

### **3.4 BIOLOGICAL RESOURCES**

This section describes biological resources in the vicinity of the Avila Ranch Development Project (Project) and evaluates the impacts that implementation of the Project may have on these resources. Biological resources examined in this section include sensitive plant and animal species, wildlife habitats, migration corridors, vegetation communities, and aquatic resources under the jurisdiction of state and federal resource protection agencies.

Grading, vegetation removal, construction activities, and eventual development of 68.23 acres of residential housing, 7.03 acres of major roadway, 16.0 acres of developed park, and 3.34 acres of commercial development would have the potential to impact onsite biological resources and those within the Buckley Road extension site. In addition, the Project would include 55.3 acres of open space consisting of agricultural buffers used for dryland farming north of Buckley Road, open lands along Tank Farm Creek, and open lands supporting wetlands. While portions of these open space lands would be impacted during construction, over the long term they would remain undeveloped. Of particular concern are resources associated with Tank Farm Creek and its existing riparian habitat. In addition to Project construction, operational components such as lighting, noise, and increased activity by human residents from the Project could impact biological resources.

The analysis of biological resources is based on a review of information contained in the City of San Luis Obispo's General Plan and Creek and Waterways Management Program, the California Natural Diversity Database (CNDDDB), information from the U.S. Fish and Wildlife Service (USFWS), the Chevron Tank Farm Remediation and Development Project Environmental Impact Report (EIR) (City of San Luis Obispo and County of San Luis Obispo 2013), and a Biological Report (Appendix I) and Wetland Delineation Study (Appendix J) completed for the proposed Project by Althouse and Meade, Inc. Biological and Environmental Services (2015). Analysis of impacts to biological resources is based upon the preliminary Vesting Tentative Tract Map (VTM) and grading estimates produced by Cannon Corp (Cannon) (2015) and the draft Avila Ranch Development Plan (Development Plan) produced by RRM Design Group, Inc. (2015).

#### **3.4.1 LUCE Update EIR**

In 2014, the update of the City's Land Use and Circulation Elements (LUCE) included some minor revisions to the City's Conservation and Open Space (COS) Element. The City's 2014 LUCE Update EIR provided a programmatic assessment of Citywide biological resource impacts related to the LUCE Update, including a brief discussion of

those related to development of the Project site. The LUCE Update EIR noted that development of the Project site could result in potentially significant impacts to biological resources, including: disturbed/ruderal habitat adjacent to roadways and developed areas; Coastal and Valley Freshwater Marsh habitat associated with San Luis Obispo Creek; special status plant species associated with San Luis Obispo Creek and riparian habitats; and common wildlife species and species of local concern onsite. However, the LUCE Update EIR concluded that implementation of the proposed LUCE Update policies would reduce impacts to a less than significant level. In particular, incorporation of COS Policies 7.3.1 through 7.3.4, which require protection of species and sensitive habitats and project-level environmental review for sensitive resource areas, would reduce program-level impacts identified for the Project site to a less than significant level.

### 3.4.2 Environmental Setting

#### 3.4.2.1 Project Site Overview

The Project site consists of 150 acres located at the corner of Buckley Road and Vachell Lane within the City of San Luis Obispo. The majority of the site consists of undeveloped agricultural land historically farmed for production of crops. The site is bisected by Tank Farm Creek, an intermittent creek that flows from the northeast to southwest for approximately 3,800 feet through the center of the site. In the Project vicinity, land uses consist of industrial development to the north and west, and of agricultural lands to the east and south.



The decommissioned Chevron Tank Farm property borders the Project site to the northeast, and while disturbed, supports extensive wetland habitat. West of the Project site across Vachell Lane along the planned Buckley Road Extension corridor lie open agricultural lands currently planted with safflower, disturbed ruderal areas dominated by non-native grasses and weedy forbs, old residential structures, driveways, and ornamental landscaping.

The Project site's open undeveloped agricultural lands and the Tank Farm Creek riparian corridor provide general habitat for plants and wildlife; however, most of the site has been subject to long-term cultivation. Additionally, upland agricultural lands provide foraging

habitat and movement corridors for wildlife, such as birds of prey, but due to repeated long-term disturbance, these areas lack native vegetation, which reduces their value as habitat for native plants and wildlife. As a result, sensitive habitats are largely confined to Tank Farm Creek and two associated tributary channels. Detailed discussion of Tank Farm Creek, onsite vegetation communities, potential special status species, and sensitive wildlife resources are presented below.

Tank Farm Creek

Tank Farm Creek runs through the Project site from the northeast to southwest before exiting the site under a bridge on Buckley Road. This bridge is located 550 feet upstream of Tank Farm Creek’s confluence with the East Fork of San Luis Obispo Creek (Althouse and Meade, Inc 2015c). This creek collects the majority of onsite runoff, as well as offsite flows from the Chevron Tank Farm property and the South Hills residential and commercial areas to the north. The East Fork of San Luis Obispo Creek flows approximately one mile further downstream to reach the main stem of San Luis Obispo Creek, which empties into the Pacific Ocean at Avila Beach located approximately 5.0 miles southwest of the Project site (City of San Luis Obispo 2003).

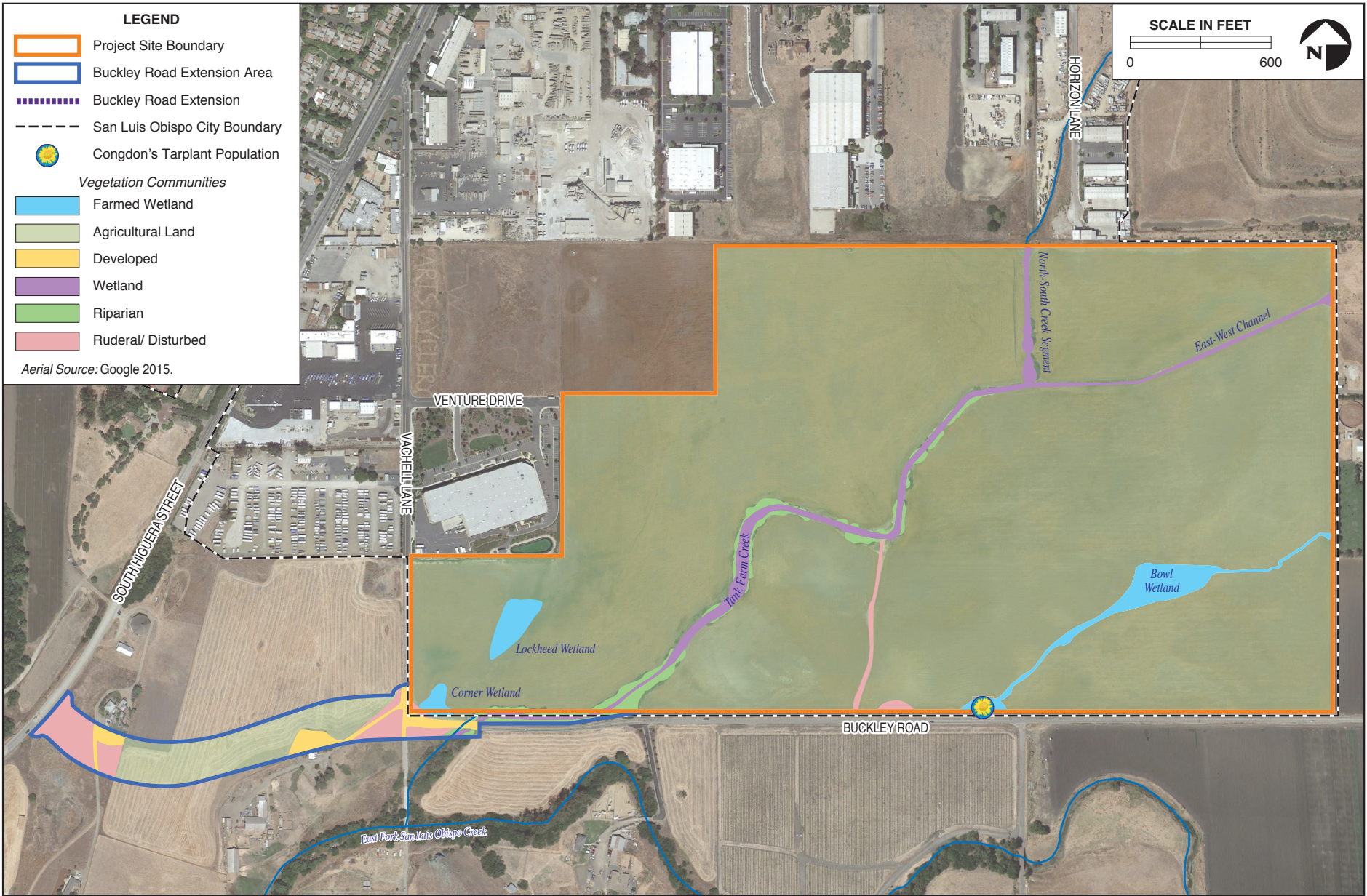


*The Project site is bisected by Tank Farm Creek, which provides a riparian corridor that support sensitive species.*

The East Fork of San Luis Obispo Creek flows approximately one mile further downstream to reach the main stem of San Luis Obispo Creek, which empties into the Pacific Ocean at Avila Beach located approximately 5.0 miles southwest of the Project site (City of San Luis Obispo 2003).

Tank Farm Creek enters the site through the “North-South Creek Segment” of approximately 600 feet in length to a confluence with a 1,365-foot long narrow agricultural ditch, referred to as the “East-West Channel.” While the North-South Creek Segment may represent past natural drainages, this segment of Tank Farm Creek has been manipulated over time from the construction of the Chevron Tank Farm site berm and other changes in tributary channels and adjacent wetlands. As such, the City’s COS Element identifies the portion of Tank Farm Creek on the Project site as an intermittent creek with a degraded corridor that is able to be restored or repaired (City of San Luis Obispo 2014).

The physical characteristics of Tank Farm Creek vary considerably, with channel width, depth and the width of riparian canopy changing along different reaches of the creek (see Table 3.4-1 and Figure 3.4-1).The North-South Creek Segment is approximately 35 feet



**Existing Biological Conditions on the Project Site and Buckley Road Extension Area**

**FIGURE 3.4-1**

**Table 3.4-1. Tank Farm Creek Cross Sections with Riparian Coverage**

Cross Section <sup>1</sup>	Channel Width (ft)	Invert Height (ft)	Riparian Corridor Width (ft) (bank full width + extended canopy)
A	35	5	50
B	45	8	50
C	42	5	80
D	26	2	82

Source: Amec Foster Wheeler Fieldwork April 2016.

<sup>1</sup> Letter correlates to approximate location on Althouse Meade Map Exhibit C. Correlations are A=F, B=H, C=G, D=I. See Figure 3.4-1.

wide with an invert of about 5 feet in depth. The North-South Creek Segment supports areas of mature willow-cottonwood riparian woodland providing a riparian corridor of up to 60 feet in width along the southern 275 feet of its reach, as well as more disturbed reaches with mixed native scrub and weedy vegetation. The East-West Channel is approximately 17 feet wide with a shallow invert not exceeding 4 feet in depth. The East-West Channel is more disturbed and primarily contains weedier, low-lying vegetation with more limited native scrub and provides no riparian habitat. The main stem of Tank Farm Creek averages 28 feet in width, with invert depths ranging from 8 feet near the North-South/East-West confluence and 5 feet upstream of the Buckley Road Bridge. The riparian corridor of the main stem of Tank Farm Creek below the North-South, East-West confluence varies from 20 feet wide at the north end to 110 feet wide near Buckley Road, and supports dense arroyo willow thickets and other native trees. Riparian areas are closely bordered by cultivated agricultural land or in places, dirt agricultural roads.

3.4.2.2 Upland Habitat

Agricultural Lands

Approximately 146 acres of the Project site comprise agricultural land that has been disturbed repeatedly by cultivation, including regular tilling, planting, and irrigation. Agricultural lands planted with safflower (*Carthamus tinctorius*) and cultivated pea (*Pisum sativum*) are the current predominant vegetation community within the Project site. Non-crop plants



*The majority of the Project site is historically cultivated agricultural land. The East-West Channel (pictured) is closely bordered by cultivated agricultural land.*

identified in this community include bindweed (*Convolvulus arvensis*), California burclover (*Medicago polymorpha*), bird's foot trefoil (*Lotus corniculatus*), wild geranium (*Geranium molle*), and stickwort (*Spergula arvensis*).

#### Riparian Woodlands

The Project site contains approximately 1.95 acres of riparian woodland habitat along Tank Farm Creek. This habitat extends for approximately 2,850 feet along both sides of Tank Farm Creek, from Buckley Road to the confluence with the North-South Creek Segment and East-West Channel, and a further 275 feet north along the North-South Creek Segment.

Tank Farm Creek supports dense willow thickets dominated by arroyo willow (*Salix lasiolepis*) with mature, scattered Fremont cottonwood (*Populus fremontii*), including a grove of cottonwoods along the southern reach of the North-South Creek Segment. There are well over 150 willows onsite along Tank Farm Creek, which generally grow in clusters of 5 to 15 trees, range from 4 to 55 feet in height, and are up to 30 inches in diameter. Other trees that make up riparian woodlands within the Project site include cottonwoods and coast live oaks. Within the North-South Creek Segment, there are approximately 15 mature cottonwood and willow trees. Closer to the southwest corner of the Project site, the riparian woodland becomes denser, and contains several clusters of willows; the majority of these are on the north bank of the southwest portion of Tank Farm Creek. Downed wood and thicket-like conditions are present along most of the creek with riparian vegetation growing within seasonally wet portions of the channel. This riparian woodland area provides habitat for small mammals, reptiles, and amphibians, potentially including the western pond turtle, and the canopy provides excellent nesting and foraging habitat for songbirds (Althouse and Meade, Inc. 2015b; see Appendix J).

#### Wetland Habitat

The Project site supports approximately 5.82 acres of mapped wetland habitat within Tank Farm Creek and associated drainages, as well as within man-made channels and agricultural swales. All of these wetlands fall under state jurisdiction as Waters of the State, and the sub-set of these wetlands located within the Tank Farm Creek and associated drainage channels also fall under federal jurisdiction as Waters of the U.S.

#### Isolated Wetlands within Agricultural Lands (Isolated Wetlands)

Isolated wetlands consist of three main features covering approximately 2.8 acres within onsite agricultural lands. These features are located in the southwest and southeast corners

of the Project site. Isolated wetlands in the southwest corner include the *Lockheed Wetland* and *Corner Wetland* from which there are two swales covering approximately one acre. These isolated wetlands collect onsite water runoff as well as offsite irrigation. The *Bowl Wetland* in the southeast corner of the Project site is an isolated wetland covering 1.85 acres extending in a narrow band diagonally from the eastern border to the southern border, forming a wide bowl in the middle before narrowing and flowing into a shallow scraped out depression along the shoulder of Buckley Road. Additionally, a wetland was identified on the northeastern area of the property during a 2002 wetland delineation performed by *Olberding Environmental, Inc.*; however, no sign of this habitat type was identified during a 2015 jurisdictional delineation effort (Althouse and Meade, Inc. 2015b). These isolated wetlands contain minimal hydric soil indicators and only occasional wetland plants. They are not the result of onsite agricultural practices. Rather, they result from topographic variations and associated drainage and may be vestiges of larger past historic wetland assemblages altered by development of the Chevron Tank Farm property, agriculture, and other uses. In general, these isolated wetland areas are not distinctive, partly due to the plowing practices on the property. No wetland habitats are present nearby the proposed Buckley Road Extension area.

#### In-Channel Wetlands

In-channel wetlands are considered federal jurisdictional wetlands due to the presence of hydric soils, hydric vegetation, and wetland hydrology. In-channel wetlands cover approximately three acres of the Project site and are found within the channel of Tank Farm Creek, the North-South Creek Segment, and East-West Channel tributaries. (Althouse and Meade, Inc. 2015b). Within Tank Farm Creek, in-channel wetlands include areas dominated by willows and cottonwoods with an understory of species common to the California bulrush marsh



*The North-South Creek Segment supports approximately 270 feet of riparian cottonwood and willow woodland along its 600-foot long reach through the Project site.*

vegetation community, including California bulrush (*Schoenoplectus californicus*) and cattails (*Typha angustifolia*). The in-channel wetland communities in the North-South Creek Segment and East-West Channel are dominated by weedy non-native species, such as poison hemlock, bristly ox-tongue (*Helminthotheca echioides*), and Fuller's teasel (*Dipsacus sativus*). However, the North-South Creek Segment supports riparian woodland, including mature cottonwoods and willows, for 270 feet north of its confluence with the main branch of Tank Farm Creek.

#### Ruderal

Ruderal habitats are characterized by a predominance of non-native weedy species in disturbed areas and occur over about 2.31 acres of the Project site, predominantly in the Buckley Road Extension property. Ruderal habitat at the Project site includes areas dominated by Italian thistle (*Carduus pycnocephalus*) and milk-thistle (*Silybum marianum*) with sporadic patches of non-native annual grasses and areas dominated by poison-hemlock, black mustard, sweet fennel, and red-stem filaree (*Erodium cicutarium*). Although fiddleneck was the only widespread California-native plant population observed within the ruderal habitat at the Project site, a contained population of rare Congdon's tarplant was observed growing across 1,330 square feet (sf) in a small ruderal scrape along the southern edge of the Project site (Althouse and Meade, Inc. 2015a).

