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## APPENDIX C

# BIOLOGICAL RESOURCES EVALUATION



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## MEMORANDUM

**DATE:** August 26, 2021

**To:** Henry Liang, PE

**FROM:** Zachary Carpenter

**SUBJECT:** Biological Resources Evaluation for the Big Sandy Rancheria Wastewater System Improvements Project, Fresno County, California

LSA has prepared this memorandum detailing the results of a biological survey conducted for the proposed Big Sandy Rancheria Wastewater System Improvements Project (project) in Fresno County, California (Figure 1).

The purpose of the biological survey was to support the environmental review requirements under the California Environmental Quality Act (CEQA), as well as the federal cross-cutting environmental requirements administered by the State Water Resources Control Board (SWRCB) for projects being funded by the Clean Water State Revolving Fund (CWSRF) program. This memorandum includes a description of the project, an explanation of the methods used to conduct the survey, a description of the project setting, the results of the survey, and recommendations, as necessary, to address the requirements of CEQA and the SWRCB for projects funded by the CWSRF program.

### PROJECT DESCRIPTION

The Big Sandy Rancheria (BSR) of Mono Indians of California is a rancheria and federally recognized tribe of Western Mono Indians. BSR proposes to construct and operate wastewater collection and treatment systems to protect the community water system from contamination and replace the existing individual septic tanks for residences. The Biological Study Area (BSA), as shown in Figure 2, consists of an approximately 18.14-acre project site that is located approximately 1 mile east of Auberry, a census-defined place in eastern Fresno County. The BSA is located approximately 20 miles northeast of the Fresno-Clovis metropolitan area. Regional access to the BSA is via State Route (SR) 168 and Auberry Road.

The project consists of the following components: 1) the proposed new wastewater treatment plant (WWTP); 2) proposed sanitary wastewater collection pipelines and lift stations; 3) electrical improvements to facilitate the new components; and 4) abandonment of existing septic systems. Wastewater treatment would consist of two components: treatment of wastewater at a WWTP; and disposal of wastewater through subsurface disposal via a drainfield. The proposed WWTP would be a packed bed aerobic system that would consist of a reactor with media and effluent recirculation chamber to keep the media wet, incorporating approximately 1,500 square feet of textile covered plastic treatment media which promotes growth of microorganisms on the surfaces. The proposed

project would include a shallow drip distribution system north of the WWTP to dispose of treated effluent. This system would consist of pressurized small-diameter tubing buried below ground, as mandated by regulatory agencies, including integrated emitters with each trickling up to 2 gallons per hour.

A wastewater collection system is proposed to connect the existing structures to the proposed WWTP, with the design considering guidelines to stay in public right-of-way when possible, utilize existing easements, and avoid trees and vegetation at all costs. The connections to residential structures would be made with 4-inch PVC between to the nearest sewer main. Manholes or cleanouts would be located at all alignment changes, and would be 48 inches in diameter to allow maintenance access. The wastewater pipelines would be installed via open trenches. Three lift stations would also be constructed to convey wastewater flows from the gravity system to the proposed WWTP and for one residential structure that cannot convey wastewater flows by gravity to the nearest proposed sewer main due to its location.

The electrical improvements required for the selected project construction would involve four new electrical supplies. The new services would be at the WWTP and at the three new lift stations.

Construction of the proposed project, including the WWTP and wastewater collection system, is expected to occur over a period of 9 months starting in the spring of 2022. Construction of the WWTP and the wastewater collection system would take place concurrently. The existing septic systems would be abandoned after the proposed WWTP and wastewater collection system have been constructed and each respective residence or structure is connected to the proposed wastewater collection system.

## **METHODS**

Prior to conducting the field survey, LSA compiled a list of sensitive plant and wildlife species potentially occurring within the BSA to evaluate potential impacts resulting from project construction. Sources used to compile this list include the California Native Plant Society (CNPS) Online Inventory (2020), the California Natural Diversity Database (CNDDB) referencing the Millerton Lake East, Shaver Lake, Trimmer, Humphreys Station, Cascadel Point, and Auberry U.S. Geological Survey 7.5 minute quadrangles, and the United States Fish and Wildlife Service (USFWS) Information, Planning, and Consultation (IPaC) Resource List. These databases contain records of special-status species that have been recorded in the general vicinity of the project and provide an indication of what species may occur within the BSA. While the National Marine Fisheries Service (NMFS), Google Earth Species list (2016) was also consulted, there are no records of listed anadromous fish species, designated critical habitat, or Essential Fish Habitat within the United States Geological Survey 7.5-minute Auberry quadrangle. Thus, a NMFS species list was not generated for the project.

LSA biologist Zachary Carpenter conducted a general biological survey of the BSA on October 23, 2020. The survey focused on identifying any sensitive habitats or special-status plant or wildlife species present within the BSA and determining if project activities would potentially impact any sensitive biological resources. The biologist surveyed the BSA, noting plant communities, examining

trees and shrubs closely for any nest structures, and identifying all birds and any other wildlife observed in order to determine if potential habitat to support special-status species was present.

Vegetation communities within the BSA were classified based on descriptions in “A Manual of California Vegetation – Second Edition” by Sawyer, Keeler-Wolf, and Evans (2008), as appropriate. Names of plant species are consistent with The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin, B.G., et al., editors 2012) and the Jepson Online Interchange for California Floristics (Jepson eFlora 2020).

Aquatic resources occurring in the BSA were examined and characterized but a formal delineation of aquatic resources to determine wetland and/or jurisdictional status was not conducted.

## ENVIRONMENTAL SETTING

The BSA, approximately 18.14 acres, is located in the Sierra Nevada foothills, approximately 1 mile east of Auberry and approximately 20 miles northeast of the Fresno-Clovis metropolitan area. The BSA is characterized by uneven topography in a small valley adjacent to Backbone Creek; an intermittent stream. Surrounding developed land uses include 54 residential units, gas station, gymnasium, tribal administration building, Head Start buildings, and the Mono Winds Casino. The BSA ranges in elevation from approximately 2,450 to 2,700 ft above mean sea level.

### Plant Communities / Land Uses

The plant communities and land uses associated with the BSA are described below.

#### *Interior Live Oak Woodland*

Interior live oak woodland is classified as a natural community and surrounds the entire BSA. However, this community only encroaches into the BSA in areas adjacent to the ruderal road shoulders along the edges of the BSA and in an undeveloped area in the north section of the BSA, totaling approximately 6.46 acres. Within the BSA, this community consists of an overstory dominated by interior live oak (*Quercus wislizeni*) and blue oak (*Quercus douglasii*), and also contains California buckeye (*Aesculus californica*), California bay (*Umbellularia californica*), gray pine (*Pinus sabiniana*), and hop tree (*Ptelea crenulata*). The understory is dominated by a variety of shrubs and herbaceous species including buckbrush (*Ceanothus cuneatus*), whiteleaf manzanita (*Arctostaphylos viscida*), poison oak (*Toxicodendron diversilobum*), California yerba santa (*Eriodictyon californicum*), silvery hairgrass (*Aira caryophyllea*), and *Bromus* sp.

