February 21, 2018

Mr. Fred Kenney
Golfland Entertainment Centers, Inc.
1893 Taylor Road
Roseville, California 95661

***Subject:*** ***Biological Resources Constraints Letter Report for the Roseville Golfland East Parking Lot Project, Roseville, Placer County, California***

Dear Mr. Kenney:

At the request of Golfland Entertainment Centers, Inc., Dudek prepared an assessment of the potential constraints that onsite biological resources could pose to the proposed Roseville Golfland East Parking Lot Project (project), located in the City of Roseville, Placer County, California (Figure 1). This letter report provides a description of the methodology and results of the assessment. The proposed project involves development of a 175-space parking lot. The parking lot would provide additional parking for the Roseville Golfland Sunsplash recreation center located west of the project site. The project would entail grading and paving of the approximately 2.1-acre site as well as constructing a drainage system and swale to channel rainwater runoff from the site to natural drainages to the southeast. The area within and immediately surrounding the project site was analyzed as part of this report and is hereafter referred to as the study area, which is approximately 5.7 acres in size.

## PROJECT LOCATION

The project is located at 1850 Taylor Road in Roseville, California, in the following Public Land Survey System location: Section 36, Township 11 North, Range 6 East of the Roseville, CA United States Geological Society (USGS) 7.5 minute quadrangle. Surrounding land use includes the Roseville Golfland Sunsplash recreation center to the west, open space and commercial development to the east and south, and open space to the north.

## METHODS

### Literature and Database Review

Because biological resources considered of special status by state and federal resource agencies typically pose the most constraints to proposed project disturbance of natural areas, the

literature/database review and field reconnaissance described herein focused on the potential of these resources to occur on or immediately adjacent to the project site. For this report, special-status plant and animal species are defined as those that are (1) listed, proposed for listing, or candidates for listing as Threatened or Endangered under the federal Endangered Species Act; (2) listed or candidates for listing as Threatened or Endangered under the California Endangered Species Act; (3) state Fully Protected species; (4) California Department of Fish and Wildlife (CDFW) Species of Special Concern; or (5) listed on the CNPS Inventory of Rare and Endangered Plants with a California Rare Plant Rank (CRPR) of 1B or 2B. Special-status vegetation communities are those communities identified as high priority for inventory in the List of Vegetation Alliances and Associations (CDFW 2010) with a state rarity ranking of S1, S2, or S3.

Special-status biological resources present or potentially present on the project site were identified through a literature and database search using the following sources: the U.S. Fish and Wildlife Service (USFWS) Information, Planning and Conservation (IPaC) Trust Resource Report (USFWS 2018); the CDFW California Natural Diversity Database (CNDDB) (CDFW 2018); and the California Native Plant Society (CNPS) online Inventory of Rare, Threatened, and Endangered Plants (CNPS 2018). Searches of the above-referenced databases included the Roseville, CA U.S. Geological Survey 7.5 minute quadrangle and eight surrounding quadrangles: Sheridan, Lincoln, Gold hill, Pleasant Grove, Rocklin, Folsom, Citrus Heights, and Rio Linda. CNDDB search results within 2 miles of the project site were overlain on aerial imagery to assess proximity of known occurrences to the project site (Figure 2).

## Field Reconnaissance

In conjunction with the literature review, Dudek biologist Laura Burris conducted a reconnaissance level site survey of the proposed project site and immediate surrounding area on December 28, 2017. All native and naturalized plant species encountered within the study area were identified and recorded. The potential for special-status plant and wildlife species to occur within the study area was evaluated based on the vegetation communities and soils present on the site, the overall habitat quality of these communities onsite, and on the known geographic range of the special-status species identified during the literature and database review. Vegetation communities and land cover types on site were mapped directly in the field. Focused protocol-level surveys for special-status plant and wildlife species were not conducted since the site visit was perfomed outside the blooming and breeding season in which the presence or absence of these species could be confirmed.

Latin and common names for potentially occurring special-status plant species with a CRPR follow the CNPS Inventory of Rare and Endangered Plants (CNPS 2018). For plant species without a

California Rare Plant Rank, Latin names follow the Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California (Jepson Flora Project 2018) and common names follow the United States Department of Agriculture's Natural Resources Conservation Service Plants Database (USDA 2017a). Natural vegetation communities were mapped using the Manual of California Vegetation, 2nd Edition (Sawyer et al. 2009) and the List of Vegetation Alliances and Associations (CDFG 2010).

Dudek geographic information systems (GIS) specialists mapped observed and documented biological resources on aerial imagery using ArcGIS software.

## RESULTS

### Site Description

Topography within the project site is generally flat due to past fill and grading activities. The site slopes gently to the southeast, towards Miner's Ravine, which flows from north to south along east of the project site. Elevation ranges from approximately 180 feet above mean sea level in the northwestern portion of the study area to approximately 160 feet above mean sea level in the southeastern portion of the survey area adjacent to Miner's Ravine. A more detailed discussion of onsite biological resources is provided below.

#### *Soils*

According to the Natural Resources Conservation Service (USDA 2017b), soils within the study area include Rubble land, Sierra sandy loam, 9 to 15 percent slopes, and Xerofluvents, frequently flooded (Figure 3) (USDA 2017b). The following text describes these soil types, which play an important role in the types of vegetation supported in a given area, in further detail. Field observations confirmed that the project site has been previously graded with fill dirt and the resulting soils were comprised of shallow horizons and gravel fill. Soils closer to Miner's Ravine appear to be sandy loam soil, consistent with Sierra sandy loam.

**Rubble Land**: Rubble land is strongly influenced by anthropogenic land practices, including deposition of fill materials and gravels, grading, and other construction practices. This soil type is generally rocky and has poor permeability.

**Sierra sandy loam, 9 to 15% slopes**: The Sierra sandy loam soil consists of Hanford series consists of well-drained soils derived from residuum weathered from granite. This soil is typically coarse sandy loam overlaying bedrock and occurs on gently sloping to very steep hill slopes in the foothills of the Sierra Nevada Mountains.

**Xerofluvents, frequently flooded**: Xerofluvent soils are those typically associated with waterways where deposition of soils is prevented or slowed by movement of water. Xerofluvents typically flood and dry depending on availability of water in the system.

### *Hydrology*

The project site is part of the Miner's Ravine sub Watershed, Hydrologic Unit Code (HUC) 12: 180201110102. The hydrology of the survey area has been significantly altered due to past fill and grading activities associated with construction of Eureka and Taylor roads, which have resulted in channelization of rainwater runoff into storm drains and culverts at the south end of the study area. Sources of hydrology in the study area include precipitation and runoff from urban development to the west. Several culverts channel water under Taylor Road to the study area.

