in sheets shall be submitted to the City of Pittsburg within 48 hours of each training conducted under the WEAP.

Impact TR-3: Cause the loss of wetlands or other waters of the United States under the Clean Water Act, 40 Code of Federal Regulations 230 Section 404. (Less than significant with mitigation.) Construction at the storage terminal and for the proposed KLM Pipeline connection and Rail Pipeline would be designed to avoid impacts to wetlands and waters of the United States (Environmental Commitment TR-4; refer to Chapter 2.0: Proposed Project and Alternatives).

The KLM Pipeline connection would be installed by conventionally boring under the BNSF right-of-way, and would avoid impacts to two drainage ditches, AQ-2 and AQ-3.

The Rail Transload Facility would impact two likely jurisdictional drainage ditches and three intermittent streams. The ECCC HCP/NCCP contains stream setback requirements and exceptions for streams within the UDA. The final design and configuration of the bridge crossings would comply with the provisions of Conservation Measure 1.7, Establish Stream Setbacks, of the ECCC HCP/NCCP.

With the implementation of Mitigation Measure TR-8, potential impacts to wetlands and waters of the United States would be less than significant.

Impacts to PW-1 at the storage terminal would be avoided by implementation of Mitigation Measure TR-7, which requires that sensitive environmental resources be shown on contract plans and delineated in the field and through the implementation of Mitigation Measure TR-8 below, which contains appropriate measures from Conservation Measure 1.7, Establish Stream Setbacks, and Conservation Measure 2.12, Wetland, Pond, and Stream Avoidance and Minimization.

Mitigation Measure TR-8: Aquatic and wetland feature impact avoidance.

- All wetlands and waters to be avoided shall be temporarily staked in the field by a qualified biologist.

- Work exclusion buffer zones equal to 50 feet or the extent practicable shall be maintained from the edge of all aquatic and wetland features. Construction activities that occur within 50 feet of an aquatic or wetland feature shall require environmental monitoring. Fencing shall be erected between the outer edge of the buffer zone and the project area. Fencing shall be temporary and removed after the construction is complete.

- Appropriate erosion-control measures (e.g., fiber rolls, filter fences, vegetative buffer strips) shall be used on-site to reduce siltation and runoff of contaminants into wetlands, ponds, streams, or riparian

woodland/scrub. Filter fences and mesh shall be of material that would not entrap reptiles and amphibians. Erosion control blankets shall be used as a last resort because of their tendency to biodegrade slowly and trap reptiles and amphibians. Erosion-control measures shall be placed between the outer edge of the buffer and the project site. Erosion barriers for disturbances in the South Tank Farm and between Tanks 15 and 16 shall be permanent. Fiber rolls used for erosion control shall be certified as free of noxious weed seed. Seed mixtures applied for erosion control shall not contain invasive nonnative species, and shall be composed of native species or sterile nonnative species.

- Personnel conducting ground-disturbing activities within or adjacent to the buffer zone of wetlands, ponds, streams, or riparian woodland/scrub shall be trained by a qualified biologist in these avoidance and minimization measures and the permit obligations of project proponents working under the ECCC HCP/NCCP. Vehicles and equipment shall be parked on pavement, existing roads, and previously disturbed areas.

- Soil excavated during construction and intended for backfill shall be taken by truck from the site and stored at the existing storage terminal or in the annual grassland south of West 10th Street to be used as backfill.

- Trash generated by covered activities shall be promptly and properly removed from the site.

- No construction or maintenance vehicles shall be refueled within 200 feet of wetlands, ponds, streams, or riparian woodland/scrub unless a bermed and lined refueling area is constructed and hazardous material absorbent pads are available in the event of a spill.

- Where feasible, stream crossings shall be located in stream segments without riparian vegetation and bridge footings shall be built outside the stream banks.

- Herbicide shall not be applied within 100 feet of wetlands, ponds, streams, or riparian woodland/scrub; however, where appropriate to control serious invasive plants, herbicides that have been approved for use by the EPA in or adjacent to aquatic habitats may be used as long as label instructions are followed and applications avoid or minimize impacts on covered species and their habitats. In seasonal or intermittent stream or wetland environments, appropriate herbicides may be applied during the dry season to control nonnative invasive

species (e.g., yellow star-thistle). Herbicide drift shall be minimized by applying the herbicide as close to the target area as possible.

