Appendix B

Biological Study Report
Sky View County Water District Water System Improvements

BIOLOGICAL STUDY REPORT

Water System Improvements

Sky View County Water District, Tehama County, California

Prepared for:

PACE Engineering, Inc.

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032-72

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1. INTRODUCTION

The Sky View County Water District (District) is proposing to improve and extend its water distribution system to serve residents in the Ponderosa Sky Ranch subdivision and along Canyon View Loop. The project study area is located on both sides of Highway 36 midway between the communities of Paynes Creek and Mineral. The purpose of this biological study report (BSR) is to identify and characterize sensitive biological resources that may occur in the proposed work areas or that may be adversely affected by implementation of the proposed project. This BSR is intended to serve as a baseline study to assist in the preparation of subsequent environmental documentation.

ENPLAN is an environmental consulting firm with over 35 years of experience with projects throughout northern California. All work associated with this project was performed by Donald Burk, Environmental Services Manager with ENPLAN, and Allison Loveless, Environmental Scientist with ENPLAN. Resumes for the biologists are provided in **Appendix A**.

Mr. Burk received his Master of Science degree in Botany, and Bachelor of Arts degree in Chemistry and Biological Sciences, from California State University, Chico. Having worked in the environmental consulting field since 1981, he has an in-depth background in a broad spectrum of environmental studies. His experience includes managing the preparation of CEQA/NEPA environmental compliance documents, environmental site assessments, wildlife and botanical studies, wetland delineations, reclamation plans, and stream restoration projects. Mr. Burk was responsible for the botanical surveys for this project and final review of this BSR.

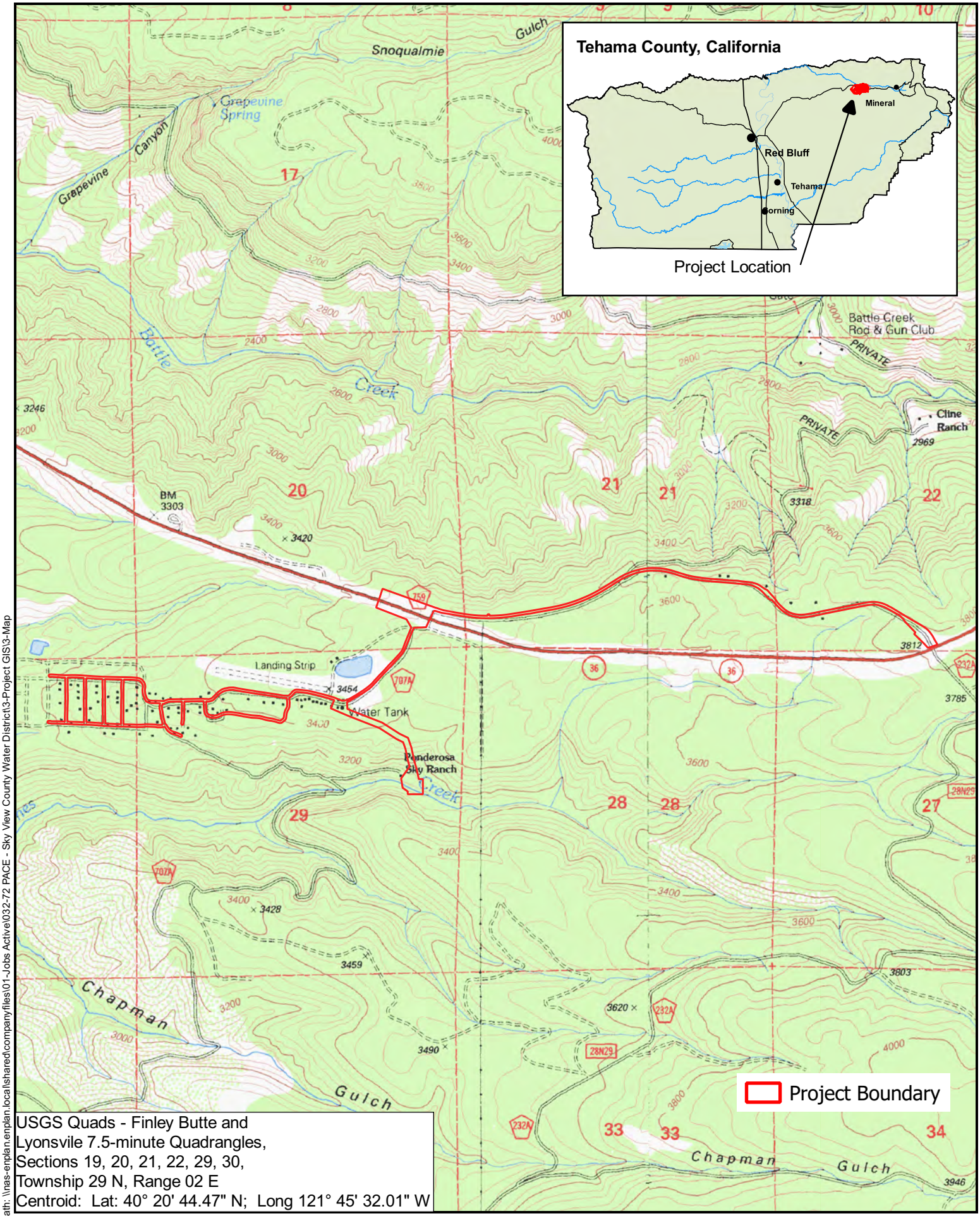
Allison Loveless received her Master of Science degree in Zoology from Oklahoma State University, Stillwater, and Bachelor of Science degree in Geography (Environmental Studies) from University of California, Los Angeles. Ms. Loveless has four years of experience working in environmental services throughout northern California. Her experience includes general wildlife surveys, endangered species surveys, and nesting bird surveys; preparing technical environmental documentation for environmental impact reports; and preparing biological study reports, wetland

