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**Biological Assessment
Trio Petroleum LLC
Hames Valley Project
Monterey County, California**

Prepared for:

**Trio Petroleum LLC
5401 Business Park South, Suite 115
Bakersfield, California 93309
Contact: Mr. Steven A. Rowlee
(661) 324-3911**

Prepared by:

**Ed Mercurio, Biological Consultant
647 Wilson Street
Salinas, California 93901
Contact: Mr. Ed Mercurio
(831) 206-0737**

Assisted by:

**Robert A. Booher Consulting
Environmental Planning and Management
3287 Congressional Court
Fairfield, California 94534
Contact: Bob Booher, R.E.A.
(707) 399-7835**

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INTRODUCTION

Trio Petroleum LLC (Trio) proposes to construct four (4) well sites and conventionally drill and production test one (1) exploratory oil and gas well (Hames Valley #1, #2, #3 and #4) from each proposed well site within an unincorporated area in southern Monterey County. The proposed well pads would be constructed within plowed fields and existing agricultural areas used for cattle grazing. Total surface disturbance for the proposed Hames Valley #1 project site is 1.03 acres. In order to access the proposed Hames Valley #2 well site, Trio would construct an access road approximately 1,154 feet in length by 20 feet in width (0.53 acres) from an existing farm access road near Nacimiento Lake Drive to the proposed well site. No other new access roads would be required. Total surface disturbance for the proposed Hames Valley #2 project site including the proposed access road is 1.66 acres. Total surface disturbance for the proposed Hames Valley #3 project site is 1.13 acres. Total surface disturbance for the proposed Hames Valley #4 project site is 1.5 acres.

Ed Mercurio, an independent biological consultant assisted by Robert A. Booher Consulting (RAB Consulting) conducted a biological survey and assessment of the proposed project sites and areas immediately adjacent to the proposed project sites. The biological survey and assessment was performed to identify special-status plant and wildlife species and habitats that could potentially be impacted during implementation of the proposed project.

Mr. Mercurio assisted by Mr. Cord Hute, a wildlife biologist with RAB Consulting, conducted biological surveys of the proposed well sites, the proposed access road to the Hames Valley #2 well site, existing access roads, and a 500-foot buffer area around these areas for sensitive wildlife, special-status plant species, and their habitats on May 2 and June 3, 2016. This report presents the results of our biological surveys and includes recommendations for avoidance and minimization measures to be implemented as operational procedures during the proposed project to avoid or minimize potential impacts to sensitive wildlife and plant species.

PROJECT LOCATION AND ENVIRONMENTAL SETTING

The proposed project sites are located just south of the southern terminus of the Salinas Valley near the boundary of Monterey and San Luis Obispo Counties within Hames Valley. The proposed Hames Valley #1 project site is located in the southeast quarter of Section 14 (Township 24 South, Range 10 East MDBM). The proposed Hames Valley #2 project site is located in the southeast quarter of Section 13 (Township 24 South, Range 10 East MDBM). The proposed Hames Valley #3 project site is located in the southwest quarter of Section 19 (Township 24 South, Range 11 East MDBM). The proposed Hames Valley #4 project site is located in the southeast quarter of Section 11 (Township 24 South, Range 10 East MDBM).

The general area surrounding the proposed project sites consist of privately owned grazing and agricultural lands. The community of Bradley is located approximately 2.8 miles northeast of the proposed project sites. San Antonio Reservoir County Recreation Area is located approximately 3.7 miles southwest of the proposed project sites. The San Antonio River lies 0.3 miles south of the proposed project sites. Figures 1 and 2 depict the location of the proposed project sites.

The term “well site” is used throughout this document to describe the specific area where a well is proposed. The term “project site” is used to further define the project footprint (i.e. proposed well pad, existing and proposed access routes, etc.). The term “buffer area” describes a 500-foot area surrounding each proposed well site that was included in the biological survey area. Representative photographs of the proposed project sites and buffer areas are presented in Appendix A.

Habitat Conservation and Natural Community Conservation Plans – There are no adopted Habitat Conservation Plans, Natural Community Conservation Plans or other approved local, regional, or State habitat conservation plans covering the proposed project sites.

SURVEY METHODOLOGIES

A literature review was completed and field surveys were conducted to identify special-status plant and wildlife species, as well as sensitive habitats that could be potentially present within each of the proposed project sites and buffer areas. The following sections describe the survey methods that were used and the literature and databases that were reviewed prior to conducting biological surveys.

Literature Review: Prior to conducting biological surveys within each of the proposed project sites and buffer areas and during the preparation of this biological assessment, we reviewed RAB Consulting data files and records from the following sources:

- United States Fish and Wildlife Service (USFWS) Sacramento Office online electronic database of threatened and endangered species (USFWS 2016a);
- United States Fish and Wildlife Service (USFWS) Environmental Conservation Online System (ECOS) Critical Habitat Portal (USFWS 2016b);
- California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) RareFind 5 and Biological Information and Observation System (BIOS) (CDFW 2016);
- Sighting records from eBird, the online database of bird sightings that is maintained by National Audubon Society and the Cornell University Lab of Ornithology (eBird 2016); and
- California Native Plant Society’s (CNPS) online *Inventory of Rare and Endangered Vascular Plants of California, 8th Edition* (CNPS 2016).

From each review, a list of special-status species was generated for species that occur in or may be affected by projects in the Bradley, Wunpost, Hames Valley, and Tierra Redonda Mountain USGS 7.5-minute quadrangles. Special-status species that potentially occur in these quadrangles (an area measuring approximately 280 square miles) are identified in Table 1. Each of the species identified in the database queries was evaluated in terms of its likelihood to occur within the proposed project sites and buffer areas (see Table 1). This evaluation considered the known distribution and habitat requirements of the species and the following findings were prepared:

- Known to Occur – species was observed within or adjacent to the project site or buffer area during biological surveys or has previously been documented within or immediately adjacent to the project site or buffer area.
- Potentially Present – species has not been documented within or immediately adjacent to the project site or buffer area, but should be expected in areas of suitable habitat on and near the project site and buffer area during the appropriate season and time of day.
- Low Potential – species has not been documented within or immediately adjacent to the project site or buffer area, nor is it likely to occur on or near the project site or buffer area, but its presence cannot be completely discounted due to incomplete information on the taxon's distribution or habitat requirements.
- No Potential – species does not occur within or immediately adjacent to the project site or buffer area due to the lack of required habitat features for the species, or the known range of the species is well defined and does not include the project vicinity.

Special-Status Species - Special-status species are those taxa that are legally protected under the State or Federal Endangered Species Act (ESAs) or other regulations and considered sufficiently rare by the scientific community to qualify for such listing. Special-status plants and animals generally fall into one or more of the following categories:

- Plants or animals listed or proposed for listing as Threatened or Endangered under the Federal ESA (50 Code of Federal Regulations [CFR] 17.12 [listed plants], 1711 [listed animal] and various notices in the Federal Register [FR][proposed species]);
- Plants or animals that are candidates for possible future listing as Threatened or Endangered under the Federal ESA (61 FR 40, February 28, 1996);
- Plants or animals listed or proposed for listing by the State of California as Threatened or Endangered under the California ESA (14 California Code of Regulations [CCR] 670.5);
- Animal Species of Special Concern to the CDFW (Remsen 1978 [birds], Williams 1986 [mammals], Jennings and Hayes 1994 [reptiles and amphibians], Moyle et al. 1989 [fish]);
- Animals Fully Protected in California (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], and 5050 [reptiles and amphibians]);
- Plants listed as California Rare Plant Rank (CRPR) 1A (former CNPS List 1A) are presumed extinct in California (CNPS 2001, 2016 and Skinner and Pavlik, 1994);
- Plants listed as California Rare Plant Rank (CRPR) 1B (former CNPS List 1B) are considered rare, threatened, or endangered in California or elsewhere (CNPS 2001, 2016 and Skinner and Pavlik, 1994);

- Plants listed as California Rare Plant Rank (CRPR) 2A (former CRPR 1A) are presumed extirpated in California, but more common elsewhere (CNPS 2016);
- Plants listed as California Rare Plant Rank (CRPR) 2B (former CRPR 1B) are considered rare or endangered in California, but more common elsewhere (CNPS 2016);
- Plants identified as California Rare Plant (CRPR) Rank 3 (former CNPS List 3) are those for which more information is needed; a review list (CNPS 2001, 2016 and Skinner and Pavlik, 1994); and
- Plants listed as California Rare Plant Rank 4 (former CNPS List 4) are of limited distribution; a watch list (CNPS 2001, 2016 and Skinner and Pavlik 1994) – these taxa may be included as special-status species based on local significance or recent biological information.

SENSITIVE WILDLIFE SPECIES SURVEYS

We surveyed the proposed well sites, the proposed access road to the Hames Valley # 2 well site, existing access roads, and a 500-foot buffer area around these areas for sensitive wildlife, special-status plant species, and their habitats on May 2 and June 3, 2016. Wildlife and plant species observed during biological surveys are listed in Table 2. Species with potential to occur in the proposed project site based on known and historic occurrences in the CNDDB are discussed in text. Based on current site conditions and lack of habitat in the proposed well sites, proposed access road to the Hames Valley #2 well site and buffer areas, those species identified in Table 1 as having no potential to occur in the proposed project sites are not discussed further in this document.

We used portions of standard agency approved methods to survey for special-status wildlife species. Surveys were conducted to identify the following:

- Suitability of habitat(s) to support special-status wildlife species
- Presence of known and potential San Joaquin kit fox dens
- Presence of individual special-status amphibian and reptile species and their habitat
- Sightings, burrows, and "sign" of sensitive small mammal species
- Sightings, burrows, and "sign" of western burrowing owls and other sensitive avian species
- Presence of suitable nesting, roosting, and/or foraging habitat for migratory and other sensitive avian species, including California condor
- Vegetation association, habitat types, and special-status plant species
- Dominant plant canopy and ground cover species
- Habitat condition and quality
- On-site, adjacent, and surrounding land uses.

We conducted surveys by walking parallel meandering transects spaced at 30 to 50 foot intervals to identify special-status wildlife species. Presence of these species was confirmed by direct observation or by identification of "sign" (e.g., tracks, scat, dens and/or burrows, etc.) unique to a particular species.

San Joaquin Kit Fox - We conducted diurnal surveys for San Joaquin kit fox dens and their “sign.” Scats measuring 15 to 20 millimeter in diameter of appropriate canid shape are attributed to kit fox. No other vulpid is known to inhabit the project sites, and scats larger than 20 millimeter in diameter probably belong to coyote (*Canis latrans*) or domestic dog (*Canis familiaris*). Canid tracks up to 45 by 38 millimeter in size were attributed to kit fox. Tracks larger than this are probably attributable to coyote or domestic dog (Murie 1974).

We conducted surveys along transects spaced 30 to 50 feet apart following CDFW Approved Survey Methodologies for Sensitive Species (CDFG 1990) and by USFWS guidelines (USFWS 1989, 1995, 1999, and 2011). If San Joaquin kit fox “sign” and/or dens were identified, they were recorded using GPS and mapped on USGS topographic maps and/or aerial imagery. In addition, we used knowledge gained from past experiences working with numerous kit fox dens and their “sign” (tracks, scat, etc.) during radio telemetry studies, and kit fox den identifications during other biological surveys. We classified underground dens according to the following USFWS kit fox den definitions (USFWS 2011):

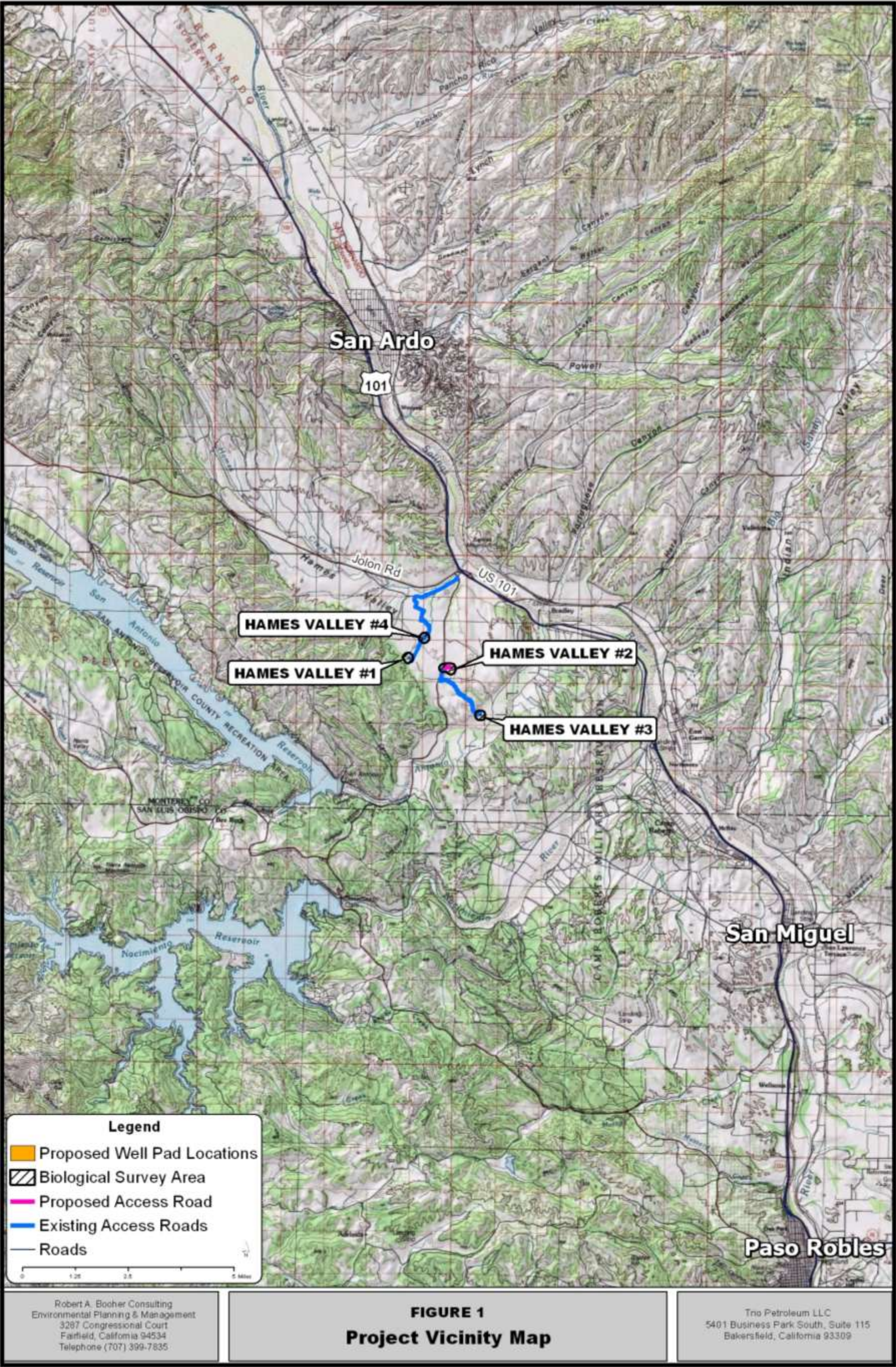
Known Den: Any existing natural den or manmade structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records, past or current radiotelemetry or spotlighting data, kit fox sign such as tracks, scat, and/or prey remains, or other reasonable proof that a given den is being or has been used by a kit fox. The Service discourages use of the terms “active” and “inactive” when referring to any kit fox den because a great percentage of occupied dens show no evidence of use, and because kit foxes change dens so often, with the result that the status of a given den may change frequently and abruptly.