#### Ornamental/Landscape Vegetation

Areas of ornamental and landscape vegetation occur in and around structures, roads, and associated infrastructure within the Project site. This vegetation occurs in the offsite Buckley Road Extension site, which contains a state-owned residence, a Caltrans move-on office trailer, and a gravel road leading to the house. Ornamental plants and cypress trees are planted in the Project vicinity.

#### 3.4.2.3 Vegetation

Several site surveys were conducted for the Project site, including the Buckley Road Extension site, to characterize onsite habitats and vegetation. Surveys revealed the presence of five broad vegetation types: upland agricultural lands, riparian woodlands, in-channel wetlands, isolated wetlands within agricultural lands, and ruderal/disturbed (See Table 3.4-2). The Project site also supports developed areas that contain planted/ornamental vegetation and other elements that support species habitat (Figure 3.4-1). Approximately 88 vascular plant species were identified during botanical surveys between February and July 2014. The list includes 20 species native to California and 68 naturalized or planted,



non-native species (Appendix I). (Althouse and Meade, Inc 2015a; Althouse and Meade, Inc 2015b). Native plant species account for 23 percent of the taxa within the Project site while non-native species account for 77 percent (Althouse and Meade, Inc 2015a). The high percentage of non-native species is likely a result of the historic use of the site for agricultural production and related high levels of site disturbance. The Project site does not contain any sensitive natural communities as designated by the California Department of Fish and Wildlife (CDFW), or by Figure 2 of the COS Element.

**Table 3.4-2. Habitat Types Located within the Project Site**

Habitat Type	Project Site Designation (acres)	Buckley Road Extension (acres)
Agricultural Land—Farmed Wetland, State	2.83	0.00
Agricultural Land—Non-Wetland, State	141.42	4.36
Riparian/Ephemeral Drainage—Federal Wetland	2.99	0.03
Riparian/Ephemeral Drainage—Willow Wetland, State	1.84	0.06
Ruderal/Disturbed	0.37	1.94
Developed	0.00	0.84
<b>Total</b>	<b>149.45</b>	<b>7.23</b>

Source: Althouse and Meade, Inc. 2015a.

#### 3.4.2.4 Wildlife

The Project site contains a number of wildlife habitats, including riparian, wetland, agricultural field, developed structures, and ruderal habitat. As described above, the vegetation communities in the Project site contain a diverse assemblage of invasive and common plants, and provide wildlife habitat, including trees for nesting and perching, structures for roosting, open areas for forage and dispersal, and edge areas for cover and escape.

Approximately 106 animal species are known or have the potential to occur on the Project site due to the presence of suitable habitat elements for some part of each species' life history, with 56 species (primarily birds) observed during field studies (Althouse and Meade, Inc 2015a). Throughout the Project site, western bluebirds, barn swallows, horned larks, and rock pigeons were observed foraging. The ruderal area around the site periphery also provides habitat for black-tailed jackrabbits and song sparrows. The riparian habitat along Tank Farm Creek is excellent habitat for songbirds and small mammals, with yellow-rumped warbler, oak titmouse, and pacific-slope flycatcher observed foraging throughout this habitat area. Surveys indicate that several species of songbird are likely to nest in riparian willows on the Project site and other birds, such as woodpeckers, are likely to nest immediately offsite and forage onsite. The existing residence on disturbed land along the

Buckley Road Extension site supports many active cliff swallow nests in its eaves, and could also house roosting bats (Althouse and Meade, Inc 2015a).

3.4.2.5 Special Status Species

The Biological Report for the Project site identified 106 special status plant species and 50 special status animal species with potential to occur within the region surrounding the Project site. These special status species are designated by the USFWS, CDFW, California Native Plant Society (CNPS), and the County of San Luis Obispo (County) (Althouse and Meade, Inc 2015a). This list was generated using information available in the CNDDDB (CDFW 2014), and CNPS’s Inventory of Rare and Endangered Plants of California (CNPS 2001). From this list, 6 special status plant and 17 animal species were determined to have the potential to be present in the Project site due to the presence of suitable habitat or direct observation during wildlife surveys (see Tables 3.4-3 and 3.4-4).

**Table 3.4-3. Special Status Plants with Potential to Occur in the Project Site**

Species <sup>1</sup>	Status <sup>2</sup>	Notes/Occurrence
Cambria Morning-glory <i>Calystegia subacaulis</i> ssp. <i>episcopalis</i>	CRPR 4.2	Low potential to occur onsite, known occurrence at the Tank Farm just offsite, but very unlikely to occur in plowed soils.
Congdon’s Tarplant <i>Centromadia parryi</i> ssp. <i>congdonii</i>	FSC, CRPR 1B.1	Occurs onsite near southern border, generally found in agricultural and ruderal areas in the Project vicinity. Observed in 2014.
Hoover’s Button-celery <i>Eryngium aristulatum</i> var. <i>hooveri</i>	CRPR 1B.1	Low potential to occur onsite, known occurrence 0.5 mile north along Tank Farm Road. Species requires vernal wetland habitat which is present in the Project site; however, it is chronically disturbed and unlikely to support this species.
Jones’s Layia <i>Layia jonesii</i>	FSC, CRPR 1B.2	Low potential to occur onsite, known occurrences 1.0 mile northwest of study area and 0.75 mile south of Mine Hill. Suitable soil and habitat types are present in the Project site, but area is chronically disturbed.
Miles’ Milk-vetch <i>Astragalus didymocarpus</i> var. <i>milesianus</i>	CRPR 1B.2	Low potential to occur onsite, known occurrence 1.2 miles north near South Hills Natural Reserve, appropriate clay soils are present onsite, but area is chronically disturbed.
San Luis Obispo Owl’s-clover <i>Castilleja desiflora</i> ssp. <i>obispoensis</i>	CRPR 1B.2	Low potential to occur onsite, known occurrence 1.2 miles north near South Hills open space. Suitable soil and habitat types are present onsite but species is unlikely to occur in plowed soils.

<sup>1</sup> Source: Althouse and Meade, Inc. 2015a.

<sup>2</sup> CRPR 1B = “Plants Rare, Threatened, or Endangered in California and Elsewhere” by the California Native Plant Society (CNPS) (CNPS 2015)

CRPR 4 = “Plants of Limited Distribution – A Watch List” (CNPS 2015)

0.1 = “Seriously threatened in California” (over 80% of occurrences threatened / high degree and immediacy of threat)

0.2 = “Moderately threatened in California” (20-80% occurrences threatened / moderate degree and immediacy of threat)

FE = Federal Endangered

FSC = Federal Species of Concern

SE = California Endangered

**Table 3.4-4. Sensitive Wildlife Species with Potential to Occur in the Project Site**

Species <sup>1</sup>	Status <sup>2</sup>	Notes/ Occurrence
Burrowing owl <i>Athene cunicularia</i>	CSC, FSC (Burrowing site)	Low potential to occur. Few squirrel burrows exist, and poor foraging habitat is present onsite.
California horned lark <i>Eremophila alpestris</i>	WL	High potential to occur. Suitable wintering and nesting habitat is present on-site in riparian areas.
California red-legged frog <i>Rana draytonii</i>	FT, CSC	Moderate potential to occur. Suitable habitat in onsite wetland areas of Tank Farm Creek is present during seasonal flows
Cooper's hawk <i>Accipiter cooperii</i>	WL	Moderate potential to occur. Limited suitable foraging and nesting habitat in the tree canopy is present onsite.
Ferruginous hawk <i>Buteo regalis</i>	WL	Low potential to occur. Marginally suitable wintering habitat for foraging is present on-site in riparian areas.
Loggerhead shrike <i>Lanius ludovicianus</i>	CSC	Moderate potential to occur. Appropriate nesting and foraging habitat is present onsite in Tank Farm Creek riparian and agricultural lands, and species is common to area.
Merlin <i>Falco columbarius</i>	WL	Moderate potential to occur. Appropriate wintering habitat is present onsite in riparian areas. Breeding habitat is absent onsite.
Nuttall's Woodpecker <i>Picoides nuttallii</i>	WL-fed	Present (foraging). Site does not contain suitable nesting habitat for the species but species were observed during surveys foraging in the riparian habitat near Buckley Road.
Oak Titmouse <i>Baeolophus inornatus</i>	WL-fed	Present (foraging). Site does not contain suitable oak-woodland nesting habitat but species were observed during surveys foraging in riparian habitat onsite.
Oregon Vesper Sparrow <i>Poocetes gramineus affinis</i>	CSC (Wintering)	Present (foraging). Appropriate wintering habitat is present and species were observed foraging in riparian habitat onsite during surveys.
Pallid bat <i>Antrozous pallidus</i>	CSC	Moderate potential to occur. Appropriate roost sites such as old buildings and tree hollows are present onsite.
Sharp-shinned hawk <i>Accipiter striatus</i>	WL	Present (foraging). Marginal nesting and foraging habitat is present on-site although nesting is highly unlikely. Species was observed during surveys foraging onsite.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	CSC	Low potential to occur. Marginally appropriate roost habitat is present near the Project site and the species could forage onsite.
Tri-colored blackbird <i>Agelaius tricolor</i>	CSC (Nesting colony), FSC, MBTA	Low potential to occur. Potential foraging habitat is present in wetlands, riparian, and agricultural habitat but no nesting habitat is present onsite.

**Table 3.4-4. Sensitive Wildlife Species with Potential to Occur in the Project Site (Continued)**

Species <sup>1</sup>	Status <sup>2</sup>	Notes/ Occurrence
Western pond turtle <i>Actinemys marmorata</i>	CSC	Moderate potential to occur. Appropriate semi-permanent stream habitat is present seasonally within Tank Farm Creek on-site.
White-tailed kite <i>Elanus leucurus</i>	FP (Nesting)	Moderate potential to occur (foraging). No potential for nesting onsite due to absence of suitable habitat but moderate potential for foraging due to suitable agricultural habitat and riparian.
Yellow Warbler	CSC (Nesting)	Moderate potential to occur. Appropriate nesting habitat is present in the willow riparian habitat onsite.

<sup>1</sup> Source: Althouse and Meade, Inc. 2015a

<sup>2</sup> CSC = California Species of Concern

FE = Federal Endangered

FSC = Federal Species of Concern

SE = California Endangered

WL = CDFG Watch list

WL-Fed = USFWS Watch list

Special Status Plant Species

Of the plant species listed in Table 3.4-3, one special status plant species was observed on the Project site: the Congdon’s tarplant (*Centromadia parryi* subsp. *congdonii*). The species is an endemic Californian annual herb that flowers in late spring and in summer. While Congdon’s tarplant does not have federal or state status, it is considered by the CNPS to be seriously threatened within its distribution across the state. A population of Congdon’s tarplant with approximately 500 to 750 individuals was identified along the southern border of the Project site in the Tank Farm Creek channel along Buckley Road in a 70-foot by 19-foot area (see Figure 6 of Appendix I). The Congdon’s tarplant patch was located approximately 500 feet east of a previously-discovered, uprooted individual Congdon’s tarplant. Suitable habitat in depressions may be present for the species to grow during normal rainfall years in other areas of the Project site (Althouse and Meade, Inc. 2015a).



Special Status Avian Species

**Burrowing Owl.** Burrowing owls are found in grasslands and sparsely vegetated woodland and scrub habitat throughout California. Burrowing owls often nest in abandoned ground

squirrel burrows that overlook suitable forage areas. Threats to the species in California include habitat loss, control of burrowing rodents, and direct mortality, in particular habitat loss, degradation, and fragmentation from the high rate of urbanization in the species' range (CDFW 2012). Although marginal habitat exists in the banks of Tank Farm Creek, the species has not been recorded onsite and is not expected to occur.

**California Horned Lark.** California horned lark is a CDFW Watch List species known to occur from Sonoma County south to San Diego County, as well as east to the foothills of the Sierra Nevada Mountains. It breeds in open, flat habitats with short vegetation, including grasslands, alkali flats, fallow grain fields, and meadows. They are known to make local movements through the seasons, and may not breed in all areas they are observed. A group of several horned larks were observed within the Project site during wildlife surveys performed in February and March, 2014; however no nesting was observed (Althouse and Meade, Inc 2015a).

**Cooper's Hawk.** The Cooper's hawk has extensive ranges that cover many habitats; however, they are primarily found in woodland habitats. Cooper's hawks are present in San Luis Obispo in areas of dense, relatively undisturbed riparian area and could potentially nest in trees onsite March through August (City of San Luis Obispo 2003a). They feed primarily on small birds, but also take reptiles and small mammals. While they have adapted well to urban landscapes, they are considered vulnerable within California when nesting. The nearest recorded occurrence of a nesting Cooper's hawk is in Morro Bay, 9.5 miles to the northwest. Moderately appropriate tree canopy is present in riparian habitat within the Project site for nesting Cooper's hawks. There are no reports in the CNDDDB of Cooper's hawks nesting in the south San Luis Obispo area, and Cooper's hawks were not observed in the Project site during surveys (Althouse and Meade, Inc 2015a).

**Ferruginous Hawk.** Ferruginous Hawk is a CDFW Watch List species that winters in grassland habitats in San Luis Obispo County but does not breed in San Luis Obispo County. Ferruginous hawks prefer short-grass habitats such as grasslands and fallow farm fields where they often perch on the ground and hunt by coursing low over the fields. They are regular but never abundant winter residents in the interior portion of the County and even less abundant coastally. The regularly planted and plowed agricultural land found in the Project site is poor foraging habitat for ferruginous hawks, and while incidental or occasional use could occur seasonally from October through February, this species is not expected to be present at the Project site or impacted by the Project. Ferruginous hawks

were not observed during February to June wildlife surveys (Althouse and Meade, Inc 2015a).

**Loggerhead Shrike.** The loggerhead shrike is a California Species of Concern (CSC) species and resident of arid regions of the County as well as elsewhere in California. Although historically considered a common resident of most of the County, recent studies indicate populations have declined by as much as 76 percent during the non-breeding season within the County. Preferred habitats for loggerhead shrike include woodland, chaparral, coastal scrub, and grassland, with perches such as fences, posts and scattered trees. Suitable nesting habitat is present within the Project site (Althouse and Meade, Inc 2015c).

**Merlin.** The merlin is a CDFW Watch List raptor species that winters in various habitats in the County. Merlins do not breed locally and only moderately appropriate wintering habitat is present on and surrounding the Project site. Merlins may use habitats in the Project site seasonally for foraging and roosting, but will not breed onsite and were not observed during winter and spring wildlife surveys (Althouse and Meade, Inc 2015a).

**Nuttall's Woodpecker.** Nuttall's woodpecker is a USFWS Watch List species due to regional reduction in preferred oak woodland habitats. Nuttall's woodpeckers remain fairly common residents in oak woodland habitats throughout Santa Barbara and San Luis Obispo Counties. Oak woodland habitat is not present onsite; however, moderate foraging habitat is present in the cottonwood and willow trees within the Tank Farm Creek drainage and the trees bordering the Project site to the south and to the east. While no nesting woodpeckers were observed onsite during winter and spring wildlife surveys in 2014, the species was observed foraging onsite at that time (Althouse and Meade, Inc 2015a).

**Oak Titmouse.** Oak Titmouse is a USFWS Watch List species due to regional reduction in preferred oak woodland habitats. The small bird is an obligate cavity-nester within oak trees and is a common species in oak woodlands on the central coast. No appropriate oak cavity nesting habitat exists within the Project site; however, oak titmice were observed foraging in the willows of the Tank Farm Creek willow riparian corridor (Althouse and Meade, Inc 2015a).

**Oregon Vesper Sparrow.** Oregon Vesper Sparrow is a CSC songbird and is an obligate grassland species, feeding on invertebrates and seeds. Wintering habitat is generally considered to be mainly open ground with little vegetation including stubble fields,

meadows, and road edges. One Oregon vesper sparrow was observed in the Project site during the February 2014 wildlife survey (Althouse and Meade, Inc 2015a).

**Sharp-shinned Hawk.** Sharp-shinned hawk is a CDFW Watch List species that frequents open oak and riparian woodland habitats. It is a regular fall and winter migrant in San Luis Obispo County that seldom remains in the area through the nesting season. One CNDDDB occurrence does exist, however, at Nipomo mesa from 2003. One sharp-shinned hawk was observed in the Project site; however, it was not nesting, and would be very unlikely to nest onsite in the future (Althouse and Meade, Inc 2015a).

**Tri-Colored Blackbird.** The tri-colored blackbird is a state and federal species of concern and a candidate for listing under the California Endangered Species Act (CESA). It requires open water, protected nesting substrate, and foraging area with insect prey near its nesting colony. Suitable nesting habitat exists within the nearby San Luis Obispo Creek but not within the Project site. While no potential nesting habitat is present onsite, a flock of tri-colored blackbirds were sighted foraging within the site during wildlife surveys (Althouse and Meade, Inc 2015a).