Average annual precipitation at the study area is 22.71 inches, with peak precipitation occurring in the month of January (WRCC 2017). The National Wetlands Inventory (USFWS 2017) identifies no wetlands in the study area; however, Miner's Ravine, just east of the area, is classified as forested palustrine, seasonally flooded wetland.

### *Vegetation Communities and Land Cover Types*

Two vegetation communities, California annual grassland and mixed riparian woodland, one anthropogenic land cover type, "ruderal", and one aquatic land cover type, ephemeral drainage, were characterized and documented in the study area during the site visit. The acreages of the observed vegetation communities and land cover types are presented in Table 1 below; the distribution on the project site is depicted in Figure 4 and described further in the following text. Aquatic features are discussed further in the following sections. Representative site photographs are presented in Attachment 1.

**Table 1**
**Vegetation Communities and Land Cover Types Within the Study Area***

| Macrogroup | Scientific Name (Common Name) | Acres |
|---|---|---|
| *Terrestrial* | | |
| Anthropogenic Land Cover Types | Ruderal | 2.32 |
| California Grasslands | California Annual Grassland | 2.03 |
| Riparian Forests and Woodlands* | Mixed Riparian Woodland | 1.39 |
| | **Total** | **5.74** |

* The project site is comprised primarily of Ruderal land cover; other land covers occur directly adjacent to the project site, within the study area.
SOURCE: Sawyer et al. 2009.

**Ruderal.** Ruderal areas are those that have significant anthropogenic influences and have a cover of plants that are typically non-native. Within the project site, ruderal areas include the sparsely vegetated upland areas that have been filled and graded as a result of past roadway improvement projects. The soils are hard-packed and contain high concentrations of gravel and asphalt. Vegetation cover was sporadic and dominated by introduced, non-native plant species such as red-stemmed filaree (***Erodium cicutarium***), Bermuda grass (***Cynodon dactylon***), English plantain (***Plantago lanceolata***), common plantain (***P. major***), black mustard (***Brassica nigra***), rose clover (***Trifolium hirtum***), and yellow star-thistle (***Centaurea solstitialis***).

**California Annual Grassland**. Directly adjacent to the proposed parking lot site to the east and south are areas of less-disturbed annual grassland. These areas contain annual grasses and forbs that are typical of disturbed grasslands throughout California. Common species observed in the grassland on the site include Italian thistle (***Carduus pycnocephalus***), medusahead grass (***Elumus caput-medusae***), soft brome (***Bromus hordeaceus***), wild oat (***Avena fatua***), prickly lettuce (***Lactuca serriola***), and chicory (***Cichorium intybus***). Closer to the riparian corridor more native species were observed that included blue wild rye (***Elymus glaucus***), deer grass (***Muhlenbergia rigens***), yarrow (***Achillea millefolium***), and Douglas' sagewort (***Artemisia douglasiana***).

**Mixed Riparian Forest**. Mixed riparian woodland occurs to the east of the proposed development in association with the Dry Creek/Miner's Ravine stream corridor and contains a multi-layered shrub and tree canopy. Species noted within the tree canopy include cottonwood ***(Populus fremontii***), white alder (***Alnus rhombifolia***), arroyo willow (***Salix lasiolepis***), interior live oak (***Quercus wislizeni***), and valley oak (***Q. lobata***). Shrub and vine species in this habitat include mulefat (***Baccharis salicifolia***), sandbar willow (***Salix exigua***), and Himalayan blackberry (***Rubus armeniacus***).

**Ephemeral Drainages**. Three ephemeral drainages occur directly adjacent to the project site. These features range from highly vegetated swale to cement-lined culverts. Vegetation associated with these features is typical of areas containing water for part of the year, especially during rain events, and includes tall flatsedge (***Cyperus eragrostis***), hyssop loosestrife (***Lythrum hyssopifolia***), English plantain, and curly dock (***Rumex crispus***).

### *Plants*

Forty-six species of native or naturalized plants, 18 native (39%) and 28 non-native (61%), were recorded in the study area (see Attachment 2). Plant species that were observed during the site visit, particularly the dominance of non-native species, are characteristic of the ruderal nature of much of the project site.

### *Wildlife*

Four species of wildlife were directly observed or documented via scat, sign, or call during the site visit. Wildlife primarily included resident and migratory bird species such as turkey vulture (***Cathartes aura***), American crow (***Corvus brachyrhynchos***), and house finch (***Haemorhous mexicanus***). Rabbit scat was also noted within the project site during the site visit.

## Special-Status Species

### *Plants*

Based on the literature and database review described above, nine special-status plant species are known to occur within the project quadrangle or surrounding quadrangles. All of these species were removed from consideration based on lack of suitable soils or habitat, or because the project site is outside of the known elevation or geographic range for the species (Attachment 3). Due to the mostly ruderal habitat and gravel soils at the project site, suitable habitat for special-status plants does not occur.

### *Wildlife*

Twenty-two special-status wildlife species are known to occur within the project quadrangle or surrounding quadrangles. Of these species, 20 were removed from consideration based on lack of suitable habitat or because the site is outside of the known geographic or elevation range for the species (Attachment 3). The remaining two species that have potential to occur within the project site are purple martin (***Progone subis***) and white-tailed kite (***Elanus leucurus***) (Table 2). These species are discussed in further detail below.

**Table 2**
**Regulatory Status of Special-Status Wildlife Species Potentially Occurring on the Site**

| Scientific Name | Common Name | Status (Federal/State) |
|---|---|---|
| *Elanus leucurus* | white-tailed kite | None/Fully Protected |
| *Progne subis* | purple martin | None/ SSC |

SOURCE: CDFW 2018, USFWS 2018.

**White-tailed Kite (*Elanus leucurus*).** This raptor is a California Fully Protected species and is found throughout lower elevations in California. It is often associated with agriculture and low elevation grassland, wetland, oak woodland, low shrub, open woodland, or savannah habitats. Riparian areas with dense, broad-leafed deciduous trees adjacent to open space areas are typically

used for nesting (Brown and Amadon 1968). White-tailed kite feed primarily on small mammals, particularly California voles (***Microtus californicus***) (Niemela 2007). This species may breed as early as February through October.

The nearest documented occurrence for this species is located approximately 3.35 miles southwest of the project site (CDFW 2018). No white-tailed kite or potential prey species were observed during the site visit; however, the visit was conducted outside of the nesting season for this species and at a time when most rodent species are likely in hibernation. However, the mixed riparian woodland directly east of the project site provides potentially suitable nesting habitat for this species, and the grassland vegetation directly adjacent to the site.

**Purple Martin (*Progne subis*).** Purple martin is a California Species of Special Concern. This species breeds in numerous areas of North America, including throughout the lower elevations of California, and winters in South America. Populations have declined due to the introduction of European starlings (***Sturnus vulgaris***), which compete for similar nesting areas as purple martin (Shuford and Gardali, ed. 2008). This species is a cavity nester and will utilize existing holes in trees created by woodpeckers, or cavities in overpasses and bridges. Breeding season for purple martin generally extends from April to August (Sibley 2003).

