5.3 BIOLOGICAL RESOURCES

INTRODUCTION

This section identifies existing biological resources on and in the vicinity of the project site and analyzes the potential for implementation of the proposed project to adversely affect those resources. For impacts that are determined to be significant, mitigation measures are presented to reduce the impacts to less than significant levels. Information presented in the discussion and analysis that follows is based on the Biological Resources Assessment prepared by Moore Biological Consultants in March 2013, for the entire project site (main project site and off-site parcel). A copy of the Biological Resources Assessment is provided in **Appendix 5.3**.

ENVIRONMENTAL SETTING

Regional Setting

The project site is located within the Suisun Hills and Valleys area of Central California Coast region. The area consists of low hills north and south of the Carquinez Strait and includes valleys between the hills. The area also contains plains at the west end of the Sacramento-San Joaquin River Delta. The climate is hot and sub-humid. It is very windy on hills adjacent to and north of the Carquinez Strait.

Local Setting

The project site consists of relatively steep and rolling hills. Site elevations range from approximately 300 to 660 feet above mean sea level. The project site is primarily vegetated with annual grassland vegetation and there are only a few trees on the site located on the southern and western portions of the project site. Although the majority of the site is upland grassland, there are two small seasonal wetlands, a seasonal wetland swale, and a few ephemeral creeks on the site in the central and eastern portions of the site.

There is a rock outcrop created by erosion over the years just southeast of the farm road entrance on Kirker Pass Road and some small patches of exposed bedrock on a south-facing hill in the north-central part of the main site. The outcrop near the road encompasses approximately 0.5 acre and contains a near-vertical face. The patches of exposed bedrock in the north-central part of the main site are in horizontal striations along the hillside and protrude through the surface of the hill in a few places. While there are a few pockets in the bedrock that appear as shallow caves from a distance, close inspection revealed that these approximately 5-foot-tall indentations are only a few feet deep. Therefore, the indentations are not suitable habitat for cave-dependent wildlife species such as some species of bats.

Vegetation

California annual grassland series best describes the dominant upland habitat type on the project site. Grasses, including oats (*Avena* sp.), soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), foxtail barley (*Hordeum murinum*), and perennial ryegrass (*Lolium perenne*) are dominant plant species on-site. Other grassland species such as yellow star-thistle (*Centaurea solstitialis*), purple star-thistle (*Centaurea calcitrapa*), rose clover (*Trifolium hirtum*), black mustard (*Brassica nigra*), fiddleneck (*Amsinckia menziesii*), black mustard (*Brassica nigra*), bull thistle (*Cirsium vulgare*), prickly lettuce (*Lactuca serriola*), and filaree (*Erodium botrys*) are intermixed with the grasses. **Table 5.3-1, Plant Species Observed on the Project Site**, presents a list of plant species observed on the site.

Table 5.3-1
Plant Species Observed on the Project Site

Scientific Name	Common Name
Aesculus californica	California buckeye
Amsinckia menziesii	fiddleneck
Avena fatua	oat
Brassica nigra	black mustard
Bromus diandrus	ripgut brome
Bromus hordeaceus	soft chess brome
Carduus pycnocephalus	Italian thistle
Centaurea calcitrapa	purple star-thistle
Centaurea solstitalis	yellow star-thistle
Cirsium vulgare	bull thistle
Cynara cardunculus	artichoke thistle
Distichlis spicata	saltgrass
Eleocharis macrostachya	creeping spikeruch
Eremocarpus setigerus	turkey mullein
Erodium botrys	filaree
Holocarpha virgate	tarweed
Hordeum marinum	Mediterranean barley
Hordeum marinum	foxtail barley
Juncus bufonius	toad rush
Lactuca serriola	prickly lettuce
Lolium perenne	perennial ryegrass
Querus lobata	valley oak
Raphanus sativus	wild radish
Rumex crispus	curly dock
Trifolium hirtum	rose clover
Vicia sp.	vetch

Source: Moore Biological Consultants, 2013

Dominant vegetation present in the on-site wetlands includes Mediterranean barley (*Hordeum marinum*), rabbit's foot grass (*Polypogon monspeliensis*), spikerush (*Eleocharis macrostachya*), toad rush (*Juncus bufonius*), saltgrass (*Distichlis spicata*), and perennial ryegrass.

The only trees on the site are some widely scattered valley oaks (*Quercus lobata*) and buckeye (*Aesculus californica*). Special-status plant species likely to occur on the project site are discussed later in this section.

Wildlife

A limited variety of wildlife species were observed on the project site. Birds observed include turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), mourning dove (*Zenaida macroura*), American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), western scrub jay (*Aphelocoma coerulescens*), and Brewer's blackbird (*Euphagus cyanocephalus*). All of these species are common in agricultural and urban areas in the project vicinity.

No active bird nests were located during the biological surveys. The relatively larger trees on the project site may be suitable for nesting raptors and the trees, shrubs, and grasslands on the site may be used for nesting by a variety of songbirds.

A variety of mammal species common to agricultural and semi-rural areas are expected to use habitats on the project site. A few California ground squirrels (*Spermophilus beecheyi*) and tracks of mule (black-tail) deer (*Odocoileus hemionus*) were observed on the project site. Coyote (*Canis latrans*), black-tailed hare (*Lepus californicus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*) are expected to occur in the area. A number of species of small rodents, including Botta's pocket gopher (*Thomomys bottae*), mice (*Mus musculus, Reithrodontomys megalotis, and Peromyscus maniculatus*), and voles (*Microtus californicus*) may also occur. A number of bat species may fly over, forage, or roost in the on-site trees on occasion. However, the site does not contain any caves or building structures that are required by many bat species for maternity roosts.

Western rattlesnake (*Crotalis viridis*) was the only reptile observed in the site. No amphibians were observed. Based on habitat types present and lack of year-round water throughout the site, a limited variety of amphibians and reptiles are expected to use on-site habitats. Although none was observed, the site and surrounding lands provide suitable habitat for species including Pacific chorus frog (*Pseudacris regilla*), western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), western toad (*Bufo boreas*), gopher snake (*Pituophis melanoleucus*), and common garter snake (*Thamnophis sirtalis*).

Special-status plant species likely to occur on the project site are discussed later in this section.

Waters of the United States and Wetlands

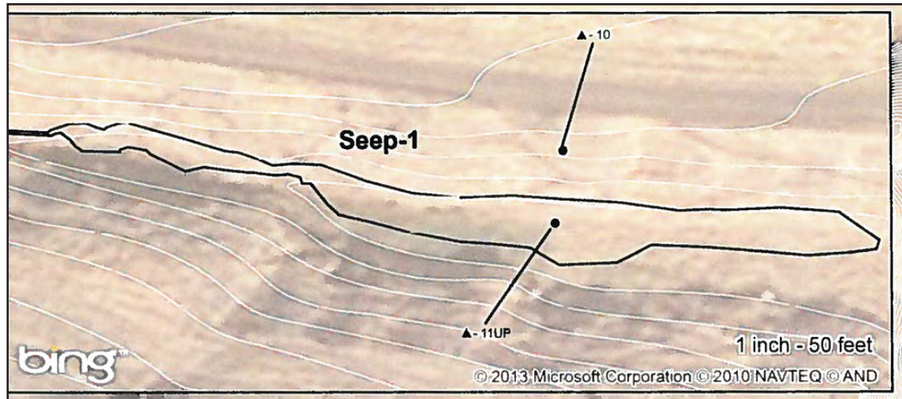
Waters of the US, including wetlands, are broadly defined under 33 Code of Federal Regulations (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. State and federal agencies regulate these habitats and Section 404 of the Clean Water Act requires that a permit be secured prior to the discharge of dredged or fill materials into waters of the US. Both the California Department of Fish and Wildlife (CDFW) and the United States Army Corps of Engineers (USACE) have jurisdiction over modifications to riverbanks, lakes, stream channels, and other wetland features.

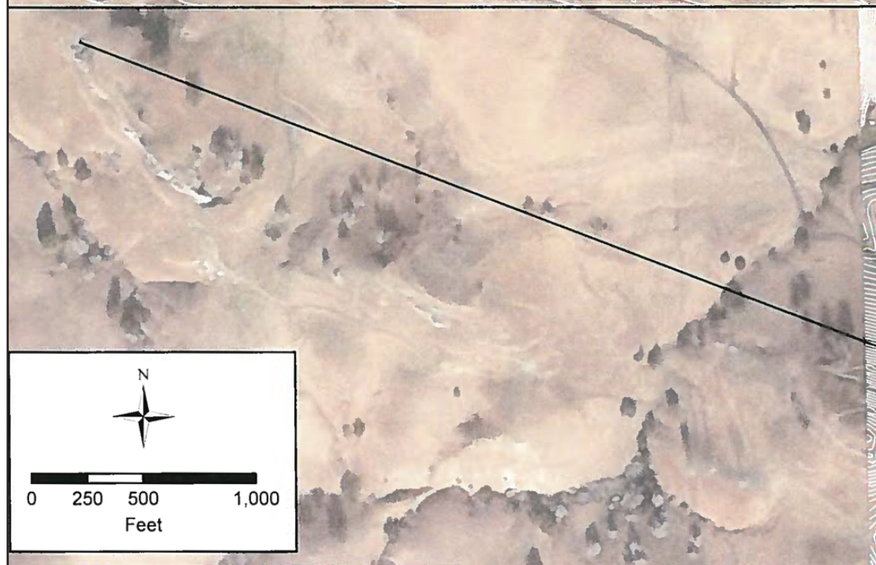
Wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated soil. Jurisdictional wetlands are vegetated areas that meet specific vegetation, soil, and hydrologic criteria defined by the USACE Wetlands Delineation Manual and Regional Supplement. Waters of the US are drainage features or water bodies as described in 33 CFR 328.4. Currently, USACE and the US Environmental Protection Agency (EPA) share authority to determine the jurisdictional status of waters of the US, including wetlands.

A preliminary delineation of potential waters of the US and wetlands present on the project site was conducted on June 28 and September 29, 2010. Minor revisions to the wetlands delineation were then made following 2011 and 2012 field visits with the USACE. Due to minor revisions in the locations of off-site components, a final wetland delineation field survey of the site was conducted on March 18, 2013 (see **Figure 5.3-1, Final Wetland Delineation**).