**Yellow Warbler.** The yellow warbler is a CSC songbird with a restricted breeding range in Central and Southern California. The status of the local subspecies of yellow warbler is described by the CNDDDB as “restricted range, rare”. The species frequents riparian habitats and nests in sycamores, cottonwoods, willows, and other riparian trees. There are no breeding records for the yellow warbler in the County; however, the species is a regular spring and fall migrant to the area. The riparian habitat found in the onsite drainages is suitable for nesting and foraging yellow warblers; however, the species was not observed during the 2014 wildlife surveys (Althouse and Meade, Inc 2015a).

**White-tailed Kite.** The white-tailed kite is a fully protected species that nests primarily in evergreen trees, especially coast live oaks, near meadows, marshes, or grasslands. The nearest records of nesting white-tailed kites are 5.6 miles north of the Project site at Camp San Luis Obispo in 1995 and 1997. Appropriate foraging habitat for the species is present in the Project site and poor quality nesting habitat may be present in cottonwood trees throughout Tank Farm Creek. One white-tailed kite was observed foraging in the Project site during February 2014 wildlife surveys (Althouse and Meade, Inc. 2015a).

#### Reptile and Amphibian Special Status Species

**California Red-Legged Frog.** The California red-legged frog is listed as threatened under the Federal Endangered Species Act (ESA) and as a CSC by CDFW. The species inhabits

creeks and ponds with open water often overhung with dense growths of woody riparian vegetation, especially willows. Suitable environments for California red-legged frogs may also include areas with seasonal waters canopied by willows, which is present at the Project site. This species is known to occur within San Luis Obispo Creek and some of its tributary channels. It generally requires seasonal pools or streams that hold water until late summer for successful breeding. Bullfrogs and introduced fish are detrimental to this species and have severely reduced populations in many areas. Tank Farm Creek in the Project site does not provide adequate pool habitat for breeding California red-legged frogs. However, during the rainy season, transient individuals could move through the drainage intermittently. The Creek connects to San Luis Obispo Creek, approximately 1.2 miles downstream. One adult and one juvenile California red-legged frog were found in San Luis Obispo Creek 1.3 miles upstream from this confluence. This occurrence is located about 0.5 mile straight-line distance northwest of the Project site. The channels in the Project site were dry during site surveys in spring and summer 2014, and no California red-legged frogs were observed (Althouse and Meade, Inc 2015a). Based upon hydrology and topography in Tank Farm Creek; however, suitable pool habitat is expected to be present through spring during years of average or greater rainfall (Althouse and Meade, Inc 2015a).

**Western Pond Turtle.** The western pond turtle is a CSC species inhabiting ponds and slow-moving streams with adequate pools. The species will move up seasonal streams during the winter months, and can over-summer in underground burrows during dry years, when ponds are empty. There is evidence that the portion of Tank Farm Creek at the southwest corner of the Project site commonly backs up at the point where water leaves the site and that this creates potentially appropriate pools for western pond turtles to winter. Standing water was not observed during 2014 surveys; however, these surveys were conducted during a year with less than average rainfall. Pond turtles were not observed in the Project site during 2014; however, CNNDDB contains numerous records in the vicinity of the Project site, including one occurrence about 0.5 mile northwest at the confluence of Prefumo Creek and San Luis Obispo Creek, 1.0 mile upstream of where the onsite creek meets San Luis Obispo Creek (Althouse and Meade, Inc 2015a). Based upon hydrology and topography in Tank Farm Creek, suitable pool habitat is expected to be present through spring during years of average or greater rainfall (Althouse and Meade, Inc 2015a).

#### Special Status Mammal Species

**Pallid Bat.** The pallid bat is a large, long-eared bat that occurs throughout the state from deserts to moist forests, and is considered a CSC. Pallid bats are primarily a crevice



roosting species that frequently occur in oak woodlands where they roost in tree cavities. These roosts are generally day or night roosts for one or a few bats. Attics may be used as roosts and during hot days individuals may emerge from crevices and roost on open rafters. Communal wintering or maternity colonies are more common in rock crevices and caves, and the species has been recorded at over 20 localities in the County. Pallid bats were not observed in the Project site during 2014 wildlife surveys (Althouse and Meade, Inc 2015a).

**Townsend’s Big-eared Bat.** Townsend’s big-eared bat is a medium-sized bat with large rabbit-like ears that is considered a CSC. The two subspecies are indistinguishable in the field. Both subspecies have been recorded in a variety of habitats in California, and in San Luis Obispo County both are found consistently in the vicinity of creek beds where they use the riparian corridor for foraging. Typical roost sites are found in caves or buildings with cave-like features. Townsend’s big-eared bat is a sedentary species and is presumed to spend the winter within 25 miles of its summer roosts. The species has been recorded in at least six localities within San Luis Obispo County. Although Townsend's big-eared bats could occur in the structures on the Project site, their presence is unlikely due to the age and use of the structures (Althouse and Meade, Inc 2015a).

#### Invasive and Non-Native Species

Botanical surveys of the Project site indicate the presence of 68 introduced non-native plant species. Introduced species account for 77 percent of the individual species identified in the Project site. Many of these species are considered “naturalized” where the species are capable of reproducing outside of their native habitat without human assistance (Althouse and Meade, Inc 2015a). All invasive species are naturalized, but not all naturalized species are invasive and threaten native habitats. A number of non-native species observed onsite are considered pests by the California Invasive Pest Council (Cal-IPC), including yellow star thistle (*Centaurea solstitialis*), tocalote (*Centaurea melistensis*), fuller’s teasel (*Dipsacus sativus*), and English ivy (*Hedera helix*). All of these species can displace native plants and degrade habitat value for native wildlife by displacing native forage.

#### 3.4.2.6 Critical Habitat

The Project site does not contain any designated critical habitat; however, there are two mapped critical habitat areas in the Project vicinity. Approximately 0.5 mile west, or 1.2 miles downstream along San Luis Obispo Creek, lies designated critical habitat for Steelhead trout. Approximately 2.5 miles to the north of the Project site lies mapped

critical habitat for California red-legged frog. While neither of these species have a high potential of entering the Project site, it is possible that during heavy rainstorms there might be enough flow to allow a limited number of California red-legged frogs to pass through the Project site. Similarly, there may be a low potential for Steelhead trout to access the area during short term heavy flows.

#### **3.4.3 Regulatory Setting**

##### 3.4.3.1 Federal

###### Endangered Species Act

The Federal Endangered Species Act (ESA) of 1973, as amended, establishes measures intended to ensure the protection and conservation of threatened and endangered species and the ecosystems on which they depend.

###### Migratory Bird Treaty Act and Executive Order 13186

The Migratory Bird Treaty Act (MBTA) governs the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts, and nest, and requires harvests to be limited to levels that prevent overuse. Further, the MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, of any migratory bird, their eggs, parts, and nests, except as authorized under a valid permit (50 CFR 21.11).

###### Section 401 of the Clean Water Act of 1977

The Clean Water Act (CWA) is the primary Federal law protecting the quality of the nation's waters (waters of the U.S.) which include wetlands, lakes, rivers, and coastal areas. Section 401 of the CWA addresses discharge of dredge and fill material into Waters of the U.S. and ensures that federally permitted activities comply with federal water quality standards. Section 401 of the CWA is regulated by the State Water Resources Control Board (SWRCB) which grants regulatory authority over water quality standards and discharges to Regional Water Quality Control Board (RWQCB). The RWQCB certifies via that a proposed project complies with applicable effluent limitations, water quality standards, and other conditions of California law. Evaluating the effects of the proposed project for both water quality and quantity (runoff) falls under the jurisdiction of the RWQCB.

### Section 404 of the Clean Water Act

Section 404 of the Clean Water Act (CWA) establishes a program to regulate the discharge of dredged or fill material into waters of the U.S., including wetlands. Activities in waters of the U.S. regulated under this program include fill for development, water resource projects (such as dams and levees), infrastructure development (such as highways and airports) and mining projects. Section 404 requires a permit before dredged or fill material may be discharged into waters of the U.S., unless the activity is exempt from Section 404 regulation (e.g., certain farming and forestry activities).

Proposed activities are regulated through a permit review process. An individual permit is required for potentially significant impacts. Individual permits are reviewed by the U.S. Army Corps of Engineers (USACE), which evaluates applications under a public interest review, as well as the environmental criteria set forth in the CWA Section 404(b)(1) Guidelines, regulations promulgated by EPA.

#### 3.4.3.2 State

### California Endangered Species Act

The California Endangered Species Act (CESA) parallels the main provisions of the Federal ESA and is administered by the California Department of Fish and Wildlife (CDFW). The California Endangered Species Act (CESA) prohibits the take of state-listed threatened and endangered species. California Fish and Game Code Section 86 defines “take” to include catch, pursue, or capture, or attempt to catch, pursue, or capture. Under the CESA, the CDFW is responsible for maintaining a list of rare, threatened, and endangered species designated under state law (California Fish and Game Code 2070-2079). The CDFW also maintains lists of candidate species, species of special concern, and fully protected species. Candidate species are those taxa which have been formally recognized by the CDFW and are under review for addition to the state threatened and endangered list. Species of special concern are those taxa which are considered sensitive; this list serves as a “watch list.” Pursuant to the requirements of the CESA, agencies reviewing proposed projects within their jurisdictions must determine whether any state-listed species have the potential to occur within a proposed project site and if the proposed project would have any significant impacts upon such species. Project-related impacts to species on the CESA’s rare, threatened, and endangered list would be considered significant. CDFW can authorize take of CESA-listed species if an incidental take permit is issued by the Secretary of the Interior or Commerce in compliance with the FESA and

CDFW issues a consistency determination, or if the director of CDFW issues a permit under Section 2080. Native Plant Protection Act

The Native Plant Protection Act (NPPA; F&G Code 1900) was enacted in 1977 and allows the Fish and Game Commission to designate plants as rare or endangered. There are 64 species, subspecies, and varieties of plants that are protected as rare under the NPPA. The NPPA prohibits take of endangered or rare native plants, but includes some exceptions for agricultural and nursery operations; emergencies; and after properly notifying CDFW for vegetation removal from canals, roads, and other sites; and changes in land use. Impacts to state designated rare plant species require a permit from CDFW.

#### Porter-Cologne Water Quality Control Act (California Water Code Division 7)

The Porter-Cologne Water Quality Control Act (Porter-Cologne) seeks to preserve, enhance, and restore the quality of California's water resources. The Porter-Cologne Water Quality Act established the SWRCB and nine RWQCBs as the principal state agencies with the responsibility for controlling water quality in the state. The State of California regulates discharges of dredged and fill material to Waters of the State through its Water Quality Certification Program under the authorities of Porter-Cologne and CWA Section 401, a program that allows the state to ensure that activities requiring a federal permit or license comply with state water quality standards. The Water Quality Certification Program is the state's de facto wetland protection program. It protects all waters within the state's regulatory jurisdiction, but has special responsibilities for wetlands, riparian areas, and headwater streams because these water bodies are not systematically protected by other state and regional board programs.

#### Section 1600-1616 of the State Fish and Game Code

The CDFW is responsible for conserving, protecting, and managing California's fish, wildlife and native plant resources. To meet this responsibility, the law requires any person, state or local government agency, or public utility proposing a project that may impact a river, stream or lake to notify the CDFW before beginning the project. If the CDFW determines that the project may adversely affect existing fish and wildlife resources, a Lake or Streambed Alteration Agreement is required. A Streambed Alteration Agreement presents the CDFW conditions of approval relative to the proposed project, and serves as an agreement between an applicant and the CDFW for a term of not more than five years for the performance of activities subject to this section.

### Other Sections of the Fish and Game Code

Fully protected and other listed species may not be taken or possessed without a permit from the CDFW. Provisions of the California Fish and Game Code provide special protection to certain enumerated species such as:

- Section 3503 protects eggs and nests of all birds.
- Section 3503.5 protects birds of prey and their nests.
- Section 3511 lists fully protected birds.
- Section 3513 protects all birds covered under the federal Migratory Bird Treaty Act.
- Section 3800 defines nongame birds.
- Section 4700 lists fully protected mammals.
- Section 5050 lists fully protected amphibians and reptiles.
- Section 5515 lists fully protected fish species.

#### 3.4.3.3 Local

### City of San Luis Obispo General Plan

The City of San Luis Obispo General Plan contains policies requiring protection of special-status plant and animal species. These local policy requirements pertaining to biological resources will be satisfied through incorporation of the mitigation measures presented in this document.

#### *Land Use Element*

***Policy LU 6.6.1: Creek and Wetlands Management Objectives.*** The City should manage its lake, creeks, wetlands, floodplains, and associated wetlands to achieve the multiple objectives of:

- Maintaining and restoring natural conditions, and fish and wildlife habitat;
- Preventing loss of life and minimizing property damage from flooding;
- Providing recreational opportunities which are compatible with fish and wildlife habitat, flood protection, and use of adjacent private properties;
- Recognizing and distinguishing between those sections of creeks and Laguna Lake which are in previously urbanized areas, such as the downtown core and sections which are in largely natural areas. Those sections already heavily impacted by urban development and activity may be appropriate for multiple use whereas creeks and lakeshore in a more natural state shall be managed for maximized ecological value.

***Policy LU 6.6.3: Amenities and Access.*** New public or private developments adjacent to the lake, creeks, and wetlands must respect the natural environment and incorporate the natural features as project amenities, provided doing so does not diminish natural values. Developments along creeks should include public access across the development site to the creek and along the creek, provided that wildlife habitat, public safety, and reasonable privacy and security of the development can be maintained, consistent with the Conservation and Open Space Element.

*Conservation and Open Space Element*

The COS Element includes a number of goals addressing biological resources, including Goal 7.2: Sustainable Natural Populations, which includes Policies 7.3.1 through 7.3.3, Goal 7.4: Trees and other Plants, which includes Policies 7.5.1 through 7.5.6, and Goal 7.7: Program, which includes Policies 7.7.1 through 7.5.6. Pertinent policies are detailed below.

***Policy COS 7.3.1 Protect Listed Species (A-D).***

- A. The City will identify the location, habitat and buffer needs of species listed for protection. This information will be developed by qualified people early in the planning and development review process.
- B. The City will establish and maintain records on the location of listed species. The City will maintain, for public use, generalized maps showing known locations of listed species. Specific site information may be kept confidential to protect the resources.
- C. The City will comply with State and Federal requirements for listed species.
- D. The City will protect listed species through its actions on: land-use designations; development standards; development applications; location, design, construction and maintenance of creeks, City roads and facilities; and on land that the City owns or manages.

***Policy COS 7.3.2 Species of Local Concern.*** The City will:

- A. Maintain healthy populations of native species in the long term, even though they are not listed for protection under State or Federal laws. These “species of local concern” are at the limit of their range in San Luis Obispo, or threats to their habitat are increasing.

- B. Identify the location, habitat and buffer needs of species of local concern. This information will be developed by qualified people early in the planning and development review process.
- C. Protect species of local concern through: its actions on land use designations, development standards, development applications; the location, design, construction, and maintenance of City facilities; land that the City owns or manages.
- D. Encourage individuals, organizations, and other agencies to protect species of local concern within their areas of responsibility and jurisdiction.
- E. Protect sensitive habitat, including creeks, from encroachment by livestock and human activities.

***Policy COS 7.3.3 Wildlife Habitat and Corridors.*** Continuous wildlife habitat, including corridors free of human disruption, shall be preserved and where necessary, created by interconnecting open spaces, wildlife habitat, and corridors. To accomplish this, the City will:

- A. Require public and private developments, including public works projects, to evaluate animal species and their movements within and through development sites and create habitats and corridors appropriate for wildlife.
- B. Plan for connectivity of open spaces and wildlife habitat and corridors using specific area plans, neighborhood plans, subdivision maps, or other applicable planning processes, consistent with Open Space Guidelines.
- C. Coordinate with San Luis Obispo County and adjoining jurisdictions, federal and state agencies such as Caltrans to assure regional connectivity of open space and wildlife corridors.
- D. Preserve and expand links between open spaces and creek corridors.

***Policy COS 7.5.1 Protection of Significant Trees.*** Significant trees, as determined by the City Council upon the recommendation of the Tree Committee, Planning or Architectural Review Committee, are those making substantial contributions to natural habitat or to the urban landscape due to their species, size, or rarity. Significant trees, particularly native species, shall be protected. Removal of significant trees shall be subject to the criteria and mitigation requirements in Chapter 8.6.3 [COS Element Policy]. Oak Woodland communities in the Greenbelt and in open space areas shall be protected.

***Policy COS 7.5.2 Use of Native California Plants in Urban Landscaping.*** Landscaping should incorporate native plant species, with selection appropriate for location.

***Policy COS 7.5.3 Heritage Tree Program.*** The City will continue a program to designate and help protect “heritage trees.”

***Policy COS 7.5.4 Preservation of grassland communities and other habitat types.***

Grassland communities and other habitat types in the Greenbelt and in designated open space areas shall be preserved.