This species was previously documented in 2007 at the overcrossing of Highway 65 at Highway 80, approximately 0.8 mile north of the project site. This species was not observed during the site visit which was conducted outside of the nesting season for this species; however, trees in the mixed riparian forest, as well as the undercrossing of Eureka Road directly south of the project site, provide potentially suitable nesting habitat for this species.

**Nesting and Migratory Birds.** All native birds in California are protected by the federal Migratory Bird Treaty Act (MBTA) of 1918 and Section 3503 of the California Fish and Game Code. Because the site is primarily ruderal land cover, it provides limited nesting habitat for most breeding bird species in the region; however, habitat areas directly adjacent to the site can provide nest habitat for a variety of bird species.

### Sensitive Natural Communities

None of the vegetation communities occurring on the project site are considered as sensitive natural communities by state or federal resource agencies; however, riparian vegetation associated with streams is regulated under California Fish and Game Code Section 1600 et seq. Thus, the mixed riparian forest adjacent to the project site is considered a sensitive natural community.

## Waters of the U.S. or State

An aquatics resources delineation was performed by Dudek during the site visit on December 28, 2017 and reported in the ***Review of Potential Wetlands and Waters of the United States Roseville Golfland Proposed East Parking Lot Project, Roseville, California*** (Dudek 2018). Table 3 and Figure 4 present the results of the delineation and the extent of aquatic resources within or directly adjacent to the site potentially regulated by US Army Corps of Engineers (ACOE), Regional Water Quality Control Board (RWQCB), and CDFW.

**Table 3**
**Jurisdictional Wetland Delineation Summary***

| Feature ID | Jurisdiction | Acreage | Linear Feet |
|---|---|---|---|
| Ephemeral Drainage-01 | ACOE, RWQCB, CDFW | 0.0037 | 105.42 |
| Ephemeral Drainage-02 | ACOE, RWQCB, CDFW | 0.0048 | 102.50 |
| Ephemeral Drainage-03 | ACOE, RWQCB, CDFW | 0.0166 | 360.78 |
| | **Total** | **0.0251** | **568.70** |

* All potentially jurisdictional features are located immediately outside the project site.
ACOE = U.S. Army Corps of Engineers; ED = Ephemeral Drainage; RWQCB = Regional Water Quality Control Board; CDFW = California Department of Fish and Wildlife.

The results of the jurisdictional delineation performed by Dudek show that there are approximately 568.70 linear feet of potentially ACOE- RWQCB- and CDFW-jurisdictional non-wetland waters adjacent to the project site.

Dry Creek/Miner's Ravine, just east and outside of the project site, is mapped as a blue line stream on USGS topographic maps and contains a mature riparian corridor in association with the stream channel. Water from the site appears to flow overland before channeling into two ephemeral drainages that eventually flow to the main channel of Miner's Ravine. ACOE asserts jurisdiction to the Ordinary High Water Mark of streams, whereas the RWQCB asserts jurisdiction to the top of bank. CDFW generally assumes jurisdiction of the bed and bank of stream courses; however, CDFW has been known to assert jurisdiction to the limits of any associated riparian vegetation along stream courses. The top of bank of Miner's Ravine is depicted on Figure 4, and generally corresponds with the limits of riparian vegetation associated with this feature.

While all ephemeral drainages occur outside the proposed footprint for construction, they are located adjacent to the project site and may be indirectly impacted by construction activites. Ephemeral Drainages (ED) -01 and -02 contain evidence of flow such as debris wracking, change in sediment, and change in vegetation. Both ED-01 and ED-02 originate just south of the project

site from culverts under Taylor Road and appear to channel rainwater runoff from the roadways and development west of the project site onto the project site. ED-02 contains a cement-lined channel for half of its length; the cement-lined portion is not anticipated to be subject to ACOE, RWQCB, or CDFW jurisdiction by virtue of the man-mad nature of this segment of the drainage. ED-03 appears to be a drainage at the base of the slope that channels rainwater runoff from the ruderal fill area of the project site to the main channel of Miner's Ravine, and therefore is subject to ACOE, RWQCB, and CDFW jurisdiction.

## CONSTRAINTS ANALYSIS AND RECOMMENDATIONS

This section addresses potential impacts to special-status biological resources that could pose as constraints to future implementation of the proposed project, and provides recommended measures to address these potential constraints.

### Special-Status Species

#### *Plants*

Because the project site does not support suitable habitat for special-status plant species, no impacts to these species are anticipated to occur and no constraints to the proposed project would occur associated with special-status plant species.

#### *Wildlife*

**White-tailed Kite, Purple Martin, and Nesting and Migratory birds**. Nesting habitat for a number of resident and migratory birds is present in the California annual grassland and mixed riparian woodland immediately adjacent to the project site. Impacts could occur indirectly by reducing reproductive success at nests due to increased light, noise, vibration, and human presence associated with construction activities during the nesting season. The following measure is recommended to avoid/minimize potential impacts to nesting bird species.

- If possible, construction activities should be conducted outside the nesting bird season (generally March 1 through July 30) to avoid impacts to nesting birds. If construction will occur within the nesting season, a preconstruction nesting bird survey of all potential nest habitat within the construction zone, including a 200-foot buffer around the construction zone, shall be completed by a qualified biologist no earlier than two weeks prior to construction during the nesting season to determine if any native birds are nesting on or near the site. If any active nests are observed during the surveys, a suitable avoidance buffer from the nests will be determined by the biologist. The nest(s) and associated avoidance

buffers will be flagged by the qualified biologist based on species, location and planned construction activity. These nests would be avoided until the chicks have fledged and the nests are no longer active, as determined by the biologist.

### Sensitive Natural Communities

The construction of the parking lot will not encroach upon riparian vegetation; thus, no constraints to project construction or operation are anticipated in relation to sensitive natural communities.

### Waters of the U.S. or State

The project has been designed to avoid all potentially jurisdictional state or federal waters and thus avoid potential permitting from the US Army Corps of Engineers, the State Water Boards, or the CDFW (e.g., Clean Water Act Section 404 Nationwide Permit, Section 401 Water Quality Certification, and CDFG Code Section 1602 Streambed Alteration Agreement, respectively). To ensure no indirect impacts to potentially jurisdictional waters through rainwater runoff or sedimentation during project construction, implementation of the best management practices outlined below should occur. With implementation of this measure, no constraints to development are anticipated to result from state or federal wetlands or waters.

- Sediment and erosion control best management practices (BMPs) shall be utilized for all construction adjacent to wetlands. BMPs may include, but are not limited to, hydroseeding, installation of biodegradable straw wattles, covering stockpiles with tarps, and silt fencing.