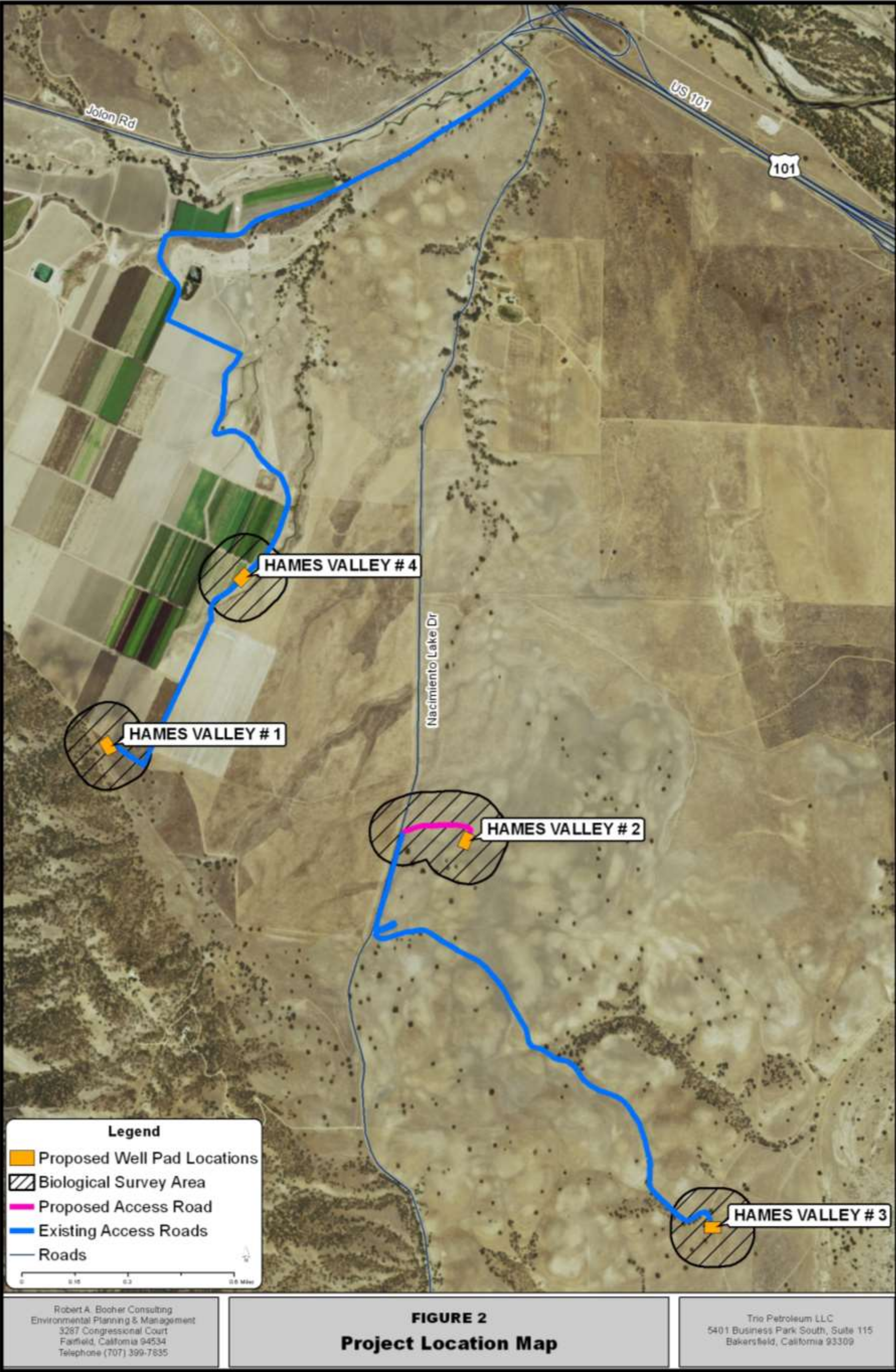
Potential Den: Any subterranean hole within the species’ range that has entrances of appropriate dimensions for which available evidence is insufficient to conclude that it is being used or has been used by a kit fox. Potential dens shall include the following: (1) any suitable subterranean hole; or (2) any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use.

Natal or Pupping Den: Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den, and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two, therefore, for purposed of this definition either term applies.

Atypical Den: Any manmade structure which has been or is being occupied by a San Joaquin kit fox den. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings.

Other Sensitive Wildlife - We surveyed for evidence of California tiger salamander, silvery legless lizard, San Joaquin whipsnake, coast horned lizard, golden eagle, western burrowing owl, prairie falcon, California condor, pallid bat, Salinas pocket mouse, and other targeted species of concern (see Table 1) while conducting transect surveys. This consisted of recording direct observation of the species and/or their "sign" (i.e., tracks, scat, dens and/or burrows, nests, roosts, etc.).





SPECIAL-STATUS PLANT SURVEYS

Literature Review: Prior to conducting field surveys, we reviewed information from published and unpublished sources to determine special-status plant species known, or that have potential to occur in the vicinity of the proposed project. Special-status plant species include species listed as Endangered, Threatened, or Rare by USFWS (1990, 2000, and 2016), or by CDFW (CDFG 1989, 2009, 2012, and CDFW 2016), and species listed by Smith and Berg (1988) and CNPS (CNPS 2016). Sources consulted for information on the distribution of special-status plant species include regional and local floras (Abrams 1923, 1944, 1951, Abrams and Ferris 1960, Hickman 1996, Munz and Keck 1968), occurrence records and maps from CNDDB (CDFW 2016), county and USGS quadrangle records in Smith and Berg (1988), CNPS (2001 and 2016), and occurrence records from previous surveys in the region.

Plant Species Surveys and Identification: Surveys to identify special-status plant species were conducted for the proposed project sites on May 2 and June 3, 2016. These surveys were floristic in nature and were completed concurrent with surveys to detect sensitive wildlife species. Surveys were conducted in accordance with the USFWS *Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed, and Candidate Plants* (USFWS 2000) and the CDFW *Protocols for Surveying and evaluating impacts to special-status native plant populations and natural communities* (CDFG 2009). Rare plant surveys were also performed using demographic survey techniques derived from the CNPS rare plant monitoring guidelines (CNPS 2011). These guidelines include conducting floristically based surveys, identifying all plants encountered to the species level, or identifying to the level necessary to detect rare plants if present.

We surveyed 30 to 50 feet wide transects within the project sites and a 500 foot buffer area surrounding the project sites. We identified vascular plant species encountered in the surveys using standard manuals (Hickman 1996). Scientific nomenclature used for plant species in this report follows Hickman (1996) and we used modifications of Cheatham and Haller (1975) and Holland (1986) to describe habitat types found in the project site and buffer area. A list of plant species observed during the course of biological surveys is included in Table 2.

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
<i>Amphibians and Reptiles</i>					
California tiger salamander, Central Population	<i>Ambystoma californiense</i>	FT	CT	Primarily inhabit non-native grassland providing underground refuges, especially ground squirrel burrows and vernal pools or other seasonal water sources for breeding.	Low Potential. Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 project site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. The closest potential aquatic habitat for this species to areas of habitat within the proposed project sites and buffer areas is located approximately 0.31 miles south of the proposed Hames Valley # 3 well site (San Antonio River). No individual salamanders were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Silvery legless lizard	<i>Anniella pulchra pulchra</i>	-	CSC	Sandy or loose loamy soils under sparse vegetation. Soil moisture is essential; this species prefers soils with high moisture content.	Low Potential. Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual lizards were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Western pond turtle	<i>Emys marmorata</i>	-	CSC	A thoroughly aquatic turtle of ponds, marshes, rivers, streams, and irrigation ditches with aquatic vegetation. Requires basking sites and suitable upland habitat (sandy banks or grassy open fields) for egg-laying.	No Potential. No suitable aquatic habitat is present in the proposed project sites or buffer areas.
San Joaquin whipsnake	<i>Masticophis flagellum ruddocki</i>	-	CSC	Open, dry habitats with little or no tree cover. Found in valley grassland and saltbush scrub in the San Joaquin Valley. Needs mammal burrows for refuge and	Low Potential. Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within

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Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				egg laying sites.	the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual snakes were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Coast horned lizard	<i>Phrynosoma blainvillii</i>	-	CSC	Frequents a wide variety of habitats. Most common in lowlands along sandy washes with scattered low bushes. Require open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supplies of ants and other insects for feeding.	Low Potential. Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the

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Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual lizards were observed during biological surveys. This species has been documented approximately 0.4 miles east of the proposed Hames Valley # 3 well site (CDFW 2016) (see Figure 3).
California red-legged frog	<i>Rana draytonii</i>	FT	CSC	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation. Requires 11 to 20 weeks of permanent water for larval development. Must have access to aestivation habitat, consisting of small mammal burrows and moist leaf litter.	No Potential. No suitable aquatic breeding habitat is present within the proposed project sites or buffer areas. Potential upland aestivation habitat (annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 project site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individuals were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Western spadefoot toad	<i>Spea hammondi</i>	-	CSC	Occurs primarily in grassland habitats, but can be found in valley-foothill hardwood woodlands. Vernal pools are essential for breeding and egg-laying.	No Potential. No suitable habitat was observed within the proposed project sites or buffer areas. No individuals were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Birds					
Tricolored blackbird	<i>Agelaius tricolor</i>	-	CSC	This highly colonial species requires open water and protected nesting substrate. Needs foraging area with insect prey within a few kilometers of the colony.	No Potential. No suitable foraging or nesting habitat for this species was observed in the proposed project sites or buffer areas.
Golden eagle	<i>Aquila chrysaetos</i>	-	Fully Protected	Golden eagles are found in open and semi-open habitats from sea level to 3,600 meters elevation. Habitat types that they inhabit include tundra, shrublands, grasslands, woodland-brushlands, and coniferous forests. Most golden eagles are found in mountainous areas, but they also nest in wetland, riparian and estuarine habitats.	Low Potential. Potential foraging habitat (annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No potential nesting habitat appropriate for use by this species was observed in the proposed project sites or buffer areas. No

Table 1
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Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					individual golden eagles were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Burrowing owl	<i>Athene cunicularia</i>	-	CSC	Open grasslands, prairies, farmlands, and deserts.	Low Potential. Potential habitat is present throughout the proposed project sites and buffer areas within annual grassland habitat and agricultural lands. California ground squirrel burrows were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area that may serve as potential for use by burrowing owls. No individual burrowing owls or sign of their presence (i.e., whitewash, castings, feathers, etc.) were observed during biological surveys. Burrowing owls have not been documented in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Yellow warbler	<i>Dendroica petechia brewsteri</i>	-	CSC	Prefers riparian plant associations with willow, cottonwood, aspen, sycamore, and alder trees for nesting and foraging activities. Also nests in montane shrubbery in open conifer forests.	No Potential. No suitable foraging or nesting habitat for this species was observed in the proposed project sites or buffer areas.
California horned lark	<i>Eremophila alpestris actia</i>	-	WL	Short grass prairie, bald hills, mountain meadows, open coastal plains, fallow grain fields, and alkali flats.	Low Potential. Potential foraging habitat (annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2,

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. No potential nesting habitat appropriate for use by this species was observed in the proposed project sites or buffer areas. No individual California horned larks were observed during biological surveys. This species has not been documented within the vicinity of the proposed project sites (CDFW 2016) (see Figure 3).
Prairie falcon	<i>Falco mexicanus</i>	-	WL	Dry, open terrain in level or hilly areas. Breeding sites are located on cliffs. This species forages far afield, to marshlands and ocean shores.	Low Potential. Potential foraging habitat (annual grassland) is present throughout the proposed project sites and buffer areas. No potential nesting habitat appropriate for use by this species was observed in the proposed project sites or buffer areas. No individual prairie falcons were observed during biological surveys. This species has been documented within the vicinity of the proposed project sites (CDFW 2016 (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
California condor	<i>Gymnogyps californianus</i>	FE	CE, Fully protected	Found as a recently reintroduced species primarily in the mountains of Ventura, Santa Barbara, and Los Angeles Counties. However, individuals are known to be wide ranging and have even been seen soaring over the Tehachapi Mountains and southern Sierra Nevada. The species is strictly a scavenger and may travel up to 35 miles or more from roost sites in search of carrion. Most foraging occurs in open habitats that facilitate landings and takeoffs. Traditional roost sites are on cliffs or ledges, but snags and trees in old growth coniferous forest may also be used.	Low Potential. Potential foraging habitat (annual grassland) is present within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. No suitable roost sites or potential nesting habitat for this species were observed in the proposed project sites or buffer areas. No individual condors were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Bald eagle	<i>Haliaeetus leucocephalus</i>	Delisted	CE	Nests and winters near ocean shores, lake margins and rivers. Nests in large, oldgrowth, or dominant live trees with open branches, especially Ponderosa pine. Roosts communally in winter.	No Potential. No suitable foraging or nesting habitat for this species was observed in the proposed project sites or buffer areas.
Least Bell's vireo	<i>Vireo belli pusillus</i>	FE	CE	Considered a rare, local, summer resident below about 2,000 feet in willows and other, low dense valley foothill riparian habitat. Usually nests in a willow or other shrub near water or in thickets along dry, intermittent streams.	No Potential. No suitable foraging or nesting habitat for this species was observed in the proposed project sites or buffer areas.
Mammals					

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Pallid bat	<i>Antrozous pallidus</i>	-	CSC	Found in deserts, grasslands, shrublands, woodlands, and forests. Most common in dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	Low Potential. Suitable habitat (non-native annual grassland and oak forest) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, we did not observe any known roosts or potential maternity or nesting sites in the proposed project sites or buffer areas. No individual bats were observed during biological surveys. This bat species has not been documented in the proposed project sites (CDFW 2016) (see Figure 3).
Townsend's big-eared bat	<i>Corynorhinus townsendii</i>	-	CSC/Candidate CT	Generally solitary or gathers in small groups, although during summer females may form larger maternity colonies. Townsend's big-eared bat can be found in mines, caves and structures in woodlands and forests to elevations above 9,500 feet. They often hang near the entrances to roosts, in the "twilight zone." The animals do not make major migrations and appear relatively sedentary. Hibernacula have low and stable temperatures -- sometimes with moderate airflow. Hibernating, the bats hang singly or in small clusters in the open, not in crevices, with pelage erect to	Low Potential. Suitable habitat (non-native annual grassland and oak forest) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. We did not observe any known roosts or potential maternity or nesting sites in the proposed project sites or buffer areas. No individual bats were observed during