***Policy COS 7.5.5 Soil Conservation and Landform modification.*** Public and private development projects shall be designed to prevent soil erosion, minimize landform modifications to avoid habitat disturbance, and conserve and reuse onsite soils.

***Policy COS 7.5.6 Minimize synthetic or organic environmental toxins.***

***Policy COS 7.7.6 Replace Invasive, Non-Native Vegetation with Native Vegetation.*** The City and private development will protect and enhance habitat by removing invasive, non-native vegetation that detracts from habitat values by replanting it with native California plant species. The Natural Resources Manager will prioritize projects and enlist the help of properly trained volunteers to assist in non-native vegetation removal and replanting when appropriate.

***Policy COS 7.7.7 Preserve Ecotones.*** Condition or modify development approvals to ensure that “ecotones,” or natural transitions along the edges of different habitat types, are preserved and enhanced because of their importance to wildlife. Natural ecotones of particular concern include those along the margins of riparian corridors, marshlands, vernal pools, and oak woodlands, where they transition to grasslands and other habitat types.

***Policy COS 7.7.8 Protect Wildlife Corridors.*** Condition development permits in accordance with applicable mitigation measures to ensure that important corridors for wildlife movement and dispersal are protected. Features of particular importance to wildlife include riparian corridors, wetlands, lake shorelines, and protected natural areas with cover and water. Linkages and corridors shall be provided to maintain connections between habitat areas.

***Policy COS 7.7.9 Creek Setbacks.*** As further described in the Zoning Regulations [Section 17.16.025], the City will maintain creek setbacks to include: an appropriate separation from the physical top of bank, the appropriate floodway as identified in the Flood Management Policy, native riparian plants or wildlife habitat, and space for paths called for by any city-adopted plan. In addition, creek setbacks should be consistent with the following:

- A. The following items should be no closer to the wetland or creek than the setback line: buildings, streets, driveways, parking lots, aboveground utilities, and outdoor commercial storage or work areas.



- B. Development approvals should respect the separation from creek banks and protection of floodways and natural features identified in Part A above, whether or not the setback line has been established.
- C. Features which normally would be outside the creek setback may be permitted to encroach where there is no practical alternative, to allow reasonable development of a parcel, consistent with the Conservation and Open Space Element.
- D. Existing bridges may be replaced or widened, consistent with policies in this Element. Removal of any existing bridge or restoration of a channel to more natural conditions will provide for wildlife corridors, traffic circulation, access, utilities, and reasonable use of adjacent properties.

***Policy COS 8.3.1: Open Space within an Urban Area.*** The City will preserve the areas listed in Goal 8.2.2 (creek corridors, including open channel with natural banks and vegetation, wetlands and vernal pools, grassland communities and woodlands, wildlife habitat corridors, habitat of listed species, and unique plant and animal communities including “species of local concern”) and will encourage individuals, organizations, and other agencies to do likewise. The City will designate these areas as Open Space or Agriculture in the General Plan.

***Policy COS 8.3.2: Open Space Buffers.*** When activities close to open space resources within or outside the urban area could harm them, the City will require buffers between the activities and the resources. The City will actively encourage individuals, organizations, and other agencies to follow this policy. Buffers associated with new development shall be on the site of the development, rather than on neighboring land containing the open space resource. Buffers provide distance in the form of setbacks, within which certain features or activities are not allowed or conditionally allowed. Buffers shall also use techniques such as planting and wildlife-compatible fencing. Buffers shall be adequate for the most sensitive species in the protected area, as determined by a qualified professional, and shall complement the protected area’s habitat values. Buffers shall be required in the following situations [four of the five noted here, see COS Policy 8.3.2 for A]:

- B. Between urban development and agricultural operations, to address dust, noise, odors, chemical use, and access by people and pets.
- C. Between agricultural operations and natural habitat, to address noise, chemical use, sediment transport, and livestock access.
- D. Between new development and cultural resources, to address visual compatibility and access by people.

E. Between new development and scenic resources or the greenbelt, to address view blockage, lighting and noise, and visual transition from urban character to rural character.

F. Between urban development -- including parks and public facilities-- and natural habitats such as creeks, wetlands, hillsides, and ridgelines, Morros, scenic rock outcrops and other significant geological features, and grassland communities, to address noise, lighting, storm runoff, spread of invasive, non-native species, and access by people and pets (see also the Safety Element for “defensible space” next to wildland fire areas).

***Policy COS 8.6.3 G. Required Mitigation.*** Any development that is allowed on a site designated as Open Space or Agriculture, or containing open-space resources, shall be designed to minimize its impacts on open space values on the site and on neighboring land.

1. Hillside development shall comply with the standards of the Land Use Element, including minimization of grading for structures and access, and use of building forms, colors, and landscaping that are not visually intrusive (See also Chapter [COS Element Policy] 9.21.1).
2. Creek corridors, wetlands, grassland communities, other valuable habitat areas, archaeological resources, agricultural land, and necessary buffers should be within their own parcel, rather than divided among newly created parcels. Where creation of a separate parcel is not practical, the resources shall be within an easement. The easement must clearly establish allowed uses and maintenance responsibilities in furtherance of resource protection.

***Policy COS 8.7.2 C: Enhance and Restore Open Space.*** Remove invasive, non-native species in natural habitat areas, and prevent the introduction or spread of invasive, non-native species and pathogens.

#### Airport Area Specific Plan

***Policy 3.2.1 Riparian Vegetation.*** Establish healthy, continuous riparian vegetation along (1) East Branch of San Luis Obispo Creek from Broad Street to Santa Fe Road, (2) Acacia Creek from the northern planning area boundary to the confluence with East Branch of San Luis Obispo Creek, (3) Orcutt Creek from the planning area northern boundary to its confluence with Acacia Creek, and (4) Tank Farm Creek from the planning area’s northern boundary to its southern boundary.

***Policy 3.2.2 East Branch SLO Creek Riparian Corridor.*** For the reach of East Branch of San Luis Obispo Creek downstream of Santa Fe Road, protect the riparian corridor from human and agricultural activity, with an adequate buffer to protect pond turtles and steelhead along this reach, and maintain the natural character of the riparian corridor.

**Policy 3.2.4 Wetlands and Buffer Areas.** Designate for open space use wetlands and their associated buffer areas.

**Policy 3.2.5 Restoring Marginal or Degraded Wetlands.** When reviewing plans to restore marginal or degraded wetlands, require (1) techniques for isolation, stabilizing, or removing petroleum contamination of soil and groundwater that minimize disturbance of existing wetland and other surface resource values, (2) configuration of the ground surface to retain wetland characteristics, (3) removal of invasive, non-native plants, (4) introduction of native plants, (5) methods approved by the Regional Water Quality Control Board, and the City Fire Department and (6) will not create a significant attraction for large birds in consideration of airport safety.

**Policy 3.2.6 Expansion of Wetlands.** Where suitable buffers can be provided, expand wetlands into areas within the wetlands complex that are conducive to wetlands, but that do not initially meet the definition of wetlands. However, any expansion or changes to wetlands must take into account the potential increase in airport safety hazards as a result of bird strikes.

**Policy 3.2.7 Mitigation of Wetland Losses.** Utilize suitable portions of the Chevron property for on-site mitigation of wetland losses on the Chevron property and, if agreed to by the property owner, off-site mitigation of wetland losses associated with development elsewhere in the Airport Area and Margarita Area.

**Policy 3.2.8 Professional Direction of Wetland Work.** Assure that all wetlands restoration, enhancement, and creation will be under the direction of qualified professionals. Seek the cooperation of trustee agencies, such as the California Department of Fish and Wildlife, and obtain any necessary approvals from these agencies.

**Policy 3.2.9 Design of Detention Areas.** Design on-site drainage detention areas within the Airport Area to support wetlands characteristics, so they will be visually attractive elements of the landscape and components in a system of wildlife habitat, in addition to flood control facilities.

**AASP Policy 3.2.10: Recreational Use of Wetlands Complex.** Recreational use of the wetlands complex and buffer areas should be limited to non-intrusive observation and study. The type and extent of public access should be restricted in order to maintain high-quality wildlife habitat.

**Policy 3.2.11 Impacts from Run-Off.** Minimize the water-quality impacts associated with run-off from rooftops and paved areas, due to contaminants, temperature changes, velocity changes, and sediment by providing dispersed surface drainage across areas with suitable soil and vegetation whenever feasible, instead of piped or other concentrated drainage from roofs and paved areas directly to creeks.

**Policy 3.2.15 Continuous Open Space Corridors.** Provide continuous open space corridors linking open space resources within the Airport Area to resources outside of the Airport Area.

**Policy 3.2.16 Continuous Wetlands.** Development in the Airport Area should not isolate or further fragment wetlands, uplands or their associated habitat areas.

#### City of San Luis Obispo Zoning Ordinance

**17.16.025 Creek Setbacks.** As stated in the zoning regulations, creek setbacks shall apply to all creeks as defined in the COS Element, as shown on that element's Creek map (figure 9), and only to those creeks. Creek setbacks shall be measured from the existing top of bank (or the future top of bank resulting from a creek alteration reflected in a plan approved by the City), or from the outside edge of the predominant riparian vegetation, whichever is farther from the creek flow line. The zoning regulations specify different setback dimensions for different classes of covered waterways such as whether the creek was within the 1996 City limits or in areas annexed after 1996. Tank Farm Creek qualifies under the zoning regulations for a 20-foot setback from the top of the bank or outside edge of riparian vegetation; however, 17.16.026.E.3 provides that the City may require larger setbacks for discretionary projects in order to avoid potentially significant environmental impacts (City of San Luis Obispo 2015).

### **3.4.4 Environmental Impact Analysis**

#### 3.4.4.1 Thresholds of Significance

Impacts to biological resources would be considered significant if the proposed Project results in:

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

- c) A substantial adverse effect on federally protected wetlands as defined by Section 404 of the CWA (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- d) 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;
- e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or,
- f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

#### 3.4.4.2 Impact Assessment Methodology

This section describes the impacts of the proposed Project on the biological resources in the Project site and surrounding area, including both permanent and temporary loss of habitat, vegetation, and species. Impacts are analyzed by evaluating the Project's effects on vegetative communities, individual occurrences of plant and wildlife species, and habitat linkages. The proposed development of the Project site is considered in relation to the existing biological setting based on site-specific information obtained from the 2015 Biological Report (Appendix I), 2015 Wetland Delineation Study (Appendix J), and GIS data provided by Althouse and Meade (Althouse and Meade, Inc. 2015c). In addition, Amec Foster Wheeler conducted several reconnaissance-level site visits (most recently in April 2016) to assess and document existing conditions within and adjacent to Tank Farm Creek and associated riparian areas. This information was used to establish the locations and extent of riparian, wetland, and upland habitat, number and location of existing trees and tree canopy, and location of the existing creek channels. This information serves as the environmental baseline upon which impacts resulting from the Project are assessed.

Construction impacts are assessed based on information provided within the Project's preliminary VTM and Development Plan, which include the size, location, and grade of building pads, location and area of disturbance associated with the Class I bicycle paths, roadways, and bridges, and location and size of utility and drainage infrastructure. As some of this information is at the conceptual or preliminary stage (e.g., proximity of development to Tank Farm Creek), a conservative approach is utilized to fully account for potential impacts to sensitive resources. This approach determined the maximum potential area of disturbance to vegetative communities and associated species. Construction impacts are then assessed based on the likely presence of heavy construction equipment, vehicles, and construction crews operating in close proximity to Tank Farm Creek riparian and wetland

habitats, along with extensive earth shaping and grading that would occur along and immediately adjacent to much of the Tank Farm Creek corridor.

Operational impacts are based on the proposed extent of development, vehicle traffic, noise, light and glare, and human presence within proximity to existing biological resources. This analysis assesses the potential for increased activity and increased impervious surfaces near Tank Farm Creek to result in impacts to biological resources.

This section also builds upon the conclusions identified in the 2014 LUCE Update EIR. The LUCE Update EIR analyzed the potential to damage or disturb biological resources within the Project site, and concluded that impacts would be less than significant with the incorporation of mitigation. Mitigation measures from the LUCE Update EIR include preservation and minimization of impacts to wildlife corridors and creeks (consistent with Policy 6.4, Creeks, Wetlands and Flooding and 7.3.3, Wildlife Habitat and Corridors) and required creek setbacks (consistent with Policy 7.7.9, Creek Setbacks). Mitigations provided below build upon these policies.

#### 3.4.4.3 Project Impacts and Mitigation Measures

Permanent and temporary impacts to biological resources in the Project site were analyzed and appropriate biological resource protection mitigation measures identified to reduce such impacts to less than significant. Impacts are related to the proposed development of approximately 68.23 acres of residential uses (720 homes), as well as 3.34 acres of neighborhood commercial development (15,000 sf of commercial buildings), and 71.30 acres of open space and parks development (55.30 acres of open space and 16.00 acres of developed residential parks onsite). Impacts are also assessed related to the development of at least 7.03 acres of roadways, major drainage facilities, utilities, and grading to shape the Project site, including cut and fill slopes of up to 8 feet in height proximate to Tank Farm Creek. Development under the Project would equate to approximately 95 acres of disturbance (paved or building footprint) with substantial topographic changes, drainage manipulations, and varied habitat creation and restoration areas. As a result, the Project would increase human population, levels of motor vehicle and truck activity, associated noise and lighting, and both the quantity and degraded quality of urban runoff. Table 3.4-5 presents a summary of Project impacts to biological resources.

**Table 3.4-5. Summary of Project Impacts**

Biological Resources Impacts	Mitigation Measures	Residual Significance
BIO-1. Construction activities within the Project site and Buckley Road Extension site, including extensive grading, excavation, and fill, would result in permanent and temporary impacts to sensitive habitats and species, particularly in areas within or near Tank Farm Creek.	MM HYD-1a – 1c MM BIO-1a MM BIO-1b	Significant but Mitigable
BIO-2. Onsite Project development would result in permanent loss of habitats within the Project site, including protected wetlands and riparian areas associated with Tank Farm Creek.	MM AG-1 MM HYD-4a MM HYD-4b MM BIO-1a MM BIO-1b MM BIO-2a – j	Significant but Mitigable
BIO-3. Onsite Project development would interfere with the movement of common wildlife and special status species through establishment of confined wildlife corridors within the Project site.	MM BIO-1a MM BIO-1b MM BIO-2a – 2j MM BIO-3a – e	Significant but Mitigable
BIO-4. Offsite improvements to and extension of Buckley Road and associated bicycle and pedestrian paths have the potential to create permanent impacts to special status species through removal of suitable habitat.	MM BIO-1a MM BIO-1b MM BIO-3a MM BIO-3b MM BIO-4	Significant but Mitigable
BIO-5. Long-term operation of the Project has the potential to create significant impacts to biological resources as a result of increased light, noise, and increased human presence and other urban edge effects.	MM BIO-5a MM BIO-5b	Significant but Mitigable
BIO-6. Project development could impact offsite biological resources from sedimentation into Tank Farm Creek.	MM HYD-1a – 1c MM BIO-1a MM BIO-1b MM BIO-2a MM BIO-2f MM BIO-2h MM BIO-2j MM BIO-6	Significant but Mitigable

