

APPENDIX D

BIOLOGICAL RESOURCES ASSESSMENT

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September 13, 2021

Adam Ross, Vice President
Ross and Sons
7828 South Maple Avenue
Fresno, California 93725

Subject: Biological Resources Assessment for the Proposed Pistachio Processing Facility
98-acres west of West Panoche Road, Fresno County, California

Dear Mr. Ross:

The purpose of this Biological Resources Technical Memorandum is to describe and document potential impacts to biological resources—including special-status species—associated with a proposed pistachio processing facility (proposed project) on approximately 98 acres of vacant land on an approximately 316-acre parcel in western Fresno County, California (Assessors Parcel [APN] Number 019-150-64S). This technical information is provided for project review under Fresno County, California Environmental Policy Act (CEQA), and other pertinent environmental regulations. This document provides a biological resources impact analysis that reflects the current environmental setting, project design, and regulatory context.

PROJECT DESCRIPTION

The proposed project includes construction of a pistachio processing facility that will be used by the owner to process pistachio harvest from approximately 7,500 acres of mature pistachio orchards. For the purposes of this assessment, the entire 98-acre “project site” would be disturbed/developed during proposed phased grading and construction activities. The majority of the approximately 316-acre parcel would not be modified. Phase 1 is proposed to begin construction in 2022, Phase 2 is proposed for construction between 2024 and 2027, Phase 3 is proposed for construction between 2026 and 2027, and Phase 4 is proposed for construction between 2028 and 2029. There are no project components proposed for construction outside of the project site.

PROJECT SETTING

The approximately 98-acre project site is located north of the Annedale Avenue alignment, west of West Panoche Road and South Newcome Avenue alignment approximately 8 miles southwest of Mendota, Fresno County, California. Elevations on the project site range from approximately 290 to 300 feet above mean sea level. Primary land uses in the project vicinity are predominantly agriculture. The project site is bounded by fallow agricultural field to the south, almond orchard to the southwest, fallow field and garlic field to the west, vineyard to the northwest, melons to the north, and pomegranate orchard to the east. The project site is relatively flat; all parts of the project site had been manipulated by humans. A few agricultural ditches occur on property boundaries; no natural drainage features or wetlands are located within the project site or in the immediate vicinity.

METHODS

Literature Review and Records Search

LSA Senior Biologist Wendy Fisher conducted a literature review and records search on July 24, 2021, to identify the existence and potential for occurrence of sensitive or special-status plant and animal species¹ in the project vicinity. Federal and State lists of sensitive species were also examined. Current electronic database records reviewed included the following:

- **California Natural Diversity Data Base information (CNDDDB – RareFind 5)**, which is administered by the California Department of Fish and Wildlife (CDFW), formerly known as the California Department of Fish and Game. This database covers sensitive plant and animal species, as well as sensitive natural communities that occur in California. Records from nine 7.5' U.S. Geological Society (USGS) quadrangles surrounding the project site (*Chaney Ranch, Broadview Farms, Firebaugh, Coit Ranch, Levis, Monocline Ridge, Turney Hills, Chounet Ranch, and Hammonds Ranch*), along with a query of records within a 5-mile radius of the project site, were obtained from this database to inform the field survey.
- **California Native Plant Society's (CNPS) Electronic Inventory of Rare and Endangered Vascular Plants**, which utilizes four specific categories or "lists" of sensitive plant species to assist with the conservation of rare or endangered botanical resources. All of the plants constituting California Rare Plant Ranks (CRPR) 1A, 1B, 2A, and 2B are intended to meet the status definitions of "threatened" or "endangered" in California Endangered Species Act and the California Department of Fish and Game (CDFG) Code and are considered by CNPS to be eligible for State listing. At the discretion of the CEQA Lead Agency, impacts to these species may be analyzed as such, pursuant to the CEQA Guidelines Sections 15125(c) and 15380. Plants in Rank 3 (limited information; review list), Rank 4 (limited distribution; watch list), or that are considered Locally Unusual and Significant may be analyzed under CEQA if there is sufficient information to assess potential significant impacts. Records from the nine USGS quadrangles surrounding the project site were obtained from this database to inform the field survey.
- **United States Fish and Wildlife Service's (USFWS) Information for Planning and Conservation (IPaC) Online System**, which lists all proposed, candidate, threatened, and endangered species managed by the Endangered Species Program of the USFWS that have the potential to occur on or near a particular site. This database also lists all designated critical habitats, national wildlife refuges, and migratory birds that could potentially be impacted by activities from a proposed project. An IPaC Trust Resource Report (USFWS 2021)² was generated for the project site.