#### *Ruderal*

Ruderal areas are relatively unvegetated and consist of pockets of non-native species that colonize and quickly establish in poor soil and disturbed or waste areas. These non-native species generally have fast-growing roots, low nutritional needs, and produce massive amounts of seed. Ruderal vegetation within the BSA occurs primarily along the existing roadway shoulders which experience regular disturbance. Ruderal species observed in the BSA include Italian rye grass (*Festuca perennis*), wild oat (*Avena fatua*), slender oat (*Avena barbata*), brome fescue (*Festuca bromoides*), pigweed amaranth (*Amaranthus albus*), *Bromus* sp., and *Hordeum* sp.

### *Developed*

Developed areas within the BSA consists of the residential areas, driveways, parking lots, and access roads. These areas are actively maintained to exclude all vegetation and primarily consist of pavement or packed earth.

## **RESULTS**

Compilation of the species lists described above resulted in a total of 35 special-status wildlife species and 37 special-status plants that could potentially occur in the BSA. Based on the results of the biological survey, information provided in the database queries, and an evaluation of aerial imagery, special-status species potentially occurring in the BSA include nesting birds and four special-status plant species, including one federally listed plant species (Mariposa pussypaws [*Calyptridium pulchellum*]). Additionally, interior live oak woodland is protected under State Public Resources Code (PRC) 21083.4 (California Oak Woodlands Conservation Law), and Backbone Creek, a potentially jurisdictional drainage feature, occurs within and adjacent to the BSA.

### **Sensitive Habitats**

#### *Interior Live Oak Woodland*

Under PRC 21083.4, counties administering CEQA must consider mitigation for oak woodland impacted by the project. This state law requires a county to establish a method for requiring oak woodland mitigation. Oak woodland is defined as habitat where a majority of living trees are native oaks and with 10 percent or greater oak canopy cover.

The Fresno County General Plan contains several policies related to the protection of oak woodlands, including Policy OS-F.10, which specifies that new developments preserve natural woodlands to the maximum extent possible, and Policy OS-F.11, which requires that the County promote the preservation and management of oak woodlands by encouraging landowners to voluntarily follow the Fresno County Oak Management Guidelines (1998) and the County adopted Oak Woodlands Management Plan. The Fresno County Oak Woodland Management Guidelines provide guidance for building within oak woodlands. These voluntary guidelines direct land owners to include the following considerations when working within oak woodlands:

- Develop an Oak Woodland Management Plan to retain existing oaks, preserve agriculture, retain wildlife corridors, and enhance soil and water conservation practices.
- Avoid tree root compaction during construction by limiting heavy equipment in root zones.
- Carefully plan roads, cuts and fills, building foundations, and septic systems to avoid damage to tree roots.
- Design roads and consolidate utility services to minimize erosion and sedimentation to downstream sources. Also, consider reseeding any disturbed ground.

- Avoid landscaping which requires irrigation within ten (10) feet of the trunk of an existing oak tree to prevent root rot.
- Consider replacing trees whose removal during construction was avoidable.
- Use fire-inhibiting and drought-tolerant and oak-compatible landscaping wherever possible.

The interior live oak woodland community located within the northern portion of the BSA contains blue oak and interior live oak trees that would be removed to accommodate the proposed drainfield. It is anticipated that no oak trees located adjacent to ruderal road shoulders in other areas of the BSA would be removed to install the sewer laterals; however, trenching in the proximity of oak trees may damage the root systems. Approximately 6.46 acres of interior live oak woodland would be impacted by the project, consisting of 2.46 acres of permanent impacts associated with the proposed WWTP and drainfield and 4.00 acres of temporary impacts associated with the installation of the sewer pipelines.

#### *Aquatic Resources*

Backbone Creek flows north to south throughout and adjacent to the BSA (Figure 2), and is classified as a R4SBA (Riverine, Intermittent, Streambed, Temporary Flooded) riverine habitat by the National Wetlands Inventory. The reach of Backbone Creek within the BSA is a low-gradient stream with occasional small pools that crosses through existing culverts under roads within the BSA. The creek bed was dry during the biological survey. While flow is anticipated only during significant rain events, water may remain in isolated pools when the water is not flowing. A few sections of the creek, outside of and adjacent to the BSA, supported a narrow riparian corridor but riparian vegetation was largely absent. Trenching activities associated with the installation of the wastewater pipelines have the potential to impact this potentially jurisdictional drainage feature regulated under Sections 404 and 401 of the Clean Water Act and Section 1602 of the California Fish and Game Code (CFGC).

#### **Special-Status Species**

Wildlife observed in the BSA included 18 species of birds, California ground squirrel (*Otospermophilus beecheyi*), and evidence of dusky-footed woodrats (*Neotoma fuscipes*). No special-status species plants or animals were observed during the field survey, however the BSA provides suitable habitat for nesting birds and special-status plants, as described below. A list of all species observed during the biological survey is attached. Consistent with SWRCB environmental review requirements, a list of all federally listed species with the potential to occur within the BSA is also attached.

#### *Nesting Birds*

The BSA provides suitable nesting habitat for a number of bird species protected under Section 3503 of the CFGC and the federal Migratory Bird Treaty Act (MBTA). No active bird nests or nest building activities were observed during the survey, which was not unexpected since the survey was conducted during the non-nesting season. However, several nest structures from previous nesting

seasons were observed in the trees throughout the site, as well as in the cottonwoods (*Populus* sp.) and shrubs along the Backbone Creek riparian corridor adjacent to the BSA. Additionally, several cavities were observed in trees throughout the site that could be used by early season cavity-nesting bird species, several of which were observed during the survey, such as oak titmouse (*Baeolophus inornatus*), white-breasted nuthatch (*Sitta carolinensis*), and acorn woodpecker (*Melanerpes formicivorus*).

Since trees would be removed as a result of project construction, migratory bird species may be impacted if any are nesting in the BSA when construction begins. Construction-related disturbance could also indirectly impact nesting birds by causing adults to abandon active nests, resulting in nest failure and reduced reproductive success. Therefore, the project has the potential to impact nesting bird species protected under Section 3503 of the CFGC and the MBTA.

The project will not adversely affect bald eagles (*Haliaeetus leucocephalus*) or golden eagles (*Aquila chrysaetos*) or otherwise conflict with the federal Bald and Golden Eagle Protection Act, as the BSA does not provide suitable nesting habitat for bald eagles or golden eagles, which typically nest in mature trees near bodies of water or in rugged, open habitats with canyons and escarpments, respectively.

#### *Special-Status Plants*

No special-status plant species were observed within the BSA; however, the interior live oak woodland provides potential habitat for the federally threatened Mariposa pussypaws; state threatened tree anemone (*Carpenteria californica*); and two California Rare Plant Rank List 1B.2 species, including orange lupine (*Lupinus citrinus* var. *citrinus*), and slender-stalked monkeyflower (*Erythranthe gracilipes*).