If you have any questions or concerns regarding the content of this letter report, please contact me at 916.835.9671 or lburris@dudek.com.

Sincerely,

Laura Burris
Biologist

***Att.:*** ***Figures***
***Figure 1 – Regional, Site, and Vicinity Map***
***Figure 2 – CNDDB 2-Mile Radius Map***
***Figure 3 – Soils Map***
***Figure 4 – Biological Resources***
***Att. 1 – Representative Site Photographs***
***Att. 2 – Vascular Plant Species Observed Onsite***
***Att. 3 – Table of Potentially Occurring Species***

***cc. Markus Lang, Dudek***

## REFERENCES CITED

Brown, L., and D. Amadon. 1968. Eagles, Hawks and Falcons of the World. 2 Vols. London, United Kingdom: Country Life Books.

CDFG (California Department of Fish and Game). 2010. List of Vegetation Alliances and Associations: Natural Communities List Arranged Alphabetically by Life Form. September 2010. http://www.dfg.ca.gov/biogeodata/vegcamp/natural_comm_list.asp.

CDFW (California Department of Fish and Wildlife). 2018. RareFind 5. California Natural Diversity Database. CDFW, Biogeographic Data Branch. Accessed January 2018. https://www.dfg.ca.gov/biogeodata/cnddb/mapsanddata.asp.

CNPS (California Native Plant Society, Rare Plant Program). 2018. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). Website http://www.rareplants.cnps.org [accessed 08 February 2018]

HistoricAerials.com. 2018. Accessed January 2018. https://www.historicaerials.com/.

Jepson Flora Project. 2018. Jepson eFlora. Berkeley, California: University of California. http://ucjeps.berkeley.edu/IJM.html.

Niemela, C.A. 2007. "Landscape Characteristics Surrounding White-tailed Kite Nest Sites in Southwestern California." A thesis presented to the Faculty of Humboldt State University in partial fulfillment of the requirements for the degree Master of Science.

Sawyer, J., T. Keeler-Wolf., and J.M. Evens. 2009. A Manual of California Vegetation. 2nd ed. California Native Plant Society.

Shuford, W. D., and Gardali, T., editors. 2008. California Bird Species of Special Concern: A ranked assessment of species, subspecies, and distinct populations of birds of immediate conservation concern in California. Studies of Western Birds 1. Western Field Ornithologists, Camarillo, California, and California Department of Fish and Game, Sacramento.

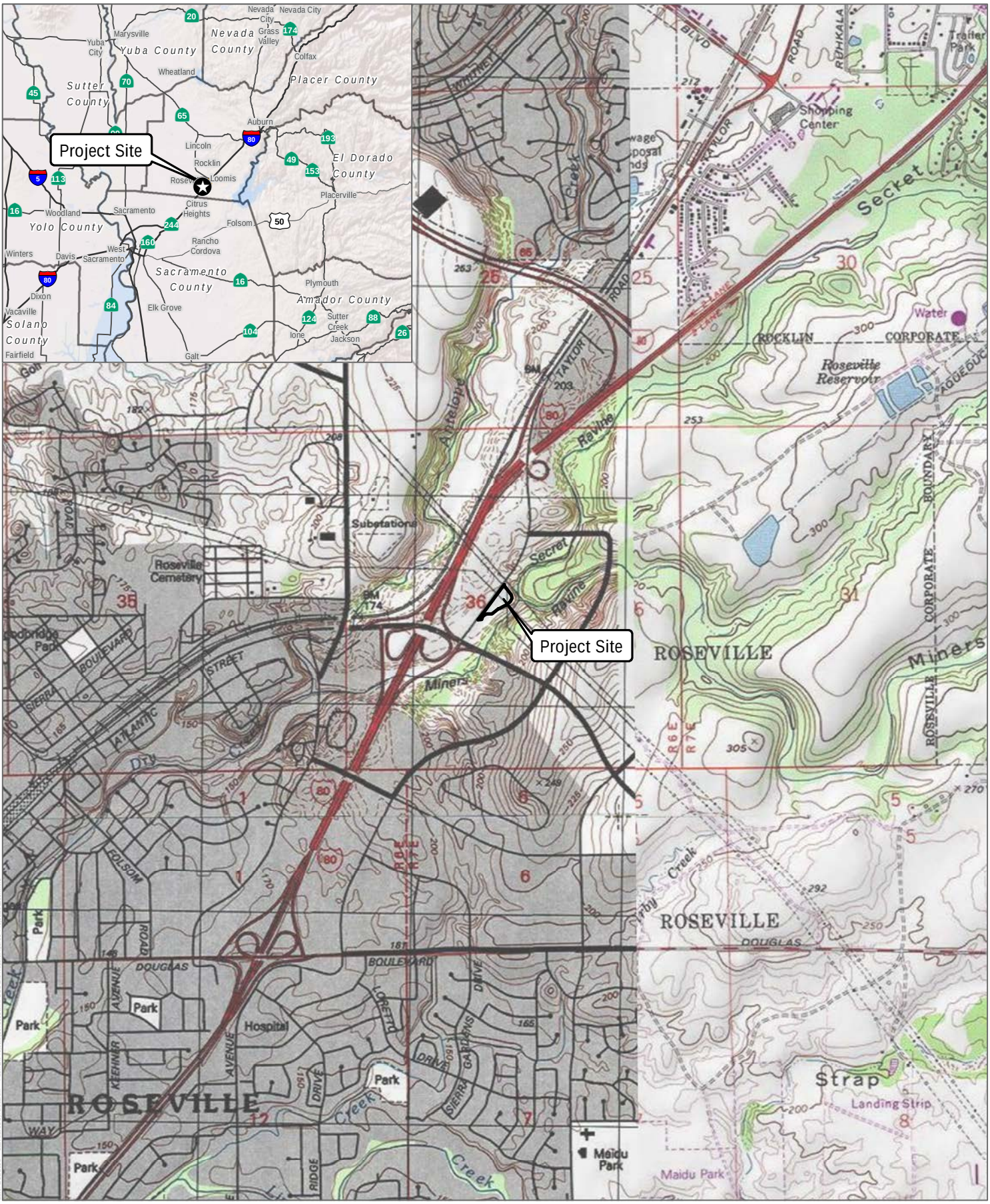
USDA. 2017. Web Soil Survey. USDA, Natural Resources Conservation Service, Soil Survey Staff. http://websoilsurvey.nrcs.usda.gov/.

USFWS U.S. Fish and Wildlife Service). 1984. Smith's Blue Butterfly Recovery Plan. U.S. Fish and Wildlife Service, Portland Oregon. 87 pp. Available online: https://ecos.fws.gov/docs/recovery_plan/841109.pdf. Accessed February 2018.

USFWS (U.S. Fish and Wildlife Service). 2018. IPaC (Information for Planning and Consultation) Search. Accessed February 2018. http://www.fws.gov/data.