¹ For the purposes of this report, the term "special-status species" refers to those species that are listed or proposed for listing under the CESA and/or FESA, California Fully Protected Species, plants with a CRPR of 1, 2, or 3, and California Species of Special Concern. It should be noted that "Species of Special Concern" is an administrative designation made by the CDFW and carries no formal legal protection status. However, Section 15380 of the CEQA Guidelines indicates that these species should be included in an analysis of project impacts if they can be shown to meet the criteria of sensitivity outlined therein.

² U.S. Fish and Wildlife Service. 2021. IPaC Resource List, Stamoules Site. www.ecos.fws.gov/ipac/

- **eBird:** eBird is a real-time, online checklist program launched in 2002 by the Cornell Lab of Ornithology and National Audubon Society. It provides rich data sources for basic information on bird abundance and distribution at a variety of spatial and temporal scales. eBird occurrence records for burrowing owl (*Athene cunicularia*) from a 5-mile radius around the project site were reviewed in July 2021 (eBird 2021).³

In addition to the databases listed above, historic and current aerial imagery along with previously prepared environmental reports and land use policies related to biological resources were reviewed.

Field Survey

LSA Senior Biologist Wendy Fisher conducted a general biological survey of the project site on July 26, 2021. The entirety of the project site was surveyed on foot or car, and all biological resources observed were noted. All plants observed during the field visit were noted, along with the habitats in which they were found. Binoculars were used to scan ruderal areas, agricultural fields, trees, and ditches, both on and adjacent to the project site in search of wildlife presence or use. Suitable habitat for any species of interest or concern was duly noted, and general site conditions were photographed (Attachment A).

RESULTS

Vegetation

The vast majority of the project site was being actively farmed in cantaloupe, and harvest was occurring the day of the field survey. A rectangular area encompassing a few acres located near the intersection of West Panoche Road and South Newcome Avenue along the western boundary of the project site, was ruderal (e.g., disturbed, mostly barren) and was fenced with chain link. This highly disturbed area was not apparent from review of Google Earth historic imagery. Ongoing soil disturbance (e.g., vegetation control, agricultural activities) and the resulting competitive exclusion by invasive nonnative plants limits the potential for native flora to occur within the project site.

A total of 16 vascular plant species were identified within the project site during the July 2021 field survey (Attachment B). About a dozen Mexican fan palms (*Washingtonia filifera*) were clustered on or immediately adjacent to the project site, and two solo mulberry trees line the southern boundary. The following describes the vegetation and land cover types occurring within the project site:

Ruderal: Areas classified as ruderal consisted mostly of barren to sparsely vegetated early successional nonnative forbs. Some of the weedy or pioneering species observed in ruderal areas of the project site included: horseweed (*Erigeron bonariensis*), five-hook bassia (*Bassia hyssopifolia*), prickly lettuce (*Lactuca serriola*), and common morning glory (*Convolvulus arvensis*). Ruderal areas of the project site were bounded by a temporary chain link fence. Included within the fence was a greenhouse and a borrow pit.

³ Ebird. 2021. www.ebird.org/home

Cantaloupe Field: More than $\frac{3}{4}$ of the project site was being cultivated with cantaloupe at the time of the field survey. A few non-native annuals bordered the fields, and included prostrate amaranth (*Amaranthus blitoides*), and common purslane (*Portulaca oleracea*).

Wildlife

The ruderal and agricultural vegetation occurring on the project site is considered low quality habitat for most native wildlife species. A total of three wildlife species were observed on or near the project site during the July 2021 field survey: house finch (*Haemorhous mexicanus*), mourning dove (*Zenaida macroura*), and western kingbird (*Tyrannus verticalis*). Each of these species commonly occur in and around developed areas throughout California. No small mammal burrows were observed within ruderal areas, the agricultural fields, or immediately adjacent to the project site.

Based on field observations and the location of the project site, which is surrounded by agricultural uses and roads, there are no indications that the project site functions as a wildlife movement corridor or an important stopover point for migratory species.

Special-Status Species

Attachment C contains tables that identify special-status species known to occur, or that potentially occur in the vicinity of the project site and includes detailed information about each species' habitat and distribution, activity period, listing/status designations, and probability of occurrence within the project site boundaries. These species were compiled from the CNPS, CNDDDB, and IPaC records search from a 5-mile radius around the project site and from LSA's extensive knowledge and experience in the region.

Historic anthropogenic disturbances have greatly altered the natural hydrologic regimes and have either eliminated or greatly impacted the pre-settlement habitats needed to support the special-status plant species identified in the CNDDDB and CNPS queries. As such, the specific habitats, soil substrates or "micro-climates" necessary for special-status plant species to occur are absent within the boundaries of the project site. Based on site observations coupled with the habitat suitability analysis, no special-status plant species are expected to occur within the project site.

There are no known occurrences of any special-status animal species in the project site, and none were observed during the July 2021 field survey. Nonetheless, trees on or adjacent to the project site provide marginally suitable habitat for various tree nesting birds and bats. Foraging habitat is extremely limited since small mammals are virtually absent. Birds and raptors are protected while nesting under the CDFG Code and the federal Migratory Bird Treaty Act.