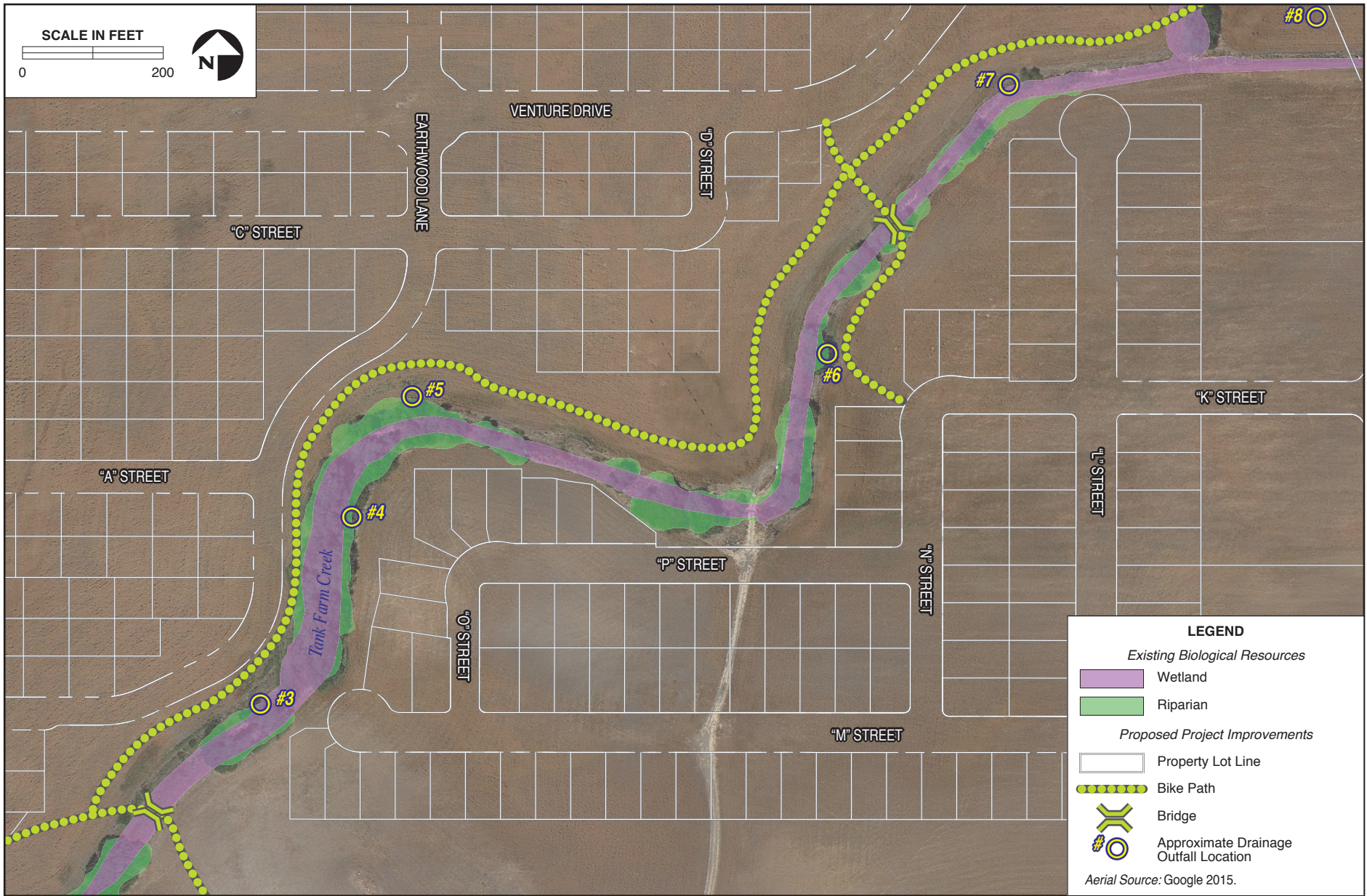
**Impact BIO-1 Construction activities within the Project site and Buckley Road Extension site, including extensive grading, excavation, and fill, would result in permanent and temporary impacts to sensitive habitats and species, particularly in areas within or near Tank Farm Creek (Significant but Mitigable).**

Construction activities throughout the Project site would occur over an estimated 10-year period over the course of six construction phases. Project construction would entail the clearing and grubbing of up to 95 acres for development (68.23 acres for residential units; 3.34 acres of commercial development; 16.00 acres for parks; and 7.03 acres for roadways), as well as disturbance of 55.3 acres proposed as open space, including grading, construction of the Jespersen Road Extension, pocket park/detention basin, Buckley Road widening, almost 3,000 feet of landscape berm, several miles of bike path, utilities and drainage facilities, and habitat restoration. Site development would involve the cut and fill of approximately 727,162 cubic yards (cy) of soil over most of the site's 150 acres. Cut and fill would be balanced onsite, with some borrow and refill between phases (see Table 2-7). Cut soils would be used to level the site, as well as to raise 35 acres of building pads and proposed roads to at least two feet above the existing Federal Emergency Management Agency (FEMA) designated floodplain.

Site preparation and grading would require the use of large excavators, scrapers, motor-graders, dump trucks, compactors, and other heavy construction equipment, for the placement of relocated earth. Grading for some phases may be spread out over a period of a year or longer, leaving large areas potentially disturbed for this amount of time. Following rough grading and site preparation, trenching, and the installation of wet and dry utilities, including eight drains to the Tank Farm Creek, would occur, with such work likely occurring in phases. Once each phase or combined phases is prepared and basic utilities installed, construction of buildings, roads, and parking lots would commence.

In addition, the Project would involve the construction of a 12-foot wide Class I bicycle path with a 20-foot wide disturbance along the majority of Tank Farm Creek for over 2,000 feet. In some areas, the Class I path is proposed to be located within the riparian canopy and approximately five feet from the top of the creek bank. This would occur within the central portions of Tank Farm Creek spanning up to 600 feet on both the northern and southern banks and could lead to direct removal or damage to riparian trees and vegetation (see Figure 3.4-2). Construction of the Class I path would also involve the construction of





Potential Project Impacts to Tank Farm Creek

**FIGURE 3.4-2**

two bridges across the creek. Both of these bridges are currently proposed in areas that could potentially intersect tree canopies and existing riparian vegetation, although the southern bridge is intended to be sited to avoid major trees. Construction of the path would require clearance of vegetation, grading, fill, compaction, and paving that would occur largely within or immediately adjacent to the Tank Farm Creek riparian corridor and within the 20-foot creek setback required under City policy. Construction could also cause additional temporary impacts to tree roots through compaction, damage to foliage and branches by construction equipment, and contamination of soils by construction waste.

Construction would also occur within areas offsite that have biological resources, including the Buckley Road Extension site. Construction of the Buckley Road Extension would involve demolition of a residence, relocation of utilities and removal of a septic tank, removal of weedy vegetation on serpentine rock near South Higuera Street, grading, and trenching, which would impact the agricultural and ruderal vegetation.

Project construction would include the ongoing operation of heavy construction equipment, vehicles, and presence of construction crews within or near sensitive biological habitats, such as wetland and riparian corridors within Tank Farm Creek, and would have the potential to affect sensitive species within those habitats. Installation of eight large culverts and associated concrete headwalls and rip rap would require operation of heavy equipment within the riparian corridor and direct removal of sensitive habitat. Installation of the culverts ranging from 18 to 54 inches in size would require use of excavators, backhoes, and other construction equipment to trench for culvert installation and headwall/apron installation within the creek bank. Additional area around the pipes and the energy dissipation structures would be temporarily disturbed during construction by equipment accessing the creek, digging footers for headwalls, and opening the trenches.

Within an approximate 2,100-foot long segment of Tank Farm Creek, 25 R-1 residential units are proposed adjacent to the south bank (lots 525 through 550), 10 R-2 residential units are proposed adjacent to the north bank. Impacts would include removal of habitat, mature willows and cottonwoods, and prolonged disturbance of wildlife over multiple Project phases. Additionally, construction crews and heavy equipment would potentially be operating within and adjacent to the riparian corridor in order to conduct site preparation, grading, trenching, and paving activities for the Class I bicycle path, bridges, roadway infrastructure, grading for housing pads, and trenching for utilities over several phases extended over several years.

Construction could temporarily impact habitat by generating noise, light, dust, petrochemical pollutants, liquid sediments, and other waste that contaminate wildlife habitat. Contamination of water sources and food supplies and the related reduction in available forage would cause direct effects to sensitive wildlife. Prolonged construction activities and exposure of large areas of disturbed soils and artificial slopes proximate to Tank Farm Creek could result in potential for substantial erosion and sediment flows into the creek and downstream habitats during grading and site preparation activities extending over multiple phases and several years. Potential for large volumes of sediment input could compromise aquatic habitat in Tank Farm Creek and San Luis Obispo Creek downstream. Changes to the creek flow and hydrology as well as potential for release of contaminants into aquatic habitats could directly affect the species by reducing the quality of existing habitat and causing mortality of individuals, both of which constitute an adverse effect to the species. However, potential construction impacts to biological resources can be reduced and/or avoided with implementation of a Biological Mitigation Plan that controls construction activities and equipment along with monitoring to ensure compliance with all requirements of the Biological Mitigation Plan. Overall, with implementation of mitigation, impacts to biological resources resulting from construction activities would be *significant but mitigable*.

#### Mitigation Measures

*MM HYD-1a – 1c shall apply.*

*MM BIO-1a The Applicant shall prepare and implement a Biological Mitigation Plan that identifies construction-related staging and maintenance areas and includes Project-specific construction best management practices (BMPs) to avoid or minimize impacts to biological resources, including all measures needed to protect riparian woodland along Tank Farm Creek, minimize erosion, and retain sediment on the Project site. Such BMPs shall include (but not be limited to) the following:*

- 1) Construction equipment and vehicles shall be stored at least 100 feet away from Tank Farm Creek and adjacent riparian habitat, and all construction vehicle maintenance shall be performed in a designated offsite vehicle storage and maintenance area.*
- 2) Prior to construction activities adjacent to Tank Farm Creek, the creek shall be fenced with orange construction fencing and signed to prohibit*

*entry of construction equipment and personnel unless authorized by the City. Fencing should be located a minimum of 20 feet from the edge of the riparian canopy or top of bank, whichever is further from the creek, and shall be maintained throughout the construction period for each phase of development.*

- 3) In the event that construction must occur within the creek or 20-foot creek setback, a biological monitor shall be present during all such activities with the authority to stop or redirect work as needed to protect biological resources.*
- 4) Construction shall occur during daylight hours (7:00 AM to 7:00 PM or sunset, whichever is sooner) to avoid impacts to nocturnal and crepuscular (dawn and dusk activity period) species. No construction night lighting shall be permitted within 100 yards of the top of the creek banks.*
- 5) Construction equipment shall be inspected at the beginning of each work day to ensure that no wildlife species is residing within any construction equipment (e.g., species have not climbed into wheel wells, engine compartments, or under tracks since the equipment was last parked). Any sensitive wildlife species found during inspections shall be gently encouraged to leave the Project site by a qualified biologist or otherwise trained and City-approved personnel.*
- 6) Pallets or secondary containment areas for chemicals, drums, or bagged materials shall be provided. Should material spills occur, materials and/or contaminants shall be cleaned from the Project site and recycled or disposed of to the satisfaction of the Regional Water Quality Control Board (RWQCB).*
- 7) All trash and construction debris shall be picked up and properly disposed at the end of each day and waste dumpsters shall be covered with plastic sheeting at the end of each workday and during storm events. All sheeting shall be carefully secured to withstand weather conditions.*
- 8) The Applicant shall implement erosion control measures designed to minimize erosion and retain sediment on the Project site. Such measures*

*shall include installation of silt fencing, straw wattles, or other acceptable erosion control devices along the perimeter of Tank Farm Creek and at the perimeter of all cut or fill slopes. All drainage shall be directed to sediment basins designed to retain all sediment onsite.*

- 9) *Concrete truck and tool washout should occur in a designated location such that no runoff will reach the creek.*
- 10) *All open trenches shall be constructed with appropriate exit ramps to allow species that incidentally fall into a trench to escape. All open trenches shall be inspected at the beginning of each work day to ensure that no wildlife species is present. Any sensitive wildlife species found during inspections shall be gently encouraged to leave the Project site by a qualified biologist or otherwise trained and City-approved personnel. Trenches will remain open for the shortest period necessary to complete required work.*
- 11) *Existing facilities and disturbed areas shall be used to the maximum extent possible to minimize the amount of disturbance of undeveloped areas and all construction access roads and staging areas shall be located to avoid high quality habitat and minimize habitat fragmentation.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall be submitted for review and approval by the City prior to acceptance of the final Development Plan and recordation of the final VTM. The plan shall be designed to address all construction-related activities during all phases of development until all disturbed areas are permanently stabilized.

**Monitoring.** The City shall review and approve the Biological Mitigation Plan to ensure that all BMPs and appropriate mitigation measures have been included. The City shall review the construction plans for each phase of development to ensure consistency with the Biological Mitigation Plan. City staff shall also periodically inspect the Project site during major grading and construction within or adjacent to Tank Farm Creek.

*MM BIO-1b The Applicant shall retain a qualified Environmental Monitor, subject to review and approval by the City and in consultation with CDFW, RWQCB, and USFWS to oversee compliance of the construction activities with the Biological Monitoring Plan and applicable laws, regulations, and policies. The Environmental Monitor shall monitor all construction activities, conduct a biological resources education program for all construction workers prior to the initiation of any clearing or construction activities, and provide quarterly reports to the City regarding construction activities, enforcement issues and remedial measures. The Environmental Monitor shall be responsible for conducting inspections of the work area each work day to ensure that excavation areas, restored habitats, and open water habitats in the area do not have oil sheen, liquid oil, or any other potential exposure risk to wildlife. If any exposure risk is identified, the Environmental Monitor shall implement measures that could include, but are not limited to, hazing, fencing, and wildlife removals to eliminate the exposure risk.*

*In addition, a CDFW-approved biologist shall be present during all construction occurring within 50 feet of Tank Farm Creek, riparian habitat, drainages, and seasonal or permanent wetlands. The biologist shall also conduct sensitive species surveys immediately prior to construction activities (within the appropriate season) and shall monitor construction activities in the vicinity of habitats to be avoided (see also, MM BIO-3 and all subparts below).*

*The work area boundaries and other off-limit areas shall be identified by the biologist and/or Environmental Monitor on a daily basis. The biologist and/or Environmental Monitor shall inspect construction and sediment control fencing each work day during construction activities to ensure that sensitive species are not exposed to hazards. Any vegetation clearing activities shall be monitored by the biologist and/or Environmental Monitor.*

**Plan Requirements and Timing.** The City shall select a qualified Environmental Monitor and a CDFW-approved qualified biologist prior to issuance of grading and building permits for each phase of construction.

The Environmental Monitor and CDFW-approved qualified biologist shall be present onsite to monitor construction activities.

**Monitoring.** The Environmental Monitor shall monitor all grading and construction activities, shall conduct regular site inspections throughout the entire site, and shall be responsible for compliance of the construction activities and the above BMPs within MM BIO-1a. During construction, the Environmental Monitor shall submit quarterly monitoring reports to the City to ensure compliance with the Biological Mitigation Plan and applicable laws, regulations, and policies. The qualified biologist shall be onsite during all construction activities which are within 50 feet of sensitive creek and riparian habitat areas.

#### Residual Impact

Implementation of MM BIO-1a and MM BIO-1b would reduce direct construction impacts to species and their habitat by limiting activities, debris, and sediment in appropriate locations outside of sensitive habitat to the maximum extent practicable and requiring that construction occurs only during daylight hours when many wildlife species are less active. MM HYD-1a-f would also reduce impacts from erosion and storm water runoff during construction. When combined with standard regulatory measures (including required permitting from USACE, CDFW, and RWQCB) and regulatory oversight during construction by the Environmental Monitor, implementation of mitigation measures MM BIO-1a and MM BIO-1b would reduce impacts from construction to less than significant after mitigation.

**Impact BIO-2            Onsite Project development would result in permanent loss of habitats within the Project site, including protected wetlands and riparian areas associated with Tank Farm Creek (Significant but Mitigable).**

Project implementation would result in the permanent removal of approximately 120 acres of agricultural habitat, 5 acres of ruderal/disturbed habitat, 0.19 acres of riparian habitat, 0.98 acres of in-channel wetlands, and 0.86 acres of isolated wetlands. Project development would impact highly suitable nesting and foraging habitat for migratory birds, including raptors, in riparian, wetland, and agricultural habitats, as well as habitat for sensitive amphibians, reptiles, roosting bats, and for rare plants (refer to Section 3.4.2.6 *Special Status Species*). There would also be associated potential impacts to sensitive wildlife

foraging, nesting, and dispersal habitat (refer to Table 3.4-3 and Table 3.4-4). Removal of habitat occupied by sensitive species would create potentially significant adverse impacts to the species, regardless of whether direct mortality or harm to individual plants or animals occurs.

#### Upland/Agricultural Habitat

Although disturbed by ongoing cultivation, permanent loss of approximately 120 acres of agricultural habitat would eliminate foraging habitat for some native species, particularly raptors and migratory birds, small rodents, and insects, as well as wildlife movement corridors.

#### Isolated Wetlands

Project development would also eliminate isolated wetlands within the southwestern portion of the site with the development of housing within Phase 1, and would impact isolated wetlands in the southeastern portion of the site with the extension of Jespersen Road through the site, construction of the Class I bike path and Buckley Road frontage improvements. These isolated wetlands provide potential habitat for the Congdon's tarplant, which is known to occur onsite. The special status Congdon's tarplant was identified in Althouse and Meade surveys (2015) in a wetland/drainage area adjacent to Buckley Road. Based on preliminary site design, the area occupied by the species would be developed into a bicycle path, paved roadway, and road shoulder. Preliminary designs indicate the population would be partially removed and the remaining portion could be temporarily impacted by construction activities, which would be a potentially significant impact. Further, extension of Jespersen Road through the Project site would divide this isolated wetland and affect drainage patterns that allow for the provision of this wetland.

#### Wetland and Riparian Habitat

Project development would result in permanent loss of 0.98 acres of in-channel wetlands through burial of the North-South Creek Segment and the East-West Channel and confinement of natural runoff to culverts, and construction of eight storm drain headwalls and concrete or rip rap aprons within the creek bed. In addition, new housing pads and residential roads would be developed on areas currently occupied by isolated wetlands within agricultural lands, eliminating 0.86 acres of this habitat (Table 3.4-6).