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				provide maximum insulation and the ears coiled back like a ram's horns, perhaps to reduce heat loss. The bat is quite sensitive to changes in temperature and humidity within the hibernaculum and may arouse to move to a more favorable location.	biological surveys. This bat species has not been documented in the proposed project sites or buffer areas (CDFW 2016) (see Figure 3).
Salinas pocket mouse	<i>Perognathus inornatus psammophilus</i>	-	CSC	Annual grassland and desert scrub communities in the Salinas Valley. Found in fine-textured, sandy, friable soils. Burrows for cover and nesting.	Low Potential. Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 project site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual mice were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
American badger	<i>Taxidea taxus</i>	-	CSC	Found in drier open stages of most shrub, forest, and herbaceous habitats with friable soils. Require uncultivated ground. Prey on	Low Potential. Potential foraging habitat was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				burrowing rodents. The American badger digs their own burrows.	site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, no potential burrows of appropriate size for use by this species were observed during biological surveys. No individuals or sign (i.e., scat, tracks, digging, prey remains) of badger activity were observed in the proposed project sites or buffer area. This species has not been documented within or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	FE	CT	Inhabit annual grasslands or grassy open stages with scattered shrubby vegetation. Require loose-textured sandy soils for burrowing, and a suitable prey base.	Known to Occur. Potential foraging habitat was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, no potential burrows of appropriate size for use by this species were observed during biological surveys. No individuals or sign (i.e., scat, tracks, digging, prey remains) of badger activity were observed in the proposed project sites or buffer areas. This species has

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					been documented approximately 0.2 miles west of the existing access road to the Hames Valley # 4 well site (CDFW 2016) (see Figure 3).
Invertebrates					
Conservancy fairy shrimp	<i>Branchinecta conservatio</i>	FE	-	Endemic to grasslands. Found in large, turbid pools. Inhabit astatic pools located in swales formed by old braided alluvium filled by winter and spring rains.	No Potential. No suitable habitat (vernal pools) was observed within the proposed project sites or buffer areas. This species has not been documented within the boundary of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Vernal pool fairy shrimp	<i>Branchinecta lynchii</i>	FT	-	Found in short-lived seasonal cool-water vernal pools with low to moderate dissolved solids.	No Potential. No suitable habitat (vernal pools) was observed within the proposed project sites or buffer areas. This species has not been documented within the boundary of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Plants					
Bristlecone pine	<i>Abies bracteata</i>	-	List 1B.3	Broadleafed upland forest, chaparral, and lower montane coniferous forest. Elevation range: 183 to 1,600 meters. Blooming period: None.	No Potential. This species was not observed within the proposed project sites or buffer areas during the biological survey. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Douglas' fiddleneck	<i>Amsinckia douglasiana</i>	-	List 4.2	Cismontane woodland, valley and foothill grassland. Found on Monterey shale, in dry areas. Elevation range: 0 to 1,950 meters. Blooming period: March to May.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Oval-leaved snapdragon	<i>Antirrhinum ovatum</i>	-	List 4.2	Chaparral, cismontane woodland, pinyon and juniper woodland, valley and foothill grassland. Found on clay, gypsum, and alkaline soils. Elevation range: 200 to 1,000 meters. Blooming period: May through November.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Hoover's manzanita	<i>Arctostaphylos hooveri</i>	-	List 4.3	Broadleaf upland forest, chaparral, cismontane woodland, and lower montane coniferous forest. Elevation range: 480 to 1,010 meters. Blooming period: February through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Indian Valley Spineflower	<i>Aristocapsa insignis</i>	-	List 1B.2	Cismontane woodland. Elevational range: 300 to 600 meters. Blooming period: May through September.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Salinas milk-vetch	<i>Astragalus macrodon</i>	-	List 4.3	Chaparral (openings), cismontane woodland, valley and foothill grassland. Found in sandstone, shale, or serpentine soils. Elevation range: 250 to 950 meters. Blooming period April through July.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Western lessingia	<i>Benitoa occidentalis</i>	-	List 4.3	Chaparral, cismontane woodland, coastal scrub, and valley and foothill grassland. Elevational range: 450 to 1,070 meters. Blooming period: May through November.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Round-leaved filaree	<i>California macrophylla</i>	-	List 1B.1	Cismontane woodland, valley and foothill grassland. Elevational range: 15 to 1,200 meters. Blooming period: March through May.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
La Panza mariposa-lily	<i>Calochortus simulans</i>	-	List 1B.3	Valley and foothill grasslands, cismontane woodlands, and chaparral. Found on decomposed granite or serpentinite soils. Elevation range: 395 to 1,100 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Dwarf calycadenia	<i>Calycadenia villosa</i>	-	List 1B.1	Chaparral, cismontane woodland, valley and foothill grassland, meadows, and seeps, open dry meadows, hillsides, and gravelly outwashes. Elevational range: 215 to 1,275 meters. Blooming period: May through October.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2,

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Santa Cruz Mountains pussypaws	<i>Calyptridium parryi</i> var. <i>hesseae</i>	-	List 1B.1	Chaparral and cismontane woodland. Elevational range: 305 to 1,530 meters. Blooming period: May through August.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Hardham's evening-primrose	<i>Camissonia hardhamiae</i>	-	List 1B.2	Chaparral and cismontane woodland on decomposed carbonate soils. Elevational range: 330 to 500 meters. Blooming period: April through May.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
San Luis Obispo owl's clover	<i>Castilleja densiflora ssp. obispoensis</i>	-	List 1B.2	Valley and foothill grassland. Elevational range: 10 to 215 meters. Blooming period: March through May.	Potentially Present. Suitable habitat (valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Lemmon's jewelflower	<i>Caulanthus lemmonii</i>	-	List 1B.2	Pinyon-juniper woodland, valley and foothill grassland. Elevational range: 80 to 1,220 meters. Blooming period: March through May.	Potentially Present. Suitable habitat (valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Lompoc ceanothus	<i>Ceanothus cuneatus</i> <i>var. fascicularis</i>	-	List 4.2	Chaparral. Elevational range: 5 to 400 meters. Blooming period: February through April.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Purple amole	<i>Chlorogalum</i> <i>purpureum</i> var. <i>purpureum</i>	FT	List 1B.1	Cismontane woodland, valley and foothill grassland. Often found in grassy areas with blue oaks in foothill woodland. Elevational range: 300 to 330 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Douglas' spineflower	<i>Chorizanthe douglasii</i>	-	List 4.3	Chaparral, cismontane woodland, valley and foothill grassland,	Potentially Present. Suitable habitat (cismontane woodland and valley and

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				coastal scrub, and lower montane coniferous forest. Elevational range: 55 to 1,600 meters. Blooming period: April through July.	foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Palmer's spineflower	<i>Chorizanthe palmeri</i>	-	List 4.2	Chaparral, cismontane woodland, and valley and foothill grassland. Elevational range: 60 to 700 meters. Blooming period: April through August.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					proposed project sites (CDFW 2016) (see Figure 3).
Straight-awned spineflower	<i>Chorizanthe rectispina</i>	-	List 1B.3	Chaparral, cismontane woodland, coastal scrub, often on granite in chaparral. Elevational range: 355 to 1,035 meters. Blooming period: April through July.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Jolon's clarkia	<i>Clarkia jolonensis</i>	-	List 1B.2	Cismontane woodland. Elevational range: 20 to 660 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 well site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Monkey-flower savory	<i>Clinopodium mimuloides</i>	-	List 4.2	Chaparral and north coast coniferous forest. Elevational range: 305 to 1,800 meters. Blooming period: June through October.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					2016) (see Figure 3).
San Antonio collinsia	<i>Collinsia antonina</i>	-	List 1B.2	Chaparral, cismontane woodland on shale substrates. Elevational range: 280 to 365 meters. Blooming period: March through May.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Rattan's cryptantha	<i>Cryptantha rattanii</i>	-	List 4.3	Cismontane woodland, riparian woodland, and valley and foothill grassland. Elevational range: 245 to 915 meters. Blooming period: April through July.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Small-flowered gypsum-loving larkspur	<i>Delphinium gypsophilum</i> ssp. <i>parviflorum</i>	-	List 3.2	Cismontane woodland, valley and foothill grassland on rocky clay and serpentinite. Elevational range: 190 to 350 meters. Blooming period: March through June.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Umbrella larkspur	<i>Delphinium umbraculorum</i>	-	List 1B.3	Cismontane woodland. Elevational range: 400 to 1,600 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Koch's cord-moss	<i>Entosthodon kochii</i>	-	List 1B.3	Cismontane woodland. Elevational range: 500 to 1,000 meters. Blooming period: Not known.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Yellow-flowered eriastrum	<i>Eriastrum luteum</i>	-	List 1B.2	Broadleafed upland forest, cismontane woodland, and chaparral. Found on bare sandy decomposed granite slopes. Elevational range: 360 to 1,000 meters. Blooming period: May through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Elegant wild buckwheat	<i>Eriogonum elegans</i>	-	List 4.3	Cismontane woodland, valley and foothill grassland. Elevational range: 200 to 1,525 meters. Blooming period: May through November.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Jepson's woolly sunflower	<i>Eriophyllum jepsonii</i>	-	List 4.3	Chaparral, cismontane woodland, and coastal scrub. Elevation range: 200 to 1,025 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 well site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Santa Lucia monkeyflower	<i>Erythranthe hardhamiae</i>	-	List 1B.1	Chaparral. Elevation range: 300 to 730 meters. Blooming period: March through May.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
San Benito poppy	<i>Eschscholzia hypocoides</i>	-	List 4.3	Chaparral, cismontane woodland, and valley and foothill grassland. Elevation range: 200 to	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				1,500 meters. Blooming period: March through June.	the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Stinkbells	<i>Fritillaria agrestis</i>	--	List 4.2	Cismontane woodland, chaparral, pinyon and juniper woodland, valley and foothill grassland. Mostly found on clay or serpentine soils. Elevation range: 10 to 1,555 meters. Blooming period: March through June.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Figure 3).
Phlox-leaf serpentine bedstraw	<i>Galium andrewsii ssp. gatense</i>	-	List 4.2	Chaparral, cismontane woodland, and lower montane coniferous forest. Elevational range: 150 to 1,450 meters. Blooming period: April through July.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access roads. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Hogwallow starfish	<i>Hesperevax caulescens</i>	-	List 4.2	Valley and foothill grasslands and vernal pools. Elevation range: 0 to 505 meters. Blooming period: March through June.	Potentially Present. Suitable habitat (valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
Kellogg's horkelia	<i>Horkelia cuneata ssp. sericea</i>	-	List 1B.1	Closed-cone coniferous forest, chaparral, coastal dunes, and coastal scrub. Elevational range: 10 to 200 meters. Blooming period: April through September.	No Potential. No suitable habitat was observed within the boundaries of the project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the project sites (CDFW 2016) (see Figure 3).
Santa Lucia dwarf rush	<i>Juncus luciensis</i>	-	List 1B.1	Chaparral, Great Basin scrub, lower montane coniferous forest, meadows, seeps, and vernal pools. Elevational range: 300 to 2,040 meters. Blooming period: April through July.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Diablo Range hare-leaf	<i>Lagophylla diabolensis</i>	-	List 1B.2	Cismontane woodland and valley and foothill grassland. Elevational range: 365 to 885 meters. Blooming period: April through September.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Pale-yellow layia	<i>Layia heterotricha</i>	-	List 1B.1	Cismontane woodland, pinyon-juniper woodland, valley and foothill grassland. Found on	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				alkaline or clay soils in open areas. Elevational range: 270 to 1,705 meters. Blooming period: March through June.	the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Woolly-headed lessingia	<i>Lessingia hololeuca</i>	-	List 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland. Elevational range: 15 to 305 meters. Blooming period: June through October.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Figure 3).
San Luis Obispo County lupine	<i>Lupinus ludovicianus</i>	-	List 1B.2	Chaparral and cismontane woodland. Elevational range: 50 to 525 meters. Blooming period: April through July.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access roads. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Abbott's bush mallow	<i>Malacothamnus abbottii</i>	-	List 1B.1	Riparian scrub among willows, near rivers, and along roadsides. Elevational range: 135 to 525 meters. Blooming period: May through October.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Indian Valley bush-mallow	<i>Malacothamnus aboriginum</i>	-	List 1B.2	Cismontane woodland and chaparral. Elevational range: 150 to 1,700 meters. Blooming period: April through October.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 well site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					(CDFW 2016) (see Figure 3).
Davidson's bush mallow	<i>Malacothamnus davidsonii</i>	-	List 1B.2	Coastal scrub, riparian woodland, and chaparral. Often found in sandy washes. Elevational range: 180 to 855 meters. Blooming period: June through January.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has been documented approximately 0.5 miles east of the proposed Hames Valley # 3 project site (CDFW 2016) (see Figure 3).
Carmel Valley bush-mallow	<i>Malacothamnus palmeri</i> var. <i>involucratus</i>	-	List 1B.2	Cismontane woodland and chaparral. Found on talus hilltops and slopes. Elevational range: 30 to 1,100 meters. Blooming period: May through August.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 well site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Jones' bush mallow	<i>Malacothrix jonesii</i>	-	List 4.3	Cismontane woodland and chaparral. Elevational range: 250 to 830 meters. Blooming period: May through July.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 well site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access road. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					(CDFW 2016) (see Figure 3).
Carmel Valley malacothrix	<i>Malacothrix saxatilis</i> var. <i>arachnoidea</i>	-	List 1B.2	Chaparral, rock outcrops, or steep roadcuts. Elevational range: 25 to 1,215 meters. Blooming period: June through December.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Mt. Diablo cottonweed	<i>Micropus amphibolus</i>	-	List 3.2	Broadleafed upland forest, chaparral, cismontane woodland, valley and foothill grassland. Elevational range: 45 to 825 meters. Blooming period: March through May.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Woodland woolythreads	<i>Monolopia gracilens</i>	-	List 1B.2	Broadleafed upland forest, chaparral, cismontane woodland, North Coast coniferous forest, and valley and foothill grassland. Elevational range: 100 to 1,200 meters. Blooming period: February through July.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Shining navarretia	<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	-	List 1B.2	Cismontane woodland, valley and foothill grassland, and vernal pools. Elevational range: 200 to 1,000 meters. Blooming period: May through July.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Prostate vernal pool navarretia	<i>Navarretia prostrate</i>	-	List 1B.1	Coastal scrub, meadows, seeps, valley and foothill grassland, and vernal pools. Elevational range: 15 to 700 meters. Blooming period:	Potentially Present. Suitable habitat (valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				April through July.	access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Robbins' nemacladus	<i>Nemacladus secundiflorus</i> var. <i>robbinsii</i>	-	List 1B.2	Chaparral and valley and foothill grassland. Dry, sandy, and gravelly slopes. Elevational range: 350 to 1,700 meters. Blooming period: April through June.	Potentially Present. Suitable habitat (valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Large-flowered nemacladus	<i>Nemacladus secundiflorus</i> var.	-	List 4.3	Chaparral and valley and foothill grassland. Dry, sandy, and gravelly	Potentially Present. Suitable habitat (valley and foothill grassland) was