The evaluation of special-status species occurrence within the project site was based on a habitat suitability analysis. It did not include exhaustive surveys to determine their presence or absence but did include direct observation of on-site and off-site conditions and a review of the available recorded occurrence data from the area to conclude whether or not a particular species could be expected to occur. Based on this analysis, it is unlikely that any of the special-status plant or wildlife species listed in Attachment C occur within the project site. Significant adverse impacts to special-

status wildlife species are not anticipated with the implementation of the recommended impact avoidance measures described in further detail below.

Wetlands and Potential Jurisdictional Drainages

There are no records of wetlands or natural drainage features within the project site. Man-made agricultural ditches on the boundaries of the project site would not be considered jurisdictional. No potentially jurisdictional drainage features, wetlands, or riparian areas were observed on the project site.

Regional Habitat Conservation Plans and Local Policies

The PG&E San Joaquin Valley Operation and Maintenance (O&M) Habitat Conservation Plan (HCP) was approved in 2007 and covers portions of nine counties, including Fresno County and the City of Fresno. This HCP covers PG&E activities which occur as a result of ongoing O&M that would have an adverse impact on any of the 65 covered species and provides incidental take coverage from the USFWS and CDFW. The project site is not located within the covered area of any other HCP, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Therefore, the project would not conflict with the provisions of the PG&E HCP and the proposed project and would have no impact.

IMPACT FINDINGS

Sensitive Vegetation Communities and Critical Habitat

There is no designated or proposed critical habitat for any federally listed species within the project site. The proposed project would not result in any adverse impacts to critical habitats or sensitive natural communities. No mitigation is required.

Wetlands and Jurisdictional Aquatic Resources

The proposed project would not impact any jurisdictional wetlands, riparian areas, or drainage features. No mitigation is required.

Special-Status Species

No special-status plant species are expected to occur within the project site or to be adversely affected by the proposed project.

While no special-status animal species (or signs of such species) were observed on-site during the July 2021 survey, over a dozen mature palm and mulberry trees occur on or immediately adjacent to the project site. These trees provide suitable nesting habitat for a variety of birds, including Loggerhead shrike (*Lanius ludovicianus*). Potentially significant direct and indirect impacts, including mortality, harassment, or other forms of incidental take, could occur if construction-related damage or removal of these trees occurs during phased construction disturbance results. Implementation of Mitigation Measure BIO-1 (see below) is recommended to address potential impacts on tree nesting birds.

No other special-status species were determined to have a moderate or high probability of occurrence on the project site (refer to Attachment C). The removal of the ruderal habitat documented on the project site is not anticipated to substantially impact the population sizes of any special-status animal species given the context and setting of the project site and additional habitats for such species in the project vicinity.

Nesting Birds

The project site and immediate vicinity contain trees that provide suitable nesting habitat for a variety of native and migratory bird species, potentially including red-shouldered hawk (*Buteo lineatus*), red-tailed hawk (*Buteo jamaicensis*), or great horned owl (*Bubo virginianus*). Ground-nesting birds such as the killdeer (*Charadrius vociferus*) and western meadowlark (*Sturnella neglecta*) could possibly use the barren ruderal areas or agricultural road shoulders for nesting. Breeding-season disturbance that causes nest abandonment and/or loss of reproductive effort is considered a form of “take” by CDFW. To ensure compliance with the Federal Migratory Bird Treaty Act and CDFG Code Sections 3500–3516, pre-construction nesting bird surveys are recommended to occur prior to any ground disturbance or construction activities planned to occur during the nesting bird season (February 1 through September 30).

If unmitigated or not avoided, these potential direct and indirect impacts to nesting birds could be considered potentially significant. However, implementation of Mitigation Measure BIO-2, included below, would avoid, minimize, or mitigate any potential impacts to nesting birds to less-than-significant levels.

Roosting Bats

Section 2000 and 4150 of the CDFG Code states that it is unlawful to take or possess a number of species, including bats, without a license or permit as required by Section 3007. Additionally, Title 14 of the California Code of Regulations states it is unlawful to harass, herd, or drive a number of species, including bats. To harass is defined as “an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering”.

Should removal of mature trees be required, the proposed project could result in mortality of native bats that may be roosting within, possibly including the special-status pallid bat (*Antrozous pallidus*) and Townsend's big-eared bat (*Corynorhinum townsendii*). If unmitigated or not avoided, these potential direct and indirect impacts to roosting bats could be considered potentially significant. However, implementation of Mitigation Measure BIO-2, included below, would avoid, minimize, or mitigate any potential impacts to bat species to less-than-significant levels.