Mariposa pussypaws is an annual herb endemic to California that is known from only a handful of occurrences in Mariposa, Madera, and Fresno counties. Mariposa pussypaws are found in sandy soils, decomposed granite or metamorphic rocks in chaparral, gray pine, or oak woodlands from between 1,310 and 3,610 feet in elevation. The typical blooming period for this species is from April to May (Jepson eFlora 2020). There are two known CNDDB occurrence records within Fresno County, both from 2011, located 3.7 and 5.2 miles northeast of the BSA.

Tree anemone is a shrub that is known from Madera and Fresno counties. This species occurs within granitic substrates in chaparral and oak woodland habitat between approximately 1,100 and 4,400 feet in elevation. The typical blooming period for tree anemone is from May to July (Jepson eFlora 2020). CNDDB lists 10 occurrence records for this species within Fresno County, and the nearest record, dated 2006, covers a large area bisecting the northeastern portion of the BSA (i.e., areas east of the intersections of Auberry Mission Road with Jose Basin Road and Rancheria Lane). This record references several extant populations from the Big Sandy Bluffs near SR 168 south of the BSA extending north to the San Joaquin River.

Orange lupine and slender-stalked monkeyflower are both annual herbs that are endemic to California and considered rare by CDFW. Both species are associated with granitic soils within



chaparral or foothill/cismontane woodland habitat, although slender-stalked monkeyflower is known to occur in disturbed areas. Orange lupine typically blooms between April and May, and slender-stalked monkeyflower typically blooms between April and July (Jepson eFlora 2020). The closest CNDDDB record for orange lupine overlaps the majority of the BSA and is associated with individuals observed in 1969. More recently, this species was observed in 2011 approximately 3.7 northeast of the BSA in conjunction with Mariposa pussypaws. The nearest CNDDDB record for slender-stalked monkeyflower, which is associated with individuals last observed in 1963, is located adjacent to Auberry Road approximately 500 feet east of the southern end of the BSA.

No special-status plants were observed during the biological survey; however, the survey was conducted outside of the blooming period for these species and, based on the presence of suitable habitat, the potential for these species to occur in the BSA cannot be ruled out. Approximately 6.46 acres of interior live oak woodland would be impacted by the project consisting of 2.46 acres of permanent impacts associated with the proposed WWTP and drainfield and 4.00 acres of temporary impacts associated with the installation of the sewer pipelines. Direct and indirect effects to these special-status plant species from removal and/or degradation of suitable habitat in the BSA could result in a decrease in the population due to the loss of habitat, if these species are present in the BSA.

## RECOMMENDATIONS

The following measures are recommended to avoid or minimize impacts on interior live oak woodland, potentially jurisdictional aquatic resources, and special-status species, including nesting birds and rare plants.

### Interior Live Oak Woodland

Disturbance within and around oak driplines should be minimized to the extent feasible. Prior to project implementation, a qualified arborist or biologist should identify all oak trees with a diameter at breast height (DBH) of 6 inches or greater within the BSA and a 50-foot radius that will be removed or potentially impacted by project construction activities. For any oak trees to remain, the qualified arborist or biologist should provide recommendations to avoid or minimize damage to the root systems during construction (e.g., restricting trenching to areas outside the root zone, flagging avoidance areas, avoiding tree root compaction, etc.). Oak trees within the BSA that are removed as a result of the project should be replaced on-site at a minimum ratio of one tree replaced to every one tree removed. The species composition should be similar to those removed. The qualified arborist or biologist should prepare an oak planting and monitoring plan specifying the number and type of plantings, installation guidelines, maintenance and monitoring requirements, and performance standards for determining planting success.

### Aquatic Resources

A formal jurisdictional waters delineation should be conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (January 1987), the *USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (September 2008), and the Regional Water Quality Control Board (RWQCB) *State Wetland Definition and Procedures for*

*Discharges of Dredged or Fill Material to Waters of the State* (April 2019). The survey should include collection of data on soils, hydrology, and vegetation, where necessary, to determine the extent of potential waters of the U.S. and State in the BSA, including any potential wetlands. Aquatic features potentially subject to California Department of Fish and Wildlife (CDFW) jurisdiction should also be identified.

Prior to project implementation, the project proponent should obtain any required permits from the USACE; the U.S. Environmental Protection Agency, which administers the Section 401 Water Quality Certification program for projects on tribal lands in California; and/or CDFW, and comply with any conditions placed on the project by these agencies to reduce adverse impacts to jurisdictional areas.

The following additional measures are recommended to reduce potential impacts to aquatic resources during construction:

1. Conduct open trenching through Backbone Creek when dry conditions are present in the stream channel, typically between June 15 and October 15.
2. Stake the boundaries of designated work areas within the stream channel and ensure all vehicles and equipment stay within the designated boundaries.
3. Designate vehicle and equipment staging areas at least 100 feet from the stream channel; any vehicle fueling or other maintenance should only occur within designated staging areas.
4. Prepare a Storm Water Pollution Prevention Plan (SWPPP) in accordance with typical provisions associated with a Regional General Permit for Construction Activities. The SWPPP should contain best management practices to minimize effects associated with erosion and siltation during construction, as well as a Spill Response Plan with instructions and procedures for reporting spills, the use and location of spill containment equipment, and the use and location of spill collection materials.

### **Nesting Birds**

The following additional measures are recommended to reduce potential impacts to nesting birds during construction:

1. Tree removal activities should be conducted outside the nesting bird season (February 1 – August 31).
2. If work begins between February 1 and August 31, a qualified biologist should conduct a preconstruction survey for nesting birds in the BSA and within a 500-foot radius no more than 10 days prior to the start of construction.
3. If no nesting activity is observed, work may proceed as planned. If any active bird nests are discovered within the BSA, a qualified biologist should evaluate the potential for the work activities to disturb typical nesting behavior of the birds and establish protective buffers, if necessary, based on this evaluation.

4. If any active nests of special-status bird species are discovered within or less than 500 feet of the BSA, a minimum 500 foot buffer should be established. If any work is proposed within this buffer, CDFW should be notified, and should have the authority to reassess protective buffers and/or establish other avoidance and minimization measures.
5. Disturbance of active nests should be avoided until it is determined by a qualified biologist that nesting is complete and the young have fledged, or the nest has failed. If work is allowed to proceed, a qualified biologist should be on-site during the start of construction activities to monitor nesting activity. The biologist should have the authority to stop work if it is determined that the project is adversely affecting nesting activities.

### Special-Status Plants

To avoid and minimize impacts to special-status plants that could potentially occur in the BSA, focused surveys should be conducted for special-status plants by a qualified botanist at least one season prior to the start of construction. Surveys should be scheduled during the blooming period or other time of year when the target species will be identifiable, and should include all areas of potential impacts in suitable habitat. The surveys should be conducted in accordance with the CDFW *“Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities”* (March 20, 2018) or the current accepted guidance.

If a state or federally listed plant species (i.e., tree anemone or Mariposa pussypaws) is identified during the focused plant survey, the project proponent should coordinate with CDFW and/or USFWS prior to initiation of construction activities to determine if incidental take authorization is required under the California Endangered Species Act and/or Federal Endangered Species Act.