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
	<i>secundiflorus</i>			slopes. Elevational range: 200 to 2,000 meters. Blooming period: April through June.	observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Hooked popcorn-flower	<i>Plagiobothrys uncinatus</i>	-	List 1B.2	Chaparral, cismontane woodland, valley and foothill grassland, and coastal bluff scrub. Found on sandstone outcrops and canyon sides, often in burned or disturbed areas. Elevational range: 300 to 820 meters. Blooming period: April through May.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
					Figure 3).
Shrub live oak	<i>Quercus turbinella</i>	-	List 4.3	Chaparral, cismontane woodland, lower montane coniferous forest, and pinyon and juniper woodland. Elevational range: 1,200 to 2,000 meters. Blooming period: April through June.	No Potential. This species was not observed within the proposed project sites or buffer areas during the biological survey. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
San Gabriel ragwort	<i>Senecio astephanus</i>	-	List 4.3	Chaparral and coastal bluff scrub. Elevational range: 400 to 1,500 meters. Blooming period: May through July.	No Potential. No suitable habitat was observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Santa Cruz microseris	<i>Stebbinsoseris decipiens</i>	-	List 1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland. Elevational range: 10 to 500 meters. Blooming period: April through May.	Potentially Present. Suitable habitat (cismontane woodland and valley and foothill grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Mason's neststraw	<i>Stylocline masonii</i>	-	List 1B.1	Chenopod scrub, pinyon-juniper	No Potential. No suitable habitat was

Table 1
Special-Status Species Potentially Occurring in the Proposed Project Sites

Common Name	Scientific Name	Federal Status	State Status	Habitat/Requirements	Potential to Occur in Project Sites
				woodland, and sandy washes. Elevational range: 100 to 1,200 meters. Blooming period: March through May.	observed within the boundaries of the proposed project sites or buffer areas. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).
Cook's triteleia	<i>Triteleia ixioides ssp. cookii</i>	-	List 1B.3	Closed cone coniferous forest and cismontane woodland. Elevational range: 150 to 700 meters. Blooming period: May through June.	Potentially Present. Suitable habitat (cismontane woodland) was observed 55 feet south of the Hames Valley # 1 project site and adjacent to the northern and southern sides of portions of the existing access road to the Hames Valley # 3 well site. No suitable habitat was observed within any the proposed well sites and access roads. This species was not observed within the proposed project sites or buffer areas during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Status Codes:

Federal

FE = Federally listed as Endangered

FT = Federally listed as Threatened

FC = Federal Candidate species

State

CE = California listed as Endangered

CT = California listed as Threatened

CR = California listed as Rare

CSC = Species of Special Concern

California Rare Plant Rank (CRPR)

California Rare Plant Rank 1A = Plants presumed extinct in California

California Rare Plant Rank 1B = Plants rare, threatened, or endangered in California and elsewhere

California Rare Plant Rank 2A = Plants presumed extirpated from California, but more common elsewhere

California Rare Plant Rank 2B = Plants rare or endangered in California, but more common elsewhere

California Rare Plant Rank 3 = Plants about which we need more information; a review list

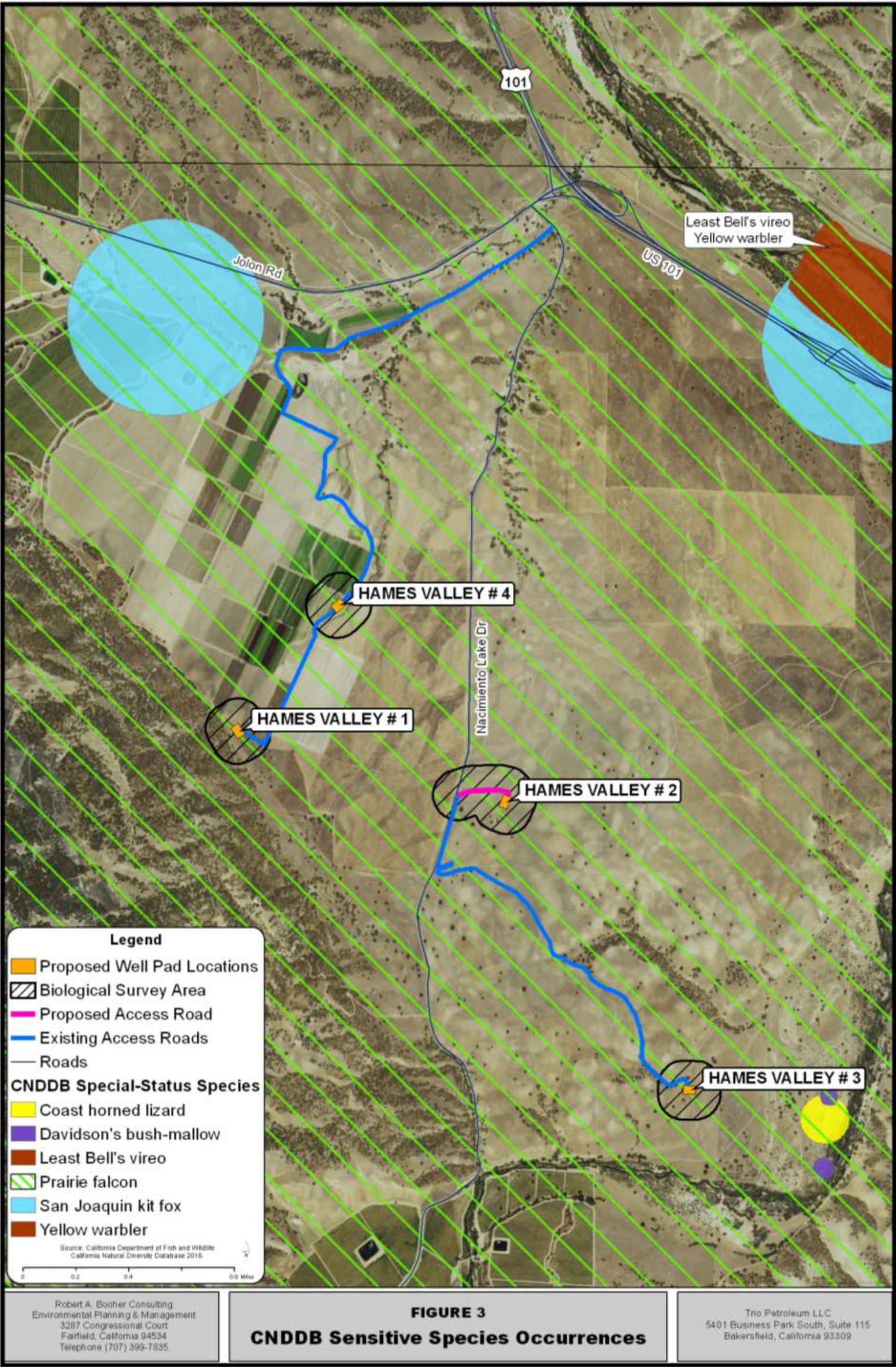
California Rare Plant Rank 4 = Plants of limited distribution; a watch list.

California Rare Plant Rank Rarity Status of .1 = Seriously endangered in California

California Rare Plant Rank Rarity Status of .2 = Fairly endangered in California

California Rare Plant Rank Rarity Status of .3 = Not very endangered in California

Status, distribution, and habitat information from the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database RareFind 5 (CDFW 2016); California Native Plant Society, California Rare Plant Electronic Inventory (CNPS 2016); and USFWS Online Endangered Species Database (USFWS 2016).



RESULTS AND DISCUSSION

Results of our biological surveys for the project site and buffer area are presented below. A list of wildlife and plant species observed during biological surveys is included as Table 2. The following discussion describes habitat types that occur in the project site and focuses on special-status wildlife species that could potentially occur within the project site, based on site conditions observed at the time of our surveys. Special-status species that were not identified on the USFWS, CDFW, or CNPS species lists are not addressed in this document.

HABITAT TYPES

No USFWS designated critical habitat is present in the proposed project sites or buffer areas (USFWS 2016b). No perennial or intermittent streams, wetlands, vernal pools, or other sensitive habitats were observed within the boundary of the existing project sites. Habitat types observed during our biological field surveys are briefly described below. Vegetative community designations are based on *A Guide to Wildlife Habitats of California* (Mayer and Laudenslayer 1988).

Ruderal/Disturbed

The ruderal/disturbed vegetative community type was observed within portions of the proposed Hames Valley # 1 and 4 well sites, and within existing access roads to all four (4) well sites wherever disturbed soils occurred, active land uses were present, or active land uses were absent where disturbance had occurred in the recent past. Common vegetative species found in this community were composed of weedy non-native and weedy native species. Common species identified during the field visit included: common fiddleneck (*Amsinckia menziesii* var. *intermedia*), black mustard (*Brassica nigra* L. Koch), field bindweed (*Convolvulus arvensis*), jimson weed (*Datura stramonium*), redstem filaree (*Erodium cicutarium*), Chinese pursley (*Heliotropium curasscicum*), prickly Lettuce (*Lactuca serriola*), cheeseweed (*Malva parviflora*), wild radish (*Rhaphanus sativus*), and spiny sowthistle (*Sonchus asper*).

Although often comprised of non-native plant species, ruderal habitats, particularly at edges of natural communities, can provide foraging habitat for many species of birds and mammals. These habitats can be occupied by California ground squirrels and other rodents.

Agricultural Lands

The proposed Hames Valley # 1 and 4 well sites will be constructed within recently plowed agricultural fields. Plowed agricultural fields were also observed within the buffer area of the proposed Hames Valley # 1 and 4 well sites and the existing access roads to these well sites. These agricultural lands are currently utilized to grow lettuce and other vegetables.

Non-Native Annual Grassland

Non-native annual grassland was the dominant vegetative community observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well

site, adjacent to the southwestern edge of the Hames Valley # 1 well site within the buffer area, and adjacent to portions of the existing access roads to all four (4) proposed well sites within the buffer area. Common species found in this community were composed of introduced grasses and broadleaf weedy species, which quickly re-colonize disturbed areas.

Common species identified during the field visit included Common fiddleneck (*Amsinckia menziesii* var. *intermedia*), wild oat (*Avena fatua*), black mustard (*Brassica nigra* L. Koch), California brome (*Bromus carinatus*), ripgut grass (*Bromus diandrus*), soft cheat grass (*Bromus hordeaceus*), red brome (*Bromus madritensis* ssp. *rubens*), purple star thistle (*Centaurea calcitrapa*), turkey mullein (*Croton setiger*), field bindweed (*Convolvulus arvensis*), six-week fescue (*Festuca bromoides*), barnyard foxtail (*Hordeum murinum* ssp. *leporinum*), Italian ryegrass (*Lolium multiflorum*), bur clover (*Medicago polymorpha* ssp. *vulgaris*), bristly ox-tongue (*Picris echioides*), and redstem filaree (*Erodium cicutarium*).

Grasslands support a variety of mammals, birds, and reptiles, and provide foraging habitat for raptors. Many species use the grassland for only part of their habitat requirements, foraging in the grassland and seeking cover in the surrounding tree and scrub cover. Grassland cover provides foraging, nesting, and denning opportunities for resident species such as: western fence lizard (*Sceloporus occidentalis*), northern alligator lizard (*Elgaria coerulea*), gopher snake (*Pituophis melanoleucus*), western meadowlark (*Sturnella neglecta*), goldfinch (*Carduelis tristis*), ring-necked pheasant (*Phasianus colchicus*), red-winged blackbird (*Agelaius phoeniceus*), California ground squirrel (*Spermophilus beecheyi*), California vole (*Microtus californicus*), pocket gophers (*Thomomys* spp.), black-tailed jackrabbit (*Lepus californicus*), and occasionally black-tailed deer (*Odocoileus hemionus columbianus*).

The rodent, bird, and reptile populations offer foraging opportunities for avian predators such as the northern harrier hawk (*Circus cyaneus*), American kestrel (*Falco sparverius*), red-tailed hawk (*Buteo jamaicensis*), golden eagle (*Aquila chrysaetos*), barn owl (*Tito alba*), and great horned owl (*Bubo virginianus*). Mammalian predators, which utilize the grasslands include gray fox (*Urocyon cinereoargenteus*) and long-tailed weasel (*Mustela frenata*). Foraging activity of these predatory species, which tend to require relatively undisturbed habitat, is generally limited to the undeveloped fringes of the project area where habitat fragmentation has not occurred and human activity is limited.

Coastal Oak Woodland

Coastal oak woodland was observed along portions of the existing access roads to the Hames Valley # 3 and 4 well sites, and approximately 75 feet southwest of the proposed Hames Valley # 1 well site. Oak woodlands within the general project area consist both of oak trees widely spaced and in clumps, forming an oak grassland savannah. Composition of both overstory trees and understory vegetation of coastal oak woodland varies and reflects the environmental diversity over which this habitat occurs. The overstory of coastal oak woodland in the project area is dominated by coast live oak (*Quercus agrifolia*) and blue oak (*Quercus douglasii*). Understory vegetation within this vegetative community consists of annual grassland species. Annual grassland species are described further under the description of *non-native annual grassland*.

Coastal oak woodlands provide habitat for a variety of wildlife species. Barrett (1980) reports that at least 60 species of mammals may use oaks in some way. Verner (1980) reports 110 species of birds observed during the breeding season in California habitats where oaks form a significant part of the canopy or subcanopy. Many types of wildlife utilize oak woodlands for food (i.e., acorns, grass, and leaf browse) and shelter. Avian species that are typically found in this vegetative community include acorn woodpecker (*Melanerpes formicivorus*), California towhee (*Pipilo crissalis*), wild turkey (*Meleagris gallopavo*), scrub jay (*Aphelocoma californica*), California quail (*Callipepla californica*), chickadees (*Poecile spp.*), and western bluebirds (*Sialia mexicana*). Mammal species typically found in this community include woodrats (*Neotoma spp.*), mule deer (*Odocoileus hemionus*), feral pigs (*Sus scrofa*), western gray squirrel (*Sciurus griseus*), and pocket gophers (*Thomomys spp.*). Typical amphibians and reptiles found in this community include ringneck snake (*Diadophis punctatus*), western skink (*Eumeces skiltonianus*), and arboreal salamanders (*Aneides lugubris*).

Ephemeral Stream

An ephemeral stream was observed immediately adjacent to the eastern side of the proposed Hames Valley # 4 well site. No other perennial or intermittent streams occur in the proposed project sites or buffer areas. The ephemeral stream channel was running during biological surveys. Common species identified during the field visit included black mustard (*Brassica nigra* L. Koch), field bindweed (*Convolvulus arvensis*), redstem filaree (*Erodium cicutarium*). Blue oak (*Quercus douglasii* Hook. and Arn), silversheath knotweed (*Polygonum argyrocoleon*), rabbitsfoot grass (*Polypogon monspeliensis*), and common purslane (*Portulaca oleracea*).

California ground squirrels (*Otospermophilus beecheyii*) were the only wildlife species observed in this vegetative community during biological surveys.

SPECIAL-STATUS BIOLOGICAL RESOURCES

Through a literature review and an electronic search of the CNDDB, CNPS and USFWS databases, 23 special-status wildlife and invertebrate species and 58 special-status plant species were identified that occur in or may be affected by projects in the Bradley, Wunpost, Hames Valley, and Tierra Redonda Mountain quadrangles (an area measuring approximately 280 miles). Table 1 provides a list of these special-status species, and includes a brief analysis of their potential to occur in the proposed project sites and buffer areas.

Based on habitats present and the environmental conditions observed during biological surveys, RAB Consulting determined that 46 special-status plant species and 14 wildlife species have the potential to occur in the proposed project sites and buffer areas. No special-status species have been previously documented within the boundaries of the proposed project sites; however, three (3) special-status species have been historically recorded in proximity to the proposed project sites and buffer areas (CDFW 2016) (see Figure 3). These species include San Joaquin kit fox, prairie falcon, and coast horned lizard (see Figure 3). No special-status species were observed during biological surveys.