Wildlife Movement

The project is surrounded by agriculture, existing residential developments, roads, and other anthropogenic land uses. The wildlife species that occur in the project vicinity are adapted to the urban-wildland interface. The noise, vibration, light, dust, or human disturbance within construction areas would only temporarily deter wildlife from using areas in the immediate vicinity of construction activities. These indirect effects could temporarily alter migration behaviors, territories, or foraging habitats in select areas. However, because these are temporary effects, it is likely that

wildlife already living and moving in close proximity to urban development would alter their normal functions for the duration of the project construction and then re-establish these functions once all temporary construction effects have been removed. The proposed project would not place any permanent barriers within any known wildlife movement corridors or interfere with habitat connectivity. No adverse effects on wildlife movement are anticipated, and no mitigation is required.

RECOMMENDED AVOIDANCE, MINIMIZATION, AND MITIGATION MEASURES

The following measures are recommended to be implemented to avoid or minimize impacts to nesting birds.

Mitigation Measure BIO-1 **Nesting Bird Surveys and Active Nest Avoidance.** Any initial ground disturbance or tree pruning or removal should take place outside of the active nesting bird season (i.e., February 1–September 30), when feasible, to avoid impacts to nesting birds protected under the California Fish and Game Code and Migratory Bird Treaty Act. Should phased construction require tree removal or initial ground disturbance to ruderal areas, a qualified biologist shall conduct a nesting bird survey no more than 15 days prior to each phase of clearing activities. If nesting birds are discovered during preconstruction surveys, the biologist shall identify an appropriate buffer where no clearing, grading, or construction activities with potential to have direct or indirect impacts on the nesting bird(s) are allowed to take place until after the nest is no longer active (e.g., the young birds have fledged), or as otherwise determined by the qualified biologist.

Mitigation Measure BIO-2 **Surveys for Roosting Bats and Avoidance of Bat Roosts.** Any tree pruning or removal could disturb roosting bats, should they be present in any of the trees located within or immediately adjacent to the project site. To avoid potential impact to maternity bat roosts, pruning or removal of mature trees should occur outside of the period between April 1 and September 30, if feasible. If pruning or removal of mature trees is to occur between April 1 and September 30, a preconstruction survey within 30 days of construction should be completed in search of day-roosting bats, dead carcasses, fecal matter, staining of guano. If no evidence is found, tree pruning or removal can commence without harm to bats. Should the preconstruction survey show evidence of non-breeding day-roosts for bats, the bats can be humanely evicted via two-stage removal of trees, under the direction of a qualified biologist to ensure that no harm or “take” of any bats occurs. If a maternity colony is detected, the biologist shall identify an appropriate buffer (50-100 feet) where no clearing, grading, or construction activities with potential to have direct or indirect

impacts on the roosting bat(s) are allowed to take place. Construction activities, including tree pruning or removal, can commence once the roost is deemed no longer active by the qualified biologist

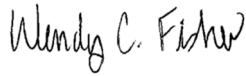
CONCLUSION

The project site is strictly upland in nature with highly manipulated agricultural fields or disturbed bare ground with minimal ruderal weedy vegetation. Based on field observations coupled with the habitat suitability analysis conducted for this assessment, the proposed project has low to moderate potential to impact one regionally occurring special-status wildlife species. The proposed project is not anticipated to impact any special-status plant species, natural communities, or other habitats of concern. With implementation of the recommended avoidance, minimization, and mitigation measures, no significant impacts on biological resources are anticipated.

If you have any questions regarding this letter report, please contact me at (559)490-1221.

Sincerely,

LSA Associates, Inc.



Wendy C. Fisher
Senior Biologist

Attachment: Attachment A: Representative Site Photographs
Attachment B: Vascular Plant Species Observed
Attachment C: Summary of Special-Status Species

ATTACHMENT A

REPRESENTATIVE SITE PHOTOGRAPHS



Photograph #1 (above). Cantoupes were actively being harvested on the western three quarters of the site during the July 2021 field visit. Photograph #2 (below). The eastern third of the site was mostly barren with a single borrow pit located in the center of the ruderal area.





Photograph #3 (above). Irrigation ditches line the agricultural field and ruderal areas of the project site. Photograph #4 (below). Two solitary mulberry trees were identified along the sites southern boundary.





Photographs #5 (above) and #6 (below). Within agriculture and ruderal land uses, ag equipment storage and beekeeping were evident within the project site.