# FIGURES

*1–4*




SOURCE: ESRI Basemaps

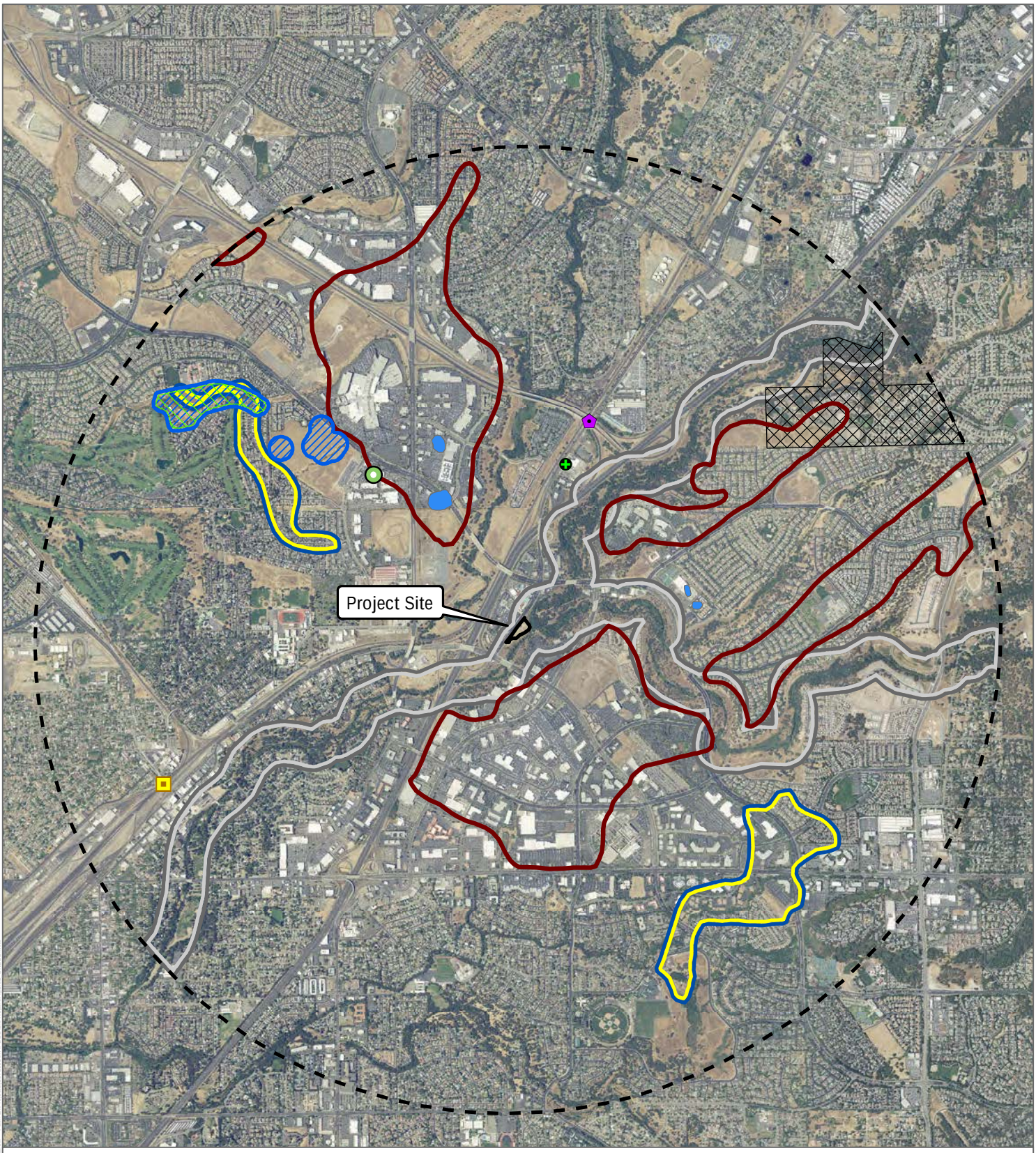
DUDEK

0 1,000 2,000 Feet

FIGURE 1

Project Location

Golfland Parking Lot Project




Project Boundary
2 Mile Buffer
An andrenid bee
dwarf downingia
purple martin
western spadefoot
Boggs Lake hedge-hyssop
California linderiella
Northern Hardpan Vernal Pool
Northern Volcanic Mud Flow Vernal Pool
steelhead - Central Valley DPS
valley elderberry longhorn beetle
vernal pool fairy shrimp

SOURCE: NAIP 2016

DUDEK

0 1,500 3,000 Feet

FIGURE 2

CNDDB Map

Golfland Parking Lot Project

SOURCE: USDA NAIP Imagery (2016); USGS SSURGO; Placer County GIS

DUDEK

0 100 200 Feet

FIGURE 3

Soils Map

Golfland Parking Lot Project

SOURCE: USDA NAIP Imagery (2016); Placer County GIS

DUDEK

0 75 150 Feet

FIGURE 3

Biological Resources

Golfland Parking Lot Project

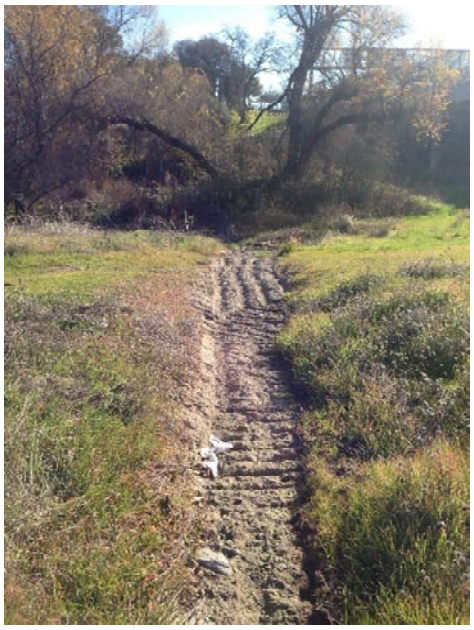
# ATTACHMENT 1

*Representative Site Photographs*

# ATTACHMENT 1
# Representative Site Photographs

| | |
|---|---|
| | |
| **Photo 1** – View of the Ruderal land cover in the project site, facing southwest. December 28, 2017. | **Photo 2** – View of Miner's Ravine and associated Mixed Riparian Woodland, facing southwest. December 28, 2017 |
| | |
| **Photo 3** – View of proposed drainage swale location in California Annual Grassland, facing north. December 28, 2017. | **Photo 4** – Ephemeral drainage habitat (ED-01) just south of the project site, facing south. December 28, 2017. |