A total of 0.468 acre of wetlands and creek channels were delineated on the main project site. No wetlands are located on the off-site parcel. This total includes 0.342 acre of jurisdictional waters of the US, including wetlands, and 0.126 acre of non-jurisdictional isolated wetlands and ephemeral creeks. The two features that have been verified as jurisdictional by the USACE comprise a 0.340-acre seasonal wetland swale (labeled "WS-1") and a 0.002-acre section of ephemeral creek (labeled "EC-1"). Both features are shown on **Figure 5.3-1**.

WS-1 is located in the southeast part of the main project site and is vegetated with rabbit's foot grass, Mediterranean barley, toad rush, and saltgrass. The seasonal wetland swale drains under Kirker Pass Road in a culvert that is tributary to Kirker Creek located a few hundred feet east of the main project site. EC-1, a headwater ephemeral creek, originates in a shallow valley near the east edge of the main project site and also conveys water under Kirker Pass Road in a culvert. The creek is dry except during and shortly after rain events. The average width of the jurisdictional channel, as defined by a faint ordinary high water mark, is approximately 1 foot. This ephemeral creek is also tributary to Kirker Creek.

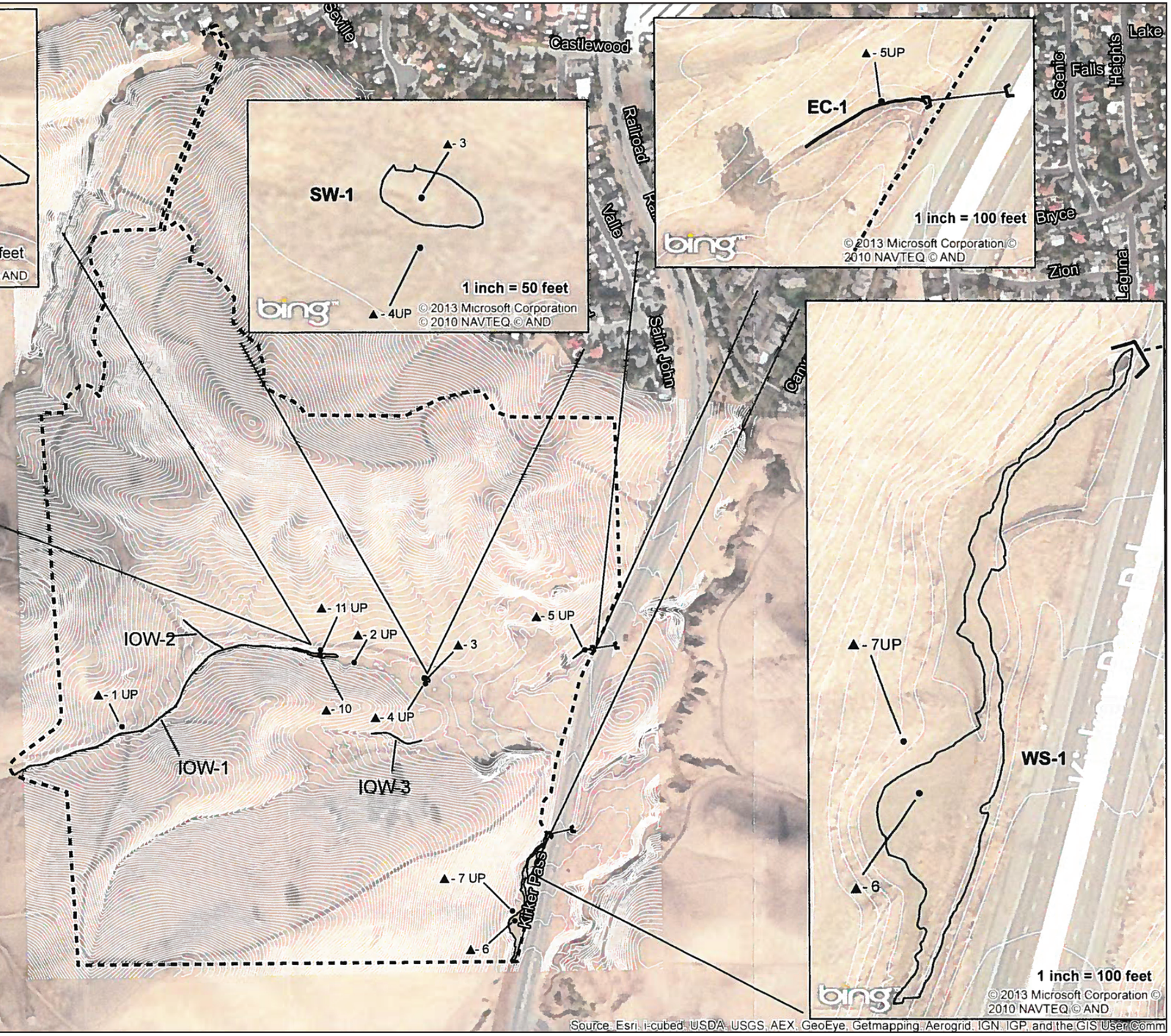




Mapped Features

Jurisdictional Waters of the U.S.	ACREAGE
Wetland Swale (WS-1)	0.340
Ephemeral Creek (EC-1)	0.002
Jurisdictional Subtotal:	*0.342*
Isolated Waters and Wetlands	
Seasonal Wetland (SW-1)	0.016
Seep (Seep-1)	0.061
Isolated Other Water (IOW-1)	0.037
Isolated Other Water (IOW-2)	0.006
Isolated Other Water (IOW-3)	0.006
Non-jurisdictional Subtotal:	*0.126*
TOTAL	0.468

Study Area (±165 acres)
▲- 1 3-Parameter Data Point
Culvert



SOURCE: Moore Biological Consultants, March 2013

FIGURE **5.3-1**

Final Wetland Delineation

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Kirker Creek flows generally north-northeast through Pittsburg and is tributary to Dowest Slough, which is in turn tributary to the San Joaquin River, which is a navigable water of the US Due to their tributary relationships to the San Joaquin River, the seasonal wetland swale and headwater ephemeral creek are jurisdictional waters of the US.

In addition to the waters discussed above, there are five additional water features on the main project site. There is a 0.016-acre seasonal wetland (SW-1) situated in an isolated basin in the east-central part of the main project site. Vegetation in the seasonal wetland includes Mediterranean barley, rabbit's foot grass, and perennial ryegrass. A second wetland (Seep-1) is located a few hundred feet to the east within a topographically low area. This 0.061-acre wetland appears to be supported by an intermittent seep; the area supported dry brown grasses in the early summer of 2010 and then started seeping water and greening up in the late summer. Vegetation in this wetland includes rabbit's foot grass, Mediterranean barley, spikerush, and perennial ryegrass. SW-1 is located in a closed basin that is not tributary to the San Joaquin River or other jurisdictional waters of the US. Similarly, Seep-1 is not contiguous with a creek that drains into jurisdictional waters of the US. Due to this hydrologic isolation, both seasonal wetlands fall outside USACE jurisdiction. Finally, there are three isolated ephemeral creeks ("IOW-1", "IOW-2" and "IOW-3") located in the east central part of the main project site. The average width of these channels, as defined by faint ordinary high water marks, is approximately 1 foot. None of these sections of isolated ephemeral creeks are contiguous with a creek. Due to hydrologic isolation, the USACE had determined that these water features fall outside of USACE jurisdiction. However, for purposes of this EIR, it is assumed that these features qualify as Waters of the State under the Porter Cologne Act.

No other potentially jurisdictional wetlands or waters of the US were observed on the main project site.

Special-Status Species

Special-status species are plants and animals that are legally protected under the state and/or federal Endangered Species Act or other regulations. The Federal Endangered Species Act (FESA) of 1973 declares that all federal departments and agencies shall utilize their authority to conserve Endangered and Threatened plant and animal species. The California Endangered Species Act (CESA) of 1984 parallels the policies of FESA and pertains to native California species. Both FESA and CESA prohibit unauthorized "take" (i.e., killing) of listed species, with take broadly defined in both acts to also include activities such as harassment, pursuit and possession.

Special-status wildlife species also includes species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or denning locations, communal roosts, and other essential habitat. The

federal Migratory Bird Treaty Act and Fish and Game Code of California protect special-status bird species year-round, as well as their eggs and nests during the nesting season. Fish and Game Code of California also provides protection for mammals and fish.

Special-status plants include species which are designated Rare, Threatened, or Endangered and candidate species for listing by the US Fish and Wildlife Service (USFWS). Special-status plants also include species considered Rare or Endangered under the conditions of Section 15380 of the California Environmental Quality Act (CEQA) Guidelines, such as those plant species identified on Lists 1A, 1B, and 2 in the Inventory of Rare and Endangered Vascular Plants of California by the California Native Plant Society (CNPS). Finally, special-status plants may include other species that are considered sensitive or of special concern due to limited distribution or lack of adequate information to permit listing or rejection for state or federal status, such as those included on List 3 in the CNPS Inventory.

Table 5.3-2, Special-Status Plant and Wildlife Species Documented or Potentially Occurring in the Project Vicinity, provides a summary of the listing status and habitat requirements of special-status plant and wildlife species that have been documented in the greater project vicinity or for which there is potentially suitable habitat on the project site. This table also includes an assessment of the likelihood of occurrence of each of these species on the project site. The evaluation of the potential for occurrence of each species is based on the distribution of regional occurrences (if any), habitat suitability, and field observations.

Special-status Plants

Most of the special-status plants found in the greater project vicinity generally occur in relatively undisturbed areas within vegetation communities such as marshes and swamps, chaparral and areas with unique soils (e.g., serpentine, alkaline). None of these habitat types occur within the project site. The on-site grassland is unremarkable and has been highly disturbed by grazing. Due to lack of suitable habitat, no special-status plant species are expected to occur on the project site.