ATTACHMENT B

VASCULAR PLANT SPECIES OBSERVED

Plant Species Observed at the Stamoules Pistachio Site, July 26, 2021*

Family	Species Name	Common Name
DICOTS		
Amaranthaceae	<i>Amaranthus blitoides</i>	prostrate amaranth
Asteraceae	<i>Erigeron bonariensis</i>	hairy fleabane
	<i>Lactuca serriola</i>	prickly lettuce
	<i>Sonchus asper</i> ssp. <i>asper</i>	prickly sow thistle
Chenopodiaceae	<i>Bassia hyssopifolia</i>	five hook Bassia
	<i>Chenopodium album</i>	white goosefoot
	<i>Salsola tragus</i>	Russian thistle
Convolvulaceae	<i>Convolvulus arvensis</i>	common morning-glory
Cucurbitaceae	<i>Cucumis melo</i>	Cultivated cantaloupe
Moraceae	<i>Morus alba</i>	white mulberry
Portulacaceae	<i>Portulaca oleracea</i>	common purslane
Solanaceae	<i>Solanum</i> sp.	nightshade
Tribulaceae	<i>Tribulus terrestris</i>	puncture vine
MONOCOTS		
Palmae	<i>Washingtonia filifera</i>	Mexican fan palm
Poaceae	<i>Echinochloa crus-galli</i>	barnyard grass
	<i>Leptochloa fascicularis</i>	wild oats

ATTACHMENT C

SUMMARY OF SPECIAL-STATUS SPECIES

Table C-1: Special-Status Plant Species Potentially Occurring in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
San Benito Onion	<i>Allium howellii</i> var. <i>sanbenitense</i>	US: – CA: – CNPS 1B.3	Occurs in openings in often on steep slopes of clay soils in chaparral, valley and foothill grassland between 1,280 -4,170 ft in elevation.	March - June	Not expected. Although clay soils are present, the highly disturbed site does not support suitable habitat for this species.
Heartscale	<i>Atriplex cordulata</i> var. <i>cordulata</i>	US: – CA: – CNPS: 1B.2	Annual herb occurring in chenopod scrub, meadows, seeps and valley/foothill grasslands (sandy) in saline or alkaline soil between 0 and 1,837 ft in elevation. Found in the Central Valley counties.	April- October	Not expected. Saline-alkaline soils are absent. The highly disturbed site does not support suitable habitat for this species.
Lost Hills crownscale	<i>Atriplex coronata</i> var. <i>vallicola</i>	US: – CA: –	Occurs in powdery, alkaline soils that are vernal moist in chenopod scrub, valley and foothill grassland, and vernal pools. Associated species are <i>Frankenia</i> , <i>Atriplex</i> ss; and <i>Distichlis</i> between 150 – 2,900 ft. in elevation.	April - August	Not expected. Suitable habitat is absent from the project site for this species. None of the associated species are present.
Lesser Saltscale	<i>Atriplex minuscula</i>	US: – CA: – CNPS 1B.1	Occurs in upland playas of shadscale scrub, alkali sink and valley grasslands in California’s Central valley between Kern County and Contra Costa County at less than 328 ft. in elevation.	April - October	Not expected. The highly disturbed site does not support suitable habitat for this species.
Subtle Orache	<i>Atriplex subtilis</i>	US: – CA: – CNPS 1B.2	Occurs in saline depressions between Kern County and Stanislaus Counties in California’s central valley less than 230 ft. in elevation.	June - October	Not expected. The highly disturbed site does not support suitable habitat for this species.
Hall’s Tarplant	<i>Deinandra halliana</i>	US: – CA: – CNPS: 1B.2	Occurs in open slopes and sink edges of shadscale scrub, foothill woodland, and valley grassland on the far west side of the Central Valley and in the inner coast range of San Luis Obispo Counties though Monterey Counties between 984 – 3280 ft. in elevation.	April - May	Not expected. The highly disturbed site does not support suitable habitat for this species.
Recurved Larkspur	<i>Delphinium recurvatum</i>	US: – CA: – CNPS: 1B.2	Occurs in shadscale scrub, foothill woodland, and valley grassland with wide range of elevations between Los Angeles to Butte Counties.	March – June	Not expected. The highly disturbed site does not support suitable habitat for this species.