Impact TR-4: Isolate wildlife populations and/or substantially disrupt wildlife migratory or movement corridors, or use of native wildlife nursery sites. (Less than significant with mitigation.) Wetlands, drainage channels, and grasslands all provide opportunity for established wildlife movement in the local study area. Although construction of the pipelines has the potential to temporarily disrupt wildlife movement through the area, pipeline construction would take place in a rolling fashion and so would not substantially interfere with connectivity between blocks of habitat. Therefore, this impact would be less than significant.

Trees, shrubs, and small-mammal burrows within the project site could provide nesting habitat for a wide variety of migratory birds. Migratory birds may also nest on the ground in grasslands, parking lots, and beneath shrubs. Construction during the nesting season could, therefore, result in the loss of active bird nests, which would be a significant impact. With implementation of Mitigation Measure TR-9, potential impacts on migratory or movement corridors and/or wildlife nursery sites would be less than significant. In addition, species-specific Mitigation Measure TR-3 and Mitigation Measure TR-4 detail additional measures that, when implemented, would reduce potential impacts to less-than-significant levels for golden eagle, Swainson's hawk, and western burrowing owl.

Mitigation Measure TR-9: Nesting bird surveys. To avoid tree removal and small-mammal burrow removal during nesting season, tree or shrub removal or pruning shall be avoided from February 1 through August 31, the bird-nesting period, to the extent feasible. A qualified biologist shall conduct preconstruction surveys no more than 14 days prior to construction to determine if migratory bird nests are present. A report documenting the results of the preconstruction survey shall be submitted to the City of Pittsburg prior to the start of construction.

Provided that no birds or eggs are present in the nest, the nest may be removed without violation of the MBTA (USFWS, 2003). If eggs or birds are present, the biologist shall, in consultation with the CDFW, designate a construction-free buffer zone around the nest until the young have fledged.

Impact TR-5: Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance. (No impact.) The project would comply with all local policies or ordinances protecting biological resources.

Mitigation Measure: No mitigation required.

Impact TR-6: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. (Less than significant.) In December 2006, the City adopted the ECCC HCP/NCCP. The terrestrial portion of the project is located within Development Zone 1 of the Inventory Boundary of the ECCC HCP/NCCP. As described under Impact TR-1, the construction activities that are planned are considered "covered activities" under the ECCC HCP/NCCP, and habitat for special-status plants and wildlife species covered under the plan are found in the project site and proposed pipeline alignment. The project proponent would comply with the provisions of the ECCC HCP/NCCP that are triggered by the project as described above as a condition of CEQA approval by the City; provisions of the ECCC HCP/NCCP would be attached as conditions to the grading or site permit. There are no other applicable approved conservation plans. Therefore, non-compliance with a relevant plan is not considered a significant impact to biological resources.

Mitigation Measure: No mitigation required.

Operational Impacts

Impact TR-7: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of stormwater runoff. (Less than significant.) Contaminated stormwater runoff from the facility has the potential to degrade habitat and water quality in adjacent streams and wetlands. The existing facility operates and maintains a stormwater drainage system. A complete description of the stormwater drainage system can be found in Chapter 17.0: Water Resources.

All stormwater from the Terminal shall be ultimately collected into the existing stormwater retention basin situated along the north end of the South Tank Farm for discharge into Willow Creek. Provisions to ensure that contaminated water is treated prior to release include visual inspection, use of an oil water separator, and other tests as detailed in Chapter 2.0: Proposed Project and Alternatives and described in Impact WR-6 in Chapter 17.0: Water Resources. Water can only be discharged into Willow Creek by manual activation of a pump. When not actively pumping, the valve between the basin and the creek would remain closed, ensuring that the contents of the basin cannot accidentally flow into the creek (Environmental Commitment TR-5; refer to Chapter 2.0: Proposed Project and Alternatives).

The basin also functions as secondary containment for the South Tank Farm. It was designed to accommodate the contents of one storage tank in addition to accumulated stormwater from a modeled storm. Therefore, it is not likely to allow stormwater overflow during routine storm events.

The modernization of the Terminal would not significantly change the amount of impervious surface. No increases over existing discharge in stormwater runoff would be discharged to Willow Creek and its associated marshes. The parking lot associated with the office and control building would be constructed with a permeable surface to reduce stormwater runoff; runoff would be directed to the South Tank Farm stormwater retention basin where it would be treated prior to release (Environmental Commitment TR-6; refer to Chapter 2.0: Proposed Project and Alternatives). Therefore, stormwater runoff from the project would not be considered a significant impact to biological resources.