AMPHIBIANS & REPTILES

The **California tiger salamander** is a cryptic species that spends the majority of its life underground in rodent burrows and cracks in the soil. Adults are typically observable for only a very short time each year as they move to aquatic breeding sites. They typically breed in long-lasting rain ponds but may also use permanent ponds if aquatic predators are absent (Jennings and Hayes 1994). Burrows excavated by small mammals, such as California ground squirrels, provide upland habitat for salamanders during the non-breeding season.

Suitable potential upland aestivation habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual salamanders were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3). The closest potential aquatic habitat for this species to areas of habitat within the proposed project sites and buffer areas is located approximately 0.31 miles south of the proposed Hames Valley # 3 well site (San Antonio River). No suitable breeding habitat for this species was observed within the proposed project sites or buffer areas during surveys. California tiger salamanders typically do not travel further than one (1) mile from aquatic habitat breeding sites. Based on the lack of suitable aquatic breeding habitat and the lack of any documented sightings of this species within the project vicinity, this species is considered to be absent from the proposed project sites, and no impacts are expected to this species during project activities.

Silvery Legless Lizard is a small lizard without limbs. The upper side of the body is light colored, while the underside is yellow. The species occurs in riparian, sand/dune, shrubland, chaparral, hardwood and mixed woodland habitats. The species ranges from near Antioch, south in the Coast Ranges, Transverse Mountains and along the coast of California, to northwestern Baja California. Scattered occurrences are also known in the San Joaquin Valley, the southern Sierra Nevada, Walker Basin, Piute, Scodie, and Tehachapi Mountains. These lizards are found in sandy or loose loamy soils under sparse vegetation. This species prefers soils with high moisture content (CDFW 2014). Silvery legless lizards may forage in leaf litter during the day, emerging on the surface at dusk or at night (Stebbins 1985).

Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the

existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual lizards were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

The **San Joaquin whipsnake** is a California species of special concern. San Joaquin whipsnakes occur along the Coast Ranges from Alameda and San Joaquin Counties south to Kern County. They are found in open, dry habitats with little or no tree cover. They require mammal burrows or rocky outcrops for refuge and may use them as oviposition sites (Jennings and Hayes 1994).

Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual snakes were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Coast horned lizard occurs in a variety of open habitats (including grasslands) that provide sites for basking, sandy substrates in which night-time burial can occur, and a suitable prey base (the taxon feeds almost exclusively on ants). However, the species is extremely rare in grasslands that do not have a shrub component.

Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual lizards were observed during biological surveys. Evidence of the lizard's prey species (i.e., granivorous ants) was found within the proposed project sites and buffer areas. This species has been documented approximately 0.4 miles east of the proposed Hames Valley # 3 well site (CDFW 2016) (see Figure 3).

BIRDS

Golden Eagles Golden eagles maintain home ranges or territories that may be as large as 77 square miles. They build large nests in high places (mainly cliffs) to which they may return for several breeding years. Most breeding activities take place in the spring; they are

monogamous and may remain together for several years or possibly for life. Females lay up to four eggs, and then incubate them for six weeks. Typically, one or two young survive to fledge in about three (3) months. Golden eagles are fairly adaptable in habitat but often reside in areas with a few shared ecological characteristics. They are best suited to hunting in open or semi-open areas and search them out year-around. Native vegetation seems to be attractive to them and they typically avoid developed areas of any type from urban to agricultural as well as heavily forested regions. In desolate areas, they can occur regularly at roadkills and garbage dumps. The largest numbers of golden eagles are found in mountainous regions today, with many eagles doing a majority of their hunting and nesting on rock formations. However, they are not solely tied to high elevations and can breed in lowlands if the local habitats are suitable.

Potential foraging habitat (annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No potential nesting habitat appropriate for use by this species was observed in the proposed project sites or buffer areas. No individual golden eagles were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Western Burrowing Owl is a ground dwelling owl that occurs in grassland habitats. Burrowing owls typically uses burrows of small mammals and large rodents, particularly California ground squirrels, for shelter and breeding. The species is listed by the CDFW as a Species of Special Concern (SSC).

Potential habitat is present throughout the proposed project sites and buffer areas within annual grassland habitat and agricultural lands. California ground squirrel burrows were observed within the boundaries of the proposed Hames Valley # 3 well site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area that may serve as potential for use by burrowing owls. No individual burrowing owls or sign of their presence (i.e., whitewash, castings, feathers, etc.) were observed during biological surveys. Burrowing owls have not been documented in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

Prairie Falcon occurs as an uncommon nesting species throughout the Sierra Nevada foothills, Coast Ranges, Modoc Plateau and adjacent mountains, Great Basin mountains, and southern California desert and mountains. Nests are typically located on a sheltered ledge of a cliff overlooking a large, open area (generally supporting grassland, rangeland, savannah, or desert scrub). However, the species sometimes utilizes old nests of other cliff-nesting species (e.g., great-horned owl, common raven, golden eagle, etc.). Although southeast-facing nest sites are preferred, orientation is secondary to the nature of the ledge. Nesting occurs from mid-February through mid-September with a peak during April to early August (Zeiner *et al.* 1990). Home

range and nest territory size varies with availability of suitable nesting habitat and adjacent foraging habitat.

We observed potential foraging habitat for prairie falcon present throughout the project sites and buffer areas. This species may forage intermittently throughout the project area, but is not expected to nest in the proposed project sites. No known roosts or potential breeding sites (cliffs) were identified in the proposed project sites or buffer areas. No individual prairie falcons were observed during biological surveys. Since the species is wide-ranging, and the buffer area provides potential foraging habitat the species has some potential to occur on site. The species is not expected to nest in the project area based on a lack of suitable nesting sites. Although location information is suppressed based on sensitivity, prairie falcons have been historically documented in the vicinity of the proposed project sites (CDFW 2016) (see Figure 3). These CNDDDB observation records are dated 1974, 1977, and 1979, and are based on CDFW prairie falcon nest records compiled by the CDFW Wildlife Branch in 1986.

California Condor was listed as endangered in a final rule published by the USFWS in 1967 (32 FR 4001) and critical habitat was designated for the species nearly a decade later, in 1976. The species historically occurred in a narrow strip along the Pacific coast, from British Columbia, Canada to Baja California Norte, Mexico (Koford 1953, Wilbur 1978). The range of California condors were restricted to chaparral, coniferous forests, and oak savannah habitats in southern and central California (USFWS 1996c). The species used a wishbone shaped area that encompassed six counties in California; this area was designated as the range of primary concern by the Condor Recovery Team. The reduced range of the California condor has since been used for reference by the public and for planning purposes by regulatory and management agencies.

As noted in the 1979 Recovery Plan and reiterated in the 5-year species review, California condors require adequate nesting sites, roosting sites, and foraging habitat with adequate food, (USFWS 2013). Roosting sites are generally located near nesting or foraging areas. Cliffs and tall conifers are used as roost sites by California condors throughout their range. Water is also required for drinking and bathing (Zeiner et al. 1990). The species typically nests in chaparral, conifer forest, or oak woodland communities. Historically, condors nested on bare ground in caves and crevices, behind rock slabs, or on large ledges or potholes on high sandstone cliffs in isolated, extremely steep, rugged areas. Nests have also been documented in cavities in giant sequoia (*Sequoiadendron giganteum*) and redwood (*Sequoia sempervirens*) trees. Nest sites are often surrounded by dense brush and generally have the following attributes:

- Entrances large enough for the adults to fit through;
- Ceiling height of at least 14.8 inches at the egg position;
- Floors fairly level with some loose surface substrate;
- Nest space unconstricted for incubating adults; and
- A nearby landing point (Zeiner et al. 1990).

Potential nesting habitat occurs over a large portion of the coastal and interior mountains in central and southern California; however the occupied nesting range is limited. Based on the 1996 Recovery Plan for the species, all California condor nest sites in the wild were located on public lands in the Angeles, Los Padres, and Sequoia National Forests (USFWS 1996).

The California condor is also found in Big Sur (57.2 miles northwest of the proposed project sites) and Pinnacles National Park (47.7 miles north of the proposed project sites). The California condor was reintroduced to Pinnacles National Park in 2003. The California condor was reintroduced to the Big Sur area in 1998. In March 2006, a pair of California condors, released by Ventana Wildlife Society, attempted to nest in a hollow tree near Big Sur, California. This was the first time in more than 100 years in which a pair of California condors had been seen nesting in Northern California. In 2014, Condor #597, also known as "Lupine", was spotted near Pescadero, a coastal community south of San Francisco. Lupine had been routinely seen at Pinnacles National Park after having been released into the wild at Big Sur the previous year. Younger birds of the Central California are seeking to expand their territory, which could mean that a new range expansion is possible for the more than 60 condors flying free in central California (USFWS 2016).

Foraging habitat of California condors has been characterized as open foothill grasslands and oak savannah foothills that support populations of deer, elk and cattle (USFWS 2013). Historically, foraging also occurred on beaches and large rivers along the Pacific coast where the condor diet may have been comprised of marine species including whales, and sea lions. While potential foraging habitat is expansive, not all is usable due to inaccessible terrain that limits soaring by condors. Prior to 1987 California condors foraged primarily in the foothills bordering the southern San Joaquin Valley and axillary valleys in San Luis Obispo, Santa Barbara, Kern, and Tulare Counties (USFWS 1996c). Most principal foraging areas were on privately owned lands used for livestock grazing. In Kern County condors foraged in the foothills adjacent to the Los Padres National Forest to Reyes Station in the west, to the Pleito Hills west of Interstate 5, and eastward throughout much of the Tehachapi Mountains. Foraging areas were relatively close to traditional nesting sites (USFWS 1984).

California condors are opportunistic scavengers, feeding exclusively on carrion (dead animal carcasses). This species, which is considered a permanent resident of the semi-arid, rugged mountain ranges surrounding the southern San Joaquin Valley (i.e., Coast Range from Santa Clara County south to Los Angeles County, Transverse Ranges, Tehachapi Mountains, and southern Sierra Nevada), travels over a wide area when foraging. The species is known to regularly fly 35 miles or more from roost sites and occasionally travels even greater distances. California condors may travel up to 150 miles in a single day in search of food. They typically fly at a height of approximately 600 feet while in search of carrion. However, they have been recorded at heights of 15,000 feet while in flight (Zeiner et al. 1990). Typical foraging behavior includes long-distance reconnaissance flights, lengthy circling flights over a carcass, and hours of waiting at a roost or on the ground near a carcass.

Condors are highly dependent on topography and thermal wind patterns for flight. Nearly all observations of California condor flights followed routes over foothills and mountains in the southern San Joaquin Valley; California condors have rarely been documented in flight directly over the flat, highly agricultural Valley floor (USFWS 1996c). However, where flat, agricultural regions are less extensive, such as the Cuyama Valley, condors have been documented high above in flight in route to foraging grounds.

Early condor recovery actions focused on habitat protection and preservation as a means to reduce mortality and control the population decline. The California condor recovery strategy was modified to emphasize a captive breeding program and intensive management actions to reestablish the species in the wild, which included radiotelemetry studies. The last wild California condors were captured in 1987 and taken into captivity due to the precipitous decline in the species' (fewer than 20 remaining individuals) population. Condors reared in captivity as well as some of the originally captured individuals have been reintroduced into the wild since 1992. The reintroductions in California were initially focused in northeastern Ventura County (including the Sespe Condor Sanctuary), Big Sur mountains and coast, and Pinnacles National Monument. Issues with reintroductions included mortalities that resulted from predation, starvation, and infection. Mortality of California condors has also been attributed to power line collisions, lead exposure and poisoning, shooting, and microtrash ingestion at nest sites.

The goal of the California condor Recovery Plan is to establish two (2) geographically separate populations in the wild and to maintain one captive population, each with 150 birds and at least 15 breeding pairs (USFWS 1996c). The reintroduced populations would be established in California and in areas of northern Arizona, southeastern Nevada, and southern Utah. In order to achieve recovery goals, the number of California condor release sites and supplemental feeding stations has increased. Population growth has been steady over the last couple of decades. In the last decade, the wild population has continued to produce offspring, numbering 35 survivors at the end of 2012 (USFWS 2013). As of May 2013, the total population of California condors was 435 individuals; the wild population consists of 237 condors. The wild population continues to exceed the number in captivity, which is 198 birds. Wild populations now occur in central and southern California, in Arizona, and in northern Baja California (USFWS 2013).

About 570,400 acres have been designated as critical habitat for California condor (USFWS 2014c). RAB Consulting conducted a review of critical habitat areas established by the USFWS to protect key habitat for this species. Based on our review, the closest area of designated critical habitat for California condor is located approximately 31.5 miles to the southeast of the proposed project site. No designated critical habitat for California condor is present in the proposed project sites (USFWS 2016b).

In the CNDDDB, no condor sightings have been documented in proximity to the proposed project site (CDFW 2016). Based on RAB Consulting's review of sighting records from eBird, a California condor was documented soaring approximately 3.55 miles east of the proposed project site on July 16, 2013 (eBird 2016). As described above, eBird is an online database of bird sightings reported by professional and recreational birders that is maintained by the National Audubon Society and the Cornell University Lab of Ornithology.

No known roosts or potential nesting sites (cliffs at higher elevations or old growth forest) were identified in the project sites or buffer areas. Potential foraging habitat (annual grassland) is present within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. No suitable roost sites or potential

nesting habitat for this species were observed in the proposed project sites or buffer areas. No individual condors were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3). While California condor may occasionally fly over in route to foraging grounds, the species is not anticipated to occur in the proposed project sites or buffer areas based on a lack of suitable roost and/or nest sites and lack of adequate forage.

MAMMALS

Pallid Bat is a locally common species of low elevations in California. The species occurs throughout the State, except for the high Sierra Nevada from Shasta to Kern Counties (Zeiner *et al.*, 1990). Pallid bats are year round occupants of grassland, shrubland, woodland, and forest habitats (CDFW 2016). These bats prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Unlike other bat species, pallid bats prey on the ground or in foliage, rather than in flight.

Suitable foraging habitat (non-native annual grassland and oak forest) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, we did not observe any known roosts or potential maternity or nesting sites in the proposed project sites or buffer areas. No individual bats were observed during biological surveys. This bat species has not been documented in the proposed project sites (CDFW 2016) (see Figure 3).

Townsend's Big-eared Bat is a locally common species of low elevations in California. The species occurs throughout the State (Zeiner *et al.*, 1990). This bat species are year round occupants of grassland, shrubland, woodland, and forest habitats (CDFW 2016). These bats prefer rocky outcrops, cliffs, and crevices with access to open habitats for foraging. Unlike other bat species, pallid bats prey on the ground or in foliage, rather than in flight.

Suitable foraging habitat (non-native annual grassland and oak forest) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, we did not observe any known roosts or potential maternity or nesting sites in the proposed project sites or buffer areas. No individual bats were observed during biological surveys. This bat species has not been documented in the proposed project sites (CDFW 2016) (see Figure 3).