Table C-1: Special-Status Plant Species Potentially Occurring in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
Spiny-sealed button-celery	<i>Eryngium spinosepalum</i>	US: – CA: – CNPS: 1B.2	Annual/perennial herb occurring in valley/foothill grasslands and vernal pools between 262 and 3,198 ft in elevation. Found in Central Coast and Central Valley counties.	April- June	Not expected. The highly disturbed site does not support suitable habitat for this species
Alkali-sink goldfields	<i>Lasthenia chrysantha</i>	US: – CA: – CNPS: 1B.1	Annual herb occurring in alkaline vernal pools between 0 and 656 ft in elevation. Found in Central Valley counties.	February- June	Not expected. The highly disturbed site does not support suitable habitat for this species.
Pale-yellow Layia	<i>Layia heterotricha</i>	US: – CA: – CNPS: 1B.1	Annual herb occurring in wetland-riparian, shadscale scrub and valley grassland between Ventura and Fresno Counties at elevation.	March - June	Not expected. The highly disturbed site does not support suitable habitat for this species
Munz’s Tidy-Tips	<i>Layia munzii</i>	US: – CA: – CNPS: 1B.2	Annual occurring in alkaline clay soils of the southern San Joaquin Valley between 540-2,625 ft. in elevation.	March - April	Not expected. The highly disturbed site does not support suitable habitat for this species.
Panoche Peppergrass	<i>Lepidium jaredii ssp. album</i>	US: – CA: – CNPS: 1B.2	Annual occurring in alkali bottoms, slopes, washes, dry hillsides, vertic clay, acidic and/or gypsoferous soils in the southwestern San Joaquin Valley and southeastern inner coast range between 1,640 – 2,300 ft. in elevation.	March - April	Not expected. The highly disturbed site does not support suitable habitat for this species.
Showy Golden Madia	<i>Madia radiata</i>	US: – CA: – CNPS: 1B.1	Annual occurring in grassy or open slopes of vertic clay and rarely serpentinite soils between 65 -3,900 ft. in elevation.	March - May	Not expected. The highly disturbed site does not support suitable habitat for this species
San Joaquin Woolly Threads	<i>Monolopia congdonii</i>	US: –E CA: – CNPS: 1B.2	Annual occurring in grassland and sandy soils in the southern San Joaquin Valley between 295-2,3000 ft. in elevation.	February - May	Not expected. The highly disturbed site does not support suitable habitat for this species. There are no known historical records of occurrence in the project vicinity and suitable habitat is absent within the project site.
Panoche navarretia	<i>Navarretia panochensis</i>	US: CA: – CNPS: 1B.3	Annual herb newly rediscovered from eastern Fresno and western San Benito Counties.	April - June	Not expected. The highly disturbed site does not support suitable habitat for this species.
Sanford's arrowhead	<i>Sagittaria sanfordii</i>	US: – CA: – CNPS: 1B.2	Perennial rhizomatous herb (emergent) occurring in marshes and swamps between 0 and 2,132 ft in elevation. Found throughout California counties.	May- October	Not expected. The highly disturbed site does not support suitable habitat for this species. The highly maintained onsite ditches were mostly barren of vegetation.

Table C-1: Special-Status Plant Species Potentially Occurring in the Project Vicinity

Common Name	Scientific Name	Status	General Habitat Description	Flowering Period	Likelihood of Occurrence and Rationale
Chaparral Ragwort	<i>Senecio aphanactis</i>	US: – CA: – CNPS: 2B.2	Annual occurring in alkaline flats and dry open rocky areas in central and southern California coast ranges to Baja California, at elevations between 32 -1,800 ft. in elevation.	January - April	Not expected. The highly disturbed site does not support suitable habitat for this species.

¹Project vicinity = Project site plus a 5-mile buffer

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Plant (CSP), California Special Animal (CSA)

California Native Plant Society Designations:

1B = Rare, threatened, or endangered in California and elsewhere
 2B = Rare, threatened, or endangered in California, but not elsewhere
 0.1 = seriously endangered
 0.2 = fairly endangered

CA = California
 CNPS = California Native Plant Society
 ft = foot/feet
 m = meter/meters
 mi = mile/miles
 US = United States

Table C-2: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence and Rationale
INVERTEBRATES				
Crotch bumble bee	<i>Bombus crotchii</i>	US: -- CA: CE	Occurs primarily in California through most of southwestern California and uncommonly in Baja California and southwest Nevada. Inhabits open grassland and scrub habitat, nests underground.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species.
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	US: FT CA: –	Endemic to the grasslands of the Central Valley, Central Coast mountains, and South Coast mountains, in astatic rain-filled pools. Inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump, or basalt-flow depression pools.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species.
AMPHIBIANS				
Northern California legless lizard	<i>Anniella pulchra</i>	US: -- CA: SSC	Endemic from the west central California including parts of the central valley and coast range from sea level to around 5,900 ft. in elevation. Occurs in moist warm loose soil with vegetative cover and moisture.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species
Foothill yellow-legged frog	<i>Rana boylei</i>	US: – CA: CE	Partly-shaded, shallow streams and riffles with a rocky substrate in a variety of habitats. Needs at least some cobble-sized substrate for egg-laying. Needs at least 15 weeks to attain metamorphosis.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species
California red-legged frog	<i>Rana draytonii</i>	US: FT CA: SSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11-20 weeks of permanent water for larval development. Must have access to estivation habitat.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species
Western spadefoot	<i>Spea hammondi</i>	US: – CA: SSC	Occurs primarily in grassland and other relatively open habitats. Found in elevations ranging from sea level to 4,500 ft. Requires temporary pools for breeding.	Not expected. Suitable scrub habitats are absent from the project and vicinity.
REPTILES				
California glossy snake	<i>Arizona elegans occidentalis</i>	US: – CA: SSC	This nocturnal snake in habits arid scrub, rocky washes, grasslands and chaparral from the eastern part of the San Francisco Bay area south to the northwestern Baja California; absent along the central coast.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species.
Western pond turtle	<i>Emys marmorata</i>	US: – CA: SSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams and irrigation ditches, usually with aquatic vegetation, below 6000 ft elevation. Needs basking sites and suitable (sandy banks or grassy open fields) upland habitat up to 0.5 km from water for egg-laying.	Not expected. There is one known record of occurrence in the project vicinity (CNDDDB 2001) and suitable habitat is absent from the project site.