Table 5.3-2
Special-Status Plant and Wildlife Species Documented or Potentially Occurring in the Project Vicinity

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Plants						
Large-flowered fiddleneck	*Amsinckia grandiflora*	E	E	1B	Cismontane woodland, valley and foothill grassland.	**Unlikely:** The highly disturbed on-site grasslands do not provide suitable habitat for large-flowered fiddleneck; the project site is also below the elevation range of this species. The nearest occurrence of large-flowered fiddleneck in the CNDDB search area is approximately 1.5 miles southeast of the project site.
Slender silver moss	*Anomobryum julaceum*	None	None	2	Damp rock and soil within broadleaved upland forest, north coast coniferous forest vegetation.	**Unlikely:** The highly disturbed on-site grasslands do not provide suitable habitat for slender silver moss. The nearest occurrence of this species in the CNDDB search area is approximately 2 miles south of the project site.
Mt. Diablo manzanita	*Arctostaphylos auriculata*	None	None	1B	Chaparral, only on the Mt. Diablo area of Contra Costa County.	**Unlikely**: The highly disturbed on-site grasslands do not provide suitable habitat for Mt. Diablo manzanita and this evergreen shrub was not observed on- site. The nearest occurrence of this species in the CNDDB search area is approximately 2.5 miles southeast of the project site.
Big tarplant	*Blepharizonia plumosa* ssp. *plumosa*	None	None	1B	Valley and foothill grassland.	**Unlikely**: The highly disturbed on-site grasslands do not provide suitable habitat for big tarplant and this showy species was not observed on the project site. The site is mapped in the East Contra Costa County HCP/NCCP as "Suitable Low Potential Habitat," in contrast to more likely areas of occurrence that are mapped as "Suitable Habitat." The nearest occurrence of big tarplant in the CNDDB search area is approximately 1 mile north of the project site.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Round-leaved filaree	*California macrophyllum*	None	None	2	Cismontane woodland and valley and foothill grassland.	**Unlikely**: The project site does not contain suitable habitat for this species and it was not observed in the project site. The nearest occurrence of round-leaved filaree in the CNDDB search area is approximately 1 mile southwest of the project site.
Mount Diablo fairy-lantern	*Calochortus pulchellus*	None	None	1B	Chaparral, cismontane woodland, riparian woodland, valley, and foothill grassland.	**Unlikely**: The highly disturbed on-site grasslands do not provide suitable habitat for Mount Diablo fairy-lantern and this showy species was not observed in the project site; the project site is also below the elevation range of this species. The nearest occurrence of Mt. Diablo fairy-lantern in the CNDDB search area is approximately 4.5 miles southwest of the project site.
Pink creamsacs	*Castilleja rubicundula* ssp. *rubicundula*	None	None	1B	Serpentine soils within chaparral, cismontane woodland, riparian woodland, meadows and seeps, valley and foothill grassland vegetation.	**Unlikely**: The highly disturbed on-site grasslands do not provide suitable habitat for this species. The nearest occurrence of pink creamsacs in the CNDDB search area is approximately 4.5 miles southwest of the project site.
Soft bird's-beak	*Cordylanthus mollis* ssp. *molllis*	E	Rare	1B	Coastal salt marsh	**Unlikely**: The project site does not contain suitable habitat for this species. The nearest occurrence of soft bird's-beak in the CNDDB search area is approximately 4 miles northwest of the project site.
Mount Diablo bird's-beak	*Cordylanthus nidularius*	None	Rare	1B	Chaparral with serpentine soils	**Unlikely**: The project site does not contain suitable habitat for Mount Diablo bird's-beak; the project site is also below the elevation range of this species. The nearest occurrence of Mount Diablo bird's-beak in the CNDDB search area is approximately 4 miles northwest of the project site.
Hospital Canyon larkspur	*Delphinium californicum* ssp. *interius*	None	None	1B	Cismontane woodland, Chaparral	**Unlikely**: The project site does not contain suitable habitat for Hospital Canyon larkspur; the project site is also below the elevation range of this species. The nearest occurrence of Hospital Canyon larkspur in the CNDDB search area is approximately 4 miles northwest of the project site.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Diamond-petaled California poppy	*Eschscholzia rhombipetala*	None	None	1B	Valley and foothill grasslands, alkaline, clay slopes, and flats.	**Unlikely:** The project site does not provide suitable habitat for this species; no alkaline or clay soils were observed on the project site. The nearest occurrence of diamond-petaled California poppy in the CNDDB search area is approximately 3 miles east of the project site. The CNPS Inventory describes this species as extirpated in Contra Costa County.
Diablo helianthella	*Helianthella castanea*	None	None	1B	Broad-leaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	**Unlikely:** The on-site grasslands provide marginally suitable habitat for Diablo helianthella; the project site is also below the elevation range of this species. The nearest occurrence of Diablo helianthella in the CNDDB search area is approximately 2.5 miles south of the site.
Brewers western flax	*Hesperolinon breweri*	None	None	1B	Chaparral, cismontane woodland, valley and foothill grassland; usually serpentine soils.	**Unlikely:** The on-site grasslands do not provide suitable habitat for Brewers western flax and this showy species was not observed on the project site. The project site is not mapped as suitable habitat for this species. The nearest occurrence of Diablo helianthella in the CNDDB search area is approximately 2.5 miles southeast of the project site.
Delta tule pea	*Lathyrus jepsonii* var. *jepsonii*	None	None	1B	Marshes and swamps.	**Unlikely:** The project site does not contain suitable habitat for this species. The nearest occurrence of Delta tule pea in the CNDDB search area is approximately 3.5 miles northeast of the project site.
Mason's lilaeopsis	*Lilaeopsis masonii*	None	R	1B	Marshes, swamps and riparian scrub.	**Unlikely:** The project site does not contain suitable habitat for this species. The nearest occurrence of Mason's lilaeopsis in the CNDDB search area is approximately 3 miles northeast of the project site.
Showy golden madia	*Madia radiata*	None	None	1B	Cismontane woodland, valley and foothill grassland.	**Unlikely:** The project site does not contain suitable habitat for showy golden madia; this species is also considered extirpated in Contra Costa County. The nearest occurrence of showy golden madia in the CNDDB search area is approximately 1.5 miles southeast of the project site.
Halls bush mallow	*Malacothamnus hallii*	None	None	1B	Chaparral	**Unlikely**: The project site does not contain suitable habitat for this species. The nearest occurrence of Halls bush mallow in the CNDDB search area is approximately 1 mile southeast of the project site.
Woodland woolythreads	*Monolopia gracilens*	None	None	1B	Mixed evergreen forest, redwood forest, Chaparral.	**Unlikely**: The project site does not contain suitable habitat for this species. The nearest occurrence of woodland woolythreads in the CNDDB search area is approximately 4.5 miles south of the project site.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Antioch dunes evening primrose	*Oenothera deltoides* ssp. *howellii*	E	E	1B	Interior dunes in the Delta region.	**Unlikely**: The project site does not contain suitable habitat for this species. The nearest occurrence of Antioch dunes evening primrose in the CNDDB search area is approximately 3 miles north of the project site.
Chaparral ragwort	*Senecio aphanactis*	None	None	2	Cismontane woodland, coastal scrub, within drying alkaline flats	**Unlikely**: The project site does not contain suitable habitat for chaparral ragwort. The nearest occurrence of this species in the CNDDB search area is approximately 2 miles southeast of the project site.
Suisun marsh aster	*Symphotrichum lentum*	None	None	1B	Marshes and swamps.	**Unlikely**: The project site does not contain suitable habitat for this species. The nearest occurrence of Suisun marsh aster in the CNDDB search area is approximately 3.5 miles north of the project site.
Caper-fruited tropidocarpum	*Tropidocarpum capparideum*	None	None	1B	Valley and foothill grassland, alkaline soils.	**Unlikely**: The project site does not provide suitable habitat for this species; no alkaline or clay soils were observed on the project site. The nearest occurrence of caper-fruited tropidocarpum in the CNDDB search area is approximately 2 miles southwest of the project site.
Wildlife						
Birds						
Swainson's hawk	*Buteo swainsoni*	None	T	N/A	Breeds in stands of tall trees in open areas. Requires adjacent suitable foraging habitats such as grasslands or alfalfa fields supporting rodents.	**Unlikely:** There are a few potentially suitable nesting trees on the project site and Swainson's hawks could use the on-site grasslands for foraging. However, the project site is along the extreme western edge of the nesting range of this species. There are no documented occurrences of nesting Swainson's hawks in the CNDDB search area.
Burrowing owl	*Athene cunicularia*	None	SC	N/A	Open, dry annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation.	**Unlikely:** There are not too many ground squirrels or ground squirrel burrows on the project site. No burrowing owls or evidence of occupancy were found on the project site. The nearest occurrence of nesting burrowing owls in the CNDDB search area is approximately 2.5 miles west of the project site.
California black rail	*Laterallus jamaicensis coturniculus*	None	T	N/A	Mainly inhabits salt marshes bordering larger bays	**Unlikely:** The project site does not provide suitable habitat for this species. The nearest occurrence of California black rail in the CNDDB search area is approximately 3.5 miles north of the project site.
California least tern	*Sturnula antillarum browni*	E	E	N/A	Estuaries and bays; nests on exposed tidal flats or beaches	**Unlikely:** The project site does not provide suitable habitat for this species. The nearest occurrence of California least tern in the CNDDB search area is approximately 3 miles north of the project site.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Suisun song sparrow	*Melospiza melodia maxillaris*	None	SC	N/A	Resident of brackish water marshes surrounding Suisun Bay. Inhabits cattails, tules, and tangles bordering sloughs	**Unlikely:** The project site does not provide suitable habitat for Suisun song sparrow. The nearest occurrence of this species in the CNDDB search area is approximately 1.5 miles north of the project site.
Saltmarsh common yellowthroat	*Geothlypis trichas sinuosa*	None	None	N/A	San Francisco Bay fresh and saltwater marshes. Requires thick, continuous cover down to water surface for foraging	**Unlikely**: The project site does not provide suitable habitat for saltmarsh common yellowthroat. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles northeast of the project site.
Mammals						
San Joaquin kit fox	*Vulpes macrotis mutica*	E	T	N/A	Inhabits open, dry grasslands and scrublands with loose textured soils.	**Unlikely**: The on-site grassland provide potentially suitable habitat for San Joaquin kit fox. However, the site is along the extreme northern edge of the range of this species. The nearest occurrence of this species in the CNDDB search area is approximately 1.5 miles east of the project site.
Pallid bat	*Antrozous pallidus*	None	SC	N/A	Open and dry habitats with rocky areas for roosting.	**Moderate:** Pallid bat and other species of bats may fly over, forage, or roost on the project site on occasion. The nearest occurrence of this species in the CNDDB search area is approximately 4.5 miles west of the project site.
Western red bat	*Lasiurus blossevillii*	None	SC	N/A	Roosts in trees in a wide variety of habitats between the coast western Sierra Nevada mountains.	**Moderate:** There is no suitable roosting habitat for western red bat on the project site. This species may fly over, forage, or roost on the project site on occasion. The nearest occurrence of western red bat in the CNDDB search area is approximately 4 miles east of the project site
Salt-marsh harvest mouse	*Reithrodontomys raviventris*	E	E	N/A	Saline emergent wetlands dominated by pickleweed	**Unlikely:** the project site does not provide suitable habitat for salt-marsh harvest mouse. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles north of the project site.
Reptiles & Amphibians						
California red-legged frog	*Rana aurora draytonii*	T	SC	N/A	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby, or emergent riparian vegetation.	**Unlikely:** There is no suitable aquatic habitat for California red-legged frog on the project site. The nearest occurrence of this species in the CNDDB search area is a year 2002 record in Kirker Creek, just east of the project site. The project site is not within designated critical habitat for California red-legged frog.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Giant garter snake	*Thamnophis gigas*	T	T	N/A	Freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches, primarily for dispersal or migration.	**Unlikely:** The project site does not provide suitable aquatic habitat for giant garter snake. There are no documented occurrences of this species in the CNDDB search area.
Western pond turtle	*Emys marmorata*	None	SC	N/A	Ponds, marshes, streams, and ditches with emergent aquatic vegetation and basking areas.	**Unlikely:** The project site does not provide suitable aquatic habitat for western pond turtle. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles northeast of the project site.
California tiger salamander	*Ambystoma californiense*	T	T	N/A	Seasonal water bodies without fish (i.e., vernal pools and stock ponds) and grassland/ woodland habitats with summer refugia (i.e., burrows).	**Unlikely**: There is no suitable breeding habitat within or near the project site for California tiger salamander. The nearest occurrence of California tiger salamander in the CNDDB search area is a year 2000 record in a pond at Keller Landfill, approximately 0.5 mile northwest of the project site. The project site is not within designated critical habitat for California tiger salamander.
Alameda whipsnake	*Masticophis lateralis euryxanthus*	T	T	N/A	Scrub, chaparral, grassland, and woodland habitat mosaics. South-facing slopes and ravines.	**Unlikely**: The project site does not provide suitable habitat for Alameda whipsnake. The nearest occurrence of this species in the CNDDB search area is approximately 3.5 miles northeast of the project site.
Silvery legless lizard	*Anniella pulchra pulchra*	None	SC	N/A	Sandy or loose loamy soils under sparse vegetation.	**Unlikely**: The project site does not provide suitable habitat for silvery legless lizard The nearest occurrence of this species in the CNDDB search area is approximately 4 miles east of the project site.
Invertebrates						
Vernal pool fairy shrimp	*Branchinecta lynchi*	T	None	N/A	Vernal pools	**Unlikely:** The 0.016-acre seasonal wetland is the only potentially suitable for vernal pool fairy shrimp, but is much smaller and shallower than most pools that support this species. The other wetlands on the project site do not pond water and are entirely unsuitable for this species. There are no documented occurrences of vernal pool fairy shrimp in the CNDDB search area. The site is not within designated critical habitat for vernal pool fairy shrimp or other listed branchiopods.