# ATTACHMENT 1
# Representative Site Photographs

| | |
|---|---|
| |  |
| **Photo 5** – Ephemeral drainage (ED-02) with culvert in background, facing west. December 28, 2017. | **Photo 6** – View of cement-lined portion of ED-02, facing east. December 28, 2017. |
| | |
| **Photo 7** – View of ephemeral drainage habitat (ED-03) with Mixed Riparian Woodland, facing northeast. December 28, 2017. | **Photo 8** – View of Ruderal land cover, with Miner's Ravine in background, facing southeast. December 28, 2017. |

# ATTACHMENT 2

*List of Vascular Plant Species Recorded at the Site*

# Attachment 2
# List of Plant Species Observed Onsite

## MONOCOTS

***CYPERACEAE*—SEDGE FAMILY**

*Cyperus eragrostis*—tall flatsedge

***POACEAE*—GRASS FAMILY**

* *Avena fatua*—wild oat
* *Bromus hordeaceus*—soft brome
* *Cynodon dactylon*—Bermudagrass
* *Elymus caput-medusae*—medusahead
*Elymus glaucus*—blue wild rye
*Muhlenbergia rigens*—deer grass beds

## EUDICOTS

***APIACEAE*—CARROT FAMILY**

* *Daucus carota*—Queen Anne's lace
* *Foeniculum vulgare*—fennel

***ASTERACEAE*—SUNFLOWER FAMILY**

*Achillea millefolium*—common yarrow
*Artemisia douglasiana*—Douglas' sagewort
*Baccharis pilularis*—coyote brush
*Baccharis salicifolia*—mulefat
* *Carduus pycnocephalus*—Italian plumeless thistle
* *Centaurea solstitialis*—yellow star-thistle
* *Cichorium intybus*—chicory
* *Cirsium vulgare*—bull thistle
* *Dittrichia graveolens*—stinkwort
* *Hypochaeris radicata*—hairy cat's ear
* *Lactuca serriola*—prickly lettuce
* *Silybum marianum*—blessed milkthistle

***BETULACEAE*—BIRCH FAMILY**

*Alnus rhombifolia*—white alder

***BRASSICACEAE*—MUSTARD FAMILY**

* *Brassica nigra*—black mustard

***EUPHORBIACEAE*—SPURGE FAMILY**

*Croton setiger*—dove weed
* *Triadica sebifera*—Chinese tallow

***FABACEAE*—LEGUME FAMILY**

*Lupinus bicolor*—miniature lupine
* *Trifolium angustifolium*—narrowleaf crimson clover

* *Trifolium hirtum*—rose clover
* *Vicia sativa*—garden vetch

***FAGACEAE*—OAK FAMILY**
*Quercus douglasii*—blue oak
*Quercus lobata*—valley oak
*Quercus wislizeni*—interior live oak

***GERANIACEAE*—GERANIUM FAMILY**
* *Erodium cicutarium*—redstem stork's bill
* *Erodium moschatum*—musky stork's bill
* *Geranium molle*—dovefoot geranium

***LYTHRACEAE*—LOOSESTRIFE FAMILY**
* *Lythrum hyssopifolia*—hyssop loosestrife

***ONAGRACEAE*—EVENING PRIMROSE FAMILY**
*Epilobium brachycarpum*—tall annual willowherb

***PAPAVERACEAE*—POPPY FAMILY**
*Eschscholzia californica*—California poppy

***PLANTAGINACEAE*—PLANTAIN FAMILY**
* *Plantago lanceolata*—narrowleaf plantain
* *Plantago major*—common plantain

***POLYGONACEAE*—BUCKWHEAT FAMILY**
* *Rumex crispus*—curly dock

***ROSACEAE*—ROSE FAMILY**
* *Rubus armeniacus*—Himalayan black berry

***SALICACEAE*—WILLOW FAMILY**
*Populus fremontii*—Fremont cottonwood
*Salix exigua*—sandbar willow
*Salix lasiolepis*—arroyo willow

***ULMACEAE*—ELM FAMILY**
* *Ulmus parvifolia*—Chinese elm

---

* denotes a non-native species

**Sources**
Latin and common names for plant species with a California Rare Plant Rank (formerly CNPS List) follow the *California Native Plant Society On-Line Inventory of Rare, Threatened, and Endangered Plants of California* (CNPS 2016). For plant species without a California Rare Plant Rank, Latin names follow the *Jepson Interchange List of Currently Accepted Names of Native and Naturalized Plants of California* (Jepson Flora Project 2017) and common names follow the *List of Vegetation Alliances and Associations* (CDFW 2010) or the United States Department of Agriculture (USDA) Natural Resources Conservation Service Plants Database (USDA 2017).

# ATTACHMENT 3

***Special-Status Species with Known or Potential Occurrence in the Vicinity of the Big Springs Meditation Resort Project in Sierra County, California***

# APPENDIX 3

## Special-Status Plant Species with Known or Potential Occurrence in the Project Vicinity

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| | | | ***Plants*** | |
| Ahart's dwarf rush | *Juncus leiospermus* var. *ahartii* | None/None/1B.2 | Annual herb found in valley and foothill grassland (mesic). Elevation 95–750 meters. Blooms Mar–May. | **Low potential to occur.** Suitable habitat for this species occurs within the project area. No CNDDB occurrences within 5 miles of the site (CNDDB 2018). |
| big-scale balsamroot | *Balsamorhiza macrolepis* var. *macrolepis* | None/None, CRPR 1B.2 | Perennial herb found in chaparral, cismontane woodland, and valley and foothill grassland. Sometimes found in serpentine soils. Elevation 90-155 meters. Blooms Mar-Jun. | **Low potential to occur.** Suitable habitat for this species occurs within the project area, the nearest documented occurrences are north of Interstate 80 near Lincoln (CNDDB 2018). |
| Boggs Lake hedge-hyssop | *Gratiola heterosepala* | None/Endangered, CRPR 1B.2 | Annual herb found in marshes and swamps (lake margins), vernal pools. Usually clay soils. Elevation 10-2,375 meters. Blooms Apr-Aug. | **Not expected to occur.** No suitable marsh or swamp habitat present. |
| dwarf downingia | *Downingia pusilla* | None/None, CRPR 2B.2 | Annual herb found in mesic valley and foothill grassland habitats, vernal pools. Elevation 1-445 meters. Blooms Mar-May. | **Not expected to occur**. No suitable vernal pool or mesic habitat present |
| legenere | *Legenere limosa* | None/None/1B.1 | Annual herb found in vernal pools. Blooms Apr–June. Elevation 3–2,887 meters. | **Not expected to occur.** No suitable vernal pool habitat present. |
| pincushion navarretia | *Navarretia myersii* | None/None, CRPR 1B.1 | Annual herb found in vernal pools, often in acidic soils. Elevation 20-333 meters. Blooms Apr-May. | **Not expected to occur.** No suitable vernal pool habitat or acidic soils present. |
| Sacramento Orcutt grass | *Orcuttia viscida* | Endangered/Endangered, CRPR 1B.1 | Annual herb found in vernal pools. Elevation 30-100 meters. Blooms Apr-Jul. | **Not expected to occur.** No suitable vernal pool habitat present. |
| Sanford's arrowhead | *Sagittaria sanfordii* | None/None, CRPR 1B.2 | Perennial rhizomatous emergent herb found in marshes and swamps. Elevation 0-650 meters. Blooms May-Oct. | **Not expected to occur.** No suitable marsh or swamp habitat present. |
| Slender Orcutt grass | *Orcuttia tenuis* | Threatened/Endangered, CRPR 1B.1 | Annual herb found in vernal pools (often gravelly). Elevation 35-1,760 meters. Blooms May-Sep. | **Not expected to occur.** No suitable vernal pool habitat present. |