If a special-status plant species is identified in the BSA, if possible, the individuals should be protected in place using orange construction fencing (or equivalent) and avoided during construction. If it is determined that individuals cannot be avoided during construction, a salvage and relocation plan should be prepared to minimize impacts to non-listed species. The salvage and relocation plan should reflect the methods and timing for plant salvage and any implementation or follow-up monitoring requirements.

#### Attachments:

1. Figure1 – Project Location and Vicinity  
Figure 2 – Biological Study Area
2. USFWS Information, Planning, and Consultation (IPaC) Resource List  
California Natural Diversity Data Base (CNDDDB) Species List  
California Native Plant Society (CNPS) Plant List
3. Federally-Listed Species Potentially Occurring in the Biological Study Area
4. List of Observed Species

**ATTACHMENT 1**

**FIGURES**

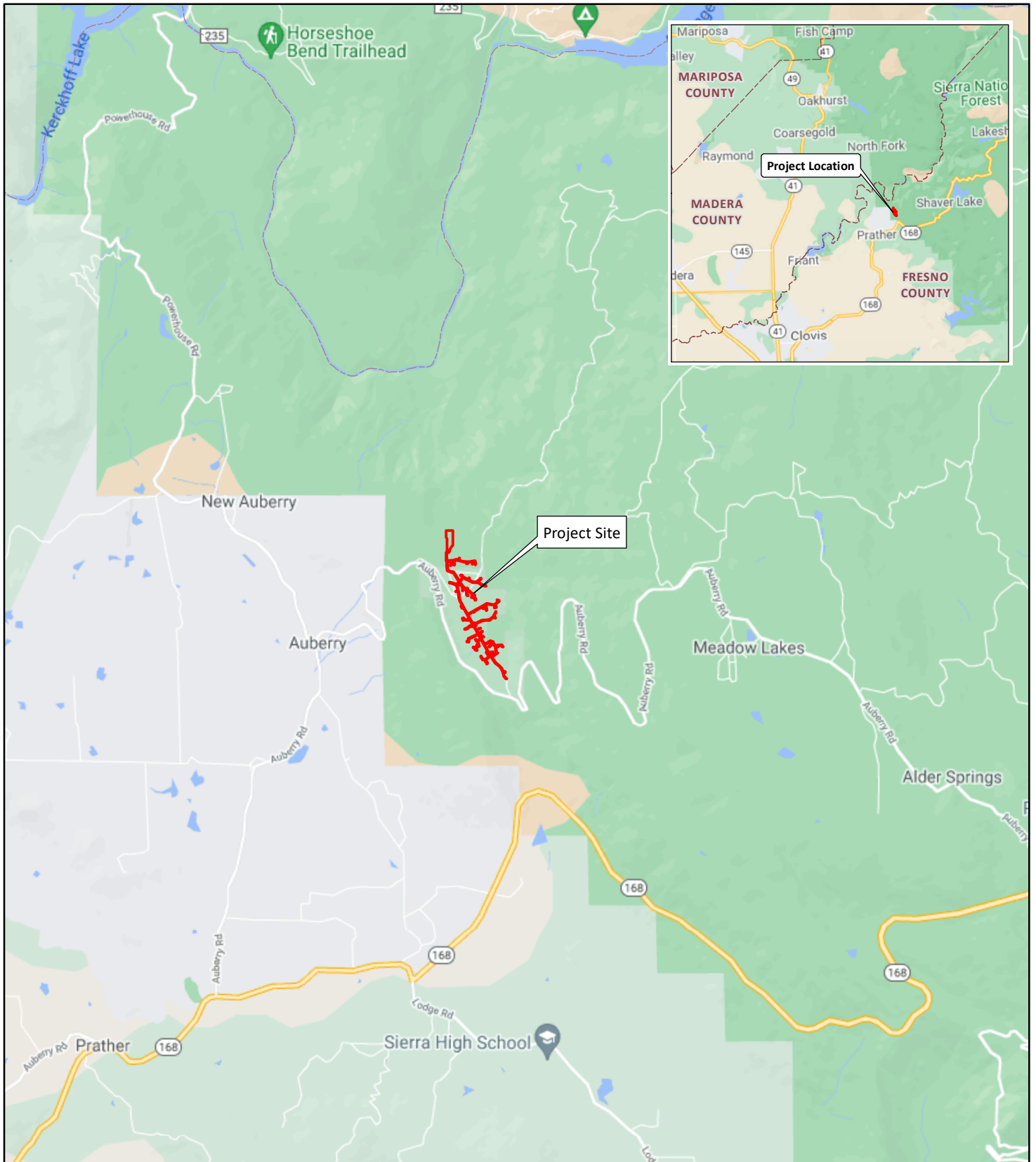
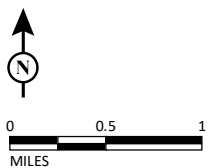


FIGURE 1

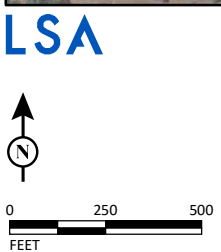
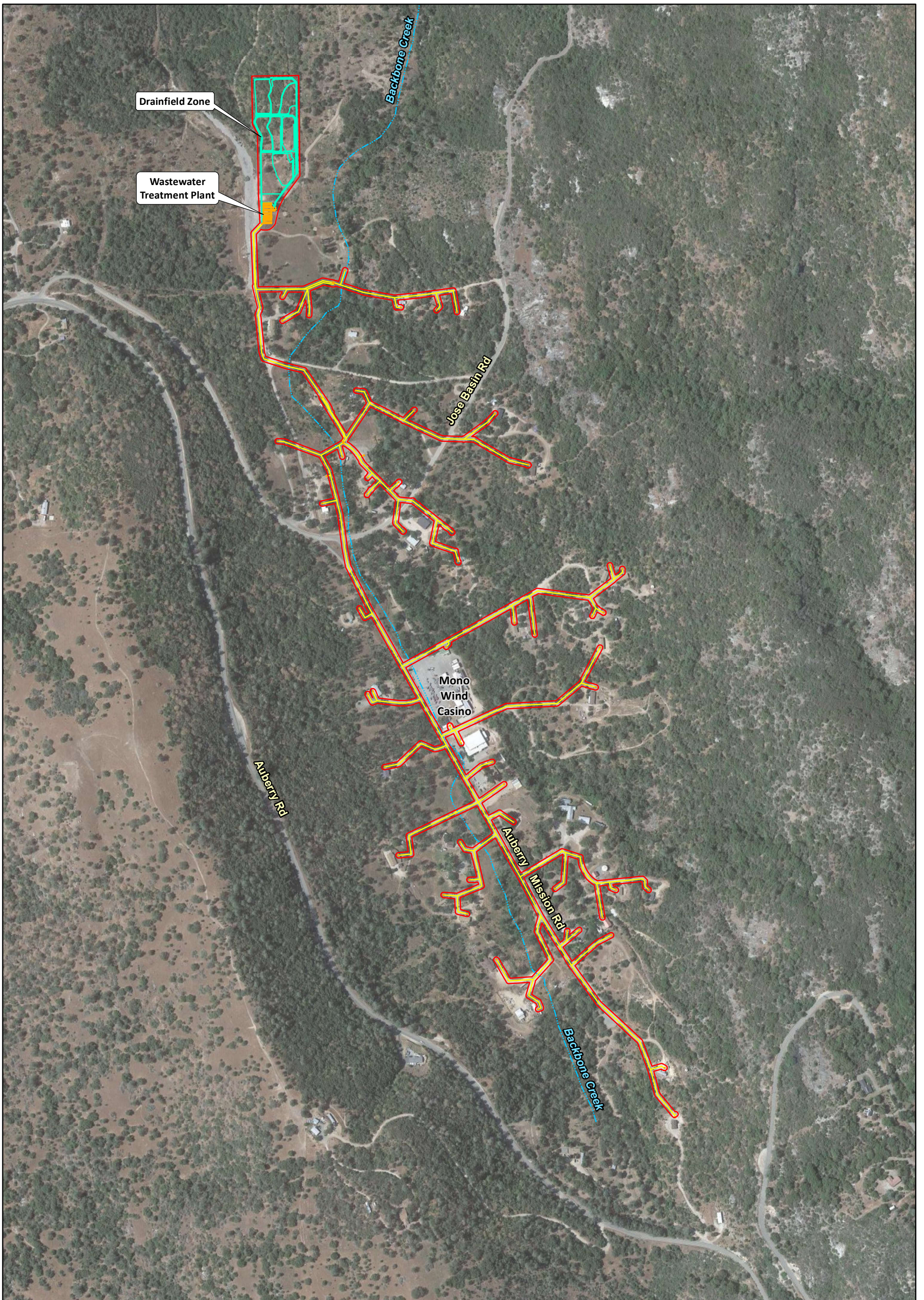
LSA