**Table 3.4-6. Permanent Impacts to Wetlands and Riparian Areas in the Project Site**

Feature Type	Impact Description	Permanent Impact Area (acres)	Notes
In-Channel Wetland	Removal of North-South Creek Segment	0.41	Includes removal of 84" farm culvert
	Removal of East-West Channel	0.53	
	Drainage headwalls and aprons	0.04	8 culvert outfalls (see table 3.4-5)
<b>Total</b>		<b>0.98</b>	
Isolated Wetland	Housing pads and residential road	0.86	
<b>Total</b>		<b>0.86</b>	
Riparian	Pedestrian bridges	0.6	
	Storm water pipes	0.03	Assumes 8 trenches, 6 by 25 feet
	Bicycle path	0.10	
<b>Total</b>		<b>0.19</b>	

Source: Comm. with Cannon and Althouse and Meade 2016.

Permanent removal or alteration of sensitive wetland habitats associated with Tank Farm Creek, including wetlands regulated under Sections 404 and 401 of the Federal CWA and the Porter-Cologne Water Quality Act, and riparian habitat protected under Section 1600 of the California Fish and Game Code, would create potentially significant adverse impacts. In addition to removal of in-channel and isolated wetlands, burial fill of the North-South Creek Segment to accommodate proposed housing, roads, pedestrian bridges, storm water culverts, and the Tank Farm Creek Class I bicycle path would eliminate approximately 0.19 acres of riparian habitat. The Project would also permanently remove approximately 15 mature trees, including six cottonwood trees, three of which are larger than 16 inches in diameter, and nine willow stems (forming two large willow clusters). These trees are located within the existing North-South Creek Segment.

Project development would realign approximately 900 feet of the upper portion of Tank Farm Creek through creation of a new channel that would be hydrologically connected to the Chevron Tank Farm property. This realigned portion of the creek would be restored and planted with native riparian vegetation. This restoration could potentially add approximately 3.93 acres of native in-channel wetlands and 1.15 acres of native riparian vegetation to the Project site, which would partially offset the loss of non-native in-channel

wetland vegetation within the North-South Creek Segment and East-West Channel; however, timing and success of this restoration effort depends upon offsite improvements upstream on adjacent Chevron Tank Farm property, and therefore are uncertain.

The Project includes development of a 12-foot wide swale along the northern property line to capture offsite drainage and route it underground south through three culverts that would discharge into Tank Farm Creek. Although this diversion of surface runoff into subsurface culverts would discharge into Tank Farm Creek, the loss of surface flows would incrementally contribute to loss of onsite in-channel wetland and riparian habitat.

#### *Tank Farm Creek Class I Bicycle Path and Bridges*

Development in proximity to riparian and wetland habitat within the lower portion of Tank Farm Creek would include the creation of a 20-foot-wide Class I bicycle path corridor (12 feet of paved width) along approximately 2,800 feet of the northern side of the channel, as well as two bridges spanning the creek. The two associated Class I path bridges are anticipated to be 25 feet wide and over 50 feet long. Development of the path would occur largely within or immediately adjacent to the Tank Farm Creek riparian corridor and within the 20-foot creek setback required under City policy.

The Class I path and bridges would permanently impact riparian vegetation through direct removal of willows and cottonwoods. The Class I path would entail development of 1.3 acres with permanent removal of approximately 0.01 acre of riparian vegetation. The proposed bridges and associated abutments are anticipated to remove approximately 0.06 acres of riparian area and could potentially impact in-channel wetlands if free span bridges are not employed. The southern bridge crosses the creek where the tree canopy is narrow, thereby minimizing disturbance to riparian areas while the northern bridge crosses through a wider area of riparian. Permanent removal of riparian vegetation the path and bridges would be considered a significant impact.

#### *Pipes and Culverts*

The Project proposes eight concrete headwalls and concrete or rip rap aprons for large culvert outlets within the riparian corridor and creek channel of Tank Farm Creek that would lead to direct removal of and substantial temporary disturbance to riparian trees and vegetation. Drainage culverts would be laid in trenches running into the riparian habitat and concrete headwalls, aprons, and wing walls installed at outfalls within wetland and riparian habitats in Tank Farm Creek. Trenching for and construction of these facilities would remove approximately 0.03 acres of riparian vegetation and approximately 1,719.9

sf (0.4 acres) of federal wetlands (Table 3.4-7). Riparian and wetland areas would be permanently removed to accommodate regular maintenance of the pipes and permanent impervious energy dissipation structures.

**Table 3.4-7. Proposed Storm Water Outfall Size and Impact Area**

Culvert Number	Culvert Size (diameter in inches)	Energy Dissipation Structure (type)	Impact to in-channel wetlands (sf)
1	24	Headwall with riprap apron	69.2
2	36		210.0
3	24		69.2
4	24		69.2
5	48		480.0
6	24		69.2
7	54		607.5
8	30		145.6
<b>Total</b>			<b>1,719.9</b>

As detailed in Section 3.13 *Utilities*, one water pipeline and one sewer pipeline are proposed to cross Tank Farm Creek to connect water systems between the two sides of the proposed development. Horizontal Directional Drilling (HDD) would be used to place at least one of these pipes under the creek bed. As such, no disturbance of the creek bed and banks would occur and, therefore, installation of the two pipelines would avoid direct impacts to riparian and wetland resources in Tank Farm Creek. However, the potential for frac-outs, described in detail in Section 3.7, *Hydrology and Water Quality*, exists with the use of HDD, which could cause smothering of aquatic organisms and siltation within the creek.

A single 84-inch culvert and existing dirt road crossing in Tank Farm Creek located at the bottom of the North-South Creek Segment would need to be removed to support development of the site, which would involve removal of fill and could lead to damage to adjacent riparian trees and vegetation as well as temporarily increase sedimentation impacts to wetlands within Tank Farm Creek. Temporary damage to and long term removal of wetlands and riparian vegetation from drainage facility construction would create potentially significant impacts to these resources.

#### *Housing Pads and Roadways*

Development of pads for residential uses and roadways would displace and permanently remove isolated wetland features that are protected under the Porter-Cologne Water Quality Control Act and loss of these features would create potentially significant impacts to Waters of the State. Permanent removal of 0.86 acres of isolated wetlands within agricultural lands is anticipated during Phase 2 for the R-2 residential units east of Vachell Lane and the Horizon Lane Extension. Temporary impacts to remaining onsite isolated wetlands located within planned open space and at the corner of Buckley and Vachell Lane are anticipated during development of the site due to grading- and roadway construction-induced modifications of upslope drainage patterns. The Project would include some onsite compensation for losses of these wetlands along the lower portion of Tank Farm Creek, adjacent to Buckley Road; however, in the absence of detailed designs, it is not possible to determine if these restored areas will fully compensate for permanent removal of onsite isolated wetlands. Permanent loss of isolated wetlands within agricultural lands is considered a potentially significant impact.

The proposed Project would include development of housing pads along and adjacent to the south bank of the creek and the riparian corridor. Proposed lot lines for R-1 lots 525 through 550 fall within the City's required creek setback and may overlap with the tree canopy and existing vegetation in portions. As housing pads along the south side of the creek would be raised 2 to 8 feet from the existing grade in order to raise finished floor elevations a minimum of 2 feet above the FEMA floodplain, fill slopes of these housing pads have the potential to intrude within the riparian corridor, resulting in the potential loss of riparian habitat, as well as impacts to instream water quality through sedimentation and runoff.

Overall, impacts resulting in the removal of habitat, particularly the total of 1.84 acres of wetlands and 0.19 acres of riparian areas would be *significant but mitigable*.

#### Mitigation Measures

*MM AG-1a shall apply.*

*MM HYD-4a and 4b shall apply.*

*MM BIO-1a and 1b shall apply.*

*MM BIO-2a Project designs shall be modified to realign the Tank Farm Class I bicycle path and relocate manufactured slopes for housing pads in order to create*

*a minimum of a 35-foot creek setback from either the top of the bank of Tank Farm Creek or edge of riparian habitat, whichever is further, for at least 90 percent of corridor length. No more than 10 percent of the length of the corridor (700 linear feet) shall have a setback of less than 35 feet, but at least 20 feet from the top of the bank or edge of riparian canopy, whichever is further. However, in any instance the creek setback shall be no less than 20 feet from the edge of riparian canopy or top of bank, whichever is further, consistent with Section 17.16.025 of the City of San Luis Obispo Zoning Regulations.*

**Plan Requirements and Timing.** The Applicant shall revise the proposed Project to move the location of the Tank Farm Class I bicycle path and manufactured slopes to be outside the City-approved creek setback. The revised Development Plan and VTM shall clearly indicate the 35-foot creek setback line from the top of the bank or riparian edge, whichever is further. The Applicant shall clearly delineate any portions of development within the 35-foot creek setback. In addition, the Applicant shall submit creek cross sections along various locations of Tank Farm Creek that demonstrate compliance. The City shall review and approve these modifications prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall ensure compliance the specific creek setbacks through review and approval of the final VTM, grading plan, and final Development Plan, along with monitoring reports prepared as part of MM BIO-1b.

*MM BIO-2b The Biological Mitigation Plan shall provide details on timing and implementation of required habitat restoration and shall be prepared in consultation with the City's Natural Resource Manager and CDFW. A copy of the final plan shall be submitted to the City for review and approval. The plan shall be implemented by the Project Applicant, under supervision by the City and Environmental Monitor, and:*

- 1) Characterize the type, species composition, spatial extent, and ecological functions and values of the wetland and riparian habitat that will be removed, lost, or damaged.*

- 2) *Describe the approach that will be used to replace the wetland and riparian habitat removed, lost, or adversely impacted by the Project, including a list of the soil, plants, and other materials that will be necessary for successful habitat replacement, and a description of planting methods, location, spacing, erosion protection, and irrigation measures that will be needed. Restoration and habitat enhancement shall include use of appropriate native species and correction of bank stabilization issues. Wetland restoration or enhancement areas shall be designed to facilitate establishment of wetland plants such as willows, cottonwoods, rushes, and creeping wild rye.*
- 3) *Describe the habitat restoration ratio to be used in calculating the acreage of habitat to be planted, consistent with MM BIO-2c through 2e below and the findings in the Biological Report (Appendix I).*
- 4) *Describe the program that will be used for monitoring the effectiveness and success of the habitat replacement approach.*
- 5) *Describe how the habitat replacement approach will be supplemented or modified if the monitoring program indicates that the current approach is not effective or successful.*
- 6) *Describe the criteria that will be used to evaluate the effectiveness and success of the habitat replacement approach.*
- 7) *Indicate the timing and schedule for the planting of replacement habitat.*
- 8) *Habitat restoration or enhancement areas shall be established within the Project boundaries, adjacent to and contiguous with existing wetlands to the maximum extent possible. Habitats suitable for Congdon's tarplant and other native wetland species shall be created onsite. If Congdon's tarplant is found in areas proposed for disturbance, the affected individuals shall be replaced at a 1:1 ratio through seeding in a suitable conserved natural open space area. A management plan for the species shall be developed consistent with applicable scientific literature pertinent to this species.*
- 9) *Habitat restoration or enhancement sites shall be placed within deed-restricted area(s), and shall be maintained and monitored for a minimum of five years. If sufficient onsite mitigation area is not practicable, an offsite mitigation plan shall be prepared as part of*

*the Biological Mitigation Plan and approved by permitting agencies.*

- 10) The Biological Mitigation Plan shall identify appropriate restoration and enhancement activities to compensate for impacts to seasonal creek, wetland, and riparian habitat, including a detailed planting plan and maintenance plans using locally obtained native species and include habitat enhancement to support native wildlife and plant species.*
- 11) A weed management plan and weed identification list shall be included in the Biological Mitigation Plan.*
- 12) Habitat restoration or enhancement areas shall be maintained weekly for the first three years after Phase completion and quarterly thereafter. Maintenance shall include eradication of noxious weeds found on California Department of Food and Agriculture Lists (CDFA) A and B. Noxious weeds on CDFa list C may be eradicated or otherwise managed.*
- 13) Mitigation implementation and success shall be monitored quarterly for the first two years after completion of each Phase, semi-annually during the third year, and annually the fourth and fifth years. Annual reports documenting site inspections and site recovery status shall be prepared and sent to the County and appropriate agencies.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall specify the location, timing, species composition, and maintenance of all habitat restoration and enhancement efforts. Completed pre-construction species surveys shall be submitted to the City within 10 days of completion. Construction work shall not commence until after the completion of surveys and approval of the Biological Mitigation Plan. Any required permits shall be obtained from the state and federal agencies prior to the issuance of grading or building permits. The Biological Mitigation Plan shall be prepared by the Applicant and submitted to the City for approval prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall review and approve the Biological Mitigation Plan to ensure compliance. The City shall review the construction plans for each phase of development to ensure consistency with the Biological Mitigation Plan. The City shall select a qualified biologist prior to issuance of grading and building permits for each phase of construction. After the completion of each phase, the qualified biologist shall inspect the site as

follows: quarterly for the first two years, semi-annually during the third year, and annually for the fourth and fifth years. Annual reports demonstrating compliance with the Biological Mitigation Plan and any needed corrective actions shall be submitted to the City for five years after completion of each phase. The City shall review findings of the surveys submitted with quarterly construction reports demonstrating compliance. The City shall also ensure compliance with Sections 3505 and 3503.1 of the Fish and Game Code of California. The qualified biologist and/or Environmental Monitor shall monitor for compliance during ongoing construction.

*MM BIO-2c Within the required Biological Mitigation Plan, all temporary and permanent impacts to riparian trees, wetlands, and riparian habitat shall be mitigated, as follows:*

- 1) Temporary impacts to wetland and riparian habitat shall be mitigated at a minimum 1:1 mitigation ratio for restoration (area of restored habitat to impacted habitat).*
- 2) Permanent impacts to state jurisdictional areas, including isolated wetlands within agricultural lands and riparian habitat will be mitigated at a 1.5:1 ratio (area of restored and enhanced habitat to impacted habitat).*
- 3) Permanent impacts to federal wetlands shall be mitigated at a minimum 3:1 ratio (1:1 area of created to impacted habitat plus 2:1 area of created/enhanced habitat to impacted habitat).*
- 4) Riparian trees four inches or greater measured at diameter-at-breast-height (DBH) shall be replaced in-kind at a minimum ratio of 3:1 (replaced: removed). Trees measured at 24 inches or greater DBH shall be replaced in-kind at a minimum ratio of 10:1. Willows and cottonwoods may be planted from live stakes following guidelines provided in the California Salmonid Stream Habitat Restoration Manual for planting dormant cuttings and container stock (CDFW 2010). Permanent impacts to riparian vegetation shall be mitigated at a 3:1 ratio to ensure no net loss of acreage and individual plants.*



5) *Replacement trees shall be planted in the fall or winter of the year in which trees were removed. All replacement trees will be planted no more than one year following the date upon which the native trees were removed. Replacement plants shall be monitored for 5 years with a goal of at least 70 percent survival at the end of the 5-year period. Supplemental irrigation may be provided during years 1 to 3; however, supplemental watering shall not be provided during the final two years of monitoring.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall demonstrate compliance with the above mitigation ratios and shall be submitted to the City for approval prior to acceptance of the final Development Plan and recordation of the final VTM. Tree and vegetation replacement shall occur within the same construction phase as tree and vegetation removal.

**Monitoring.** The City shall ensure compliance with requirements for the Biological Mitigation Plan. The Environmental Monitor shall also ensure compliance with during restoration activities.

*MM BIO-2d Project design shall be modified to preserve at a minimum the southern 275 feet of the North-South Creek Segment to protect all existing mature riparian woodland, and the proposed drainage plan shall be altered to convey remaining surface water flows from areas to the north to this channel.*

**Plan Requirements and Timing.** The Applicant shall revise the Development Plan and VTM to preserve a minimum of 275 feet of the North-South Creek Segment along its southern reach. The revised plans shall be submitted and approved by the City prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall review and ensure compliance of protection and restoration measures within the required Biological Mitigation Plan.

*MM BIO-2e To minimize impacts to riparian habitat, the Project shall stockpile sufficient emergent vegetation (e.g., cattails) for later planting in the realigned reach of Tank Farm Creek. Stockpiled vegetation shall be placed*

*in earthen basins with the roots covered with moist soil and maintained in a moist condition during construction operations.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall demonstrate compliance and shall be submitted to the City for approval prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The Environmental Monitor shall ensure compliance with the Biological Mitigation Plan during restoration activities.

*MM BIO-2f The reconstructed portion of Tank Farm Creek shall be engineered to provide similar characteristics to the existing creek channel and banks, including sinuosity, gradient, and channel capacity. The reconstructed stream channel shall be vegetated with appropriate riparian tree and shrub species, and monitored as part of the required Biological Mitigation Plan.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall demonstrate compliance and shall be submitted to the City for review and approval prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall ensure compliance with the requirements of the Biological Mitigation Plan. The Environmental Monitor shall also ensure compliance with during restoration activities. Compliance shall also be demonstrated within the Biological Mitigation Plan annual report for Phase 3 submitted to the City.