# ATTACHMENT 3

## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| ***Invertebrates*** | | | | |
| conservancy fairy shrimp | *Branchinecta conservatio* | Endangered/None | Conservancy fairy shrimp is adapted to seasonally inundated playa pools which are larger more turbid vernal pools that fill with water during fall and winter rains and persist later into the summer than other vernal pools due to their larger size. | **Not expected to occur.** No suitable aquatic habitat within the project area. |
| valley elderberry longhorn beetle | *Desmocerus californicus dimorphus* | Threatened/None | The valley elderberry longhorn beetle is completely dependent on its host plant, elderberry (*Sambucus nigra* ssp. *cerulea*), which occurs in riparian and other woodland communities in California's Central Valley and the associated foothills. Female beetles lay their eggs in crevices on the stems or on the leaves of living elderberry plants. When the eggs hatch, larvae bore into the stems. The larval stages last for one to two years. The fifth instar larvae create emergence holes in the stems and then plug the holes and remain in the stems through pupation. Adults emerge through the emergence holes from late March through June. The short-lived adult beetles forage on leaves and flowers of elderberry shrubs. | **Not expected to occur.** No elderberry shrubs present within the project area. |

# ATTACHMENT 3
## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| vernal pool fairy shrimp | *Branchinecta lynchi* | Threatened/None | Vernal pool fairy shrimp is adapted to seasonally inundated features and occur primarily in vernal pools, seasonal wetlands that fill with water during fall and winter rains and dry up in spring and summer. Typically the majority of pools in any vernal pool complex are not inhabited by the species at any one time. Different pools within or between complexes may provide habitat for the fairy shrimp in alternative years, as climatic conditions vary. | **Not expected to occur.** No suitable aquatic habitat within the project area. |
| vernal pool tadpole shrimp | *Lepidurus packardi* | Endangered/None | Vernal pool tadpole shrimp is associated with low-alkalinity seasonal pools in unplowed grasslands. The vernal pool tadpole shrimp is found only in ephemeral freshwater habitats, including alkaline pools, clay flats, vernal lakes, vernal pools, vernal swales, and other seasonal wetlands in California. Suitable vernal pools and seasonal swales are generally underlain by hardpan or sandstone. This species inhabits freshwater habitats containing clear to highly turbid water, with water temperatures ranging from 50 to 84 degrees Fahrenheit and pH ranging from 6.2 to 8.5. | **Not expected to occur.** No suitable aquatic habitat within the project area. |

# ATTACHMENT 3

## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| | | | ***Fish*** | |
| Central Valley steelhead | *Oncorhynchus mykiss irideus* (NMFS) | Threatened/None | Central Valley steelhead spawn downstream of dams on every major tributary within the Sacramento and San Joaquin River systems.<br>Regardless of life history strategy, for the first year or two of life rainbow trout and steelhead are found in cool, clear, fast-flowing permanent streams and rivers where riffles predominate over pools, there is ample cover from riparian vegetation or undercut banks, and invertebrate life is diverse and abundant. | **High potential to occur in Dry Creek.** Known CNDDB records along Dry Creek, which flows adjacent to the project. |
| delta smelt | *Hypomesus transpacificus* | Threatened/Endangered | Delta smelt are a euryhaline species (tolerant of a wide salinity range). They have been collected from estuarine waters up to 14 ppt (parts per thousand) salinity. For a large part of their one-year life span, delta smelt live along the freshwater edge of the mixing zone (saltwater-freshwater interface), where the salinity is approximately 2 ppt. Shortly before spawning, adults migrate upstream from the brackish-water habitat associated with the mixing zone and disperse widely into river channels and tidally influenced backwater sloughs. They spawn in shallow, fresh or slightly brackish water upstream of the mixing zone. Most spawning happens in tidally influenced backwater sloughs and channel edgewaters. | **Not expected to occur.** Suitable habitat for this species is not present within or adjacent to the project area. No CNDDB occurrences within 5 miles of the project site. |

# ATTACHMENT 3

## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| | | | ***Amphibians and Reptiles*** | |
| California red-legged frog | *Rana draytonii* | Threatened/ SSC | California red-legged frogs occur in different habitats depending on their life stage, the season, and weather conditions. Breeding habitat includes coastal lagoons, marshes, springs, permanent and semi-permanent natural ponds, and ponded and backwater portions of streams. These frogs also breed in artificial impoundments including stock ponds, irrigation ponds, and siltation ponds. Creeks and ponds with dense growths of woody riparian vegetation, especially willows (*Salix* spp.) are preferred, although the absence of vegetation at an aquatic site does not rule out the possibility of occupancy. Adult frogs prefer dense, shrubby or emergent riparian vegetation near deep (≥2 to 3 feet), still or slow moving water, especially where dense stands of overhanging willow and an intermixed fringe of cattail occur adjacent to open water. | **Not expected to occur.** Although low-quality aquatic habitat occurs adjacent to the project area. No CNDDB occurrences within 5 miles of the site. |
| California tiger salamander | *Ambystoma californiense* | Threatened/None | California tiger salamander (CTS) may be found in riparian and wet meadow habitats, but is more common in grasslands. CTS spends most of its life cycle underground in adjacent valley oak woodland or grassland habitat, primarily in rodent burrows. Breeding takes place following the first heavy winter rains. Temporary or permanent freshwater pools or slowly flowing streams are required for egg-laying and larval development. They appear to be absent in waters containing predatory game fish. | **Not expected to occur.** Suitable breeding habitat for this species is not present within or adjacent to the project area. |