delineations, biological assessments, and associated GIS mapping. Ms. Loveless was responsible for the wildlife surveys for this project and drafting this BSR.

2. PROJECT LOCATION

As shown in **Figure 1**, the proposed project is located in Tehama County, California, in Sections 20, 21, 22, 29, and 30, Township 29N, Range 2E, of the U.S. Geological Survey's (USGS) Finley Butte and Lyonsville 7.5-minute quadrangles (USGS, 1985; USGS, 1995).

As shown in Figure 2, proposed improvements on the north side of Highway 36 would occur in the public road right-of-way (ROW) of Canyon View Loop, and near the upper (eastern) intersection of Canyon View Loop and Highway 36; proposed improvements on the south side of Highway 36 would occur within the Ponderosa Sky Ranch Subdivision in the public road ROW of Navion Road, Ponderosa Way, Vanguard Avenue, Snark Lane, Jupiter Avenue, Cessna Avenue, Summit Road, Ruth Lane, Piney Lane, and Explorer Road; and on the District's existing well and water tank sites. Additionally, a cross-country raw water transmission main would be installed between the District's well site at Paynes Creek and the water tank site on Ponderosa Way. Improvements would also occur within public utility easements on private property and within District property. The water line extension under Highway 36 would be within Caltrans' ROW.



USGS Quads - Finley Butte and Lyonsville 7.5-minute Quadrangles,
Sections 19, 20, 21, 22, 29, 30,
Township 29 N, Range 02 E
Centroid: Lat: 40° 20' 44.47" N; Long 121° 45' 32.01" W

Path: \\nas-enplan.enplan.local\shared\companyfiles\01-Jobs Active\032-72 PACE - Sky View County Water District\3-Project GIS\3-Map

0 1,000 2,000 Feet

Figure 1

Study Site - Sky View County Water District

All depictions are approximate. Not a survey product. 10.11.21

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Path: N:\company\files\01-Jobs Active\032-72 PACE - Sky View County Water District\3-Project GIS\3-Map Documents\CEQA\Figure 2 - Proposed Improvements 110321.qgz

11.03.21

0 600 1,200 Feet

Figure 2

Proposed Improvements

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3. PROJECT DESCRIPTION

The project entails improvements to the Sky View County Water District public water system. Project components addressed in this BSR include the following:

- Improving the existing well near Paynes Creek, including replacing the well house, electrical controls, pumps, and motors.
- Replacing approximately 2,130 linear feet of water transmission main between the well and an existing water tank located adjacent to Ponderosa Way.
- Constructing an access stairway over Paynes Creek to allow District staff to safely access the well for year-round maintenance, and to provide structural support for the new transmission main. The clear-span bridge would be about four feet wide and 60 feet long.
- Constructing a 150,000-gallon bolted-steel water tank near the upper (eastern) intersection of Canyon View Loop and Highway 36, along with associated improvements such as a control panel, miscellaneous electrical equipment, a solar panel on top of the water tank, a driveway from the existing road to the tank, and security fencing surrounding the site.
- Constructing a 110,000-gallon bolted-steel water tank and new booster pump station at the existing Ponderosa Way site, with associated improvements including a driveway, a new diesel emergency back-up generator on a cement slab adjacent to the new booster pump station, temporary and permanent piping, an overflow discharge pipe, and security fencing around the facility.
- Replacing the entire water distribution system serving Ponderosa Sky Ranch subdivision, including installing ±16,200 linear feet of water line, relocating water lines that are currently behind residences, installing new water meters at property lines, installing service connections from the mains to the property lines of empty parcels to facilitate future connections, and installing new fire hydrants every 500 to 1,000 feet throughout the service area, installing of system Pressure Reducing Valve (PRV) stations along the new waterline extensions.
- Extending water service to Canyon View Loop via new mains between the Ponderosa Way booster pump station to the new Canyon View Loop water tank.