Common Name	Scientific Name	Federal Status[1]	State Status[2]	CNPS List[3]	Habitat	Potential for Occurrence in the Project Site
Vernal pool tadpole shrimp	*Lepidurus packardi*	E	None	N/A	Vernal pools	**Unlikely**: The 0.016-acre seasonal wetland is too small and shallow to support vernal pool tadpole shrimp. The other wetlands on the project site do not pond water and are entirely unsuitable for this species. There are no documented occurrences of vernal pool tadpole shrimp in the CNDDB search area.

Source: Moor Biological Consultants, 2013

[1] *T=Threatened; E = Endangered*

[2] *T=Threatened; E = Endangered; SC=State of California Species of Special Concern*

[3] *CNPS List 1B includes species that are Rare, Threatened, or Endangered in California and elsewhere; List 2 includes plants that are Rare, Threatened, or Endangered in California but are more common elsewhere.*

Based on a review of the California Natural Diversity Data Base (CNDDB), the following special-status plant species have been documented in the vicinity of the project site: large-flowered fiddleneck (*Amsinckia grandiflora*), slender silver moss (*Anomobryum julaceum*), Mt. Diablo manzanita (*Arctostaphylos auriculata*), big tarplant (*Blepharizonia plumosa ssp. plumosa*), round-leaved filaree (*California macrophyllum*), Mt. Diablo fairy-lantern (*Calochortus pulchellus*), pink creamsacs (*Castilleja rubicundula* ssp. *rubicundula*), soft bird's-beak (*Cordylanthus mollis* ssp. *molllis*), Mount Diablo bird's-beak (*Cordylanthus nidularius*), Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*), diamond-petaled California poppy (*Eschscholzia rhombipetala*), Diablo helianthella (*Helianthella castanea*), Brewers western flax (*Hesperolinon breweri*), Delta tule pea (*Lathyrus jepsonii* var. *jepsonii*), Mason's lilaeopsis (*Lilaeopsis masonii*), showy golden madia (*Madia radiata*), Halls bush mallow (*Malacothamnus hallii*), woodland woolythreads (*Monolopia gracilens*), Antioch dunes evening primrose (*Oenothera deltoides* ssp. *howellii*), chaparral ragwort (*Senecio aphanactis*), Suisun marsh aster (*Symphotrichum lentum*), and caper-fruited tropidocarpum (*Tropidocarpum capparideum*) (see **Table 5.3-2**). Additionally, although not recorded in the CNDDB within the search area, the East Contra Costa County Habitat Conservation Plan/Natural Community Conservation Plan (HCP/NCCP) also identifies alkali milkvetch (*Astragalus tener* ssp. *tener*), Contra Costa goldfields (*Lasthenia conjugens*), Mount Diablo buckwheat (*Eriogonum truncatum*), and adobe navarretia (*Navarretia nigelliformis* ssp. *nigelliformis*) as species requiring evaluation in annual grassland and seasonal wetland habitats in the greater project vicinity.

The dominant habitat on the project site is annual grassland, with one small seasonal wetland, one small emergent wetland, a seasonal wetland swale, and a few sections of ephemeral creek. The project site has been heavily grazed and on-site grasslands are moderately to highly disturbed. The project site was systematically searched by driving and walking throughout the site. No special-status plants were observed or are expected to occur in the project site. Each of the plant species identified in the East Contra Costa Country Habitat Conservation Plan (HCP)/Natural Community Conservation Plan (NCCP) as potentially occurring in annual grassland and seasonal wetland habitats is discussed below.

Alkali Milkvetch

The California Native Plant Society (CNPS) on-line Inventory of Rare and Endangered Plants describes alkali milkvetch as occurring in annual grasslands in adobe clay soils, and alkaline vernal pools, at elevations between 0 and 60 meters above sea level. There is no suitable habitat on the project site for this species. The site is also above the elevation range of this species, and the CNPS Inventory describes this species as extirpated (i.e., no longer existent) in Contra Costa County.

Big Tarplant

The CNPS Inventory describes big tarplant as occurring in annual grassland habitats at elevations between 30 and 505 meters above sea level. The site is mapped in the East Contra Costa County HCP/NCCP as "Suitable Low Potential Habitat," in contrast to more likely areas of occurrence mapped as "Suitable Habitat." This showy plant was not observed on the project site.

Brewer's Dwarf Flax

The CNPS Inventory describes Brewer's dwarf flax as occurring in annual grassland habitats, usually in serpentinite soils, at elevations between 90 and 900 meters above sea level. The site is not mapped in the East Contra Costa County HCP/NCCP as "Suitable Habitat" for Brewer's dwarf flax. This plant was not observed on the project site.

Contra Costa Goldfields

The CNPS Inventory describes Contra Costa goldfields as occurring in annual grassland habitats and vernal pools at elevations between 0 and 470 meters above sea level. There are no vernal pools on the project site. This showy plant was not observed in the annual grassland habitat on the project site.

Diamond-petaled Poppy

The CNPS Inventory describes diamond-petaled poppy as occurring in annual grassland habitats with alkaline or clay soils, at elevations between 0 and 975 meters above sea level. No areas of alkaline or clay soils were observed on the project site. The CNPS Inventory describes this species as extirpated in Contra Costa County.

Large-flowered Fiddleneck

The CNPS Inventory describes large-flowered fiddleneck as occurring in annual grassland habitats at elevations between 275 and 550 meters above sea level. The project site is below the elevation range of this species. This plant was not observed on the project site.

Mount Diablo Buckwheat

The CNPS Inventory describes Mount Diablo buckwheat as occurring in annual grassland habitats with sandy soils, at elevations between 3 and 350 meters above sea level. No areas of sandy soils were observed on the project site. This plant was not observed on the project site.

Mount Diablo Fairy-lantern

The CNPS Inventory describes Mount Diablo fairy-lantern as occurring in annual grassland habitats with sandy soils, at elevations between 30 and 840 meters above sea level. In contrast, the East Contra Costa County HCP/NCCP describes this species as occurring at elevations between 650 and 2,600 feet above sea level. The site is at the low end or below the elevation range of the species. This showy plant was not observed in the annual grassland habitat on-site.

Round-leaved Filaree

The CNPS Inventory describes round-leaved filaree as occurring in annual grassland habitats with clay soils, at elevations between 15 and 1,200 meters above sea level. While this species blooms from March through May, it should have been detectable in mid-June 2010, if present, due to the extended spring rains which delayed the blooming periods of most Central Valley annuals. Round-leaved filaree was not observed in the annual grassland habitat on-site.

Showy Madia

The CNPS Inventory describes showy madia as occurring in annual grassland habitats at elevations between 25 and 900 meters above sea level. While this species blooms from March through May, it should have also been detectable in mid-June 2010, if present, due to the extended spring rains in 2010 which delayed the blooming periods of most Central Valley annuals. Showy madia was not observed in the annual grassland habitat on-site. Further, the CNPS Inventory describes this species as extirpated in Contra Costa County, and there are no known records of showy madia in the East Contra Costa County HCP/NCCP planning area.

Adobe Navarretia

The CNPS Inventory describes adobe navarretia as occurring in mesic (i.e., wet) areas within annual grassland habitats and vernal pools, at elevations between 100 and 1,000 meters above sea level. There are no vernal pools on the project site and no mesic areas were observed in the annual grassland habitats on the project site. This plant was not observed on the project site.