SOURCE: Google Streets (8/2021).

I:\MKN2001\GIS\Reports\Project Location and Vicinity.mxd (8/17/2021)

*Big Sandy Rancheria Wastewater System Improvements Project  
Fresno County, California  
Project Location and Vicinity*



- LEGEND**
- Biological Study Area - (18.14 ac)
  - Wastewater Treatment Plant
  - Pipe
  - Drainfield Zone
  - Backbone Creek

FIGURE 2

*Big Sandy Rancheria Wastewater System Improvements Project  
Fresno County, California  
Biological Study Area*

SOURCE: MKN Associates (07/2021); USGS NHD (2020); Aerial Imagery from Google Maps (2020).  
I:\MKN2001\GIS\Reports\Biological Study Area\_v2.mxd (8/17/2021)

**ATTACHMENT 2**

**USFWS, CNDDDB, AND CNPS LISTS**



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Sacramento Fish And Wildlife Office  
Federal Building  
2800 Cottage Way, Room W-2605  
Sacramento, CA 95825-1846  
Phone: (916) 414-6600 Fax: (916) 414-6713

In Reply Refer To:

October 22, 2020

Consultation Code: 08ESMF00-2021-SLI-0187

Event Code: 08ESMF00-2021-E-00487

Project Name: Big Sandy Rancheria Wastewater System Improvements Project

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, under the jurisdiction of the U.S. Fish and Wildlife Service (Service) that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the Service under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

Please follow the link below to see if your proposed project has the potential to affect other species or their habitats under the jurisdiction of the National Marine Fisheries Service:

[http://www.nwr.noaa.gov/protected\\_species/species\\_list/species\\_lists.html](http://www.nwr.noaa.gov/protected_species/species_list/species_lists.html)

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.



The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan ([http://www.fws.gov/windenergy/eagle\\_guidance.html](http://www.fws.gov/windenergy/eagle_guidance.html)). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

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Attachment(s):

- Official Species List

# Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

**Sacramento Fish And Wildlife Office**

Federal Building

2800 Cottage Way, Room W-2605

Sacramento, CA 95825-1846

(916) 414-6600

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## Project Summary

Consultation Code: 08ESMF00-2021-SLI-0187

Event Code: 08ESMF00-2021-E-00487

Project Name: Big Sandy Rancheria Wastewater System Improvements Project

Project Type: LAND - DRAINAGE

Project Description: Fresno County, CA

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/37.085993866855134N119.46583411784778W>



Counties: Fresno, CA

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## Endangered Species Act Species

There is a total of 5 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries<sup>1</sup>, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

- 
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

### Mammals

NAME	STATUS
Fisher <i>Pekania pennanti</i> Population: SSN DPS No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/3651">https://ecos.fws.gov/ecp/species/3651</a>	Endangered
Fresno Kangaroo Rat <i>Dipodomys nitratoides exilis</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/5150">https://ecos.fws.gov/ecp/species/5150</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/37/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/37/office/11420.pdf</a>	Endangered

### Amphibians

NAME	STATUS
California Red-legged Frog <i>Rana draytonii</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/2891">https://ecos.fws.gov/ecp/species/2891</a> Species survey guidelines: <a href="https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf">https://ecos.fws.gov/ipac/guideline/survey/population/205/office/11420.pdf</a>	Threatened

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## Fishes

NAME	STATUS
<b>Delta Smelt</b> <i>Hypomesus transpacificus</i> There is <b>final</b> critical habitat for this species. Your location is outside the critical habitat. Species profile: <a href="https://ecos.fws.gov/ecp/species/321">https://ecos.fws.gov/ecp/species/321</a>	<b>Threatened</b>

## Flowering Plants

NAME	STATUS
<b>Mariposa Pussypaws</b> <i>Calyptridium pulchellum</i> No critical habitat has been designated for this species. Species profile: <a href="https://ecos.fws.gov/ecp/species/2695">https://ecos.fws.gov/ecp/species/2695</a>	<b>Threatened</b>

## Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

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# Selected Elements by Scientific Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad (Cascadel Point (3711924) OR Millerton Lake East (3711915) OR Auberry (3711914) OR Shaver Lake (3711913) OR Trimmer (3611983) OR Humphreys Station (3611984))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Allium abramsii</i> Abrams' onion	PMLIL02360	None	None	G3	S3	1B.2
<i>Ambystoma californiense</i> California tiger salamander	AAAAA01180	Threatened	Threatened	G2G3	S2S3	WL
<i>Aquila chrysaetos</i> golden eagle	ABNKC22010	None	None	G5	S3	FP
<i>Bombus crotchii</i> Crotch bumble bee	IIHYM24480	None	Candidate Endangered	G3G4	S1S2	
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Calasellus longus</i> An isopod	ICMAL34020	None	None	G1	S1	
<i>Calicina dimorphica</i> Watts Valley harvestman	ILARAU8050	None	None	G1	S1	
<i>Calyptridium pulchellum</i> Mariposa pussypaws	PDPOR09060	Threatened	None	G1	S1	1B.1
<i>Carpenteria californica</i> tree-anemone	PDHDR04010	None	Threatened	G1?	S1?	1B.2
<i>Castilleja campestris var. succulenta</i> succulent owl's-clover	PDSCR0D3Z1	Threatened	Endangered	G4?T2T3	S2S3	1B.2
<i>Central Valley Drainage Hardhead/Squawfish Stream</i> Central Valley Drainage Hardhead/Squawfish Stream	CARA2443CA	None	None	GNR	SNR	
<i>Central Valley Drainage Rainbow Trout/Cyprinid Stream</i> Central Valley Drainage Rainbow Trout/Cyprinid Stream	CARA2422CA	None	None	GNR	SNR	
<i>Central Valley Drainage Resident Rainbow Trout Stream</i> Central Valley Drainage Resident Rainbow Trout Stream	CARA2421CA	None	None	GNR	SNR	
<i>Chrysis tularensis</i> Tulare cuckoo wasp	IIHYM72010	None	None	G1G2	S1S2	
<i>Collomia rawsoniana</i> Rawson's flaming trumpet	PDPLM02080	None	None	G2	S2	1B.2
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G3G4	S2	SSC
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2	S3	
<i>Empidonax traillii</i> willow flycatcher	ABPAE33040	None	Endangered	G5	S1S2	