Construction of new structures would avoid direct and indirect impacts on local hydrological conditions and erosion by incorporating the applicable Provisions of the C.3 Amendments for New Development and Redevelopment of the Contra Costa County Clean Water Program's amended National Pollutant Discharge Elimination System Permit (order no. R5-2010-0102; permit no. CAS 0083313), as described in Chapter 17.0: Water Resources.

As described in Conservation Measure 1.10, Maintain Hydrologic Conditions and Minimize Erosion, the project would:

- Develop stormwater treatment controls such as detention basins sized, at a minimum, to treat runoff in accordance with the criteria provided in Provision C.3.

- Implement a verification program for treatment controls to ensure that all installed controls are appropriately operated and maintained.

- Control peak runoff flows and volumes by creating and implementing a Hydrography Modification Management Plan.

- Provide compensatory mitigation to the City where meeting Provision requirements is physically impractical.

- Limit the use of stormwater controls that function primarily as infiltration devices to protect groundwater quality and local stream hydrograph (Environmental Commitment TR-7; refer to Chapter 2.0: Proposed Project and Alternatives).

Mitigation Measure: No mitigation required.

Impact TR-8: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of routine maintenance. (Less than significant.) Pipeline maintenance along the KLM Pipeline connection and Rail Pipeline could require soil-disturbing activities with the potential to impact special-status plants or animals. Operation of the crude oil pipelines would not cause impacts to special-status plants or animals. However, maintenance of the pipelines could require excavation of a section of the pipeline for inspection and/or repair. Regular inspection of the pipeline would be performed using remote-sensing pigs, which run inside of the pipeline, and, therefore, would not require excavation. Excavation of the pipeline for maintenance would occur infrequently. Any maintenance activities requiring excavation would be conducted in accordance with guidelines in Chapter 6 of the ECCC HCP/NCCP, provisions of which would be attached as conditions to the site's grading or development permit. Therefore, routine maintenance of the pipeline would not be considered a significant impact to biological resources.

Mitigation Measure: No mitigation required.

Impact TR-9: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species) as a result of collisions or electrocutions from power lines. (Less than significant.) The project includes installation of a substation that would tie into Pacific Gas and Electric Company's (PG&E) Pittsburg Power Plant 115-kilovolt Substation located within the PG&E Switchyard. Due to the presence of adjacent wetlands west of the facility, the project site is within the Raptor Concentration Zone, as defined by PG&E, and could result in bird collisions or electrocution from aboveground power lines. Any aboveground power lines would be constructed in accordance with PG&E bird-safe standards as defined in their Avian Protection Plan (PG&E, 2007) (Environmental Commitment TR-8; refer to Chapter 2.0: Proposed Project and Alternatives). PG&E's Avian Protection Plan includes bird-safe construction design standards, procedures for nest management, and mortality-reduction measures developed in coordination with the USFWS. Therefore, collisions or electrocution from power lines would not be considered a significant impact.

Mitigation Measure: No mitigation required.

Impact TR-10: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of a hazardous materials spill. (Significant and unavoidable.) Hazardous material spills have the potential to cause injury or harm to plants, wildlife, and sensitive habitats. Injury means a measurable adverse change, either long- or short-term, in the chemical or physical quality of the viability of a natural resource. Change can result either directly or indirectly from exposure to a discharge of oil, from exposure to a product, or from reactions resulting from a discharge of oil.

A potential crude oil (or partially refined crude oil) release from a pipeline, encompassed in the proposed project, would pose a risk to special-status species and sensitive habitats. A crude oil release could occur in the form of a pipeline rupture or pipeline leak. Pipeline ruptures have a higher associated release volume and a significantly lower frequency in comparison to pipeline leaks. Pipeline leaks have a lower associated release volume (4,200 gallons or less) and a significantly higher frequency in comparison to pipeline ruptures. The likelihood of a release and the reasonable worst-case spill volumes are evaluated and discussed in Chapter 10.0: Hazards and Hazardous Materials. As concluded in Chapter 10.0, it is unlikely that a pipeline release would occur along pipelines included in the proposed project; however, if there were a rupture or leak, the impacts to special-status species and sensitive habitats could be significant and unavoidable, even with the implementation of an Spill Prevention, Containment, and Countermeasure (SPCC) Plan, as described in Chapter 2.0: Proposed Project and Alternatives and Mitigation Measure TR-10.