All water lines would be installed using open-trench construction.

4. AREA CHARACTERISTICS AND HABITAT TYPES

The study area is generally located on a broad, gently sloping ridgetop, and drops steeply to the south to Paynes Creek, where the District's well is sited. Elevations in the study area range from approximately 3,100 to 3,830 feet above mean sea level. Land uses adjacent to and within the project area are primarily rural residential and undeveloped forest land. The circulation system serving the area includes State Highway 36, paved County-maintained roads, and unpaved, unmaintained roads.

The climate of the project area is Mediterranean, with hot, dry summers and cool, wet winters. Annual precipitation averages ±32.92 inches in the community of Paynes Creek (WRCC, 2020a) and ±52.62 inches at Mineral (WRCC, 2020b). Annual precipitation at the project site can be reasonably approximated within the range between the two above described locations.

Soils in the study area range from sandy loams to very rocky loams. No hydric soils, or soils units with hydric inclusions, are present in the study area. As a result of the field evaluation, four communities were identified in the study area: stream/riverine, oak/pine woodland, mixed chaparral, and urban/rural residential. Each of these communities is briefly described below. Representative photographs of the project study area are provided in **Appendix B**.

It should be noted that two seasonal wetlands were observed during the field evaluation. In many cases, seasonal wetlands provide unique habitat characteristics suitable for plant and animal species specially adapted to seasonally flooded environments. However, the wetlands in the study area are adjacent to existing roads, are very disturbed, and quite small (254 square feet and 24 square feet. Given these site-specific conditions, the onsite seasonal wetlands are not expected to have unique habitat values and are not treated as a separate natural community type.

Stream/Riverine. Stream/riverine habitat may be utilized by a variety of fish and wildlife species. Pools and backwater areas also provide breeding habitat for amphibians. Waterfowl forage for aquatic plants and invertebrates in slow-moving sections of riverine habitat. Small mammals such as beaver, river otter, and muskrat may build nests in or along riverine habitat. Riverine systems may also provide

spawning and rearing habitat for resident and anadromous fish. Numerous species of macroinvertebrates occur in riverine habitats, often beneath submerged rocks (e.g., stoneflies, mayflies, and caddisflies), in mud (e.g., clams and mussels), or at the water surface (e.g., water striders, backswimmers, water boatmen, and mosquito larvae). Stream habitats are often further enriched by the presence of vegetation along their banks. Overhanging trees and shrubs provide shade and contribute to a decrease in water temperatures. Additionally, roots from trees and fallen vegetation within the stream increase habitat complexity and bank stability, and provide shelter for rearing fish, amphibians, and invertebrates.

In the study area, stream/riverine habitat is found only in association with Paynes Creek, an intermittent stream. Ephemeral streams and numerous constructed ditches are also present within the study area; two of the ephemeral streams are directly tributary to Paynes Creek. The ephemeral streams and drainage ditches do not support aquatic life or riparian vegetation, and are not considered as stream/riverine habitat.

Paynes Creek is located in the southernmost portion of the project area and is a spring-fed tributary of the Sacramento River. The stream originates east of the community of Mineral and ranges from 5,400 to 320 feet in elevation along its route west (Tehama County Resource Conservation District, 2010). The reach of Paynes Creek in the study area is over 30 miles from the confluence with the Sacramento River. The dominant in-stream substrate is cobbles and boulders, with a narrow band of riparian habitat along both banks. Isolated pockets of standing water were present in Paynes Creek during an April 29, 2021, field visit. According to Water District staff, the stream is typically dry in the summer at the well site, with perennial flow generally starting about a quarter-mile downstream, near the Ponderosa Way crossing.

Because the on-site reach of Paynes Creek is at the bottom of a steep canyon, it has a narrow floodplain and supports only a narrow band of riparian vegetation. Species present include big-leaf maple, willows, wild rose, and others. The wellhouse access road extends through the steam corridor, which further limits the extent of riparian vegetation in the study area.

Ponderosa Pine Forest. Ponderosa pine forests range from pure stands of ponderosa pine to mixed stands in which at least 50 percent of the canopy area is ponderosa pine (CDFW, 1988). Trees often accompanying ponderosa pine include white fir, incense-cedar, Jeffrey pine, sugar pine, Douglas-fir, canyon live oak, California black oak, Oregon white oak, Pacific madrone, and tanoak (CDFW, 1988). In Northern California, ponderosa pine forests occur in a narrow elevational belt above oak woodland habitats and below mixed conifer habitats.