**Selected Elements by Scientific Name**  
**California Department of Fish and Wildlife**  
**California Natural Diversity Database**



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Emys marmorata</i></b> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<b><i>Eriastrum tracyi</i></b> Tracy's eriastrum	PDPLM030C0	None	Rare	G3Q	S3	3.2
<b><i>Eryngium spinosepalum</i></b> spiny-sepaled button-celery	PDAP10Z0Y0	None	None	G2	S2	1B.2
<b><i>Erythranthe gracilipes</i></b> slender-stalked monkeyflower	PDSCR1B1C0	None	None	G2	S2	1B.2
<b><i>Eumops perotis californicus</i></b> western mastiff bat	AMACD02011	None	None	G5T4	S3S4	SSC
<b><i>Falco mexicanus</i></b> prairie falcon	ABNKD06090	None	None	G5	S4	WL
<b><i>Gonidea angulata</i></b> western ridged mussel	IMBIV19010	None	None	G3	S1S2	
<b><i>Gratiola heterosepala</i></b> Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2
<b><i>Haliaeetus leucocephalus</i></b> bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
<b><i>Ivesia unguiculata</i></b> Yosemite ivesia	PDROS0X0N0	None	None	G3	S3	4.2
<b><i>Lepidurus packardi</i></b> vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3S4	
<b><i>Leptosiphon serrulatus</i></b> Madera leptosiphon	PDPLM09130	None	None	G3	S3	1B.2
<b><i>Lewisia disepala</i></b> Yosemite lewisia	PDPOR04060	None	None	G2	S2	1B.2
<b><i>Linderiella occidentalis</i></b> California linderiella	ICBRA06010	None	None	G2G3	S2S3	
<b><i>Lupinus citrinus var. citrinus</i></b> orange lupine	PDFAB2B103	None	None	G2T2	S2	1B.2
<b><i>Lytta molesta</i></b> molestan blister beetle	IICOL4C030	None	None	G2	S2	
<b><i>Martes caurina sierrae</i></b> Sierra marten	AMAJF01014	None	None	G5T3	S3	
<b><i>Myotis evotis</i></b> long-eared myotis	AMACC01070	None	None	G5	S3	
<b><i>Myotis volans</i></b> long-legged myotis	AMACC01110	None	None	G5	S3	
<b><i>Myotis yumanensis</i></b> Yuma myotis	AMACC01020	None	None	G5	S4	
<b>Northern Basalt Flow Vernal Pool</b> Northern Basalt Flow Vernal Pool	CTT44131CA	None	None	G3	S2.2	





Selected Elements by Scientific Name  
California Department of Fish and Wildlife  
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<b><i>Oravelia pege</i></b> Dry Creek cliff strider bug	IIHEM14010	None	None	G1	S1	
<b><i>Orcuttia inaequalis</i></b> San Joaquin Valley Orcutt grass	PMPOA4G060	Threatened	Endangered	G1	S1	1B.1
<b><i>Pandion haliaetus</i></b> osprey	ABNKC01010	None	None	G5	S4	WL
<b><i>Pekania pennanti pop. 2</i></b> Fisher - Southern Sierra Nevada ESU	AMAJF01022	Endangered	Threatened	G5T1	S1	SSC
<b><i>Plagiobothrys torreyi var. torreyi</i></b> Yosemite popcornflower	PDBOR0V152	None	None	G4T3Q	S3	1B.2
<b><i>Rana boylei</i></b> foothill yellow-legged frog	AAABH01050	None	Endangered	G3	S3	SSC
<b><i>Rana sierrae</i></b> Sierra Nevada yellow-legged frog	AAABH01340	Endangered	Threatened	G1	S1	WL
<b><i>Ribes menziesii var. ixoderme</i></b> aromatic canyon gooseberry	PDGRO02104	None	None	G4T2	S2	1B.2
<b><i>Sidalcea keckii</i></b> Keck's checkerbloom	PDMAL110D0	Endangered	None	G2	S2	1B.1
<b><i>Spea hammondi</i></b> western spadefoot	AAABF02020	None	None	G3	S3	SSC
<b><i>Strix nebulosa</i></b> great gray owl	ABNSB12040	None	Endangered	G5	S1	
<b><i>Taxidea taxus</i></b> American badger	AMAJF04010	None	None	G5	S3	SSC
<b><i>Viburnum ellipticum</i></b> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3
<b><i>Vulpes macrotis mutica</i></b> San Joaquin kit fox	AMAJA03041	Endangered	Threatened	G4T2	S2	
<b><i>Vulpes vulpes necator</i></b> Sierra Nevada red fox	AMAJA03012	Proposed Endangered	Threatened	G5T1T2	S1	

Record Count: 54

\*The database used to provide updates to the Online Inventory is under construction. [View updates and changes made since May 2019 here.](#)

## Plant List

36 matches found. [Click on scientific name for details](#)

### Search Criteria

Found in Quads 3711924, 3711915, 3711914, 3711913 3611984 and 3611983;

[Modify Search Criteria](#) [Export to Excel](#) [Modify Columns](#) [Modify Sort](#) [Display Photos](#)

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	Federal Listing Status	State Listing Status
<a href="#">Allium abramsii</a>	Abram's onion	Alliaceae	perennial bulbiferous herb	May-Jul	1B.2		
<a href="#">Bryum chryseum</a>	brassy bryum	Bryaceae	moss		4.3		
<a href="#">Calyptridium pulchellum</a>	Mariposa pussypaws	Montiaceae	annual herb	Apr-Aug	1B.1	FT	
<a href="#">Carex praticola</a>	northern meadow sedge	Cyperaceae	perennial herb	May-Jul	2B.2		
<a href="#">Carpenteria californica</a>	tree-anemone	Hydrangeaceae	perennial evergreen shrub	(Apr)May-Jul	1B.2		CT
<a href="#">Castilleja campestris var. succulenta</a>	succulent owl's-clover	Orobanchaceae	annual herb (hemiparasitic)	(Mar)Apr-May	1B.2	FT	CE
<a href="#">Ceanothus fresnensis</a>	Fresno ceanothus	Rhamnaceae	perennial evergreen shrub	May-Jul	4.3		
<a href="#">Claytonia palustris</a>	marsh claytonia	Montiaceae	perennial herb	May-Oct	4.3		
<a href="#">Claytonia parviflora ssp. grandiflora</a>	streambank spring beauty	Montiaceae	annual herb	Feb-May	4.2		
<a href="#">Collomia rawsoniana</a>	Rawson's flaming-trumpet	Polemoniaceae	perennial rhizomatous herb	Jul-Aug	1B.2		
<a href="#">Cordylanthus rigidus ssp. brevibracteatus</a>	short-bracted bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug(Oct)	4.3		
<a href="#">Cordylanthus tenuis ssp. barbatus</a>	Fresno County bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jul-Aug	4.3		
<a href="#">Delphinium hansenii ssp. ewanianum</a>	Ewan's larkspur	Ranunculaceae	perennial herb	Mar-May	4.2		
<a href="#">Eriastrum tracyi</a>	Tracy's eriastrum	Polemoniaceae	annual herb	May-Jul	3.2		CR
<a href="#">Eryngium spinosepalum</a>	spiny-sepaled	Apiaceae	annual /	Apr-Jun	1B.2		