Special-status Wildlife

Based on a review of the California Natural Diversity Data Base (CNDDB), the following special-status wildlife species have been documented in the vicinity of the project site: burrowing owl, California black rail (*Laterallus jamaicensis coturniculus*), California least tern (*Sturnula antillarum browni*), Suisun song sparrow (*Melospiza melodia maxillaris*), Saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*), San

Joaquin kit fox (*Vulpes macrotis mutica*), pallid bat (*Antrozous pallidus*), western red bat (*Lasiurus blossevillii*), salt-marsh harvest mouse (*Reithrodontomys raviventris*), California red-legged frog (*Rana auroura draytonii*), western pond turtle (*Actinemys marmorata*), California tiger salamander (*Ambystoma californiense*), Alameda whipsnake (*Masticophis lateralis euryxanthus*), and silvery legless lizard (*Anniella pulchra pulchra*). Additionally, although not recorded in the CNDDB within the search area, the East Contra Costa County HCP/NCCP also identifies Swainson's hawk (*Buteo swainsoni*), giant garter snake (*Thamnophis gigas*), vernal pool fairy shrimp (*Branchinecta lynchi*), and vernal pool tadpole shrimp (*Lepidurus packardi*) as species requiring evaluation in annual grassland and seasonal wetland habitats in the greater project vicinity.

As noted above, the dominant habitat on the project site is annual grassland, with one small seasonal wetland, one small emergent wetland, a seasonal wetland swale, and a few sections of ephemeral creek. The project site has been heavily grazed and on-site grasslands are moderately to highly disturbed. The site was systematically searched by driving and walking throughout the site. No special-status wildlife species were observed or are expected to occur in the project site on more than a very occasional or transitory basis. Each of the wildlife species identified in the East Contra Costa County HCP/NCCP as potentially occurring in annual grassland and seasonal wetland habitats is discussed below.

Swainson's Hawk

The Swainson's hawk is a migratory hawk listed by the State of California as a Threatened species. The Migratory Bird Treaty Act and Fish and Game Code of California protect Swainson's hawks year-round, as well as their nests during the nesting season (March 1 through September 15). Swainson's hawk is found in the Central Valley primarily during the breeding season, and a population is known to winter in the San Joaquin Valley.

Swainson's hawks prefer nesting sites that provide sweeping views of nearby foraging grounds consisting of grasslands, irrigated pasture, hay, and wheat crops. Most Swainson's hawks are migratory, wintering in Mexico and breeding in California and elsewhere in the western United States. This raptor generally arrives in the Central Valley in mid-March, and begins courtship and nest construction immediately upon arrival at the breeding sites. The young fledge in early July, and most Swainson's hawks leave their nest territories by late August.

No Swainson's hawks were observed during the field surveys conducted on the project site. The larger trees within the site are suitable for nesting Swainson's hawks. Swainson's hawks are not documented in the CNDDB nesting within 5 miles of the project site and the project site is along the extreme western

edge of the nesting range of this species. It is considered unlikely that Swainson's hawks would nest on-site in future years.

Burrowing Owl

The Migratory Bird Treaty Act and California Fish and Game Code protect burrowing owls year-round, as well as their nests during the nesting season (February 1 through August 31). Burrowing owls are a year-long resident in a variety of grasslands as well as scrub lands that have a low density of trees and shrubs with low growing vegetation. Burrowing owls that nest in the Central Valley may winter elsewhere.

The primary habitat requirement of the burrowing owl is small mammal burrows for nesting. The owl usually nests in abandoned ground squirrel burrows, although they have been known to dig their own burrows in softer soils. In urban areas, burrowing owls often utilize artificial burrows, including pipes, culverts, and piles of concrete pieces. This semi-colonial owl breeds from March through August, and is most active while hunting during dawn and dusk. The nearest documented occurrence of burrowing owl is located approximately 2.5 miles west of the project site. The CNDDB also contains numerous occurrences of burrowing owls throughout the search area.

No burrowing owls were observed during the field surveys conducted on the project site. A small number of ground squirrel burrows were observed on-site; however, none of these burrows showed any evidence of current or past occupancy by burrowing owls (i.e., whitewash, pellets, feathers). Based on the presence of potentially suitable habitat in the site and distribution of burrowing owls in the project vicinity, it is possible owls could move on-site in the future.

San Joaquin Kit Fox

The project site is located just north of the known range of the federally Endangered and State of California Threatened San Joaquin kit fox. This species dens in subterranean burrows and forages primarily for small mammals and insects in annual grasslands, pasturelands, cultivated fields, and along the edges of orchards.

No San Joaquin kit fox were observed in or adjacent to the project site during the field surveys. No on-site burrows showed signs of kit fox occupancy. While kit fox may have migrated through or foraged on the project site in the past, it is considered a remote possibility that this species uses burrows on the project site for denning, due to a lack of sign and location of the project site at the outer edge of the species known range. It is also considered highly unlikely that migrating or wandering kit foxes ever use these burrows for occasional cover due to a lack of kit fox sightings in this area during fairly intensive survey

efforts during the past decade. However, since kit fox have been known to occasionally wander several miles outside of its known range, future use of the project site for foraging or denning by kit fox is possible.

Vernal Pool Invertebrates

In 1994, the USFWS listed three species of Central Valley fairy shrimp and one species of tadpole shrimp as Threatened or Endangered species under the Federal Endangered Species Act. Vernal pool fairy shrimp was listed as Threatened, while Conservancy fairy shrimp (*Branchinecta conservatio*), longhorn fairy shrimp (*B. longiantenna*), and vernal pool tadpole shrimp were listed as Endangered. All of these species occur in vernal pools and other seasonal wetland habitats throughout much of the Central Valley. Each year, shrimp eggs that lay on the floor of the dry wetlands during the summer hatch after the onset of cold winter rains. The shrimp grow for a few weeks to a couple months, and then lay eggs and die.

There are no recorded occurrences of vernal pool fairy shrimp, vernal pool tadpole shrimp, or other listed branchiopods in the CNDDB search area. The project site is not within an area designated by USFWS as critical habitat for vernal pool species.

The 0.016-acre seasonal wetland in the central part of the main project site is the only area that provides potentially suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. However, due to the small size and shallow nature of this wetland, it is unlikely to support listed vernal pool branchiopods.

REGULATORY FRAMEWORK

Federal Regulations

Endangered Species Act

Under the federal Endangered Species Act (FESA), the Secretary of the Interior and the Secretary of Commerce have joint authority to list a species as Threatened or Endangered (16 United States Code [USC] 1533[c]). Pursuant to the requirements of the FESA, an agency reviewing a proposed project within its jurisdiction must determine whether any federally listed or proposed species may be present in the

project region, and whether the proposed project would result in a "take"[1] of such species. The "take" provision of the FESA applies to actions that would result in injury, death, or harassment of a single member of a species protected under the Act. In addition, the agency is required to determine whether the project is likely to jeopardize the continued existence of any species proposed to be listed under the FESA, or result in the destruction or adverse modification of critical habitat for such species (16 USC 1536[3][4]). If it is determined that a project may result in the "take" of a federally listed species, a permit from the USFWS would be required under Section 7 or Section 10 of the FESA. Section 7 applies if there is a federal nexus (e.g., the project is on federal land, the lead agency is a federal entity, a permit is required from a federal agency, or federal funds are being used). Section 10 applies if there is no federal nexus.

Substantial, adverse project-related impacts to federally listed species or their habitats would be considered significant in this EIR. Species proposed for listing are granted limited protection under the FESA and must be addressed in Biological Assessments (under Section 7 of the Act); proposed species otherwise have no protection from "take" under federal law, unless they are emergency-listed species. Candidate species are afforded no protection under the Act. However, the USFWS recommends that candidate species and species proposed for listing also be considered in informal consultation during a project's environmental review.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (16 USC, Section 703, Supplement I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. The Act encompasses whole birds, parts of birds, and bird nests and eggs.[2]

Clean Water Act

The federal Water Pollution Control Act of 1972, often referred to as the Clean Water Act, is the nation's primary law for regulating discharges of pollutants into waters of the United States. The objective of the

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1 "Take," as applied in Section 9 of the FESA, means to "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, collect or to attempt to engage in any such conduct." "Harass" is further defined by the USFWS (50 CFR. Section 17.3) as an intentional or negligent act or omission that creates the likelihood of injury to wildlife by annoying it to such an extent as to significantly disrupt normal behavioral patterns which include, but are not limited to, breeding, feeding, and sheltering. "Harm" is defined as "an act which actually kills or injures wildlife." This may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.

2 The Act covers hundreds of birds, including varieties of loon, grebe, albatross, booby, pelican, cormorant, heron, stork, swan, goose, duck, vulture, eagle, hawk, falcon, fail, plover, avocet, sandpiper, phalarope, gull, tern, murre, puffin, dove, cuckoo, roadrunner, owl, swift, hummingbird, kingfisher, woodpecker, swallow, jay, magpie, crow, wren, thrush, mockingbird, vireo, warbler, cardinal, sparrow, blackbird, finch, and many others.

Clean Water Act is to restore and maintain the chemical, physical, and biological integrity of the nation's waters. The regulations adopted pursuant to the Act deal extensively with the permitting of actions in waters of the United States, including wetlands. The Act's statutory sections and implementing regulations provide more specific protection for riparian and wetland habitats than any other federal law. The US Environmental Protection Agency (US EPA) has primary authority under the Clean Water Act to set standards for water quality and for effluents, but the USACE has primary responsibility for permitting the discharge of dredge or fill materials into streams, rivers, and wetlands.

State Regulations

California Endangered Species Act

Under the California Endangered Species Act (CESA), the CDFW has the responsibility for maintaining a list of Threatened and Endangered species (California Fish and Game Code Section 2070). The CDFW also maintains a list of "candidate species," which are species formally under review for addition to either the list of Endangered species or the list of Threatened species. In addition, the CDFW maintains lists of "species of special concern," which serve as watch lists. Pursuant to the requirements of the CESA, an agency reviewing a proposed project within its jurisdiction must determine whether any state-listed Endangered or Threatened species could be present on the project site and determine whether the proposed project could have a potentially significant impact on such species. In addition, the CDFW encourages informal consultation on any proposed project that may affect a candidate species. Project-related impacts to species on the CESA Endangered or Threatened lists would be considered significant in this EIR. Impacts to "species of concern" would be considered significant if the species met the criteria set forth under the *State CEQA Guidelines* Section 15380, or if the species were also protected under any of the other statutes or policies discussed in this section.