*MM BIO-2g A post-construction landscape and restoration report for each phase shall be prepared by the Environmental Monitor based on as-built drawings and site inspections to document the final grading, plantings, and habitat restoration activities. The report shall include as-built plans prepared after restoration, grading, and mitigation habitat plantings are complete. The as-built plans shall be prepared by landscape and grading contractors responsible for realignment and restoration within Tank Farm Creek.*

**Plan Requirements and Timing.** The Applicant shall submit to the City all post-construction landscape and restoration reports within 60 days of final installation of plant materials for each phase.

**Monitoring.** The City shall review post-construction landscape and restoration reports and ensure compliance prior to approval of grading and building permits for each new phase of construction. The Environmental Monitor shall ensure compliance with the approved Biological Mitigation Plan for all restoration activities.

*MM BIO-2h Project activities within Tank Farm Creek and drainage channels, including any tree pruning or removals, any necessary erosion repairs, or culvert removals, shall be performed when the channel is dry, planned to the satisfaction of the City Engineer and Natural Resource Manager per City Drainage Manual Standards, and be subject to monitoring by the Environmental Monitor. Upon removal of the existing steel culvert currently used for farm access across Tank Farm Creek, the channel shall be restored to match conditions immediately upstream and downstream including channel width, gradient, and vegetation.*

**Plan Requirements and Timing.** Compliance with the City Drainage Manual Standards shall be demonstrated within the final Development Plan and grading plans for each phase and be subject to City review and approval prior to acceptance of the final Development Plan and recordation of the final VTM. The City shall be notified at least 10 business days in advance of any work to be performed within the creek or drainage channels.

**Monitoring.** The City shall ensure compliance with standards on the final Development Plan and VTM. The Environmental Monitor shall monitor activities within the creek and drainage channels.

*MM BIO-2i To reduce erosion and runoff from all exposed soils, all bare disturbed soils shall be hydroseeded at the completion of grading for each construction phase. The seed mix shall contain a minimum of three locally native grass species and may contain one or two sterile non-native grasses not to exceed 25 percent of the total seed mix by count. Seeding shall be completed no later than November 15 of the year in which Project activities occurred. All exposed areas where seeding is considered unsuccessful after 90 days shall receive a second application or seeding, straw, or mulch as soon as is practical to reduce erosion.*

**Plan Requirements and Timing.** Seeding shall be completed no later than November 15 of the year in which Project activities occurred.

**Monitoring.** The Environmental Monitor shall monitor hydroseeding activities for compliance. Compliance shall be demonstrated within the quarterly reports for construction activities (refer to MM BIO-1a and 1b).

*MM BIO-2j The Tank Farm Creek Class I bicycle path bridge footings for creek crossings shall be placed outside mapped riparian areas and outside the top of the bank of the channel invert. The Class I bridges shall be located within areas that have little to no riparian vegetation. No construction activities or equipment shall occur in the stream channel. The placement of the bridge and footings shall be indicated on the Development Plan, VTM, and Biological Mitigation Plan, and shall show the bridges' placement in relation to existing vegetation and the creek channel and banks.*

**Plan Requirements and Timing.** The Applicant shall demonstrate compliance within the Development Plan, VTM, and Biological Mitigation Plan subject to City review and approval prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall review the Biological Mitigation Plan, final Development Plan and final VTM to ensure compliance.

#### Residual Impact

Implementation of MM BIO-2a would avoid the potential impacts of manufactured slopes and the Class I bicycle path intruding into the bank of Tank Farm Creek or its riparian habitat by establishing setbacks for a wider wildlife corridor. This would also protect the creek and riparian habitat from potential impacts associated with temporary or permanent loss of habitat, construction impacts, siltation and erosion, and operational impacts associated with increased human activity. Implementation of MM BIO-2b through 2c would offset the loss of sensitive habitat and trees and compensates at appropriate replacement ratios onsite consistent with appropriate agencies, to the maximum extent feasible. Impacts to riparian vegetation would be reduced within implementation of MM BIO-2d and 2e. MM BIO-2f would ensure that habitat restoration and enhancement within the reconstructed portion of Tank Farm Creek would be similar to the habitat within the North-South Creek Segment that would be removed. MM BIO-2g would ensure appropriate restoration of riparian habitat. MM BIO-2h would reduce potential erosion and

siltation impacts within the creek. Implementation of MM BIO-2i in combination with MM BIO-1a and 1b and all subparts, would reduce temporary impacts to jurisdictional aquatic features from construction activities by requiring work to be completed when water flow in the creek is dry, and appropriate measures are taken to prevent sedimentation. Lastly, MM BIO-2j would address potential impacts to Tank Farm Creek from the proposed Class I bicycle path footings placement. MM HYD-4a and b would address potential impacts of frac-outs. Implementation of MM BIO-2a through MM BIO-2i, in combination with MM BIO-1a and b and MM HYD-4a and b, would reduce impacts to sensitive habitats to less than significant after mitigation.

**Impact BIO-3            Onsite Project development would interfere with the movement of common wildlife and special status species through establishment of confined wildlife corridors within the Project site (Significant but Mitigable).**

Project development would significantly narrow and interfere with the wildlife movement and migratory corridor along Tank Farm Creek. Additionally, the Project would eliminate open agricultural lands that currently connect extensive wetlands and other habitats within the Chevron Tank Farm property to undeveloped lands south of the site along the East Fork of San Luis Obispo Creek. Extensive site alteration and construction of new homes, roads, bridges, culverts and outlet structures, a new bicycle path, and increased noise, lighting, and glare along Tank Farm Creek would disrupt the movement of special status birds, amphibians, and reptiles, such the vesper sparrow, merlin, western pond turtle, and potentially the California red-legged frog and Steelhead trout, as well as more common wildlife species. Project activities, including removal of and damage to habitat within the creek, increased noise, activity, sedimentation, and potential for releases of toxic materials to be introduced into the creek, would occur over multiple Project phases. Disturbance of the creek and open land movement areas could interfere with wildlife movement through the site and a substantial disturbance would be considered a significant impact to both common and sensitive wildlife species.

The Tank Farm Creek Class I bicycle path along the western bank of Tank Farm Creek would be built in close proximity to and in some areas within the canopy of the riparian corridor along Tank Farm Creek and may be as close as five feet from the creek bank (see Figure 3.4-2). In addition, the extension of Earthwood Lane would closely border the creek for over 700 feet, with the buffer between the creek and this road consisting primarily of the paved bicycle path. Further, along the south bank of the creek, 10 to 15 single-family

homes, one neighborhood street, and two cul-de-sacs would be constructed with minimal buffers from the creek.

Taken together, long-term Project operation could reduce the habitat value of the Tank Farm Creek riparian woodland and restrict or inhibit wildlife movement and utilization. While there is no uniform approach for establishing width of wildlife corridors for management or mitigation purposes, there is consensus amongst various organizations, including CDFW, that the width of wildlife corridors should address connectivity, linkage, and habitat range of wildlife within the area. The CDFW notes that “selecting [wildlife corridors] based on a minimum width, may not be appropriate ecologically”, yet mentions that linkages between habitats should be less than 1.0 kilometer for local scale corridors (CDFW 2014).

Imposing wildlife corridors in order to discourage habitat fragmentation would have significant effects on Project design, with associated loss of opportunities for provision of housing, a key Project and City goal. However, adjustments in Project design to provide wider buffers and setbacks in places would help maintain the functionality of the wildlife corridor along Tank Farm Creek, with relatively minor changes to the Project. Such increased buffers would be consistent with the intent of City Conservation and Open Space Element Policies 7.73.3, Wildfire Habitat and Corridors; and Program, 7.7.8, Protect Wildlife Corridors; as well as Program, 7.7.9, Creek Setbacks and Section 17.16.025 of the City Zoning Regulations, Creek Setbacks, which establishes minimum setback distances for different classes of creeks; the required setback from Tank Farm Creek is 20 feet. Required setbacks from the creek effectively supports the function of a wildlife corridor.

Zoning Regulations setbacks are defined in terms of the distances from the top of bank or edge of riparian drip line, whichever is farther from the creek, that development is permitted to occur. The City Zoning Regulations prohibit the following activities from occurring within a set-back area: paving, parking lots, and, in nonresidential zones, areas used for storing or working on vehicles, equipment, or materials. COS Program 7.7.9, Creek Setbacks, allows intrusion into setbacks if there is no practicable alternative; however, ample road area exists on the Project site to permit design modifications to increase setbacks.

Project development within and adjacent to Tank Farm Creek would impede and disrupt the movement of wildlife along the creek over multiple Project phases extending for up to a decade. During this period, repeated disturbances would occur, particularly during Phases 1 through 5. Further, it is undetermined at this point whether realignment of the creek

would occur in advance of the removal of the North-South Creek Segment or afterward. Therefore, as a conservative approach, it is assumed that removal of the North-South Creek Segment would occur prior to completion of creek realignment and restoration, since this development phasing could disrupt wildlife movement for an extended period. This disruption could impact both common and sensitive species that use Tank Farm Creek for movement, including migratory birds and raptors, as described further below. Over the long term, such species would return to the migratory corridor after completion of restoration.

#### *Special Status Birds*

The Project could impact sensitive bird species, particularly nesting and wintering special status birds, such as the oak titmouse, sharp-shinned hawk, tricolored blackbird, and vesper sparrow that potentially nest within riparian habitat along Tank Farm Creek, as well as white-tailed kites and other species that forage in agricultural lands (Althouse and Meade, Inc 2015a). Cottonwoods and willow clusters that provide nesting habitat and foraging perches for these species as well as other migratory birds would be removed, which could temporarily displace species until restored riparian woodland areas and mature trees are established. Agricultural land and in-channel wetland habitat that support small mammals, insects, and aquatic invertebrates would be removed and replaced with new developed urban uses, reducing the forage base for special status raptors. Eventual riparian restoration would not offset the short-term reduction in available nesting habitat as it would take more than 10 years to develop a comparable mature canopy to the one that was removed. Loss of habitat, as well as nest abandonment or loss of individual birds due to construction activities may occur due to construction and would constitute an adverse effect to nesting and migratory birds.

#### *Special Status Reptiles and Amphibians*

Project development within and adjacent to Tank Farm Creek could impact two special status species with moderate potential to occur onsite; the western pond turtle and the California red-legged frog. In addition, such construction could impact Steelhead trout, which have a low potential to occur onsite. These species could occur in Tank Farm Creek due to the presence of seasonally-restricted suitable pool habitat. Removal of wetland habitat during realignment of the North-South Creek Segment and construction of culvert headwalls and aprons could directly impact suitable habitat for the western pond turtle and potentially Steelhead trout. Construction within and adjacent to Tank Farm Creek could also impact dispersal habitat for the California red-legged frog, if construction occurs

during the spring of a year with average or greater rainfall. Tank Farm Creek was also determined to support seasonal movement of transient California red-legged frog or western pond turtle intermittently during the rainy season, and construction at that time within the creek could impact movement corridors associated with those species (Althouse and Meade, Inc. 2015a).

#### *Special Status Bats*

A number of large trees in the Project site provide suitable day-roost habitat for the pallid bat, a CDFW species of concern. Removal of these trees during the roosting period within the North-South Creek Segment and other creek segments could lead to mortality of pallid bats, which would constitute a direct adverse effect to the species.

Impacts to special status species can be addressed with measures to protect species during all phases of Project development, such as training of all Project personnel onsite, avoidance of breeding seasons, and surveys prior to Project activities. Overall, impacts to the movement of common wildlife and special status species through established wildlife corridors in the Project site would be ***significant but mitigable***.

#### Mitigation Measure

*MM BIO-1a and BIO-1b shall apply.*

*MM BIO-2a through 2j shall apply.*

*MM BIO-3a The City-approved qualified biologist shall conduct training to all construction personnel to familiarize construction crews with sensitive species that have the potential to occur within the Project site. This may include but is not limited to: California red-legged frog, western pond turtle, Steelhead trout, bats, migratory birds, and Congdon's tarplant. The educational program shall include a description what constitutes take, penalties for take, and the guidelines that would be followed by all construction personnel to avoid take of species during construction activities. Descriptions of the California red-legged frog and its habits, Congdon's tarplant, nesting and migratory birds that may be encountered, and all other sensitive species that have a potential to occur within the vicinity of Project construction shall be provided. The construction crew foreman shall be responsible for ensuring that crew members comply with*



*the guidelines and that all new personnel receive the training before partaking in construction activities.*

**Plan Requirements and Timing.** All construction personnel shall complete special status species training prior to partaking in any Project-related activities, and again prior to the commencement of each Project phase. Ongoing weekly “tail-gate” trainings shall occur during construction activities performed within 50 feet of creek, wetland, and riparian areas.

**Monitoring.** The construction foreman shall demonstrate compliance and completion of training with training logs. The City-approved qualified biologist shall verify completion of training. Training logs shall be submitted to the City along with quarterly reports during construction (refer to MM BIO-1a).

*MM BIO-3b The Biological Mitigation Plan shall address wildlife and special status species movement as follows:*

- ***Migratory and Nesting Bird Management.*** *Grading and construction activities shall avoid the breeding season (typically assumed to be from February 15 to August 15) to the extent practicable, particularly within 50 feet of Tank Farm Creek and riparian or wetland habitat. If Project activities must be conducted during this period, pre-construction nesting bird surveys shall take place within one week of habitat disturbance associated with each phase, and if active nests are located, the following shall be implemented:*
  - *Construction activities within 50 feet of active nests shall be restricted until chicks have fledged, unless the nest belongs to a raptor, in which case a 200-foot activity restriction buffer shall be observed.*
  - *A pre-construction survey report shall be submitted to the City immediately upon completion of the survey. The report shall detail appropriate fencing or flagging of the buffer zone and make recommendations on additional monitoring requirements. A map of the Project site and nest locations shall be included with the report.*

- *The Project biologist conducting the nesting survey shall have the authority to reduce or increase the recommended buffer depending upon site conditions and the species involved. A report of findings and recommendations for bird protection shall be submitted to the City prior to vegetation removal.*
- **Bat Colony Management.** *Prior to removal of any trees over 20 inches diameter-at-breast-height (DBH), a survey shall be conducted by a CDFW-approved qualified biologist to determine if any tree proposed for removal or trimming harbors sensitive bat species or maternal bat colonies. Maternal bat colonies shall not be disturbed. If a non-maternal roost is found, the qualified biologist shall install one-way valves or other appropriate passive relocation method. For each occupied roost removed, one bat box shall be installed in similar habitat and shall have similar cavities or crevices to those which are removed, including access, ventilation, dimensions, height above ground, and thermal conditions. If a bat colony is excluded from the Project site, appropriate alternate bat habitat shall be installed in the Project site. To the extent practicable, alternate bat house installation shall be installed near the onsite drainage.*
- **Congdon's Tarplant Management.** *Prior to initiation of construction, the Applicant shall fund a site survey for Congdon's tarplant, and:*
  - *If Congdon's tarplant is found in areas proposed for building, the affected individuals shall be replaced at a 1:1 ratio through seeding in a suitable conserved natural open space area.*
  - *A mitigation and monitoring plan for the species shall be developed consistent with applicable scientific literature pertinent to this species. The plan shall provide for the annual success over an area of at least 1,330 square feet with approximately 500-750 individuals (the current aerial extent) and be implemented to reduce impacts to Congdon's tarplant to a less than significant level.*

- *The mitigation plan shall be incorporated into the Biological Mitigation Plan, wherein wetland sites shall be created and Congdon's tarplant seeds from the site shall be reintroduced.*
- ***Sensitive Species Management.*** *Injury or mortality to the California red-legged frog, western pond turtle, and steelhead shall be avoided. The plan shall include the following measures: pre-Project surveys; worker awareness; cessation of work in occupied areas; relocation (if necessary) of frogs, turtles, and steelhead from the work area by a professional biologist authorized by the USFWS and/or CDFW; and monitoring by a qualified biologist during construction. Necessary permits shall be obtained from the state (CDFW) and federal (USACE and USFWS) regulatory agencies with jurisdiction. Any other sensitive species observed during the pre-construction surveys shall be relocated out of harm's way by the qualified biologist into the nearest suitable habitat as determined in consultation with the jurisdictional resource agency outside the disturbance area.*

**Plan Requirements and Timing.** The Biological Mitigation Plan shall include a management plans for migrating and nesting birds, bat colonies, Congdon's tarplant, and sensitive species and shall be submitted for review and approval by the City prior to acceptance of the final Development Plan and recordation of the final VTM. Construction shall be conducted between August 16 and February 14 unless pre-construction surveys are completed. Completed pre-construction species surveys (i.e., nesting, bat surveys, etc.) shall be submitted to the City within 10 days of completion. Construction work shall not commence until after the completion of surveys. Any required permits shall be obtained from the state and federal agencies prior to the issuance of grading or building permits.

**Monitoring.** The City shall ensure compliance on the Biological Mitigation Plan. The City shall review findings of the surveys submitted with quarterly construction reports demonstrating compliance. The City shall also ensure compliance with Sections 3505 and 3503.1 of the Fish and Game Code of California. The qualified biologist and/or Environmental Monitor shall monitor for compliance during ongoing construction.