Discharged oil from failure of tank safety containment devices could travel from the facility before it is contained, causing injury to special-status species and sensitive environments. A potential tank failure at the East Tank Farm would be contained within that unit's individual secondary containment system, which has a capacity equal to that of the individual tank (162,000 barrels). Minor spills in the South Tank Farm would be routed to the stormwater retention basin, which acts as secondary containment for the 10 tanks in the South Tank Farm. As discussed above, the basin was designed with the capacity to hold a tank's discharge in addition to stormwater. Multiple tank failure is unlikely; however, if there were to be an event such that the basin was overwhelmed and crude oil traveled outside the facility, it would be a potentially catastrophic event. Even with the implementation of a Facility Response Plan, as described in Chapter 2.0: Proposed Project and Alternatives, impacts to special-status species and sensitive habitats could be significant and unavoidable.

The Rail Transload Facility would receive five unit trains per week. Each unit train contains 104 rail tank cars, with a capacity of 30,000 gallons each. Oil would be vacuumed from each car into a crude oil transfer pump vault through a hose coupled to the bottom of the tank. Because of the high number of temporary

couplings during transfer, crude oil release is likely to occur. However, crude oil would only be transferred within a secondary containment system with a 100,000 gallon capacity that would direct spilled crude oil into a tank for recovery and to limit vapor formation. As discussed in Chapter 10.0: Hazard and Hazardous Materials, because the capacity of the secondary containment substantially exceeds the worst-case release scenario of one full rail tank car (30,000 gallons) and vapors would remain below levels that are unsafe off-site, the hazard of a crude oil release during rail car unloading would be less than significant, and thus impacts to special-status species and sensitive habitats would be less than significant as well.

As discussed in Chapter 10.0: Hazards and Hazardous Materials, BNSF train accident rates over the past 10 years are low. BNSF had a train accident rate ranging between 2 and 3.6 accidents per million train miles, with a consistent trend of accident reduction over this period. The average accident rate for the 10-year period is three accidents per million miles. Table 10-6 in Chapter 10.0 shows that of the average of 552 total BNSF train accidents per year over the 10-year period, approximately 1.3 percent resulted in hazardous material releases of some unknown quantity. Although it is unlikely, derailment of a unit car could result in the release of crude oil from rail tank cars, causing injury to special-status species and sensitive environments. Impacts to special-status species and sensitive habitats could be significant and unavoidable.

Mitigation Measure TR-10: Implementation of an SPCC Plan. An SPCC Plan shall be prepared to address spills resulting from operation of the pipelines and storage terminal. The SPCC Plan shall include the following provisions to mitigate impacts to biological resources:

1. A vulnerability analysis section that provides information about environmentally sensitive resources that could be harmed in the event of a spill.

2. A response section that includes:

    a. Notification of the spill to designated USFWS and CDFW offices.

    b. Specific measures to contain the spread of spilled oil within environmentally sensitive habitat utilized by special-status plant and wildlife species and any federal, State, county, or city-designated environmentally sensitive areas.

    c. Specific measures to block wildlife access to oiled areas through the use of physical barriers; for spill areas that are smaller and well defined, hazing methods (techniques that use

visual and auditory deterrent methods such as shiny reflectors or recordings of predator calls) may be used.

d. Species- and site-specific procedures for collection, transportation, and treatment of oiled wildlife, particularly for sensitive species.

e. Oil removal methods that incorporate feasible, low-impact, site-specific techniques that minimize impacts to sensitive habitat. Oil removal methods should include, but are not limited to, hand cutting contaminated vegetation and using low-pressure water flushing to remove spilled material from particularly sensitive wildlife habitats such as coastal marshes. Mechanical oil removal, high-pressure or hot-water flushing, and sediment relocation should be avoided because these remediation activities can cause more damage to a sensitive habitat than the oil spill itself. The SPCC Plan shall also evaluate the non-cleanup option for ecologically vulnerable habitats such as coastal estuaries.