Pine/oak woodlands and forests provide nesting habitat for a variety of migratory and resident birds, including scrub jays, acorn woodpeckers, northern flickers, oak titmice, western bluebirds, turkeys, red-tailed hawk, warblers, and many other species. Terrestrial salamanders (e.g., California slender salamander and ensatina) and western toads are occasionally found on moist soil beneath logs or fallen limbs. Western fence lizards and western skinks are particularly abundant, feeding on a variety of terrestrial insects, many of which inhabit decaying woody debris. Rattlesnakes, gopher snakes, and California kingsnakes are common in this woodland type, feeding predominantly on mice and squirrels. Mammal species that have potential to occur in oak/pine woodland include various bats, black-tailed deer, black-tailed jackrabbits, and coyotes.

The onsite ponderosa pine forest is best developed in the eastern portion of the Ponderosa Sky Ranch subdivision and along Canyon View Loop. Relatively pure stands of ponderosa pine are present in some areas, while black oak is a substantial component of the community in other areas. Understory vegetation is quite limited and generally consists of sapling trees and patches of manzanita. The pure stands best match the ponderosa pine forest and woodland alliance (87.010.00) described in the CDFW California Natural Communities List, while the mixed stands most closely resemble the California black oak forest and woodland alliance (71.010.00), specifically, the *Quercus kelloggii – Pinus ponderosa* association (71.010.26). The habitat is not identified as a sensitive natural community.

***Mixed Chaparral*.** Mixed chaparral habitat generally occurs on steep slopes and ridges with relatively thin soils. The habitat typically consists of a structurally homogeneous brushland dominated by shrubs with thick, evergreen leaves capable of

withstanding droughts. Mature stands can form dense, nearly impenetrable thickets; however, stand formation is heavily influenced by fire. The mixed chaparral community is floristically rich and can support a wide range of plant species.

In the project study area, the mixed chaparral community is present on the steep south-facing slope between Paynes Creek and the Ponderosa Sky Ranch residential development, and in the western portion of the development. Characteristic shrub species include buckbrush, deerbrush, yerba santa, green-leaved manzanita, white-leaf manzanita, Brewer oak, Fremont's silktassel, western redbud, California flannelbush, Sierra plum, birch-leaved mountain mahogany, California buckeye, and other species. This community most closely resembles the buckbrush chapparal alliance (37.211.00) and the *Ceanothus cuneatus – Eriodictyon californicum* – (*Fremontodendron californicum*) association (37.211.08) described in the CDFW California Natural Communities List, neither the alliance nor the association is identified as a sensitive natural community.

Although no wildlife species are known to be restricted to mixed chaparral habitat, the community can provide important deer foraging habitat, and may support a wide variety of small mammals, birds, and reptiles. Most animal populations reach peak densities two to three decades after fires, and then decline as the community ages. As shrubs die back, the fuel load increases, priming the area for another fire.

Urban/Rural Residential. This habitat type is characterized as natural habitats that have been converted to facilitate development or have been substantially altered by planting non-native vegetation. The urban habitat in the study area includes paved and unpaved roadways, and adjoining developed residential properties. Very little of the urban habitat has been planted with non-native ornamental species, however, numerous non-native grass and forb species have become established in clearings and road shoulders. The mosaic of planted, native, and non-native vegetation provides potential habitat for a variety of species. In spring and summer, the vegetation may provide nesting habitat for a variety of migratory and resident bird species. This community is not identified as a natural community by CDFW, and is not a sensitive natural community.

5. RECORDS REVIEW AND FIELD RECONNAISSANCE

5.1. Records Review

Records reviewed for this evaluation consisted of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) records for special-status plants, animals, and natural communities within a 5-mile radius of the study area (see **Table 1**); California Native Plant Society (CNPS) Inventory of Rare and Endangered Plants present in the Finley Butte and Lyonsville 7.5-minute quadrangles (see **Table 2**); U.S. Fish and Wildlife Service (USFWS) records for federally listed, proposed, and candidate plant and animal species with potential to occur in the study area (see **Appendix C**); and National Marine Fisheries Service (NMFS) records for anadromous fish species, critical habitat, and essential fish habitat within the Finley Butte and Lyonsville quadrangles (see **Appendix C**).

5.2. Field Reconnaissance

To determine the presence/absence of special-status species, botanical field surveys were conducted by an ENPLAN biologist on April 29, May 22, and May 31, 2021; wildlife surveys were conducted by an ENPLAN biologist on April 29, June 16, and August 25, 2021. Biological field observations extended up to approximately 100 feet beyond the project site boundaries; these off-site areas were inspected where accessible to evaluate potential indirect impacts to special-status species and their habitats.