*MM BIO-3c Within 48 hours prior to construction activities within 50 feet of Tank Farm Creek, drainages, and seasonal wetlands, the Project site shall be surveyed for California red-legged frogs by a qualified biologist. If any California red-legged frogs are found, work within 25 linear feet in any direction of the frog shall not start until the frog has been moved from the area. The USFWS shall be consulted for appropriate action; the Applicant shall obtain a Biological Opinion from the USFWS and any additional authorization required by other regulatory agencies prior to the commencement of work. The USFWS-qualified biologist, Environmental Monitor, or USFWS personnel may determine that frog-exclusion fencing is necessary to prevent overland movement of frogs if concerns arise that frogs could enter construction areas. Frog-exclusion fencing should contain no gaps and must extend at least 18 inches above ground; fences may be opened during periods of no construction (e.g., weekends) to prevent entrapment.*

**Plan Requirements and Timing.** No construction activities within 50 feet of frog habitat shall occur prior to the completion of California red-legged frog surveys. Completed surveys shall be submitted to City along with quarterly construction reports.

**Monitoring.** The City shall review findings of the surveys submitted with quarterly construction reports demonstrating compliance. The biologist shall ensure compliance during ongoing construction activities and with USFWS recommended actions.

*MM BIO-3d Within 48 hours prior to construction activities within 50 feet of Tank Farm Creek, drainages, seasonal wetlands, and riparian habitat, the Project site shall be surveyed for western pond turtles by a qualified biologist. If any western pond turtles are found, work shall cease until the turtle is relocated to the nearest suitable habitat. The qualified biologist shall monitor all ground breaking work conducted within 50 feet of western pond turtle habitat. The City-approved biologist Environmental Monitor may determine that silt fencing shall be installed adjacent to western pond turtle habitat if concerns arise that the western pond turtle overland movement could allow them to access construction areas.*

**Plan Requirements and Timing.** No construction activities within 50 feet of frog habitat shall occur prior to the completion of western pond turtle surveys. Completed surveys shall be submitted to City along with quarterly construction reports.

**Monitoring.** The City shall review findings of the surveys submitted with quarterly construction reports demonstrating compliance. The biologist and/or Environmental Monitor shall ensure compliance during ongoing construction activities and with USFWS recommended actions.

*MM BIO-3e Construction of the realigned portion of Tank Farm Creek, including planting of riparian vegetation, watering, and bank stabilization, shall be conducted prior to removal of the North-South Creek Segment to provide a fully connected wildlife movement area through Tank Farm Creek throughout the construction period. Project phasing shall be adjusted as needed to accommodate this sequence of construction activities.*

**Plan Requirements and Timing.** The Applicant shall demonstrate phasing and creek restoration within the Development Plan, VTM and the Biological Mitigation Plan. The Applicant shall submit to the City for review and approval prior to acceptance of the final Development Plan and recordation of the final VTM.

**Monitoring.** The City shall review the Biological Mitigation Plan, Development Plan, and VTM for compliance. The Environmental Monitor shall monitor creek realignment and the removal of the North-South Creek Segment for compliance.

#### Residual Impact

MM BIO-3a through 3e would reduce potential direct permanent impacts to wildlife species from loss of habitat and loss of species. MM BIO-3a would provide educational training all construction personnel in order for them to identify sensitive species, take appropriate actions, and avoid “take”. MM BIO-3b through 3e would reduce potential impacts to special status birds and bats to less than significant by avoiding disturbance during the breeding season and roosting times when these species are most vulnerable to disturbance and ensuring compliance with appropriate avoidance buffers if construction during the season cannot be avoided. Mitigation would limit construction in the creek during nesting season and peak activity periods, thus reducing impacts to migrating

species. Implementation of MM BIO-3b through 3e would also reduce potential impacts to special status amphibians, reptiles, and fish by requiring plan preparation with requirements for pre-construction surveys for the species, including development of necessary additional avoidance and minimization measures, and onsite monitoring during construction to prevent construction runoff from contaminating aquatic habitats. MM BIO-3b would minimize or avoid impacts to Congdon's tarplant. Impacts would be less than significant after mitigation.

**Impact BIO-4      Offsite improvements to and extension of Buckley Road and associated bicycle and pedestrian paths have the potential to create permanent impacts to special status species through removal of suitable habitat (Significant but Mitigable).**

Within the Buckley Road Extension site, locally common birds pass through the crops to forage on insects and small rodents. The disturbed/ruderal habitat of trees, shrubs, and herbaceous plants in developed portions of the property provide potential roosting habitat for migratory birds, and food and cover for other migratory wildlife. The structures on the developed portion of the property offer suitable day roosting habitat for bat species such as the Pallid bat and Townsend's big-eared bat, based upon their known habitat range, and a colony of nesting swallows. The Buckley Road Extension site is contiguous with adjacent agricultural parcels containing similar habitat elements, and therefore, removal of marginally suitable foraging habitat for migratory birds is not anticipated to substantially impact migratory bird species. Similarly, despite the presence of a few non-native trees and native shrubs within the property, tree and vegetation removal over an area equating to approximately three acres would not substantially affect native plant or wildlife species.

Demolition of structures on the Buckley Road Extension site would remove suitable habitat for nesting swallows protected under the Migratory Bird Treaty Act and day roost habitat for Pallid bat and Townsend's big-eared bat and therefore be considered an adverse effect to special status species, if present. Impacts would be *significant but mitigable*.

#### Mitigation Measures

*MM BIO-1a and 1b shall apply.*

*MM BIO-3a and 3b shall apply.*

*MM BIO-4      The required Biological Mitigation Plan shall address bat colonies for the Buckley Road Extension site. Bat surveys shall be conducted in buildings*

*proposed for demolition. If surveys determine bats are present, bat exclusion devices shall be installed between August and November, and building demolition would occur between November and March. If demolition of structures must occur during the bat breeding season, buildings must be inspected and deemed clear of bat colonies/roosts within seven days of demolition and an appropriately trained and approved biologist must conduct a daily site-clearance during demolition. If bats are roosting in a structure in the Project site during the daytime but are not part of an active maternity colony, then exclusion measures must include one-way valves that allow bats to get out but are designed so that the bats may not re-enter the structure.*

**Plan Requirements and Timing.** A bat colony management plan shall be submitted for review and approval by the City as part of the Biological Mitigation Plan prior to acceptance of the final Development Plan and recordation of the final VTM. Completed bat surveys shall be submitted to the City within 10 days of completion. Construction work shall not commence until after the completion of surveys or relocation of any non-maternal bat colonies. Disturbance of any maternal bat colony shall be avoided. Exclusion measures shall be installed prior to initiation of construction of Phase II.

**Monitoring.** The City shall review findings of the bat surveys submitted with quarterly construction reports demonstrating compliance. The qualified biologist and/or Environmental Monitor shall monitor for compliance during ongoing construction.

#### Residual Impact

With the implementation of mitigation measures MM BIO-3a through 3b, as well as MM ~~BIO-4~~ ~~BIO-4a~~ and ~~4b~~, which require pre-construction surveys and exclusion measures for sensitive bats and protection or replacement of the Congdon's tarplant, impacts to bat colonies and sensitive plant species due to the Buckley Road Extension would be less than significant after mitigation. Additionally, with MM BIO-1a and 1b, which provide best management practices during construction, impacts to sensitive species in the offsite Buckley Road Extension site would be less than significant after mitigation.

**Impact BIO-5      Long-term operation of the Project has the potential to create significant impacts to biological resources as a result of increased light, noise, and increased human presence and other urban edge effects (Significant but Mitigable).**

Project completion would result in construction and occupation of 720 residential units, with 1,649 residents and associated roads, bicycle paths, utilities, 55.3 acres of open space, and 16 acres of developed parks, including an open space corridor along Tank Farm Creek. Long-term impacts to wildlife movement and special status species could occur due to increased human presence onsite, including lighting located on buildings and along residential streets, increased noise from automobiles, human activity, domesticated pets, truck loading, parking lot cleaning and sweeping, trash compactors, and other similar activities. Solid waste and polluted runoff from parks, residential streets, and roads could enter Tank Farm Creek through wind or the drainage system during storm events. These long-term impacts could cause sensitive species onsite to be killed, flee the area, or could cause disruption to breeding/nesting efforts, which would be considered potentially significant impacts to sensitive resident and migratory species.

Outdoor night lighting and noise associated with development of new residential units could create glare offsite, light spillage, and increased noise levels, which would degrade the quality of the creek and setback area. Although lighting fixtures would be shielded and directed downward to avoid light spill and glare (see Section 3.1, *Aesthetics and Visual Resources*), the increase in the amount of night lighting and noise would be substantial relative to the existing condition resulting in potential impacts to wildlife migrating through the stream corridor and riparian buffer area, which would be surrounded by housing units. Further, the interface of the Project site and Tank Farm Creek, particularly through use of the bike path and traffic along Earthwood Lane, would lead to increased human interaction within the riparian area. This includes increased foot traffic in and around Tank Farm Creek and more post-consumer waste entering the sensitive habitat. Increased runoff from paved surfaces and buildings could lead to increased sedimentation, water turbidity, and water quality degradation in the long-term. These impacts may cause wildlife to avoid or flee the site.

Overall, long-term operational impacts to the habitat value from light, noise, and increased human presence would be *significant but mitigable*.



Mitigation Measures

*MM BIO-5a All exterior building lights facing Tank Farm Creek shall be hooded to prevent light spillover into the creek; all residential street lights over 10 feet in height shall be setback a minimum of 100 feet from the top of the creek bank and hooded and/or directed away from the creek. Any night lighting adjacent to the creek (e.g., walkway lights) shall be of low voltage and hooded downward. Artificial light levels within 20 feet of the top of the creek bank shall not exceed 1-foot candle or the lowest level of illumination found to be feasible by the City.*

**Plan Requirements and Timing.** This mitigation measure shall be incorporated as part of the Biological Mitigation Plan and Project lighting plan and subject to City review and approval prior to acceptance of the final Development Plan and recordation of the final VTm.

**Monitoring.** The City shall review the final Development Plan, Biological Mitigation Plan, and lighting plan to ensure compliance.

*MM BIO-5b Tank Farm Creek restoration/enhancement plantings shall include native vegetation, such as oaks, cottonwoods, willows, and sycamores along the entire length of the Project's creek frontage in order to minimize light spillover into the creek.*

**Plan Requirements and Timing.** Measure shall be incorporated as part of the Biological Mitigation Plan to subject to City review and approval prior to acceptance of the final Development Plan and recordation of the final VTm.

**Monitoring.** The City shall review the final Development Plan, landscape plans and restoration plans to ensure compliance.

Residual Impact

Implementation of MM BIO-5a and 5b would reduce long-term impacts to the habitat value and wildlife corridor functions of Tank Farm Creek associated with increased disturbance from light and glare. Residual impacts would be less than significant.

**Impact BIO-6      Project development could impact offsite biological resources from sedimentation into Tank Farm Creek (Significant but Mitigable).**

As discussed in Impact BIO-1, development of the Project site includes large quantities of cut and fill, equal to approximately 728,156 cubic yards of cut and fill over a 10-year period. Extensive grading over several rainy seasons within and in close proximity to Tank Farm Creek could substantially increase erosion and sedimentation into the creek with potential for loss of suitable habitat for aquatic species, notably the threatened Steelhead trout and California red-legged frog. Portions of San Luis Obispo Creek downstream of the Project site contain pools that provide potential rearing habitat for juvenile Steelhead and populations of the California red-legged frog. Sedimentation degrades spawning grounds by covering preferred gravels, smothering eggs, reducing habitats for food sources, and filling refugia pools that are important habitat for rearing juveniles. In addition to individual species, sedimentation degrades sensitive habitats such as wetlands by smothering new vegetative growth at best, and eliminating wetland coverage at worst. Offsite impacts to Steelhead trout or other sensitive aquatic species and habitats from sediment generated during construction within the Project site would be considered an adverse effect to these species and other aquatic resources.

Extensive earthmoving and grading would be necessary to develop the site, including raising housing pads on up to eight feet of fill above the existing floodplain. Artificial fill slopes within the floodplain at an approximate 3:1 ratio could contribute sediment to the creek if they are not appropriately vegetated or protected from erosion. Erosion from all these activities and structures could cause sedimentation and contamination in the lower watershed, and impacts could extend far downstream into San Luis Obispo Creek. Sensitive species and habitats in San Luis Obispo Creek, including steelhead and wetlands, are susceptible to degradation through sedimentation, and therefore impacts from construction of the Project on offsite biological resources would be considered *significant but mitigable*.

Mitigation Measures

*MM BIO-1a and 1b shall apply.*

*MM BIO-2a, 2f, 2h, and 2j shall apply.*

*MM HYD-1a through 1c shall apply.*

*MM BIO-6 All work in and within 100 feet of Tank Farm Creek, including work within the creek setback, shall occur outside the rainy season (April 15 to October 15, unless approved otherwise by the RWQCB), during periods when the creek channel is dry and water flows are absent.*

**Requirements and Timing.** This measure shall be included within the Biological Mitigation Plan and subject to City review and approval prior to acceptance of the final Development Plan and recordation of the final VTM. During construction, quarterly documentation demonstrating compliance shall be submitted to the City.

**Monitoring.** The City shall review and approve the Biological Mitigation Plan to ensure this issue is addressed and prior to the onset of construction for each phase. The City shall ensure compliance in detailed grading and construction plans. The onsite Environmental Monitor shall ensure that construction within 100 feet of the creek is halted during a wet weather event.

#### Residual Impact

Significant impacts to downstream biological resources from Project construction would be reduced with the implementation of MM BIO-1a and 1b, which require BMPs be applied during construction to reduce the movement of all toxins, including sediment, within the site; and with the implementation of MM BIO-6 and MM BIO-2f, 2h and 2j, which directly address measures to stop the movement of sediment into the creek during construction within and adjacent to the creek channel. Lastly, implementation of MM BIO-2a would slightly widen the creek corridor, thereby reducing siltation impacts from construction of the Tank Farm Creek Class I bicycle path and manufactured slopes along the creek. Implementation of these measures would reduce impacts to downstream biological resources to less than significant after mitigation.

#### 3.4.4.4 Cumulative Impacts

The proposed Project is one of many planned and/or proposed residential developments in undeveloped open or agricultural lands along the fringes of the City. Construction of the Project would incrementally contribute to the trend of conversion of the southern end of the City from undeveloped agricultural land to developed urban uses, with resultant losses of open space and habitats, increases in impervious surfaces, night light, noise, and traffic

that come with such development. These changes would both directly and indirectly affect sensitive habitats and wildlife species.

Project development resulting in impacts to onsite wetlands and riparian habitat would contribute to cumulative losses of foraging/nesting habitat for sensitive bird species, potential habitat to the California red-legged frog and western pond turtle. Cumulative removal of habitat within the vicinity reduces the amount of foraging and breeding habitat for other non-sensitive mammals, birds, and reptiles, particularly to wildlife corridors along San Luis Obispo Creek and its tributaries. Project impacts, when combined with other projects in the vicinity as represented in Table 3.0-1, such as the San Luis Ranch Project and Chevron Tank Farm Remediation and Development Project, would add to impervious surfaces and pollutant loading in the San Luis Obispo Creek watershed. The development of a business park within the Chevron Tank Farm property to the northeast, combined with Project development, would reduce the wildlife corridor and forage habitat in the vicinity of the Project area. However, these projects would retain Tank Farm Creek and areas of sensitive wetlands, in order to minimize habitat fragmentation and protect wildlife corridors, consistent with City policy.

The Project would contribute to cumulative impacts on the Tank Farm Creek corridor, as the Project extends for approximately 3,800 linear feet along the creek corridor. Despite the proposed riparian buffer and dedication of open space within the Project site, cumulative impacts from increased levels of light, noise, runoff (pollution and siltation), waste material, and human interaction (foot traffic) would potentially impact the species that use and reside in and around Tank Farm Creek. In particular, long-term impacts to wetland habitat and sensitive species from water quality pollution and siltation, and potential cumulative degradation of water quality in Tank Farm Creek are of concern.

In addition to localized cumulative impacts, Project development would contribute to citywide and regional impacts to biological resources. Pending development projects in other cities within the County, as well as within unincorporated areas, could impact a range of biological resources, including riparian and wetland habitats, as well as special status species. Construction of the Project, as well as reasonably foreseeable projects in the County, would result in further loss to natural land and other habitat that supports sensitive and listed species, and would contribute to the fragmentation of habitat by interrupting wildlife corridors. Within the City and its immediate planning area, full development permitted under the LUCE would increase overall developed area in the City and further reduce natural habitat acreages within the City limits. Development under the LUCE would

contribute to the removal or modification of natural habitats, decrease in native plant and animal species occurrences, increase in urban/wildland interface, and increase in ruderal/disturbed habitat areas. However, the LUCE EIR ultimately found that cumulative impacts to biological resources would be less than significant after implementation of both the existing General Plan policies and those proposed by the LUCE Update, as well as compliance with state and federal regulations.

With retention of open space along the creek corridor and incorporation of recommended mitigation measures, the Project's contribution to regional cumulative impacts to biological resources would be significant but mitigable with the incorporation of all the Project-specific mitigation measures described above.

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