Table C-2: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence and Rationale
Blunt-nosed leopard lizard	<i>Gambelia sila</i>	US: FE CA: CE	Occurs in open sparsely vegetated areas along sandy washes in the San Joaquin Valley and adjacent foothills, as well as Carrizo Plain and Cuyama Valley. Use small rodent burrows for cover and breeding.	Not expected. There are no known historical records of occurrence in the project vicinity ¹ . The disturbed land uses on the project site offer no suitable habitat for this species.
San Joaquin coachwhip	<i>Masticophis flagellum ruddocki</i>	US: – CA: SSC	Occurs in open, dry, treeless areas with little or no cover, including valley grassland and saltbush scrub habitat. Takes refuge in rodent burrows, shaded vegetation and surface objects. Endemic to California, ranges from the Sacramento Valley south to the grapevine in Kern County into the inner south coast ranges.	Not expected. There is one known record of occurrence in the project vicinity (CNDDDB 2001) and suitable habitat is absent from the project site.
Coast horned lizard	<i>Phrynosoma blainvillii</i>	US: – CA: SSC	Inhabits open areas of sandy soil and low vegetation in valleys, foothills and semiarid mountains. Fragmented distribution from Baja California west to the deserts and the Sierra Nevada, north to the Bay Area, and inland as far north as Shasta Reservoir.	Not expected. There are no known historical records of occurrence in the project vicinity ¹ . The disturbed land uses on the project site offer no suitable habitat for this species.
Giant Garter Snake	<i>Thamnophis gigas</i>	US: FT CA: CT	Aquatic snake found in marshes, shoughs, drainage canals, and irrigation ditches from Glenn County to the southern edge of the San Francisco Bay Delta, and from Merced County to northern Fresno County. Absent from 98% of its former range in San Joaquin Valley.	Not expected. There are no known historical records of occurrence in the project vicinity ¹ . The disturbed land uses on the project site offer no suitable habitat for this species
BIRDS				
Tricolored blackbird	<i>Agelalus tricolor</i>	US: – CA: CT	Occurs in open country or marshes in large colonies mainly in CA Central Valley. Breeds in freshwater marshes with tall emergent vegetation, feeds on insects.	Not expected. Suitable colonial nesting habitat and foraging habitat are absent from the project site.
Short-eared owl	<i>Asio flammeus</i>	US: – CA: SSC	Occurs in large open areas with low vegetation, and nest in dry areas on the ground surface amid grasses and low plants. The site is in the southern portion of its breeding range. The range, extends across North America.	Not expected. Suitable nesting habitat is extremely marginal on the project site. Foraging habitat is absent since no small mammal burrows were found.
Burrowing owl	<i>Athene cunicularia</i>	US: – CA: SSC	Burrows in open, dry, annual or perennial grasslands, deserts, and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably the California ground squirrel.	Not expected. Suitable nesting habitat is absent since no small mammal burrows were found on or immediately adjacent to the site.
Golden eagle	<i>Aquila chrysaetos</i>	US: – CA: FP	Rolling foothills, mountain areas, sage-juniper flats, and desert. Cliff-walled canyons provide nesting habitat in most parts of range; also, large trees in open areas.	Not expected. Suitable nesting habitat is extremely marginal on the project site. Foraging habitat is absent since no small mammal burrows were found.