Most special-status plant species potentially occurring in the project area would have been identifiable at the time the botanical surveys were completed, while most special-status animal species potentially occurring in the project area would not have been evident at the time the fieldwork was conducted. However, determination of the potential presence of the species that would not have been detectable at the time of the field surveys could readily be determined based on observed habitat characteristics.

6. NATURAL COMMUNITIES

CNDDB records do not identify any sensitive natural communities within a five-mile radius of the project area. The USFWS does not identify designated critical habitat for federally listed species in the study area or vicinity. NMFS identifies critical habitat for Central Valley spring-run (CVSR) Chinook salmon and California Central Valley (CCV) steelhead within both the Finley Butte and Lyonsville quadrangles; however, all the critical habitat that occurs in the quadrangles is within streams that occur north or south of the project area and do not connect to Paynes Creek. Critical habitat for CVSR Chinook salmon and CCV steelhead in Paynes Creeks is over 25 miles west of the project area. NMFS identifies essential fish habitat (EFH) for Chinook salmon in the USGS Finley Butte and Lyonsville quadrangles.

As described above, the principal natural communities in the study area are stream/riverine, ponderosa pine forest, mixed chaparral, and urban/rural residential. Stream/riverine communities are considered sensitive; the remaining communities are not sensitive. Potential impacts of the proposed project on natural communities include temporary impacts to Paynes Creek and its riparian habitat (including Essential Fish Habitat), potential indirect impacts to downstream aquatic habitats, indirect impacts to seasonal wetlands, and removal of mature trees throughout the project area. Each of these effects is briefly discussed below.

Installation of the access stairway over Paynes Creek may temporarily impact a small amount (<250 square feet) of the intermittent stream and its associated riparian habitat. Impacts could include trimming of riparian vegetation (although no riparian trees would be removed), and temporary access in the dry stream channel. Earth-disturbing activities in the vicinity of the wellhouse and on the steep slope above Paynes Creek could result in erosion and subsequent water-quality degradation in downstream reaches of Paynes Creek. **Mitigation Measure 1** limits construction activities in Paynes Creek to the period between June 1 and October 31, when the stream is dry or the water temperature exceeds 25°C, or as may otherwise be specified by jurisdictional permits/certifications issued by the CDFW, USACE, and/or Regional Water Quality Control Board. Implementation of **Mitigation Measure 2** would minimize the loss of riparian habitat that is present along the banks of Paynes Creek and promote quick

regeneration of riparian plants following completion of construction. Best Management Practices for erosion control would be employed in accordance with existing regulations in accordance with the State Water Resources Control Board's (SWRCB) National Pollutant Discharge Elimination System (NPDES) permit for Discharges of Storm Water Runoff Associated with Construction Activity (currently Order No. 2009-009-DWQ).

With implementation of the above measures, the potential for direct and indirect impacts on Essential Fish Habitat would be negligible. In the long term, installation of the access stairway would allow District staff to walk to the wellhouse during high stream flows rather than drive through the flowing channel; thus, the bridge would provide a long-term enhancement to Essential Fish Habitat.

Approximately 279 square feet of seasonal wetland is present in two locations, in the road shoulders of Vanguard Avenue and Canyon View Loop. Current project plans show that these wetlands will be avoided during installation of waterlines in the roadways; however, the seasonal wetlands could be temporarily affected if increased erosion results in the deposition so sediments in these features. **Mitigation Measure 3** calls for placement of temporary fencing or other high-visibility markings to minimize the potential for accidental entry into the wetlands. As noted above, implementation of Best Management Practices would minimize the potential for indirect impacts due to erosion.

In addition, the project would permanently remove ±38 trees that may provide habitat for nesting birds, roosting bats, or other arboreal species. These trees consist primarily of ponderosa pines and black oaks located near the existing well, the existing Ponderosa Way well and pump station site, and the proposed Canyon View Loop water tank. The loss of trees is not considered as a sensitive impact given that the ponderosa pine forest community is not a CDFW sensitive natural community, and given the abundance of similar habitat in the vicinity. Further, a Timber Harvest Plan, Timberland Conversion Permit, or conversion exemption from the California Department of Forestry and Fire Protection would be required as part of the project. Nonetheless, mitigation measures are warranted to minimize the potential for adverse impacts to special-status species that could occur in association with the trees, as further discussed below.

7. SPECIAL-STATUS SPECIES

7.1. Special-Status Plant Species

Review of the U.S. Fish and Wildlife Service species lists (see **Appendix C**) for the project area did not identify any federally listed or candidate plant species as potentially being affected by the proposed project. The project site does not contain designated critical habitat for federally listed plant species.