California Native Plant Protection Act

State listing of plant species began in 1977 with the passage of the California Native Plant Protection Act (NPPA), which directed the CDFW to carry out the legislature's intent to "preserve, protect, and enhance Endangered plants in this state." The NPPA gave the California Fish and Game Commission the power to designate native plants as Endangered or Rare and to require permits for collecting, transporting, or selling such plants. The CESA expanded upon the original NPPA and enhanced legal protection for plants. The CESA established Threatened and Endangered species categories and grandfathered all Rare animals—but not Rare plants—into the Act as Threatened species. Thus, there are three listing categories for plants in California: Rare, Threatened, and Endangered.

California Fish and Game Code

Streambed Alteration Agreements (Section 1600 *et seq*.)

Under Section 1602 of the Fish and Game Code, agencies are required to notify CDFW before implementing any project that would divert, obstruct, or change the natural flow, bed, channel, or bank of any river, stream, or lake (Fish and Game Code Section 1602). Preliminary notification and project review generally occur during the environmental review process. When an existing fish or wildlife resource may be substantially adversely affected, CDFW is required to propose reasonable changes to the project to protect the resources. These modifications are formalized in a Streambed Alteration Agreement that becomes part of the plans, specifications, and bid documents for the project.

Unlawful Destruction of Nests or Eggs and Birds-of-Prey or their Eggs (Sections 3503 and 3503.5)

Under Sections 3503 and 3503.5 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, or to take, possess, or destroy any birds of prey or their nest or eggs. A number of birds-of-prey have potential to nest within the project site. Mitigation measures are proposed to ensure that active bird-of-prey nests would not be disturbed by the proposed project.

California Fully Protected Species

The California Fish and Game Code provides protection from take for a variety of species, referred to as "fully protected species." Section 5050 lists fully protected amphibians and reptiles; Section 3515 lists fully protected fish; Section 3511 lists fully protected birds; and Section 4700 lists fully protected mammals. Except for take related to scientific research, all take of fully protected species is prohibited.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act authorizes the State Water Resources Control Board (SWRCB) to regulate state water quality and protect beneficial uses. The SWRCB certifies activities subject to CWA Section 404 permits.

Local Regulations

City of Pittsburg General Plan

The Resource and Conservation Element in the Pittsburg General Plan includes goals and policies to preserve, protect, enhance, and promote the City's valuable natural, cultural, and scenic resources. The goals and policies applicable to the prosed project are listed below.

Biological Resources and Habitat

Goal 9-G-1 Protect conservation areas, particularly habitats that support special-status species, including species that are state or federally listed as endangered, threatened, or rare.

Goal 9-G-2 Guide development in such a way that preserves significant ecological resources.

Policy 9-P-1 Ensure that development does not substantially affect special-status species, as required by State and federal agencies and listed in Table 9-1. Conduct assessments of biological resources as required by CEQA prior to approval of development within habitat areas of identified special-status species, as depicted in Figure 9-1.

Policy 9-P-7 During the design of hillside residential projects, encourage clustering of housing to preserve large, unbroken blocks of open space, particularly within sensitive habitat areas. Encourage the provision of wildlife corridors to ensure the integrity of habitat linkages.

Policy 9-P-8 As a condition of approval of new development, ensure revegetation of cut-and-fill slopes with native plant species.

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

The East Contra Costa County HCP/NCCP is intended to provide a comprehensive framework to protect natural resources in eastern Contra Costa County, while improving and streamlining the environmental permitting process for impacts of new development on Endangered and Threatened species. The HCP/NCCP describes how to avoid, minimize, and mitigate the impacts on covered species and their habitats. The plan's primary goal is to streamline review of development projects by eliminating costly and time-consuming project-by-project permitting that often results in uncoordinated and biologically ineffective mitigation, while providing ecosystem conservation and contributing to the recovery of Threatened or Endangered species in California.

The East Contra Costa County HCP/NCCP entails the issuance of 30-year incidental take permits for 28 listed and non-listed species from USFWS and CDFW to local jurisdictions, allowing them to use those permits and extend take authorization to development and other projects that meet the terms of the HCP/NCCP. The plan's conservation strategy is a system of new preserves linked to existing protected

lands that would preserve between 23,800 and 30,300 acres of land. The East Contra Costa County HCP/NCCP calls for the creation of an implementing entity to oversee assembly and operation of the preserve system and ensure compliance with all terms of the HCP/NCCP. The implementation entity is a Joint Exercise of Powers Authority, formed by the cities of Clayton, Pittsburg, Oakley, and Brentwood and Contra Costa County, and is called the East Contra Costa County Habitat Conservancy.

The permit area for the East Contra Costa County HCP/NCCP generally includes land within the urban limit lines in the cities of Clayton, Pittsburg, Oakley, and Brentwood and Contra Costa County. The local jurisdictions who are permittees under the HCP/NCCP include the cities of Brentwood, Clayton, Oakley, and Pittsburg, Contra Costa County, Contra Costa County Flood Control and Water Conservation District, East Bay Regional Park District, and the Conservancy. The participating cities (Pittsburg, Clayton, Oakley, and Brentwood) and Contra Costa County enacted ordinances that direct development projects to go through the HCP/NCCP process.

As required by the FESA, the East Contra Costa County HCP/NCCP includes measures to avoid and minimize take of covered species, which would be included as conditions on development for applicable projects. The permit area excludes most high-quality habitat and jurisdictional waters; low-quality habitat impacts would be allowed under the East Contra Costa County HCP/NCCP. It is the responsibility of project proponents to design and implement their projects in compliance with listed measures in the HCP/NCCP. Planning survey reports are required prior to permit application.

ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Thresholds of Significance

In accordance with Appendix G of the *2013 State CEQA Guidelines*, the impact of the proposed project related to biological resources would be considered significant if it would:

- have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by CDFW or USFWS;
- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;
- have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;

- interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan; or
- conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

CEQA Checklist Items Adequately Addressed in the Initial Study

The analysis in the Initial Study prepared for the proposed project and circulated with the Notice of Preparation (NOP) concluded that further analysis of the following issues was not required in the EIR.

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations, or by CDFW or USFWS;

The Biological Resources Report (2013) prepared by Moore Biological Consultants found that the project site does not contain any riparian habitat or other sensitive natural communities as defined by the East Contra Costa HCP/NCCP, California Fish and Game Code, FESA, Clean Water Act, or any other local or regional plans, policies or regulations. The creek on the main project site is ephemeral and does not support any riparian habitat and the seasonal wetland swale does not support riparian plant communities. In addition, no riparian habitat or other sensitive natural community has been identified within or adjacent to the off-site parcel. Therefore, no impact would occur.

Impact Analysis

Impact BIO-1 **Implementation of the proposed project could result in substantial adverse effects, either directly or through habitat modifications, on some candidate, sensitive, or special-status wildlife species due to the loss of potential habitat.** ***(Potentially significant)***

The main project site, off-site parcel and the surrounding area are primarily vegetated with annual grassland, a few trees and include some small wetlands. Removal of these habitats would not result in substantial adverse effects, either directly or through habitat modifications, to any candidate, sensitive, or special-status plant species due to lack of suitable habitat on the project site. However, removal of these habitats could result in substantial adverse effects to some candidate, sensitive, or special-status wildlife species due to the removal of potential habitat. These wildlife species include Swainson's hawk, which is listed as a California Threatened species; burrowing owl, which is listed as a California Species of Special Concern; San Joaquin kit fox, which is listed as a federally Endangered species and a California

Threatened species; vernal pool fairy shrimp, which is listed as a federally Threatened species; Conservancy fairy shrimp, which is listed as a federally Endangered species; longhorn fairy shrimp, which is listed as a federally Endangered species; and vernal pool tadpole shrimp, which is listed as a federally Endangered species. Other species covered by the Migratory Bird Act (MBTA) also utilize the project site for foraging and nesting.

The project area is located within the East Contra Costa County HCP/NCCP inventory area. Analysis regarding impacts on biological resources in the Final and Draft EIS/EIR for the East Contra Costa County HCP/NCCP (available online at www.ci.pittsburg.ca.us) was relied upon for this current project analysis. The East Contra Costa County HCP/NCCP provides incidental take authority for covered species to participating local jurisdictions, including the City of Pittsburg. The HCP/NCCP provides specific avoidance and minimization measures for covered species that reduce impacts on those species from urban development to less than significant levels, as documented in the Draft and Final EIS/EIR for the HCP/NCCP (East Contra Costa County Habitat Conservation Plan Association and US Fish and Wildlife Service, 2006). These measures are consistent with the USFWS and the CDFW guidelines.

The HCP/NCCP implements a conservation strategy that includes preservation of over 30,000 acres of land, as well as restoration of covered species habitat and vegetation communities in order to compensate for direct and indirect impacts from development, and to contribute to the recovery of listed species and help prevent the listing of non-listed covered species, and management of the preserves to maximize the functions of habitats for covered species. A planning-level biological resource survey has been conducted on the project site in accordance with the requirements of the HCP/NCCP (Moore 2013). While none of the special-status species mentioned above were observed on the project site during field surveys (Moore 2013), there are a number of species-specific avoidance and minimization measures that are required by the HCP/NCCP because potential habitat does exist on-site. These measures are discussed in detail within each respective wildlife species discussion below. In addition to the species-specific avoidance and minimization measures, the HCP/NCCP utilizes a variety of development-based fees to fund mitigation that would offset the potential losses of land cover types, covered species habitat, and other biological values. This project would have permanent and temporary impacts to land cover and jurisdictional waters of the US and state, including seasonal wetlands. Therefore, in addition to compliance with the avoidance and minimization measures outlined below, applicable mitigation fees would be required to be paid, as identified in the Wetland Mitigation Fee Table 9-5 of the HCP/NCCP.

Swainson's hawk

Swainson's hawk is a state Threatened species and is also protected under the MBTA. No Swainson's hawks were observed during the field surveys of the project site. Swainson's hawks are also not

documented in the CNDDB as nesting within 5 miles of the site and the site is along the extreme western edge of the nesting range of this species. However, the larger trees on the project site are suitable for Swainson's hawk nesting. This species is covered by the HCP/NCCP. Project impacts would be mitigated by species-specific HCP/NCCP avoidance and minimization measures (described below) which would be implemented pursuant to **Mitigation Measure MM BIO-1a**.