Table C-2: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence and Rationale
Swainson’s hawk	<i>Buteo swainsoni</i>	US: – CA: CT	Breeds in grasslands with scattered trees, juniper-sage flats, riparian areas, savannas, and agricultural/ranch lands. Requires adjacent suitable foraging areas such as grasslands, alfalfa, or grain fields supporting rodent populations.	Not expected. Suitable nesting and foraging habitat is absent from the project site. Foraging habitat is limited to absent; Small mammal burrows were absent.
California condor	<i>Gymnogyps californianus</i>	US: FE CA: --	Nest in caves on cliff faces in mountains up to 6,000 feet in elevation in Central California, northern Baja, and great basin area.	Not expected. Suitable nesting and foraging habitat is absent from the project site. Foraging habitat is limited to absent. Small mammal burrows were absent.
MAMMALS				
Nelson’s antelope squirrel	<i>Amмосpermophilus nelsoni</i>	US:-- CA: CT	This ground-dwelling squirrel occurs on the floor of the San Joaquin Valley to around 3,600 feet in elevation of the Temblor Mountains, centered around Lokern and Elk Hills in western Kern County and in the Carrizo and Elkhorn Plains in eastern San Luis Obispo County.	Not expected. Suitable breeding and foraging habitat are absent from the project site and adjacent lands. An historical occurrence from 1920 was from 4 miles north to northwest of the project site. .
Pallid bat	<i>Antrozous pallidus</i>	US: – CA: SSC	Found in arid and semi-arid regions across much of the American west, the pallid bat can be found in rocky outcroppings to open sparsely vegetated grassland and roost in small colonies in buildings, caves and cracks in rocks.	Not expected. Suitable colonial roosting habitat and foraging habitat are absent from the project site.
Fresno kangaroo rat	<i>Dipodomys nitratoides exilis</i>	US: –FE CA: --SE	Adapted to survival in an arid environment, Fresno kangaroo rats breed in relatively light sandy soils of in alkali sink communities. Currently there are no known populations within its historical range in Merced, Madera, and Fresno Counties. Critical habitat for this species occurs approximately 14 miles west of the site.	Not expected. Suitable breeding and foraging habitat are absent from the project site and adjacent lands.
Giant Kangaroo rat	<i>Dipodomys ingens</i>	US: –FE CA: SE	Inhabits most arid, southeastern edge of central California San Joaquin Valley and adjacent valley and plateaus of the Inner Coast Range at elevations ranging between 90-885 meters.	Not expected. There are no known historical records of occurrence in the project vicinity ¹ . The disturbed land uses on the project site offer no suitable habitat for this species.
Western Mastiff bat	<i>Eumops perotic californicus</i>	US: – CA: SSC	This large free-tailed cliff-dwelling bat occur most frequently in broad open areas in a variety of habitats, from dry desert washes, flood plains, chaparral, oak woodland, forest, grassland meadows and agricultural areas.	Not expected. Suitable roosting habitat is absent. Foraging habitat is extremely limited due to the disturbed nature of the site.
Western red bat	<i>Lasiurus blossevillii</i>	US: – CA: SSC	Roosts in riparian trees below 6,500 ft. in elevation throughout much of western north American and South America.	Moderate probability of occurrence. Onsite trees would be marginally suitable for western red bat. Foraging habitat is extremely limited due to the highly disturbed nature of the project site.

Table C-2: Special-Status Animal Species Potentially Occurring or Known to Occur in the Project Vicinity

Common Name	Scientific Name	Status Listing	Habitat and Comments	Likelihood of Occurrence and Rationale
Hoary bat	<i>Lasiurus cinereus</i>	US: – CA: CSA	Lives in forests of the eastern U.S. and in arid deserts of the southwest, but is most abundant in forests and croplands of the Plains states and the forests of the Pacific Northwest. Hoary bats thrive in diverse forest habitat with a mixture of forest and small open areas provide edges.	Not expected. Suitable roosting habitat is absent. Foraging habitat is extremely limited due to the disturbed nature of the site. A historical occurrence from 1946 is from a 1.5 mile east of the site.
San Joaquin pocket mouse	<i>Perognathus inornatus</i>	US: – CA: CSA	Grassland, oak savanna and arid scrubland in the southern Sacramento Valley, Salinas Valley, San Joaquin Valley and adjacent foothills, south to the Mojave Desert. Associated with fine-textured, sandy, friable soils.	Not expected. There are no known historical records of occurrence in the project vicinity. ¹ The disturbed land uses on the project site offer no suitable habitat for this species
American badger	<i>Taxidea taxus</i>	US: – CA: SSC	Most abundant in drier open stages of most shrub, forest, and herbaceous habitats, with friable soils. Needs sufficient food, friable soils and open, uncultivated ground. Preys on burrowing rodents. Digs burrows.	Not expected. Suitable breeding and foraging habitats are absent from the project and adjacent lands. Small mammal burrows are absent from the project site.
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	US: FE CA: CT	Prefers open, level areas with loose-textured soils supporting scattered, shrubby vegetation with little human disturbance. Some agricultural areas may support these foxes.	Not expected. Suitable breeding and foraging habitats are absent from the project and adjacent lands. Small mammal burrows are absent from the project site.

¹Project vicinity = Project area plus a 5-mile buffer

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Candidate (FC), Federal Proposed (FP, FPE, FPT), Federal Delisted (FD), California Endangered (CE), California Threatened (CT), California Species of Special Concern (SSC), California Fully Protected Species (CFP), California Special Animal (CSA)

CA = California

ft = foot/feet

m = meter/meters

mi = mile/miles

US = United States

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