	button-celery		perennial herb				
<a href="#">Erythranthe acutidens</a>	Kings River monkeyflower	Phrymaceae	annual herb	Apr-Jul	3		
<a href="#">Erythranthe gracilipes</a>	slender-stalked monkeyflower	Phrymaceae	annual herb	Apr-Jun	1B.2		
<a href="#">Erythranthe inconspicua</a>	small-flowered monkeyflower	Phrymaceae	annual herb	May-Jun	4.3		
<a href="#">Erythranthe laciniata</a>	cut-leaved monkeyflower	Phrymaceae	annual herb	Apr-Jul	4.3		
<a href="#">Erythranthe sierrae</a>	Sierra Nevada monkeyflower	Phrymaceae	annual herb	Mar-Jul	4.2		
<a href="#">Gratiola heterosepala</a>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	1B.2		CE
<a href="#">Ivesia unguiculata</a>	Yosemite ivesia	Rosaceae	perennial herb	Jun-Sep	4.2		
<a href="#">Jensia yosemitana</a>	Yosemite tarplant	Asteraceae	annual herb	(Apr)May-Jul	3.2		
<a href="#">Leptosiphon serrulatus</a>	Madera leptosiphon	Polemoniaceae	annual herb	Apr-May	1B.2		
<a href="#">Lewisia disepala</a>	Yosemite lewisia	Montiaceae	perennial herb	Mar-Jun	1B.2		
<a href="#">Lupinus citrinus var. citrinus</a>	orange lupine	Fabaceae	annual herb	Apr-Jul	1B.2		
<a href="#">Meesia triquetra</a>	three-ranked hump moss	Meesiaceae	moss	Jul	4.2		
<a href="#">Mielichhoferia shevockii</a>	Shevock's copper moss	Mielichhoferiaceae	moss		1B.2		
<a href="#">Orcuttia inaequalis</a>	San Joaquin Valley Orcutt grass	Poaceae	annual herb	Apr-Sep	1B.1	FT	CE
<a href="#">Plagiobothrys torreyi var. perplexans</a>	chaparral popcornflower	Boraginaceae	annual herb	Apr-Sep	4.3		
<a href="#">Plagiobothrys torreyi var. torreyi</a>	Yosemite popcornflower	Boraginaceae	annual herb	Apr-Jun	1B.2		
<a href="#">Plagiobryoides vinosula</a>	wine-colored tufa moss	Bryaceae	moss		4.2		
<a href="#">Sidalcea keckii</a>	Keck's checkerbloom	Malvaceae	annual herb	Apr-May(Jun)	1B.1	FE	
<a href="#">Streptanthus farnsworthianus</a>	Farnsworth's jewelflower	Brassicaceae	annual herb	May-Jun	4.3		
<a href="#">Viburnum ellipticum</a>	oval-leaved viburnum	Adoxaceae	perennial deciduous shrub	May-Jun	2B.3		
<a href="#">Wyethia elata</a>	Hall's wyethia	Asteraceae	perennial herb	May-Aug	4.3		

### Suggested Citation

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**Questions and Comments**

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**ATTACHMENT 3**

**FEDERALLY-LISTED SPECIES POTENTIALLY OCCURRING IN THE BIOLOGICAL  
STUDY AREA**

**Table A-1: Federally-Listed Plant Species Potentially Occurring in the Biological Study Area**

Scientific Name	Common Name	Federal Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Calyptridium pulchellum</i>	Mariposa pussypaws	FT	Annual herb occurring in chaparral, gray pine, and oak woodland habitat; associated with sandy soils, decomposed granite or metamorphic rocks between 1,300 ft and 3,600 ft in elevation. Southern Mariposa, Madera, and northern Fresno counties. Blooms April – May.	Present	Suitable habitat is present in the BSA within the interior live oak woodland. The BSA also contains coarse sandy loam soils. There are two known CNDDB occurrence records within Fresno County, both from 2011, located 3.7 and 5.2 miles northeast of the BSA. As the biological survey was conducted outside of the blooming period for this species, its presence within the BSA cannot be ruled out.
<i>Castilleja campestris</i> var. <i>succulenta</i>	succulent owl's clover	FT	Annual herb occurring in vernal pools, often acidic, between 160 and 2,500 ft in elevation. Fresno, Madera, Merced, Mariposa, San Joaquin, and Stanislaus counties. Blooms April – May.	Absent	No suitable habitat (vernal pool) present for this species within the BSA.
<i>Orcuttia inaequalis</i>	San Joaquin Valley Orcutt grass	FT	Annual herb occurring in vernal pools between 30 and 2,500 ft in elevation. Found in Central Valley counties. Blooms April – September.	Absent	No suitable habitat (vernal pool) present for this species within the BSA.
<i>Sidalcea keckii</i>	Keck's checkerbloom	FE	Annual herb occurring on grassy slopes, serpentinite between 245 and 2,130 ft in elevation. Blooms April – May.	Absent	No suitable habitat is present in the BSA; the BSA elevation is above this species range.