3. Specific measures requiring spill response personnel to be adequately trained for response in terrestrial environments and spill containment and recovery equipment to be maintained in full readiness. Inspection of equipment shall be conducted annually (at a minimum), and the results evaluated, so that spill-response personnel are familiar with the equipment and with the types and locations of sensitive biological resources.

4. When habitat disturbance cannot be avoided, stipulations for development and implementation of site-specific habitat restoration plans and other site-specific and species-specific measures appropriate for mitigating impacts to local populations of sensitive wildlife species and to restore native plant and animal communities to pre-spill conditions.

5. Monitoring procedures and success criteria to be satisfied for restoration areas. The success criteria shall consider the level of disturbance and condition of the adjacent habitats. Monitoring shall continue for three to five years, depending on habitat, or until the success criteria are met. Appropriate remedial measures such as replanting, erosion control, or control of invasive plant species shall be identified and implemented if it is determined that the success criteria are not being met.

7.2.3.2 Alternative 1: Reduced Onshore Storage Capacity

Construction-related Impacts

Impact TR-11: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species). (Less than significant with mitigation.) As with the proposed project, construction activities would be conducted to avoid and minimize impacts on special-status species. Construction activities associated with the South Tank Farm and the proposed pipelines would be identical to those described for the proposed project and would take place within the UDA (previously defined as "covered activities" under the ECCC HCP/NCCP). Like the proposed project, Alternative 1 would comply with all relevant mitigation measures to reduce impacts to covered species under the ECCC HCP/NCCP. Proposed mitigation measures, below, would reduce impacts for species not covered under the ECCC HCP/NCCP to levels that are less than significant.

Mitigation Measure TR-12: Blooming period surveys for special-status plant species and impact avoidance. Refer to Mitigation Measure TR-1.

Mitigation Measure TR-13: Preconstruction surveys for Townsend's western big-eared bat and sensitive bat species, and impact avoidance. Refer to Mitigation Measure TR-2.

Mitigation Measure TR-14: Golden eagle, Swainson's hawk, and white-tailed kite nest surveys and impact avoidance. Refer to Mitigation Measure TR-3.

Mitigation Measure TR-15: Western burrowing owl preconstruction surveys and impact avoidance. Refer to Mitigation Measure TR-4.

Mitigation Measure TR-16: Western pond turtle avoidance and minimization. Refer to Mitigation Measure TR-5.

Mitigation Measure TR-17: California red-legged frog and California tiger salamander habitat assessment and notification. Refer to Mitigation Measure TR-6.

Impact TR-12: Cause the loss of sensitive native plant communities, as defined by the CDFW. (Less than significant with mitigation.) Similar to the proposed project, under Alternative 1, contractor encroachment could degrade or destroy the permanent wetland located within the footprint of the existing facility at the north fenceline of Tank 16. As discussed under Impact TR-2, with the implementation of Mitigation Measure TR-18, potential impacts to sensitive native plant communities would be less than significant.

> **Mitigation Measure TR-18: Environmentally sensitive area avoidance and education.** Refer to Mitigation Measure TR-7.

Impact TR-13: Cause the loss of wetlands or other waters of the United States under the Clean Water Act, 40 Code of Federal Regulations 230 Section 404. (Less than significant with mitigation.) Construction at the storage terminal and for the pipeline connections to the existing KLM Pipeline and Rail Transload Facility would be designed to avoid impacts to wetlands and waters of the United States, exactly as described for the proposed project (refer to Impact TR-3). With the implementation of Mitigation Measure TR-19, potential impacts to wetlands and waters of the United States would be less than significant.

Impacts to PW-1 at the storage facility would be avoided by implementation of Mitigation Measure TR-19.

> **Mitigation Measure TR-19: Aquatic and wetland feature impact avoidance.** Refer to Mitigation Measure TR-8.

Impact TR-14: Isolate wildlife populations and/or disrupt wildlife migratory or movement corridors, or use of native wildlife nursery sites. (Less than significant with mitigation.) Similar to the proposed project, pipeline construction would take place in a rolling fashion and so would not substantially interfere with connectivity between blocks of habitat (refer to Impact TR-4). With implementation of Mitigation Measure TR-20, potential impacts on migratory or movement corridors and/or wildlife nursery sites would be less than significant. In addition, species-specific Mitigation Measure TR-14 and Mitigation Measure TR-15 detail additional mitigation measures that when implemented would reduce potential impacts to less-than-significant levels for golden eagle, Swainson's hawk, and western burrowing owl.