American Badger (*Taxidea taxus*) is widespread across the drier portions of the western United States where suitable habitat is characterized by most open vegetation communities with dry, friable soils. These include grassland and shrub communities, and open stages of some woodland communities. Home range estimates vary geographically and seasonally, but have

ranged between 338 and 1,549 acres (Messick and Hornocker 1981, Lindzey 1978). Badgers mate in summer and early fall, and most young are born in March and April (Long 1973). The most common signs of habitat occupation by badgers include dens and fresh diggings. Badger dens exhibit characteristics that are diagnostic of the species (e.g., dome-shaped entrance with claw marks in the upper portion of the entrance).

We observed potential habitat (non-native annual grassland) for the American badger during biological surveys within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, no potential burrows of appropriate size for use by this species were observed during biological surveys. No individuals or sign (i.e., scat, tracks, digging, prey remains) of badger activity were observed in the proposed project sites or buffer areas. This species has not been documented within or in proximity to the proposed project sites (CDFW 2016) (see Figure 3). However, given the species' large home range sizes and the presence of suitable habitat within and adjacent to the proposed project sites, the species is considered to have some potential to occur within the proposed project sites and buffer areas.

Salinas Pocket Mouse prefers annual grassland habitat on fine- textured, sandy soils. They may also occur on a variety of other substrates in annual grassland and desert shrub communities, especially where plant cover is not dense and soils are friable. The known distribution of this species extends from near Soledad southward to Hog Canyon in the Salinas Valley, Monterey County.

Suitable habitat (non-native annual grassland) was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. Potential burrows that were of appropriate size for use by this species were observed within the boundaries of the proposed Hames Valley # 3 project site, along portions of the existing access road to the Hames Valley # 3 well site, and southwest of the proposed Hames Valley # 1 well site in the project buffer area. No individual mice were observed during biological surveys. This species has not been documented within the boundaries of or in proximity to the proposed project sites (CDFW 2016) (see Figure 3).

San Joaquin Kit Fox historically occurred throughout the southern portion of the San Joaquin Valley, along the eastern edge of the San Joaquin Valley, and in the dry interior valleys of the Coast Ranges. The species occurs in a variety of open grassland, oak savannah, and shrub vegetation communities. However, in the southern portion of its range it is generally found in sparse annual grassland and scrub communities (e.g., valley sink scrub, saltbush scrub). Den characteristics of the subspecies vary across its range. In the southern portion of its range the taxon often creates dens with two entrances; natal/pupping dens typically have multiple entrances. Entrances range from 8 to 10 inches in diameter and are normally higher than wide,

but kit foxes can utilize dens with entrances as small as four inches in diameter. Kit foxes often change dens on a regular basis. Home ranges for the taxon have been reported by several authors to range from 1 to 12 square miles (USFWS 1998).

Monterey County is considered to be the northern portion of the San Joaquin kit fox range in the general project region; however, few sightings have been recorded in the CNDDDB (CDFW 2016) for the county. The Salinas River corridor, approximately 2.02 miles to the northeast of the proposed Hames Valley # 4 project site, is likely utilized by San Joaquin kit fox for movement in this portion of its range.

The Endangered Species Recovery Program (ESRP 1999) conducted a study to estimate the quality of habitat under managed/protected lands and under private ownership. Kit fox populations were delineated from public land survey townships that corresponded to the general area of the named populations. The three (3) core kit fox populations were assigned sixteen (16) townships each, eight (8) secondary populations were assigned eight (8) townships each, and eight (8) tertiary populations were assigned four (4) townships each. The nearest core kit fox population is the Salinas River Valley population, which begins near King City and encompasses Camp Roberts to the south. The project site is in the vicinity of the southern end of this core population area. The general range of the San Joaquin kit fox in the Salinas Valley is between Soledad on the north and the Carrizo Plain on the south.

Potential foraging habitat was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, within the buffer area of the Hames Valley # 1, 2, and 3 well sites, and within the buffer area of the existing access roads to the Hames Valley # 2 and 3 well sites. No suitable habitat was observed within the Hames Valley # 1 and 4 well sites, and the existing access roads to the Hames Valley # 1, 2, 3 and 4 well sites. However, no potential burrows of appropriate size for use by this species were observed during biological surveys. No individuals or sign (i.e., scat, tracks, digging, prey remains) of badger activity were observed in the proposed project sites or buffer areas. This species has been documented approximately 0.2 miles west of the existing access road to the Hames Valley # 4 well site (CDFW 2016) (see Figure 3). Although no burrows suitable for potential denning were observed within the proposed project sites and buffer areas at the time of our biological surveys, it is possible that the proposed project sites may accommodate foraging San Joaquin kit fox. However, forage would be limited in the proposed project sites based on a lack of small mammal burrows that would support a suitable prey base.

Incidental Wildlife

Wildlife species that we recorded during our biological surveys for special-status species are listed in Table 2 below. A few avian species protected under the Federal Migratory Bird Treaty Act were observed during biological surveys (see Table 2). Common raven and other raptors such as red-tailed hawk may construct nests in oak trees adjacent to the proposed well sites and existing access roadways in project buffer areas. However, in the event that migratory birds and raptors become established in the proposed project sites prior to project implementation, avoidance measures are included as recommendations in this report.

Oak Trees

The Open Space and Land Use Elements of the Monterey County General Plan 2006, and the Monterey County Zoning Ordinance (Section 21.64.260) provide protections for any oak tree with a trunk that is over 6 inches in diameter at breast height. A number of oak trees occur adjacent to the proposed well sites and existing access roadways and would fall under the protection of these regulations. However, the proposed project has been designed to completely avoid these resources. Therefore, no impacts to oak trees are expected during project implementation.

SPECIAL-STATUS PLANTS

Based on literature and database reviews, and the findings of the biological surveys on May 2 and June 3, 2016, no special-status plant species have the potential to occur in the proposed project sites. Suitable habitat for special-status plant species was observed within the Hames Valley # 2 and 3 well sites, within the proposed access road to the Hames Valley # 2 well site, adjacent to the southwestern edge of the Hames Valley # 1 well site within the buffer area, and adjacent to portions of the existing access roads to all four (4) proposed well sites within the buffer area. Based on the habitat requirements of targeted plant species, historic and current land use, and botanical surveys conducted within the proposed project sites and buffer areas on May 2 and June 3, 2016, RAB Consulting determined that special-status plant species are not expected to occur or become established in the proposed project sites. Therefore, no impacts to special-status plants would result from project implementation.

Table 2

List of Animal and Plant Species Observed During Biological Surveys

Scientific name	Common name
Animals	
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus brachyrhynchos</i>	American crow
<i>Corvus corax</i>	Common raven
<i>Elgaria coerulea</i>	Northern alligator lizard
<i>Lepus californicus</i>	Black-tailed jackrabbit
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Spermophilus beecheyi</i>	California ground squirrel
<i>Sturnella neglecta</i>	Western meadowlark
<i>Zenaida macroura</i>	Mourning dove
Plants	
<i>Amaranthus deflexus</i>	Low amaranth
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Common fiddleneck
<i>Anagallis arvensis</i>	Scarlet pimpernel
<i>Avena fatua</i>	Wild oat
<i>Brassica nigra</i> L. Koch	Black mustard
<i>Bromus carinatus</i>	California brome
<i>Bromus diandrus</i>	Ripgut grass
<i>Bromus hordeaceus</i>	Soft cheat grass
<i>Bromus madritensis</i> ssp. <i>rubens</i>	Red brome
<i>Capsella bursa-pastoris</i>	Shepherd's purse
<i>Centaurea calcitrapa</i>	Purple star thistle
<i>Convolvulus arvensis</i>	Field bindweed
<i>Croton setiger</i>	Turkey mullein
<i>Datura stramonium</i>	Jimson weed
<i>Erodium cicutarium</i>	Redstem filaree
<i>Erodium moschatum</i>	Whitestem filaree
<i>Festuca bromoides</i>	Six-week fescue
<i>Filago gallica</i>	Narrow-leaved filago
<i>Gnaphalium luteo-album</i>	Weedy cudweed
<i>Heliotropium curasscicum</i>	Chinese pursley
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Barnyard foxtail
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Malva parviflora</i>	Cheeseweed
<i>Medicago polymorpha</i> ssp. <i>vulgaris</i>	Bur clover
<i>Melilotus officinalis</i>	Yellow sweet clover
<i>Phalaris aquatica</i>	Harding grass
<i>Picris echioides</i>	Bristly ox-tongue
<i>Polygonum argyrocoleon</i>	Silversheath knotweed
<i>Polypogon monspeliensis</i>	Rabbitsfoot grass
<i>Portulaca oleracea</i>	Common purslane
<i>Quercus douglasii</i> Hook. and Arn.	Blue oak
<i>Sonchus asper</i>	Spiny sowthistle

ANALYSIS OF POTENTIAL IMPACTS

The biological assessment conducted for the Hames Valley project found that no special-status animal or plant species were present within the boundary of the proposed project sites. No riparian, wetland, vernal pool, or other sensitive community types were observed within the

proposed project sites during the biological survey. A highly disturbed ephemeral stream was observed directly southeast of the proposed Hames Valley # 4 well site. No impacts to this ephemeral stream is proposed during project activities.

Direct mortality or injury to common wildlife and plant populations could occur during site preparation activities and project drilling and production testing operations associated with implementation of the project. Small vertebrate, invertebrate, and plant species are particularly prone to impact during project implementation because they are much less to non-mobile, and cannot easily move out of the path of project activities. Other more mobile wildlife species, such as most birds and larger mammals, can avoid project-related activities by moving to other adjacent areas temporarily. Increased human activity and vehicle traffic in the vicinity may disturb some wildlife species. Because common wildlife species found in the project area are locally and regionally common, potential impacts to these resources are considered less than significant. Therefore, no avoidance or minimization measures are proposed at this time.

Implementation of the proposed project could potentially impact individual San Joaquin kit fox or their dens, in the event they become established in the proposed project sites prior to project implementation. Impacts to kit fox could occur through crushing by construction, drilling and production testing equipment during project activities. This species could also be affected due to noise and vibration from project activities if dens are located closer than 250 feet to the proposed project sites; project related noise and vibration could cause the abandonment of occupied den sites. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual and nesting burrowing owls should they become established within the proposed project sites or buffer areas prior to project implementation. Impacts to this species could occur through crushing by construction and drilling and production testing equipment during implementation of project activities. Actively nesting burrowing owls could also be affected due to noise and vibration from project activities if nests are located closer than 250 feet to the proposed project sites; project related noise and vibration could cause the abandonment of active nest sites. Impacts to this species would be considered significant. In the event that burrowing owls become established in the proposed project sites or buffer areas, avoidance and minimization measures to protect this species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project is not expected to impact foraging activities of California condors. As stated previously, California condors are opportunistic scavengers, feeding exclusively on the carcasses of large dead animals. This species may potentially fly over the general area, in route to foraging grounds. There is the remote possibility that cattle might die near the Hames Valley # 2 and 3 well sites, which could attract California condors. However, this is a remote possibility. There is also the possibility that California condors could visit the proposed well sites and accidentally ingest microtrash and other hazardous fluid at the proposed well sites. Ingesting of microtrash has been documented by the USFWS on a number of occasions in California, and this has led to mortality of these individual condors (USFWS 2016).

Impacts to California condors would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

No nesting habitat was observed at the proposed project sites or buffer areas. Therefore, there is no substantial evidence that the proposed project would impact nesting activities of the California condor. Furthermore, no California condors were observed during the course of biological surveys for the proposed project, and no condor sightings have been documented in the proposed project sites by the CNDDDB (CDFG 2016). In the unlikely event that California condor becomes established in the proposed project sites, avoidance and mitigation measures to protect this species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section. Protective measures include implementing an environmental awareness program, conducting pre-construction and nesting bird surveys, and employing best management practices and housekeeping measures that ensure trash and fluids are not available to affect wildlife species in a negative manner. Implementation of these measures would be intended to avoid or reduce these potential impacts to a less-than-significant level. The recommended measures are feasible and appropriate to reduce impacts under CEQA to the California condor.

Implementation of the proposed project could potentially impact individual and nesting migratory bird and raptor species (including special-status species) should they become established within the proposed project sites prior to project implementation. Impacts to migratory bird and raptor species could occur through crushing by construction and drilling and production testing equipment during implementation of project activities. Actively nesting birds could also be affected due to noise and vibration from project activities, if nests are located closer than 250 feet to the proposed project sites. Project related noise and vibration could cause the abandonment of active nest sites. Impacts to these species would be considered significant. In the event that nesting birds are present or become further established in the proposed project sites, avoidance and minimization measures to protect these species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual American badgers or their dens, in the event they become established in the proposed project sites prior to project implementation. Impacts to badgers could occur through crushing by construction, drilling and production testing equipment during project activities. This species could also be affected due to noise and vibration from project activities if dens are located closer than 250 feet to the proposed project sites; project related noise and vibration could cause the abandonment of occupied den sites. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project has the potential to impact potential foraging habitat of the pallid bat and Townsend's big-eared bat. This species could potentially forage in all habitats found within the proposed project sites and buffer areas during biological surveys. Impacts to foraging habitat are considered less than significant as an abundance of such habitat is found throughout the immediate and general project area. No active or potential roosting/maternity

sites of this species were observed within the proposed project sites or buffer areas during biological surveys, nor was this species observed. This species has not been documented in the proposed project sites or buffer areas by CNDDDB (see Figure 3). Therefore, no impacts to roosting or maternity sites is expected as a result of project implementation.

Implementation of the proposed project could potentially impact individual coast horned lizards and silvery legless lizards in the event they are present in the proposed project sites prior to project implementation. Impacts to these lizards could occur through crushing by construction, drilling and production testing equipment during project activities. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual San Joaquin whipsnakes or their burrows, in the event they become established in the proposed project sites prior to project implementation. Impacts to whipsnakes could occur through crushing by construction, drilling and production testing equipment during project activities. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual Salinas pocket mice or their burrows, in the event they become established in the proposed project sites prior to project implementation. Impacts to Salinas pocket mice could occur through crushing by construction, drilling and production testing equipment during project activities. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Traffic, consisting predominantly of oilfield personnel and vehicles in the proposed project sites is sporadic. A short-term increase in vehicle traffic is anticipated during project implementation and less so after project completion. This will result in a short-term increase in associated noise, which may cause temporary disturbance to common wildlife species. Increased vehicular traffic could cause direct mortality to these species or impede normal activities such as dispersal (Luckenbach 1975, Weinstein 1978). Species intolerant of human activities may use the proposed project sites less when humans are regularly present in the area (Bushnel 1978, Lee and Griffith 1977). Those species observed during biological surveys appear to have acclimated to ongoing oil and gas exploration and production activities near the proposed project sites.

The project would not interfere with movements of wildlife species or with established native resident or migratory wildlife corridors. Native resident and/or migratory fish and known native wildlife nursery sites are not present within the proposed project sites or buffer areas.

PROPOSED AVOIDANCE AND MINIMIZATION MEASURES

Implementation of the proposed avoidance and minimization measures is recommended to avoid or reduce potential impacts to special-status wildlife and plant species. The avoidance and minimization measures presented below would be implemented as Operational Procedures for the proposed project.