Review of California Natural Diversity Data Base (CNDDB) records (**Table 1**) showed that no special-status plant species have previously been reported in the project site. Two special-status plants have been reported within a five-mile radius of the study area: Callahan's mariposa-lily and long-stiped campion. One non-status plant, Butte County fritillary, has also been reported in the five-mile search radius. The CNPS Inventory (**Table 2**) for the Finley Butte and Lyonsville quadrangles identified three additional special-status plants: blushing wild buckwheat, mingan moonwort, and watershield. Seven additional non-status species have been recorded in the Finley Butte and Lyonsville quadrangles by CNPS.

The potential for each of the special-status plant species to occur on the project site is evaluated in **Table 3.** As documented, none of these or any other special-status plant species were observed during the botanical field survey, nor are any expected to be present. Included as **Appendix D** is a list of vascular plants observed during the botanical surveys.

7.2. Special-Status Wildlife Species

Review of the USFWS species list for the project area (see **Appendix C**) identified the following federally listed animal species as potentially being affected by the proposed project: California red-legged frog, delta smelt, and vernal pool fairy shrimp. The USFWS does not identify designated critical habitat in the study area for any federally listed animal species.

The NMFS records identify the following federally listed anadromous fish species in the USGS Finley Butte and Lyonsville quadrangles: Chinook salmon-CVSR evolutionarily significant unit (ESU), Chinook salmon-Sacramento River winter-run (SRWR) ESU, and CCV steelhead-distinct population segment (DPS).

Review of CNDDB records showed that one special-status animal species, American peregrine falcon, was reported in the general vicinity of the project area in 2000. Four additional special-status animals have been reported within a five-mile radius of the study area: foothill yellow-legged frog, Northern goshawk, Sierra Nevada red fox, and western pond turtle. Additionally, three non-status animals have been reported in the search radius: gray-headed pika, Klamath sideband, and Wawona riffle beetle.

The potential for each of the above special-status animal species to occur on the project site is further evaluated in **Table 3**. As documented, although no special-status species were observed during the field surveys, potentially suitable habitat occurs in the project area for CCV steelhead.

CCV Steelhead DPS *(Oncorhynchus mykiss irideus)*

CCV steelhead are federally listed as Threatened. The majority of the CCV steelhead spawning migration occurs between August and March (Schafter, 1980; Vogel and Marine, 1991). Spawning then occurs between December and April in streams with cool, well-oxygenated water that is available year-round. Eggs incubate for one to four months before the fry emerge. Newly emerged fry move to shallow stream margins to escape predation and high water velocities. Steelhead may remain in fresh water for one to four years before emigrating, but typically emigrate after two years in fresh water. Once at sea, adults spend anywhere from one to four years there before returning to fresh water to spawn as four- or five-year-olds.

Due to their dependency on dissolved oxygen, steelhead have strict thermal requirements. Carter (2005) summarized previous research conducted by others on the thermal tolerances of salmonids and found that temperatures lethal to all life stages of CCV steelhead range from 21ºC to 23.9ºC.

The CCV steelhead population has not been well documented in upper Paynes Creek, and it is difficult to assess the current presence/status of steelhead in the watershed. However, given the intermittent flow, the potential presence of CCV steelhead during the wet season cannot be ruled out. Based

on field surveys, by June 1 the upstream reaches of Paynes Creek are expected to be dry or have water temperatures that are lethal to CCV steelhead. Therefore, any work conducted between June 1 and October 31 would have no direct effect on CCV steelhead survival (see **Mitigation Measure 1**).

As discussed in Section 6, BMPs for sediment control and spill prevention would be implemented in accordance with SWRCB requirements, which would avoid/minimize the potential for indirect impacts on CCV steelhead. In addition, **Mitigation Measure 2** includes measures to minimize the loss of riparian habitat, which would in turn protect Essential Fish Habitat. No additional mitigation measures are needed with respect to CCV steelhead.

8. NESTING MIGRATORY BIRDS

Under the Migratory Bird Treaty Act (MBTA) of 1918, migratory bird species, their nests, and their eggs are protected from injury or death, and any project-related disturbances during the nesting period. In addition, California Fish and Game Code §3503 provides regulatory protection to resident and migratory birds and all birds of prey within the State.

The USFWS identified the following migratory Birds of Conservation Concern as potentially affected by the proposed project: black-throated gray warbler, California thrasher, golden eagle, oak titmouse, olive-sided flycatcher, and wrentit. The potential for each of these species to utilize the project site is evaluated in **Table 4**. As documented in the table, five of the six bird species of conservation concern have potential to nest in the study area.