# ATTACHMENT 3

## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| giant gartersnake | *Thamnophis gigas* | Threatened/Threatened | Giant gartersnake is found in isolated populations restricted to the Central Valley of California. It is found in freshwater marsh and wetlands, irrigation ditches, low gradient streams and rice fields containing emergent vegetation. Adjacent upland habitat is necessary for cover and aestivation. | **Not expected to occur**. Suitable habitat for this species is not present within or adjacent to the project area. |
| western pond turtle | *Emys marmorata* | None/SSC | Western pond turtles use both aquatic and terrestrial habitats. They are found in rivers, lakes, streams, ponds, wetlands, vernal pools, ephemeral creeks, reservoirs, agricultural ditches, estuaries, and brackish waters. Western pond turtles prefer areas that provide cover from predators, such as vegetation and algae, as well as basking sites for thermoregulation. Adults tend to favor deeper, slow moving water, whereas hatchlings search for slow and shallow water that is slightly warmer. Terrestrial habitats are used for wintering and consist usually of burrows in leaves and soil. Western pond turtles also lay their eggs in terrestrial habitats. They are rarely found at altitudes above 1,500 meters. | **Low potential to occur**. Although suitable upland habitat occurs within the project area and suitable aquatic habitat is adjacent to the site, there are no known occurrences within 5 miles of the site. |
| western spadefoot | *Spea hammondii* | None/SSC | Western spadefoot inhabits areas with slightly moist, friable soils in mostly treeless habitats. Usually absent from narrow canyons and highly mesic habitats. Requires rain pools with little to no vegetation for spawning. | **Low potential to occur.** Nearest CNDDB occurrence is 0.75 miles north of the project area. Majority of the site is composed of the rubble land soil type unsuitable to western spadefoot. |

# ATTACHMENT 3

## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| | | | ***Birds*** | |
| bank swallow | *Riparia riparia* | None/Threatened | Restricted to riparian, lacustrine, and coastal areas with vertical banks, bluffs, and cliffs with fine-textured or sandy soils, into which it digs nesting holes. Feeds predominantly over open riparian areas, but also over brushland, grassland, wetlands, water, and cropland. | **Not expected to occur**. No suitable cliff habitat within or adjacent to the project area. |
| burrowing owl | *Athene cunicularia* | None/SSC | The burrowing owl utilizes abandoned ground squirrel burrows in open habitats and grasslands, also disturbed areas. Diet consists of insects, small mammals, reptiles and amphibians. Commonly uses burrows on levees or mounds where there are unobstructed views of possible predators such as raptors or foxes. | **Not expected to occur**. Suitable habitat for this species present on site is highly disturbed. No suitable burrows observed during December 2017 site visit. |
| California black rail | *Laterallus jamaicensis coturniculus* | None/Threatened, FP | California black rail occurs near freshwater marshes along the margins of ponds, lakes, and water impoundments; also herb dominated wetlands on sloped ground associated with springs, canal leaks, seepage from impoundments and agricultural irrigation. Needs water depths of about 1 inch that do not fluctuate during the year and dense vegetation for nesting habitat. | **No potential to occur.** Suitable habitat for this species is not present within or adjacent to the project area. |
| purple martin | *Progne subis (nesting)* | None/ SSC | Purple Martin nest and forage in woodland habitats including riparian, coniferous, and valley foothill and montane woodlands. Within in the Sacramento region they often nest in weep holes under elevated freeways | **Moderate potential to occur.** Suitable nesting and foraging habitat is present within the site for this species. Known occurrence record 0.75 miles to the north (CNDDB 2018). |

# ATTACHMENT 3
## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| tricolored blackbird | *Agelaius tricolor* | None/Candidate Endangered, SSC | Tricolored blackbird is a colonial species found almost exclusively in California. It utilizes wetlands, marshes and agricultural grain fields for foraging and nesting. The tricolored blackbird population has declined significantly in the past 6 years due to habitat loss and harvest of grain fields before young have fledged. | **Not expected to occur.** No suitable nesting and foraging habitat exists within the project area; furthermore, the disturbed nature of the project area likely precludes tricolored blackbird from occurring. |
| Swainson's hawk | *Buteo swainsoni* | None/Threatened | Swainson's hawk spends the breeding season in the Central Valley of California and is commonly found in agricultural areas or open grasslands containing solitary trees for nesting. Diet consists of insects, small mammals and reptiles. | **Low potential to occur.** Although potentially suitable nesting habitat is present within and adjacent to the site, no large raptor nests were noted within the project site during the December 2017 site visit. Additionally, the ruderal habitat does not provide suitable foraging habitat. The nearest documented occurrence of this species is located approximately 4.5 miles east of the project site (CDFW 2018). |
| western yellow-billed cuckoo | *Coccyzus americanus occidentalis* | Threatened/Endangered | Western yellow-billed cuckoo inhabits woodlands, thickets, orchards, streamside groves. Breeds mostly in dense deciduous stands, including forest edges, tall thickets, dense second growth, overgrown orchards, scrubby oak woods. Often in willow groves around marshes. In the west, mostly in streamside trees, including cottonwood-willow groves in arid country. Forages by scaling through shrubs and trees, gleaning insects from foliage and branches. | **Not expected to occur.** Suitable habitat within or adjacent to the project area low quality; and the nearest documented occurrence is over 10 miles away along the Sacramento River (CDFW 2018). |

# ATTACHMENT 3
## Special-Status Wildlife Species with Known or Potential Occurrence

| Common Name | Scientific Name | Federal/State Status | Habitat Associations | Potential to Occur in the Project Area |
|---|---|---|---|---|
| white-tailed kite | *Elanus leucurus* | None/Fully Protected | White-tailed kite nest in woodland, riparian, and individual trees near open lands; forages opportunistically in grassland, meadows, scrubs, agriculture, emergent wetland, savanna, and disturbed lands. | **Moderate potential to occur.** Suitable nesting and foraging habitat is present within and adjacent to the site for this species. Multiple CNDDB occurrences within 5 miles of the site (CDFW 2018). |
| ***Mammals*** | | | | |
| pallid bat | *Antrozous pallidus* | None/SSC | Pallid bat occupies a variety of habitats including grassland, shrubland, woodland and forests from sea level up through mixed conifer forest. Roosts in caves, mines, crevices and occasionally hollow trees or buildings. Prefers open habitats for foraging. | **Low potential to occur.** Suitable foraging habitat exists within the project area. Marginal roosting habitat present within or adjacent to site. Nearest CNDDB occurrence is 4.5 miles southeast near Orangevale Park (CNDDB 2018). |
| Townsend's big-eared bat | *Corynorhinus townsendii* | None/SSC | Townsend's big-eared bat is found throughout most of western North America. Hibernates and roosts in caves and mines near entrances, or cave like structures such as buildings or under decks. Forages in forested habitats, along open edges. | **Not expected to occur.** Suitable foraging habitat exists within the project area; however, there is no roosting habitat present within or adjacent to site. |
| American badger | *Taxidea taxus* | None/SSC | American badger is most abundant in drier open stages of most shrub, forest and herbaceous habitats with friable soils. Will dig burrows for cover. Will reuse burrows occasionally but also may dig new burrows each night in summer. Diet consists of rodents, small mammals, reptiles, insects, birds and carrion. | **Not expected to occur**. Suitable habitat present for this species is highly disturbed; no burrows of suitable size for this species were observed during December 2017 site visit. |