1. Environmental Awareness Training shall be presented to all personnel working in the field on the proposed project sites. Training shall consist of a brief presentation in which biologists knowledgeable of endangered species biology and legislative protection shall explain endangered species concerns. Training shall include a discussion of special-status plants and sensitive wildlife species. Species biology, habitat needs, status under the Endangered Species Act, and measures being incorporated for the protection of these species and their habitats shall also be discussed.
2. As close to the beginning of project activities as possible, but not more than 14 days prior, a qualified biologist shall conduct a final pre-construction survey of the proposed project site and buffer area to verify that no special-status wildlife species have become established in the proposed project site or buffer area. A qualified biologist shall be present immediately prior to project activities that have potential to impact sensitive species to identify and protect potentially sensitive resources.
3. Project site boundaries shall be clearly delineated by stakes and /or flagging to minimize inadvertent degradation or loss of adjacent habitat during project site preparation and drilling operations. Staff and/or its contractors shall post signs and/or place fence around the proposed project sites to restrict access of vehicles and equipment unrelated to drilling operations.
4. If San Joaquin kit foxes become established within the proposed project sites or buffer areas prior to project implementation, Trio will implement the following measures (measures 4-9) contained in the USFWS's *Standardized Recommendations For Protection of the Endangered San Joaquin Kit Fox Prior to or During Ground Disturbance* (USFWS 2011):
 - a) For kit fox dens within 200 feet of proposed construction area(s), exclusion zones shall be established prior to construction by a qualified biologist. Exclusion zones shall be roughly circular with a radius of the following distances measured outward from the entrance:

Potential den	50 feet
Atypical den	50 feet
Known den	100 feet
Natal/pupping den (occupied <u>and</u> unoccupied)	USFWS must be contacted

- b) Protective exclusion zones can be placed around all known and potential dens which occur outside the project footprint (conversely, the project boundary can be demarcated).
 - c) To ensure protection of known dens, exclusion zones should be demarcated by fencing that encircles each den at the appropriate distance and does not prevent access to the den by kit foxes. Acceptable fencing includes untreated wood particle-board, silt fencing, or orange construction fencing, as long as it has opening for kit fox ingress/egress and keeps humans and equipment out.
 - d) Exclusion zone barriers shall be maintained until all construction related or operational disturbances have been terminated. At that time all fencing shall be removed to avoid attracting subsequent attention to the dens.
 - e) For potential and/or atypical dens, placement of 4-5 flagged stakes 50 feet from the den entrance(s) will suffice to identify the den location; fencing will not be required, but the exclusion zone must be observed.
 - f) Only essential vehicle operation on existing roads and foot traffic should be permitted. Otherwise, all construction, vehicle operation, material storage, or any type of surface-disturbing activity should be prohibited or greatly restricted within the exclusion zones.
5. If a natal/pupping den is discovered within the proposed project sites or within 200-feet of the project boundaries, the USFWS shall be immediately notified and under no circumstances should the den be disturbed or destroyed without prior authorization. If the preconstruction/preactivity survey reveals an active natal pupping den or new information, Trio should contact the USFWS immediately to obtain the necessary take authorization/permit.
6. Destruction of any known or natal/pupping kit fox den requires take authorization/permit from the USFWS. Limited destruction of kit fox dens may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed:
- a. Known dens occurring within the footprint of the project must be monitored for three (3) consecutive days with tracking medium or an infra-red camera beam to determine the current use. If no kit fox activity is observed during this period, the den(s) should be destroyed immediately to preclude subsequent use.
 - b. If kit fox activity is observed at the den(s) during this period, the dens) should be monitored for at least five (5) consecutive nights from the time of the observation to allow any resident animal to move to another den during its normal activity. Only when the den(s) are determined unoccupied may the den(s) be excavated.

- c. Destruction of the den(s) should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den(s) should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter to use the den(s) during the construction period. If at any point during excavation, a kit fox is discovered inside the den(s), the excavation activity shall cease immediately and monitoring the den as described above should resume. Destruction of the den(s) may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den(s).
7. Potential dens occurring within the footprint of the project or within 50 feet must be monitored for three (3) consecutive days with tracking medium or an infra-red camera beam to determine the current use. If no kit fox activity is observed during this period, the den(s) should be destroyed immediately to preclude subsequent use.
8. Destruction of the den(s) should be accomplished by careful excavation until it is certain that no kit foxes are inside. The den(s) should be fully excavated, filled with dirt and compacted to ensure that kit foxes cannot reenter to use the den during the construction period. If at any point during excavation, a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring the den as described above should resume. Destruction of the den may be completed when in the judgment of the biologist, the animal has escaped, without further disturbance, from the partially destroyed den.
9. If any kit fox den is considered to be a potential den, but is later determined during monitoring or destruction to be currently, or previously used by kit fox (e.g., if kit fox sign is found inside), then all construction activities shall cease and the USFWS shall be notified immediately.
10. Trio shall implement the following mitigation measures to avoid significant impacts to American badgers:
 - A pre-construction survey of the project disturbance zone and areas immediately adjacent to the disturbance zone shall be conducted at least two (2) weeks prior to implementation of the proposed project and ground disturbance activities to determine if potentially active or known active den sites are present.
 - If potential dens are found during pre-construction surveys, a qualified biologist shall excavate these dens by hand with a shovel to prevent badgers from re-using them during construction.
 - If the qualified biologist determines that potential dens may be active, the entrances of the dens shall be blocked with soil, sticks, and debris for three (3) to five (5) days to discourage the use of these dens prior to project disturbance activities. The den entrances shall be blocked to an incrementally greater degree over the three (3) to five (5)-day period. After the qualified biologist determines that badgers have stopped using active dens, the dens shall be hand-excavated

with a shovel to prevent re-use during construction.

11. Pre-construction nesting surveys shall be conducted for nesting migratory avian and raptor species in the proposed project sites and buffer areas. Pre-construction surveys shall occur prior to the proposed project implementation, and during the appropriate survey periods for nesting activities. Surveys will follow required CDFW and USFWS protocols, where applicable. A qualified biologist will survey suitable habitat for the presence of these species. If a migratory avian species is observed and suspected to be nesting, a 250-foot buffer area will be established to avoid impacts to the active nest. If no nesting avian species are found, project activities may proceed and no further mitigation measures will be required. If active nesting sites are found, the following exclusion buffers will be established, and no project activities will occur within these buffer zones until young birds have fledged.
 - a. If ground disturbing activities occur during breeding season (February through mid-September), surveys for active nests will be conducted by a qualified biologist no more than 10 days prior to start of activities. Minimum no disturbance of 250 feet around active nest of non-listed bird species and 250 foot no disturbance buffer around migratory birds; and 0.5-mile no disturbance buffer from listed species and fully protected species until breeding season has ended or until a qualified biologist has determined that the birds have fledged and are no longer reliant upon the nest or parental care for survival.
12. The following measures included in the CDFW's *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) shall be implemented by Trio for the proposed project:
 - a. If preconstruction surveys determine that burrowing owls are present in the proposed project sites and/or buffer areas, a burrowing owl mitigation plan shall be prepared by a qualified biologist describing recommended site specific shelter-in-place measures, worker training, and/or other measures to ensure that Project construction does not result in adverse impacts to the burrowing owls.
 - b. Occupied burrows shall not be disturbed during the burrowing owl nesting season (February 1 through August 31) unless a qualified biologist approved by the CDFW verifies through non-invasive methods that either: (1) the birds have not begun egg-laying and incubation; or (2) that juveniles from the occupied burrows are foraging independently and are capable of independent survival.
 - c. Burrowing owls present in the project sites or within 500 feet (as identified during preconstruction surveys) shall be moved away from the disturbance area using passive relocation techniques. Prior to commencement of relocation, a management plan shall be prepared and approved by CDFW. Relocation shall be completed between September 1 and January 31 (outside of breeding season). A minimum of one or more weeks is required to relocate the owls and allow them to acclimate to alternate burrows. Passive relocation techniques will follow the CDFG Staff Report

on Burrowing Owl Mitigation Guidelines (2012) and include the following measures:

- i. Install one-way doors in burrow entrances. Leave doors in place for 48 hours to ensure owls have left the burrow.
- ii. Allow one or more weeks for owls to acclimate to off-site burrows. Daily monitoring shall be required for the passive relocation period.
- iii. Once owls have relocated off-site, collapse existing burrows to prevent reoccupation. Prior to burrow excavation, flexible plastic pipe shall be inserted into the tunnels to allow escape of any remaining owls during excavation. Excavation shall be conducted by hand whenever possible.
- iv. Destruction of burrows shall occur only pursuant to a management plan approved by CDFW.
- v. As an alternative (if approved by CDFW), all occupied burrows identified off-site within 500 feet of construction activities outside of nesting season (September through January) and during nesting season (February 1 through August 31) could be buffered by hay bales, fencing (e.g. sheltering in place) or as directed by a qualified biologist and the CDFW.

13. During construction and operation, Trio shall adhere to the following USFWS recommended California condor best management practices (BMPs):

- All power lines, poles, and guy wires shall be retrofitted with raptor guards, flight diverters, and other anti-perching or anti-collision devices to minimize the potential for collision or electrocution of condors. Landing deterrents shall be attached to the walking beams on pumping units.
- All surface structures which are identified as a risk to California condors shall be modified or relocated to reduce or eliminate the risk.
- All construction debris, food items, and other trash including microtrash will be covered or otherwise removed from a project site at the end of each day or prior to periods when workers are not present at the project sites.
- All hoses or cords that must be placed on the ground due to drilling operations that are outside of the primary work area (immediate vicinity of the drilling rig) will be covered to prevent California condor access. Covering will take the form of burying or covering with heavy mats, planks, or grating that will preclude access.
- All equipment and work-related materials (including, but not limited to, loose wires, open containers, rags, hoses, or other supplies or materials) shall be contained in closed containers either in the work area or placed inside vehicles.
- Well sites shall be inspected closely for microtrash on a daily basis.
- Ethylene glycol based antifreeze or ethylene glycol based liquid substances shall be avoided, and propylene glycol based antifreeze will be encouraged. Equipment or vehicles that use ethylene glycol based antifreeze or other ethylene glycol based liquid

substances shall be inspected daily for leaks, including (but not limited to) areas below vehicles for leaks and puddles. Standing fluid will be remediated immediately upon discovery. Leaks shall be repaired immediately. The changing of antifreeze of any type shall be prohibited onsite.

14. Trio shall conduct field surveys and, if necessary, trap and relocate Salinas Pocket Mice prior to ground disturbance within the expansion area.
15. As close to the beginning of construction as possible, but no more than 30 days prior to construction, a qualified biologist shall conduct a pre-project survey for California horned lizards and silvery legless lizards. Coast horned lizards and silvery legless lizards shall be removed from the proposed project site (by capture by a qualified biologist) and moved to a safe adjacent location.
16. Preconstruction surveys for San Joaquin whipsnake shall be completed within potential areas of habitat within the proposed project sites and buffer areas. Surveys shall be conducted by a qualified biologist within 30 days of project initiation. If San Joaquin whipsnake are identified, they shall be removed from the proposed project site (capture by a qualified biologist) and moved to a safe adjacent location.
17. A project representative shall establish restrictions on project-related traffic to approved project areas, storage areas, staging and parking areas via signage. Off-road traffic outside of designated proposed project site shall be prohibited.
18. Project-related traffic shall observe a 15 mph speed limit in the project site except on County roads and State and federal highways to avoid impacts to special-status and common wildlife species.
19. Project activities shall be scheduled to avoid evening hours, as feasible, to avoid special-status wildlife species that are active in the nighttime.
20. Hazardous materials, fuels, lubricants, and solvents that spill accidentally during project-related activities shall be cleaned up and removed from the project as soon as possible according to applicable federal, state and local regulations.
21. All equipment storage and parking during site development and operation shall be confined to the proposed project sites.
22. All excavated steep-walled holes or trenches in excess of three (3) feet in depth shall be provided with one or more escape ramps constructed of earth fill to prevent entrapment of endangered species or other animals. Ramps shall be located at no greater than 1,000-foot intervals (for pipelines etc.) and at not less than 45-degree angles. Trenches shall be inspected for entrapped wildlife each morning prior to onset of project activities and immediately prior to the end of each working day. Before such holes or trenches are filled they shall be inspected thoroughly for entrapped animals. Any animals discovered shall be allowed to escape voluntarily without harassment before project activities related to the

trench resume, or removed from the trench or hole by a qualified biologist and allowed to escape unimpeded.

23. All pipes, culverts, or similar structures stored at the proposed project sites overnight having a diameter of four (4) inches or greater shall be inspected thoroughly for wildlife species before being buried, capped, or otherwise used or moved in any way. Pipes laid in trenches overnight shall be capped. If during project implementation a wildlife species is discovered inside a pipe, that section of pipe shall not be moved or, if necessary, moved only once to remove it from the path of project activity, until the wildlife species has escaped.
24. All food-related trash items such as wrappers, cans, bottles or food scraps generated during project activities shall be disposed of only in closed containers and regularly removed from the proposed project sites. Food items may attract wildlife species onto the proposed project site, consequently exposing such animals to increased risk of injury or mortality. No deliberate feeding of wildlife shall be allowed.
25. To prevent harassment or mortality of wildlife species via predation, or destruction of their dens or nests, no domestic pets shall be permitted on-site.

CONCLUSION

Special-status species and their habitat have been documented in the general vicinity of the proposed project sites. However, no special-status animal or plant species were observed during the biological survey and assessment of the project disturbance zone or buffer area.

Direct mortality or injury to common wildlife and plant populations could occur during site preparation activities and project drilling and production testing operations associated with implementation of the project. Because common wildlife species found in the project area are locally and regionally common, potential impacts to these resources are considered less than significant. Therefore, no avoidance or minimization measures are proposed at this time.

Implementation of the proposed project could potentially impact individual San Joaquin kit fox or their dens, in the event they become established in the proposed project sites prior to project implementation. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual and nesting burrowing owls should they become established within the proposed project sites or buffer areas prior to project implementation. Impacts to this species would be considered significant. In the event that burrowing owls become established in the proposed project sites or buffer areas, avoidance and minimization measures to protect this species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project is not expected to impact foraging activities of California condors. However, there is the remote possibility that dead cattle might attract California condors. However, this is a remote possibility. There is also the possibility that California condors could visit the proposed well sites and accidentally ingest microtrash and other hazardous fluid at the proposed well sites. Ingesting of microtrash has been documented by the USFWS on a number of occasions in California, and this has led to mortality of these individual condors (USFWS 2016). Impacts to California condors would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual and nesting migratory bird and raptor species (including special-status species) should they become established within the proposed project sites prior to project implementation. Impacts to these species would be considered significant. In the event that nesting birds are present or become further established in the proposed project sites, avoidance and minimization measures to protect these species from potential impacts are described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual American badgers or their dens, in the event they become established in the proposed project sites prior to project implementation. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project has the potential to impact potential foraging habitat of the pallid bat and Townsend's big-eared bat. Impacts to foraging habitat are considered less than significant as an abundance of such habitat is found throughout the immediate and general project area. No active or potential roosting/maternity sites of this species were observed within the proposed project sites or buffer areas during biological surveys, nor was this species observed. Therefore, no impacts to roosting or maternity sites is expected as a result of project implementation.