Although no nests were observed during the biological field screening, birds could potentially nest in vegetation or on structures in and adjacent to the study corridor in subsequent years. If present during construction, nesting birds could be directly or indirectly affected by construction activities. Direct effects could include mortality resulting from tree removal or from construction equipment operating in an area containing an active nest with eggs or chicks. Indirect effects could include nest abandonment by adults in response to loud noise levels or human encroachment, or a

reduction in the amount of food available to young birds due to changes in feeding behavior by adults.

In the local area, most birds nest between February 1 and August 31, and the potential for adversely affecting nesting birds can be greatly minimized by conducting vegetation removal before February 1 or after August 31. If this is not possible, a nesting survey should be conducted prior to commencement of construction. If active nests are found, the survey biologist would consult with CDFW and the USFWS regarding appropriate action to comply with the Migratory Bird Treaty Act and California Fish and Game Code §3503. Compliance measures may include, but are not limited to, exclusionary buffers, sound attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists (see **Mitigation Measure 4**).

9. NOXIOUS WEEDS

The introduction and spread of noxious weeds during construction activities has the potential to impact natural habitats. A noxious weed is a plant that has been defined as a pest by federal or state law. In California, the California Department of Food and Agriculture (CDFA, 2021) maintains a list of plants that are considered threats to the well-being of the state. Each noxious weed identified by the CDFA receives a rating that reflects the importance of the pest, the likelihood that eradication or control efforts would be successful, and the present distribution of the pest within the state. Below is a description of ratings categories applied by CDFA:

> **Category A**. A pest of known economic or environmental detriment that is either not known to be established in California or it is present in a limited distribution that allows for the possibility of eradication or successful containment. A-rated pests are prohibited from entering the state because they have been determined to be detrimental to agriculture.
>
> **Category B**. A pest of known economic or environmental detriment and, if present in California, is of limited distribution. B-rated pests are eligible to enter the state if the receiving county has agreed to accept them.
>
> **Category C.** A pest of known economic or environmental detriment and, if present in California, it is usually widespread. C-rated organisms are eligible to

enter the state as long as the commodities with which they are associated conform to pest cleanliness standards when found in nursery stock shipments.

According to California Invasive Plant Council (Cal-IPC) records, six of the plant species observed in the project area during the botanical survey have a California Department of Food and Agriculture weed ranking (in Categories B and C). These species include yellow starthistle, Spanish broom, Klamath weed, barbed goatgrass, cheatgrass, and medusahead. An addition twenty observed plant species were listed with Cal-IPC ratings between "watch" (not currently invasive in California, but with high potential for becoming invasive) and "high." As called for in **Mitigation Measure 5**, the potential for introduction and spread of noxious weeds can be avoided/minimized by using only certified weed-free erosion control materials, mulch, and seed; limiting any import or export of fill material to material that is known to be weed free; and requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering and upon leaving the job site.

10. CONCLUSIONS AND RECOMMENDATIONS

Based on the records search results, field observations, and the above analyses, we find that the proposed project would temporarily impact one intermittent stream; has the potential to directly and indirectly affect special-status wildlife species (CCV steelhead), if present; has the potential to directly and indirectly affect riparian habitat; has the potential to indirectly affect two seasonal wetlands; has the potential to affect nesting birds and roosting bats (if present); and could result in the introduction and spread of noxious weeds. However, implementation of conditions of regulatory agency permits, use of BMPs for spill prevention and erosion control, and implementation of the following mitigation measures would reduce the proposed project's potential impacts on biological resources to a less-than-significant level.

Mitigation Measure 1: Limit the Work Period for Stream Bed and Bank Work

Construction activities within the ordinary high-water mark of streams shall be limited to the period between June 1 and October 31, or as may otherwise be specified through jurisdictional permits/certifications issued by the California Department of Fish and Wildlife, U.S. Army Corps of Engineers, and/or Regional Water Quality Control Board. If

work is proposed outside of the agency-approved work windows, the Sky View County Water District shall obtain approval from those agencies prior to conducting such work, and shall implement any additional measures that may be required.

Mitigation Measure 2: Minimize Loss of Riparian Habitat

Loss of riparian habitat along drainages shall be minimized by implementing the following measures:

a. Minimize the construction disturbance to riparian habitat along drainage systems through careful pre-construction planning.
b. Install high-visibility fencing, flagging, or other markers along the outer edges of the construction zone where needed to prevent accidental entry into riparian habitat.
c. Stockpile equipment and materials outside of riparian habitat, in the designated staging areas.
d. Prune any riparian plants at ground level where feasible (as opposed to mechanically removing the entire plant and root system) in temporary use areas, which will promote regeneration from the root systems.