Avoidance and Minimization Measures

As required by Section 6.4.3 of the HCP/NCCP, prior to ground disturbing activities during the nesting season (March 15 through September 15), a qualified biologist would conduct a pre-construction survey no more than one month prior to construction to establish whether occupied Swainson's hawk nests occur on or within 1,000 feet of the area of proposed construction. If occupied nests are found, then project construction activity buffer zone distances from the nest would be established in a Construction Monitoring Plan required to be approved by the City. The City would coordinate with CDFW to determine the appropriate buffer size. Construction monitoring would be required under the Construction Monitoring Plan and would focus on ensuring that the buffer zone is adhered to. During the nesting season, construction activities would be avoided within the buffer zone to prevent nest abandonment. If young fledge prior to September 15, construction activities can proceed normally. If an active nest site is present but shielded from view and noise by other development or other features, the City may waive this avoidance measure if approved by the CDFW.

Burrowing Owl

Burrowing owl is a state Species of Special Concern and is also protected under the MBTA. The nearest documented occurrence of burrowing owl was located approximately 2.5 miles west of the site. The CNDDB also contains numerous occurrences of burrowing owls throughout the search area; however, no burrowing owls were observed on-site during the field surveys. A small number of ground squirrel burrows were observed on-site; however, none of these burrows showed any evidence of current or past occupancy by burrowing owls. This species is covered by the HCP/NCCP and based on the presence of potentially suitable habitat on the site and the known occurrence of burrowing owls in the project vicinity, it is possible that owls could move on-site in the future and project development could adversely affect the species. Project impacts would be mitigated by species-specific HCP/NCCP avoidance and minimization measures (described below) which would be implemented pursuant to **Mitigation Measure MM BIO-1a** However, it should be noted that the avoidance and minimization measures incorporated in the HCP/NCCP are intended as guidance related to construction impacts and assume that construction would proceed to completion once initiated. If the site is graded and future construction is placed on hold for one construction season or more, the site could be recolonized by resident or breeding

owls and project development that is delayed could adversely affect the species. Project impacts due to a delay in the construction schedule would be mitigated by conducting surveys prior to the restart of construction activities and employing interim measures such as disking the site periodically after initial grading as required by **Mitigation Measure MM BIO-1b**.

Avoidance and Minimization Measures

As required by Section 6.4.3 of the HCP/NCCP, no more than 30 days prior to project construction, a qualified biologist would conduct a pre-construction survey for burrowing owls in conformance with the HCP/NCCP. The survey would establish the presence or absence of western burrowing owl and habitat features and evaluate use of the project site by owls in accordance with the CDFW's western burrowing owl survey guidelines (CDFG 1993). The project site and surrounding lands within a 500-foot radius and under the same ownership would be surveyed. If burrowing owls are identified during the breeding season (February 1 through August 31), then all nest sites would be avoided by project construction during the remainder of the breeding season or while the nest is occupied by adults or young, or relocation may occur if a qualified biologist monitors the nest and determines that the birds have not yet begun egg-laying or juveniles have fledged.

San Joaquin Kit Fox

The San Joaquin kit fox is listed as Threatened by the state of California under the CESA and Endangered under the FESA. San Joaquin kit fox can be locally common in some areas of their range but are typically rare, particularly in the northern portion of their range (Contra Costa County) and the project site is located north of its known range. No San Joaquin kit fox were observed on or adjacent to the project site during the field surveys. No on-site burrows showed signs of kit fox occupancy and while kit fox may have migrated through or foraged in the site in the past, it is considered a remote possibility that this species uses burrows on the project site for denning due to the lack of signs and location of the project site at the outer edge of its known range. It is also considered highly unlikely that migrating or wandering kit foxes ever use these burrows for occasional cover due to lack of kit fox sightings in this area during fairly intensive survey efforts during the past decade. Nevertheless, this species is covered by the HCP/NCCP and since kit fox have been known to occasionally wander within several miles outside the published species range, future use of the project site by kit fox is possible. Project impacts would be mitigated by species-specific HCP/NCCP avoidance and minimization measures (described below) which would be implemented pursuant to **Mitigation Measure MM BIO-1a**.

Avoidance and Minimization Measures

As required by Section 6.4.3 of the HCP/NCCP, preconstruction surveys for San Joaquin kit fox would be conducted within 30 days of ground disturbance. On the parcel where construction is proposed, the biologist would survey the proposed disturbance footprint and a 250-foot radius from the perimeter of the proposed footprint to identify San Joaquin kit foxes and/or suitable dens. If a San Joaquin kit fox den is discovered in the proposed development footprint, the den would be monitored for three days by a USFWS/CDFW-approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used. If the den is found to be unoccupied then it would be immediately destroyed to prevent subsequent use. If a natal or pupping den is found, the den would not be destroyed until the pups and adults have vacated. If kit fox activity is observed at the den during the initial monitoring period, the den would be monitored for an additional five consecutive days from the time of the first observation to allow any resident animals to move to another den while den use is actively discouraged.

Vernal Pool Invertebrates

Vernal pool fairy shrimp is listed as a federally Threatened species while the Conservancy fairy shrimp, longhorn fairy shrimp, and vernal pool tadpole shrimp are listed as federally Endangered species. There are no recorded occurrences of vernal pool fairy shrimp, vernal pool tadpole shrimp, or other listed branchiopods in the CNDDB search area. The main site is not within an area designated by USFWS as critical habitat for vernal pool species. The 0.016-acre seasonal wetland in the central part of the main site is the only area on the main project site that is potentially suitable habitat for vernal pool fairy shrimp and vernal pool tadpole shrimp. However, due to the small size and shallow nature of this wetland, it is unlikely to support listed vernal pool species. Nevertheless, listed vernal pool species are covered by the HCP/NCCP and the seasonal wetland in the central part of the main site which is potential habitat for listed vernal pool species would be removed by the project, project impacts would be mitigated by species-specific HCP/NCCP avoidance and minimization measures (described below) which would be implemented pursuant to **Mitigation Measure MM BIO-1a**.

Avoidance and Minimization Measures

As required by Section 6.4.3 of the HCP/NCCP, prior to any ground disturbance related to covered activities, a USFWS-approved biologist would conduct a preconstruction survey in areas identified in the planning surveys as having suitable shrimp habitat. If covered shrimp are absent from the main site, there are no further requirements related to the covered shrimp. If shrimp are present, and the wetlands are not going to be retained (as is the case with the proposed project), filling of seasonal wetlands would

be delayed until pools are dry and samples from the top 4 inches of wetlands soils are collected. Soil collection would be sufficient to include a representative sample of plant and animal life present in the wetland by incorporating seeds, cysts, eggs, spores, and similar inocula. These samples would be provided to the Implementing Entity so that the soil can be translocated to suitable habitat within the inventory area unoccupied by covered shrimp or used to inoculate newly created seasonal wetlands on preserve lands. In addition, seasonal wetlands occupied by covered shrimp that are filled would be offset by preserving or acquiring seasonal wetlands occupied by covered shrimp species and restoring habitat suitable for the covered shrimp species.

As stated above, the HCP/NCCP includes prescribed monitoring, avoidance and minimization measures that are required in conjunction with take authorization in order to ensure that the project does not result in a substantial adverse effect on covered species identified as candidate, sensitive or special status, or species covered by the MBTA, beyond that already anticipated by the HCP/NCCP. Prescribed monitoring and avoidance measures included in the HCP/NCCP that would be applicable to the project include:

- HCP/NCCP Conservation Measure 1.11, requires that covered activities avoid direct impacts on fully protected wildlife. Implementation of **Mitigation Measure MM BIO-1a** would ensure this conservation measure is a requirement of the project.

- HCP/NCCP Conservation Measure 1.11 requires that covered activities comply with the MBTA and avoid killing or possessing covered migratory birds, their young, nests, feathers, or eggs. Implementation of **Mitigation Measure MM BIO-1a** would ensure this conservation measure is a requirement of the project, and **Mitigation Measure MM BIO-1c** would further help to ensure that impacts to species protected under the MBTA are less than significant.

- Conducting monitoring during construction as required by Section 6.4.3 of the HCP/NCCP would ensure that disturbance limits, best management practices, and HCP/NCCP restrictions are being implemented properly. Implementation of **Mitigation Measure MM BIO-1a** would ensure this is a requirement of the project.

- The project site does not contain any known nests of the Swainson's hawk, but large trees on the site could support nests and would be surveyed for occupied nests prior to construction. If occupied nests are identified, avoidance and minimization measures are prescribed by Section 6.4.3 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO-1a** would require the project to follow these requirements.

- Preconstruction surveys and avoidance requirements for burrowing owl are prescribed by Section 6.4.3 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO-1a** and **Mitigation Measure MM BIO-1b** would require the project to follow these requirements.

- Preconstruction surveys and avoidance requirements for San Joaquin kit fox are prescribed by Section 6.4.3 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO-1a** would require the project to follow these requirements.

- Preconstruction surveys and minimization requirements for shrimp are prescribed by Section 6.4.3 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO-1a** would require the project to follow these requirements.

- If pre-construction surveys indicate the presence of burrowing owl, Swainson's hawk, and San Joaquin kit fox then the developer would be required to submit a construction-monitoring plan to the City of Pittsburg for approval, as prescribed by Section 6.4.3 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO-1a** would require the project to follow this requirement.

- Mitigation fees would be required as prescribed by Section 9.3.1 of the HCP/NCCP. Implementation of **Mitigation Measure MM BIO 1a** would require the project to follow these requirements, which would include mitigation fees for:

  - Approximately 123 acres of annual grassland to be removed; and

  - Approximately 0.016 acre of potential vernal pool invertebrate habitat to be filled.

The HCP/NCCP is designed to provide for comprehensive species, wetlands, and ecosystem conservation within the region and to contribute to the recovery of Endangered species in Northern California. Implementing the proposed project with monitoring, avoidance, minimization and mitigation measures that follow the requirements of the HCP/NCCP would not have a substantial adverse effect on any sensitive species. The project site is not expected to provide nesting habitat or critical habitat for any additional candidate, sensitive or special status species not addressed in the HCP/NCCP. **Mitigation Measure MM BIO-1a** would ensure that requirements of the HCP/NCCP are incorporated in the project so that project impacts to biological resources covered by the HCP/NCCP would be less than significant. **Mitigation Measure MM BIO-1b** would ensure that if construction is delayed, additional pre-construction surveys would be conducted to check for the presence of burrowing owls and to avoid impacts to the species. **Mitigation Measure MM BIO-1c** would ensure that project impacts to fully protected wildlife species or MBTA-covered species not already addressed by the HCP/NCCP, would be less than significant.