Implementation of the proposed project could potentially impact individual coast horned lizards and silvery legless lizards in the event they are present in the proposed project sites prior to project implementation. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual San Joaquin whipsnakes or their burrows, in the event they become established in the proposed project sites prior to project implementation. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

Implementation of the proposed project could potentially impact individual Salinas pocket mice or their burrows, in the event they become established in the proposed project sites prior to

project implementation. Impacts to this species would be considered significant. Avoidance and minimization measures to protect this species from potential impacts are included and described further in the ***Proposed Avoidance and Minimization Measures*** section.

LITERATURE CITED AND REFERENCES CONSULTED

- Abrams, L. 1923. Illustrated flora of the Pacific states. Volume I. Stanford University Press, Stanford, California. 538 pp.
- Abrams, L. 1944. Illustrated flora of the Pacific states. Volume II. Stanford University Press, Stanford, California. 635 pp.
- Abrams, L. 1951. Illustrated flora of the Pacific states. Volume III. Stanford University Press, Stanford, California. 866 pp.
- Abrams, L. and R. S. Ferris. 1960. Illustrated flora of the Pacific states. Volume IV. Stanford University Press, Stanford, California. 732 pp.
- Barrett, R. H. 1980. Mammals of California oak habitats: management implications. Pages 275-291 In T. R. Plumb, tech. coord. Ecology, management, and utilization of California oaks. U.S. Dep. Agric., For. Serv. (Berkeley, Calif.), Gen. Tech. Rep. PSW-44.
- Burt, W. B. and R. P. Grossenheider. 1976. A field guide to the mammals. Houghton Mifflin Company. Boston, Massachusetts. 289 pp.
- Bushnel, R. G. 1978. Effect of noise on wildlife. Introduction. Pages 7-22. In: Fletcher, J. L. and R. G. Busnel (eds.). Effects of noise on wildlife. Academic Press, New York. 305 pp.
- CDFG (California Department of Fish and Game). 1980. At the crossroads, a report on the status of California's Endangered and rare fish and wildlife. Amended July 1983. State of California Resources Agency, Sacramento, California. 147 pp.
- CDFG (California Department of Fish and Game). 1984. Guidelines for assessing effects of proposed developments on rare and endangered plants and plant communities. The Resource Survey, California Department of Fish and Game.
- CDFG (California Department of Fish and Game). 1989. Designated Endangered or Rare Plants. State of California, Resources Agency.
- CDFG (California Department of Fish and Game). 1990. Region 4 Survey methodologies for San Joaquin kit fox, blunt-nosed leopard lizard, San Joaquin antelope squirrel, Tipton kangaroo rat, giant kangaroo rat. Compiled by R. Rempel and G. Presley.
- CDFG (California Department of Fish and Game). 1995. Staff report on burrowing owl mitigation. Unpublished protocol, California Department of Fish and Game, Sacramento, California. 8 pp.

- CDFG (California Department of Fish and Game). 2000. Guidelines for assessing effects of proposed developments on rare and endangered plants and natural communities. The Resource Survey, California Department of Fish and Game.
- CDFG (California Department of Fish and Game). 2004. Natural Diversity Database Special Animals. Unpublished list.
- CDFG (California Department of Fish and Game). 2009. Protocols for Surveying and evaluating impacts to special-status native plant populations and natural communities. California Department of Fish and Game, November 2009.
- CDFG (California Department of Fish and Game). 2012. Staff Report on Burrowing Owl Mitigation. State of California, Natural Resources Agency, Department of Fish and Game. March 7, 2012. 34 pp.
- CDFW (California Department of Fish and Wildlife). 2016. California Natural Diversity Database. Rare Find 5, for Commercial Subscribers. Habitat Planning and Conservation Branch. Electronic Database.
- CNPS (California Native Plant Society). 1991. Mitigation guidelines regarding impacts to rare, threatened, and endangered plants. Unpublished manuscript by California Native Plant Society – Rare plant scientific advisory committee. 17 pp.
- CNPS (California Native Plant Society). 2001a. Inventory of Rare and Endangered Vascular Plants of California, 6th Edition. Rare Plant Scientific Advisory Committee, David P. Tibor, Convening Editor. California Native Plant Society. Sacramento, California. 388 pp.
- CNPS (California Native Plant Society). 2001b. Botanical survey guidelines of the California Native Plant Society. Fremontia. 29:3-4.
- CNPS (California Native Plant Society). 2016. Inventory of Rare, Threatened, and Endangered Plants of California, 8th Edition. California Native Plant Society. Sacramento, California. Accessed from <http://www.cnps.org/inventory>.
- Cheatham, N. H. and J. R. Haller. 1975. An annotated list of California habitat types. Unpublished manuscript prepared for University of California Natural Land and Water Reserves System. 80 pp.
- Cypher, B.L., G.D. Warrick, M.R.M. Otten, T.P. O'Farrell, W.H. Berry, C.E. Harris, T.T. Kato, P.M. McCue, J.H. Scrivner and B.W. Zoellick. 2000. Population dynamics of San Joaquin kit foxes at the Naval Petroleum Reserves in California. Wildlife Society Monograph Number 145. 43 pp.
- Dragoo, J. W., J. R. Choate, T. L. Yates, and T. P. O'Farrell. 1990. Evolutionary and taxonomic relationships among North American arid-land foxes. Journal of Mammalogy. 71:318-332.

- eBird. 2014. Online database available at: <http://ebird.org/ebird/map/>. Website accessed May 21, 2014.
- Griffin, J. R. 1977. Oak woodland. Pages 383-415 In M. G. Barbour and J. Major, eds. Terrestrial vegetation of California. John Wiley and Sons, New York.
- Grinnell, J. and A. H. Miller. 1944. The Distribution of the Birds of California. Cooper Ornithological Club, Berkeley, California. 615 pp.
- Hall, E. R. 1981. The Mammals of North America. J. Wiley and Sons, Inc. New York. 1181 pp.
- Hickman, J. 1996. The Jepson Manual: Higher plants of California. University of California Press. Berkeley, California.
- Holland, R. F. 1986. Preliminary descriptions of the terrestrial natural communities of California. Unpublished manuscript, California Department of Fish and Game, Nongame - Heritage Program, Sacramento. 156 pp.
- Ingles, L. G. 1965. Mammals of the Pacific states, California, Oregon, Washington. Stanford University Press, Stanford, California. 506 pp.
- Jameson, E. W. Jr. and H. J. Peeters. 1988. California Mammals. University of California Press. Berkeley, CA. 403 pp.
- Kartesz, J. T. and R. Kartesz. 1980. A synonymized checklist of the vascular flora of the United States, Canada, and Greenland. The biota of North America, Volume II. University of North Carolina Press, Chapel Hill. 498 pp.
- Koford, C.B. 1953. The California condor. National Audubon Society, New York, NY.
- Laudenslayer, W.F., Jr., et al. 1991. A checklist of Amphibians, Reptiles, Birds, and Mammals of California. California Department of Fish and Game.
- Laughrin, L. 1970. San Joaquin fit fox, its distribution and abundance. Wildlife Management Branch Administrative Report Number 70-2. State of California Resources Agency, Department of Fish and Game. Sacramento, California. 19 pp.
- Lee, J. M. and D. B. Griffith. 1977. Transmission audible noise and wildlife. In: Proceedings Symposium Ninth International. Congress on Acoustics. July 4-9, 1977. Madrid, Spain.
- Long, C. A. 1973. *Taxidea taxus*. Mammal Species, 26:1-4.
- Luckenbach, R. A. 1975. What off-road vehicles are doing to the desert. Fremontia. 2:3-11.

- Martin, D. J. 1973. Selected aspects of burrowing owl ecology and behavior. *The Condor*. 75:446-456.
- Mayer, K.E., and W.F. Laudenslayer. 1988. A guide to wildlife habitats of California. California Department of Fish and Game, Sacramento, California. 166 pages.
- Morrell, S. 1972. Life History of the San Joaquin Kit Fox. California Department of Fish and Game. 58(3): 162-174.
- Munz, P. A. and D. D. Keck. 1968. A California flora and supplement. University of California Press, Berkeley.
- Murie, O. J. 1974. A Field Guide to Animal Tracks. Houghton Mifflin Company. Boston, MA.
- Nelson, J. R. 1987. Rare plant surveys: Techniques for impact assessment. pp. 159-166. *In*: T. Elias (ed.), Conservation and Management of Rare and Endangered Plants. California Native Plant Society, Sacramento, California.
- O'Farrell, T. P. 1983. San Joaquin kit fox recovery plan. U. S. Fish and Wildlife Service, Sacramento, California. 84 pp.
- Orloff, S.G. 1992. Survey techniques for the San Joaquin kit fox (*Vulpes macrotis mutica*). pp 185-197. *In*: Williams, D.F., S. Byrne and T. A. Rado (eds.), Proceedings of a conference on endangered and sensitive species of the San Joaquin Valley, California, Bakersfield, California, December 10-11, 1987. California Energy Commission, Sacramento, California. 388 pp.
- Orloff, S. F. Hall, and L. Spiegel. 1986. Distribution and habitat requirements of the San Joaquin kit fox in the northern extreme of its range. California-Nevada Wildlife Society Proceedings.
- Preston, W. L. 1981. Vanishing Landscapes: Land and line in the Tulare Basin. University of California Press, Berkeley, California.
- Remsen, J. V. Jr. 1978. Bird species of special concern in California, an annotated list of declining or vulnerable bird species. California Department of Fish and Game, Nongame Wildlife Investigations, Wildlife Management Branch Administrative Report Number 78-1. 52 pp.
- Sawyer, J. and T. Keeler-Wolf. 1995. A manual of California Vegetation. California Native Plant Society. Sacramento, California
- Skinner, M.W., and B.M.Pavlik. 1994. Inventory of rare and endangered vascular plants of California. California Native Plant Society Special Publication Number 1 (5th edition). California Native Plant Society, Sacramento, California. 336 pp.

- Smith, J. P. and K. Berg. 1988. Inventory of rare and endangered plants of California. California Native Plant Society Special Publication Number 4, Sacramento, California.
- Stebbins, R. C. 1985. A field guide to western reptiles and amphibians. Houghton Mifflin Company. Boston, Massachusetts. 336 pp.
- Thomsen, L. 1971. Behavior and ecology of burrowing owls on the Oakland municipal airport. *The Condor*. 73:177-192.
- USFWS (U.S. Fish and Wildlife Service). 1984. California Condor Recovery Plan, Second Revision. Washington, DC. 110 pp.
- USFWS (U.S. Fish and Wildlife Service). 1989. Standardized recommendations for the protection of the San Joaquin kit fox. April 1989.
- USFWS (U.S. Fish and Wildlife Service). 1990. Endangered and threatened wildlife and plants. *Federal Register*. 50(35): 6184-6229.
- USFWS (U.S. Fish and Wildlife Service). 1995. Standardized recommendations for the protection of the San Joaquin kit fox.
- USFWS (U.S. Fish and Wildlife Service). 1996a. Endangered and threatened wildlife and plants; Review of plant and animal taxa that are candidates for listing as endangered or threatened species. *Federal Register*. 61(40): 7596-7613.
- USFWS (U.S. Fish and Wildlife Service). 1996b. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. Unpublished Field Survey Protocol by U.S. Fish and Wildlife Service. 3 pp.
- USFWS (U. S. Fish and Wildlife Service). 1996c. California Condor Recovery Plan, Third Revision. Portland, Oregon. 62 pp.
- USFWS (U.S. Fish and Wildlife Service). 1999. Standardized recommendations for the protection of the San Joaquin kit fox prior to or during ground disturbance. Unpublished protocol prepared by U.S. Fish and Wildlife Service, Sacramento, California. 7 pp.
- USFWS (U.S. Fish and Wildlife Service). 2000. Guidelines for conducting and reporting botanical inventories for federally listed, proposed and candidate plants. United States Fish and Wildlife Service. January 2000.
- USFWS (U.S. Fish and Wildlife Service). 2011. U.S. Fish and Wildlife Service Standardized Recommendations For Protection Of The Endangered San Joaquin Kit Fox Prior To Or During Ground Disturbance. Prepared by the Sacramento Fish And Wildlife Office, January 2011. 9 pp.

- USFWS (United States Fish and Wildlife Service). 2016a. Website Address: http://sacramento.fws.gov/es/spp_lists/QuickList.cfm.
- USFWS (U.S. Fish and Wildlife Service). 2016b. Environmental Conservation Online System (ECOS). Critical Habitat Portal for Threatened and Endangered Species. Available online at: <http://ecos.fws.gov/crithab/>.
- USFWS (U.S. Fish and Wildlife Service). 2016c. Environmental Conservation Online System (ECOS). Species profiles available online at: <http://ecos.fws.gov>.
- USFWS (U.S. Fish and Wildlife Service). 2013. California Condor (*Gymnogyps californianus*) 5-Year Review: Summary and Evaluation. U.S. Fish and Wildlife Service. Pacific Southwest Region. June 2013. 64 pp.
- Verner, J. 1980a. Birds of California oak habitats: management implications. Pages 246-264 In T. R. Plumb, tech. coord. Ecology, management, and utilization of California oaks. U.S. Dep. Agric., For. Serv. (Berkeley Calif.) Gen. Tech. Rep. PSW-44.
- Weinstein, M. 1978. Impact of off-road vehicles on the avifauna of Afton Canyon, California. Report to Bureau of Land Management, California Desert Plan Program, Riverside California. Contract Number CA-0606-CT7-2734. 34 pp.
- Wilbur, S.R. 1978. The California condor, 1966-76: A look at its past and future. U.S. Fish and Wildlife Service North America Fauna 72:1-136.
- Williams, D. F. 1986. Mammalian species of special concern in California. California Department of Fish and Game, Wildlife Management Division, Administrative Report. 86-1. 112 pp.
- Zarn, M. 1974. Habitat management for unique or endangered species. Burrowing owl, *Speotyto cunicularia hypugaea*, Report Number 11. Technical Note, U. S. Department of Interior, Bureau of Land Management. Denver, Colorado. 25 pp.
- Zeiner, D. C., W. F. Laudenslayer, Jr., K. E. Mayer and M. White. 1990. California's wildlife. Volume I - amphibians and reptiles. Volume II - birds, and Volume III - mammals. California Department of Fish and Game. Sacramento, California.

APPENDIX A
REPRESENTATIVE PHOTOGRAPHS



Photograph 1

Hames Valley # 1 well site. View looking northwest at proposed well site from southeast edge of well site.



Photograph 2

Hames Valley # 2 well site. View looking north at proposed well site from southern edge of well site.



Photograph 3

Hames Valley # 3 well site. View looking south at proposed well site from northern edge of well site.



Photograph 4

Hames Valley # 4 well site. View looking northwest at proposed well site from southeast edge of well site.



Photograph 5

Existing access road to Hames Valley # 3 well site. View looking northwest from access road.



Photograph 6

Existing access road to Hames Valley # 1 and 4 well sites. View looking northeast from access road.



Photograph 7

Disturbed stream channel adjacent to the eastern side of the Hames Valley # 4 well site. View looking southwest down stream channel.



Photograph 8

View of grassland and oak woodland habitat area southwest of Hames Valley # 1 well site.



Photograph 9

California ground squirrel burrow found on Hames Valley # 3 well site.



Photograph 10

Woodpecker nest in oak tree adjacent to the Hames Valley # 3 well site. The nest was not occupied at the time of our surveys.