Status: Federal Endangered (FE), Federal Threatened (FT)

BSA: Biological Study Area

CNDDB: California Natural Diversity Database

ft: foot/feet

**Table A-2: Federally-Listed Animal Species Potentially Occurring in the Biological Study Area**

Scientific Name	Common Name	Federal Status	Habitat Requirements	Habitat Present/Absent	Rationale
<b>MAMMALS</b>					
<i>Dipodomys nitratoides exilis</i>	Fresno kangaroo rat	FE	Endemic to alkali sink shrubland, seasonally flooded wetlands, and uncultivated, native grasslands of Fresno County.	Absent	Suitable habitat is not present in the BSA; there is no alkali sink shrubland or seasonally flooded wetlands within the BSA. In addition, the BSA is outside of the range for this species.
<i>Pekania pennanti</i>	Fisher	FE	Habitat includes dense coniferous or deciduous riparian forests with high canopy closure, multiple canopy layers, and large trees with snags, cavities, and hollow logs for resting and natal and maternal dens. Hunt exclusively in forested habitats and generally avoid openings. Elevation range from sea level to 8,500 ft.	Absent	Suitable habitat is not present in the BSA; there is no dense, closed-canopy forested habitat within or adjacent to the BSA. The nearest CNDDDB occurrences for this species are located 9 miles east of the BSA. Sightings associated with these occurrences are more than 20 years old.
<i>Vulpes macrotis mutica</i>	San Joaquin kit fox	FE	Annual grasslands or grassy open stages with scattered vegetation; need loose-textured soils for burrowing, and a suitable prey base.	Absent	Suitable habitat is not present in the BSA. In addition, the BSA is outside of the range for this species.
<i>Vulpes vulpes necator</i>	Sierra Nevada red fox	FPE	Range is limited to conifer forests and rugged alpine landscape of the Sierra Nevada and Cascade ranges between 4,000 and 12,000 ft elevation.	Absent	The BSA is located outside the known distribution range for this species, and the BSA elevations are well below the elevation range for this species.
<b>AMPHIBIANS</b>					
<i>Ambystoma californiense</i>	California tiger salamander	FT	Most commonly found in annual grassland habitat, but also occurs in grassy understory of valley-foothill hardwood habitats, and uncommonly along stream courses in valley-foothill riparian habitats. Requires vernal pools or other seasonal water bodies for breeding. Needs underground refuges, especially ground squirrel burrows.	Absent	The BSA is located outside the known distribution range for this species, and the BSA elevations are above the elevation range for this species.

**Table A-2: Federally-Listed Animal Species Potentially Occurring in the Biological Study Area**

Scientific Name	Common Name	Federal Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Rana draytonii</i>	California red-legged frog	FT	Lowlands and foothills in or near permanent sources of deep water with dense, shrubby or emergent riparian vegetation.	Absent	Suitable habitat is not present in the BSA; Backbone Creek is an intermittent water source and is not sufficient to support this species, and the BSA does not support dense riparian vegetation.
<i>Rana sierrae</i>	Sierra Nevada yellow-legged frog	FE	Inhabits lakes, ponds, meadow streams, isolated pools, and sunny riverbanks in the Sierra Nevada Mountains. Waters that do not freeze to the bottom and which do not dry up completely are required.	Absent	Suitable habitat is not present in the BSA; Backbone Creek is an intermittent water source and is not sufficient to support this species.
<b>FISH</b>					
<i>Hypomesus transpacificus</i>	Delta smelt	FT	With the exception of spawning season, delta smelt generally inhabits the freshwater-saltwater mixing zone of an estuary. Spawning occurs in river channels upstream from the mixing zone in the Sacramento-San Joaquin delta. Seasonally in Suisun bay, Carquinez strait, and San Pablo bay.	Absent	Suitable habitat is not present in the BSA; Backbone Creek is not within the Sacramento-San Joaquin delta or within Suisun bay, Carquinez strait or San Pablo bay.
<b>INVERTEBRATES</b>					
<i>Branchinecta lynchi</i>	Vernal pool fairy shrimp	FT	Endemic to the grasslands of the Central Valley, Central Coast Mountains and South Coast Mountains. Typically associated with small, shallow vernal pools with relatively short periods of inundation. Found in larger pools in southern extent of range.	Absent	Suitable habitat is not present; there are no vernal pools in the BSA.
<i>Desmocerus californicus dimorphus</i>	Valley elderberry longhorn beetle	FT	Occurs only in the Central Valley of California, in association with blue elderberry ( <i>Sambucus mexicana</i> ). Prefers branches greater than 1 inch in diameter.	Absent	The BSA is located outside the current range for this species and no elderberry host plants were observed in the BSA.



**Table A-2: Federally-Listed Animal Species Potentially Occurring in the Biological Study Area**

Scientific Name	Common Name	Federal Status	Habitat Requirements	Habitat Present/Absent	Rationale
<i>Lepidurus packardii</i>	Vernal pool tadpole shrimp	FE	Found in a variety of natural, and artificial, seasonally ponded habitat types including: vernal pools, swales, stock ponds, reservoirs, backhoe pits, and ruts caused by vehicular activities. Within the Sacramento Valley.	Absent	Suitable habitat is not present; there are no vernal pools in the BSA.

Status: Federal Endangered (FE), Federal Threatened (FT), Federal Proposed Endangered (FPE)

BSA: Biological Study Area

CNDDDB: California Natural Diversity Database

DBH: diameter at breast height

ft: foot/feet

**ATTACHMENT 4**

**LIST OF OBSERVED SPECIES**

## PLANT AND WILDLIFE SPECIES OBSERVED WITHIN THE BSA

Common Name	Scientific Name
<b>Plants</b>	
Silvery hairgrass	<i>Aira caryophyllea</i>
Pigweed amaranth	<i>Amaranthus albus</i>
California buckeye	<i>Aesculus californica</i>
Whiteleaf manzanita	<i>Arctostaphylos viscida</i>
Slender oat	<i>Avena barbata</i>
Wild oat	<i>Avena fatua</i>
Perennial quakinggrass	<i>Briza media</i>
Ripgut brome	<i>Bromus diandrus</i>
Soft (chess) brome	<i>Bromus hordeaceus</i>
Italian thistle	<i>Carduus pycnocephalus</i>
Soft calycadenia	<i>Calycadenia mollis</i>
California yerba santa	<i>Eriodictyon californicum</i>
Italian rye grass	<i>Festuca perennis</i>
Meadow barley	<i>Hordeum brachyantherum</i>
Foxtail barley	<i>Hordeum murinum</i>
Gray pine	<i>Pinus sabiniana</i>
Oaks	<i>Quercus</i> sp.
Willow sp.	<i>Salix</i> sp.
Poison oak	<i>Toxicodendron diversilobum</i>
California bay	<i>Umbellularia californica</i>
<b>Wildlife – Birds</b>	
California scrub jay	<i>Aphelocoma californica</i>
Sharp-shinned hawk	<i>Accipiter striatus</i>
California quail	<i>Callipepla californica</i>
Turkey vulture	<i>Cathartes aura</i>
Northern flicker	<i>Colaptes auratus</i>
Common Raven	<i>Corvus corax</i>
White-tailed kite	<i>Elanus leucurus</i>

Red-tailed hawk	<i>Buteo jamaicensis</i>
Sage thrasher	<i>Oreoscoptes montanus</i>
Oak titmouse	<i>Baeolophus inornatus</i>
Mourning dove	<i>Zenaida macroura</i>
Northern mockingbird	<i>Mimus polyglottos</i>
European starling	<i>Sturnus vulgaris</i>
Yellow-rumped warbler	<i>Setophaga coronata</i>
Savannah sparrow	<i>Passerculus sandwichensis</i>
Brewer's blackbird	<i>Euphagus cyanocephalus</i>
Red-winged blackbird	<i>Agelaius phoeniceus</i>
Western meadowlark	<i>Sturnella neglecta</i>
<b>Wildlife – Mammals</b>	
California ground squirrel	<i>Otospermophilus beecheyi</i>
Dusky-footed woodrat	<i>Neotoma fuscipes</i>