Mitigation Measures

MM BIO-1a Prior to approval of any permits for ground disturbing activities, the developer shall secure the services of an HCP/NCCP qualified biologist to prepare a final version of the Planning Survey Report (PSR), along with any related supporting studies, consistent with the requirements of the East Contra Costa County HCP/NCCP necessary to obtain take coverage for the entire project site, as authorized by the City of Pittsburg per Pittsburg Municipal Code (PMC) section 15.108, and pay all associated mitigation fees for coverage of approximately 123 acres of development/ground disturbance and 0.016 acre

of vernal pool invertebrate habitat (exact final acreages to be determined in accordance with the verified wetland delineation to be included in the final PSR) on-site. For any special-status species or habitat identified by the PSR as potentially being present on the project site, avoidance and minimization measures as outlined in the HCP/NCCP shall be implemented during construction of the project. Avoidance and mitigation measures may include (but are not limited to) pre-construction surveys, construction monitoring, tree replacement, and salvaging of plants. Final avoidance and mitigation measures applicable to the project site shall be incorporated as conditions of approval on any ground disturbing permits that are issued for the project.

MM BIO 1b If construction begins and then is delayed for more than a year, as an interim measure, the developer shall periodically disk the graded areas of the project site to avoid re-colonization by burrowing owls. Upon recommencement of project construction, the developer shall secure the services of an HCP/NCCP qualified biologist to conduct pre-construction surveys for burrowing owls prior to recommencement of any ground disturbing activities.

MM BIO 1c To avoid direct impacts to any fully protected wildlife species or MBTA-protected species not already addressed under the East Contra Costa County HCP/NCCP, the developer shall either schedule vegetation clearing outside of the avian nesting season (February 1 through August 31), or conduct a survey within 14 days of vegetation removal activities to check for protected species in suitable habitat within 500 feet of the construction site, where access is permitted. If an active nest is located, the need and/or extent of no disturbance buffer(s) around the nest location shall be determined through consultation with the CDFW to avoid disturbance or destruction of the nest site until after the breeding season or after a qualified biologist determines that the young have fledged. The extent of no disturbance buffers shall be based on consideration of the anticipated levels of noise or disturbance, ambient levels of noise and other disturbances, and topographic or other barriers. If determined in consultation with the CDFW that construction activities would not affect an active nest, activities may proceed without restriction.

Residual Impacts after Mitigation

This impact would be reduced to a less than significant level.

Impact BIO-2 **Implementation of the proposed project could have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.** ***(Potentially significant)***

Waters of the US, including wetlands, are broadly defined under 33 Code of Federal Regulation (CFR) 328 to include navigable waterways, many of their tributaries, and adjacent wetlands. The USACE determined that the 0.340-acre seasonal wetland swale was tributary to the San Joaquin River, which is a navigable waterway, via Kirker Creek and Dowest Slough. Therefore, this swale falls under the jurisdiction of the USACE pursuant to the Clean Water Act. However, the proposed project would not directly or indirectly affect the swale, as it is within the greenwall proposed on the southern 20 percent of the main project site. The USACE also determined that the 0.002-acre ephemeral creek located at the easternmost edge of the main project site falls under its jurisdiction. This ephemeral creek would be filled with development of this project.

Concerning the remaining wetlands on the project site, the USACE found that the 0.016-acre seasonal wetland situated in an isolated basin in the east-central part of the main project site, the 0.061-acre seep located a few hundred feet to the west of the seasonal wetland and the 0.049 acre of other isolated waters located in the center of the main project site, were not tributary to any waters of the United States and therefore not under the jurisdiction of the USACE. However, these wetlands fall under the state's jurisdiction. The project would result in removal of these small aquatic features.

The loss of jurisdictional and other waters on the main project site represents a potentially significant impact. The HCP/NCCP includes a Wetland Mitigation Fee program to address impacts to jurisdictional wetlands and other waters. **Mitigation Measure MM BIO-2** would require the developer to pay appropriate wetland mitigation fees, as identified in the Wetland Mitigation Fee Table 9-5 of the HCP/NCCP, in order to comply with the requirements of the HCP/NCCP. **Mitigation Measure MM BIO-2** would ensure that requirements of the HCP/NCCP are incorporated in the project so that project impacts to wetlands covered by the HCP/NCCP would be less than significant.

Mitigation Measures

MM BIO-2 Prior to approval of any grading permits where waters are to be filled, the developer shall pay all associated wetland mitigation fees as required by the HCP/NCCP for waters of the US and waters of the state (exact final acreages to be determined in accordance with the verified wetland delineation to be included in the final PSR).

Residual Impacts after Mitigation

This impact would be reduced to a less than significant level.

Impact BIO-3 **Implementation of the proposed project could interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites.** ***(Potentially significant)***

The proposed project would extend extensive suburban development into an area which is currently undeveloped and provides largely unrestricted access to wildlife, and could thus create a barrier to wildlife movement. This is of particular concern for the San Joaquin kit fox, which may migrate or wander through the project site (Moore 2013). However, the southern 20 percent of the main project site would be preserved as a greenwall, thus providing a corridor for wildlife crossing the site. This would reduce potential impacts related to wildlife movement. In addition, implementation of the proposed project would result in the loss of several trees on the project site that could provide nesting sites for migratory birds. However, implementation of **Mitigation Measure MM BIO-1a,** discussed above, would require that minimization measures provided by the HCP/NCCP be implemented during construction, which includes preconstruction surveys for nesting birds. Finally, the project site was included in the HCP/NCCP as an area for future development and that HCP/NCCP includes a program to preserve in other areas within the inventory area with the best habitat to offset impacts of new development on wildlife movement and nursery sites. As a result, the proposed project would not substantially interfere with wildlife movement or impede the use of native wildlife nursery sites, and this impact would be reduced to a less than significant level.

Mitigation Measures

Implement **Mitigation Measure MM BIO-1a**.

Residual Impacts after Mitigation

This impact would be reduced to a less than significant level.

Impact BIO-4 **Implementation of the proposed project could conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan.** ***(Potentially significant)***

The proposed project is within the inventory area of the adopted East Contra Costa County HCP/NCCP. However, while the HCP/NCCP considered this site for development, development on the project site has the potential to directly and indirectly impact biological resources protected by the HCP/NCCP, resulting in a potential conflict with the HCP/NCCP. This represents a potentially significant impact. However, with implementation of **Mitigation Measures MM BIO-1a** and **MM BIO-2** discussed above, the proposed project would be consistent with the requirements of the HCP/NCCP and this impact would be reduced to a less than significant level.

Mitigation Measures

Implement **Mitigation Measures MM BIO-1a** and **MM BIO-2**.

Residual Impacts after Mitigation

This impact would be reduced to a less than significant level.

Impact BIO-5 **Implementation of the proposed project would not conflict with local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.** ***(Less than significant)***

While the City of Pittsburg does have a Street Tree Ordinance (PMC chapter 12.32), the City does not have an oak tree preservation policy or ordinance, or any other local policy or ordinance for the protection of biological resources. The only trees on the project site are some widely scattered valley oaks and buckeye. None of these trees are considered special-status species and the project site is not classified as oak woodland by the HCP/NCCP. While the project would result in the removal of some trees, a majority of the trees on the project site are located within the boundaries of the proposed greenwall on the southern 20 percent of the main project site. As a result, a majority of the trees on the project site would be protected from removal. As the loss of a small number of trees is not considered a substantially adverse effect, this impact is considered less than significant.

The City of Pittsburg is a participating agency in the East Contra Costa County HCP/NCCP. The City enacted an ordinance (PMC chapter 15.108) that directs developers to go through the HCP/NCCP process to avoid, minimize, and mitigate impacts on biological resources from development projects within the

City's urban limit line. The proposed project would comply with the ordinance by implementing the requirements of the HCP/NCCP. With the proposed mitigation and adherence to the HCP/NCCP process, the project would not conflict with any ordinance for the protection of biological resources. The impact would be less than significant.

Mitigation Measures

No mitigation measures are required.

Cumulative Impacts

Impact BIO-6: **The proposed project could combine with other existing and future development in the cities of Pittsburg and Antioch to result in a significant cumulative impact with regard to biological resources, including special-status plant and wildlife species. (*Potentially significant*)**

Future development associated with the proposed project and other development in the vicinity of the project site in the City of Pittsburg, including Tuscany Meadows, Sky Ranch II and the James Donlon Boulevard Extension Project, and in the City of Antioch, including the Black Diamond Ranch, may result in significant cumulative impacts to biological resources, including special-status plant and wildlife species. While development of the proposed project would not result in substantial adverse effects on special-status plant species, it could result in substantial adverse effects on special-status wildlife species. However, mitigation that would adhere to requirements set forth in the East Contra Costa County HCP/NCCP is provided that would reduce impacts to special-status species to a less than significant level. In addition, HCP/NCCP includes a program to preserve in other areas within the inventory area with the best habitat to offset impacts of new development. The proposed project would contribute to the preservation of high-quality habitat types and contribute to the recovery of Threatened or Endangered species through the payment of HCP/NCCP permit fees. Therefore, the contribution of the proposed project to impacts on biological resources would not be cumulatively considerable.

Mitigation Measures

Implement **Mitigation Measures MM BIO-1a** through **MM BIO-1c** and **Mitigation Measure MM BIO-2**

Residual Impacts after Mitigation

This impact would be reduced to a less than significant level.

REFERENCES

City of Pittsburg. 2004. *City of Pittsburg General Plan*. (Pittsburg 2004)

East Contra Costa Habitat Conservation Plan Association. 2006. *East Contra Costa County Habitat Conservation Plan and Natural Community Conservation Plan Final Environmental Impact Statement/ Environmental Impact Report*.

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Moore Biological Consultants. 2013. *Biological Resources Assessment at the 165+/- Acre "Montreux" Project Site (Subdivision 8279), Pittsburg, California*. (Moore 2013)