> **Mitigation Measure TR-20: Nesting bird surveys.** Refer to Mitigation Measure TR-9.

Impact TR-15: Conflict with any local policies or ordinances protecting biological resources such as a tree preservation policy or ordinance. (Less than significant.) Under Alternative 1, the project would comply with all local policies or ordinances protecting biological resources.

Mitigation Measure: No mitigation required

Impact TR-16: Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. (Less than significant.) Similar to the proposed project, construction activities associated with Alternative 1 are considered covered activities under the ECCC HCP/NCCP, and habitat for special-status plants and wildlife species covered under the plan are found in the project site and pipeline alignments. Under this alternative, the project proponent would comply with the provisions of the ECCC HCP/NCCP. Therefore, non-compliance with a relevant plan is not considered a significant impact to biological resources.

Mitigation Measure: No mitigation required.

Operational Impacts

Impact TR-17: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of stormwater runoff. (Less than significant.) Similar to the proposed project, under Alternative 1 stormwater from the facility would be ultimately collected into the existing stormwater retention basin situated along the north end of the South Tank Farm for discharge into Willow Creek. Provisions to ensure that contaminated water is treated prior to release would include visual inspection, use of an oil water separator, and other tests as detailed in Chapter 2.0: Proposed Project and Alternatives.

As discussed under Impact TR-7, the modernization of the facility would not significantly change the amount of impervious surface and no increases over existing discharge in stormwater runoff would be discharged to Willow Creek. Therefore, stormwater runoff from the project would not be considered a significant impact to biological resources.

Mitigation Measure: No mitigation required.

Impact TR-18: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of routine maintenance. (Less than significant.) Routine maintenance would be identical to that of the proposed project, as described above under Impact TR-8.

Mitigation Measure: No mitigation required.

Impact TR-19: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species) as a result of collisions or electrocutions from power lines. (Less than significant.) Similar to the proposed project, aboveground power lines would be constructed in accordance with PG&E's bird-safe standards as defined in PG&E's Avian Protection Plan (PG&E, 2007). Therefore, collisions or electrocution from power lines would not be considered a significant impact.

Mitigation Measure: No mitigation required.

Impact TR-20: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species); cause the loss of sensitive native plant communities; or cause the loss of wetlands as a result of a hazardous materials spill. (Significant and unavoidable.) As discussed under Impact TR-10, while it is unlikely that a pipeline release would occur along pipelines included under Alternative 1, if there was a rupture or leak, the impacts to special-status species and sensitive habitats could be significant and unavoidable, even with the implementation of an SPCC Plan, as described in Chapter 2.0: Proposed Project and Alternatives.

Minor spills in the South Tank Farm would be routed to the stormwater retention basin, which acts as secondary containment for the 10 tanks in the South Tank Farm. As discussed above, the basin was designed with the capacity to hold a tank's discharge in addition to stormwater. Multiple tank failure is unlikely; however, if there were to be an event such that the basin was overwhelmed and crude oil traveled outside the facility, it would be a potentially catastrophic event.

Mitigation Measure TR-21: Implementation of an SPCC Plan. Refer to Mitigation Measure 11.

7.2.3.3 Alternative 2: No Project

Impact TR-21: Substantially affect threatened or endangered species, or protected species (including candidate, sensitive, or special-status species). (No impact.) Alternative 2 would allow the Terminal to remain in its existing condition. Therefore, no impacts to terrestrial resources are expected with the implementation of Alternative 2.

Mitigation Measure: No mitigation required.

Impact TR-22: Cause the loss of sensitive native plant communities, as defined by the CDFW; cause the loss of wetlands or other waters of the United States under the Clean Water Act, 40 Code of Federal Regulations 230 Section 404 (No impact.) Alternative 2 would allow the Terminal to remain in its existing condition, and no construction would take place. Therefore, no impacts to plant communities, wetlands, or other waters of the United States are expected with the implementation of Alternative 2.

Mitigation Measure: No mitigation required.

Impact TR-23: Conflict with any local policies or ordinances protecting biological resources, provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. (No impact.) Alternative 2 would allow the Terminal to remain in its existing condition, and no construction or renewed operations would take place that would conflict with the ECCC HCP/NCCP.

Mitigation Measure: No mitigation required.

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