Mitigation Measure 3: Avoid Indirect Impacts to Wetlands

High-visibility fencing, flagging, or other markers shall be installed along the outer edges of the construction zone adjacent to wetlands and other waters designated for avoidance. The fencing location shall be determined by a qualified biologist in consultation with the project engineer and the Sky View County Water District. No construction activities (e.g., clearing, grading, trenching, etc.), including vehicle parking and materials stockpiling, shall occur within the fenced area. The exclusionary fencing shall be periodically inspected during construction activities to ensure the fencing is properly maintained. The fencing shall be removed upon completion of work.

Mitigation Measure 4: Avoid Effects to Nesting Birds

In order to avoid impacts to nesting birds and raptors protected under the federal Migratory Bird Treaty Act and California Fish and Game Code §3503 and §3503.5, including their nests and eggs, one of the following shall be implemented (removal of raptor nests at any time of year is prohibited unless appropriate permits are obtained):

a. Vegetation removal and other ground-disturbance activities associated with construction shall occur between September 1 and January 31, when birds are not nesting; or
b. If vegetation removal or ground disturbance activities occur during the nesting season (February 1 – August 31), a pre-construction nesting survey shall be conducted by a qualified biologist to identify active nests in and adjacent to the work area.

Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The survey shall consider acoustic impacts and line-of-sight disturbances occurring as a result of the project in order to determine a sufficient survey radius to avoid nesting birds. At a minimum, the survey report shall include a description of the area surveyed, date and time of the survey, ambient conditions, bird species observed in the area, a description of any active nests observed, any evidence of breeding behaviors (e.g., courtship, carrying nest materials or food, etc.), and a description of any outstanding conditions that may have impacted the survey results (e.g., weather conditions, excess noise, the presence of predators, etc.).

The results of the survey shall be submitted electronically to the California Department of Fish and Wildlife at R1CEQARedding@wildlife.ca.gov upon completion. The survey shall be conducted no more than one week prior to the initiation of construction. If construction activities are delayed or suspended for more than one week after the pre-construction survey, the site shall be resurveyed.

If active nests are found, appropriate actions shall be implemented to ensure compliance with the Migratory Bird Treaty Act and California Fish and Game Code. Compliance measures may include, but are not limited to, exclusion buffers, sound-attenuation measures, seasonal work closures based on the known biology and life history of the species identified in the survey, as well as ongoing monitoring by biologists.

Mitigation Measure 5: Minimize the Introduction and Spread of Noxious Weeds

The potential for introduction and spread of noxious weeds shall be avoided/minimized by:

a. Using only certified weed-free erosion control materials, mulch, and seed;
b. Limiting any import or export of fill material to material that is known to be weed free; and
c. Requiring the construction contractor to thoroughly wash all equipment at a commercial wash facility prior to entering the job site and upon leaving the job site.

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TABLES

TABLE 1
CNDDB Report Summary

Five-Mile Radius of Project Area
September 2021

Listed Element	Quadrangle [1]				Status [2]
	FB	IH	LY	MA	
ANIMALS					
American peregrine falcon	•				FD, SD, SFP
Foothill yellow-legged frog	•			•	SE, SSSC
Gray-headed pika			•		None
Klamath sideband	•	•			None
Northern goshawk			•		SSSC
Sierra Nevada red fox			•		FPE, ST
Wawona riffle beetle	•		•	•	None
Western pond turtle	•				SSSC
PLANTS					
Butte County fritillary	•			•	3.2
Callahan's mariposa-lily	•		•		1B.1
Long-stiped campion			•		1B.2

Highlighting denotes the quadrangle in which the project site is located

[1]QUADRANGLE CODE

FB – Finley Butte
IH – Inskip Hill
LY – Lyonsville
MA - Manton

[2]STATUS CODES

Federal

FC Federal Candidate Species
FPE Federal Proposed Endangered Species
FD Federally Delisted
FSC Federal Species of Concern

State

SFP State Fully Protected
SE State Listed – Endangered
ST State Listed – Threatened
SD State Delisted
SSSC State Species of Special Concern

Rare Plant Rank

1A Plants Presumed Extinct in California
1B Plants Rare, Threatened or Endangered in California and Elsewhere
2 Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3 Plants About Which We Need More Information *(A Review List)*
(generally not considered special-status, unless unusual circumstances warrant)

Rare Plant Threat Ranks

0.1 Seriously Threatened in California
0.2 Fairly Threatened in California

TABLE 2
California Native Plant Society
Inventory of Rare and Endangered Plants

U.S. Geological Survey Lyonsville and Finley Butte 7.5-minute Quadrangles

October 2021

Common Name	Scientific Name	CA Rare Plant Rank	Blooming Period	State Listing Status	Federal Listing Status
Baker cypress	*Hesperocyparis bakeri*	4.2	–	–	–
Bidwell's knotweed	*Polygonum bidwelliae*	4.3	April-July	–	–
Blushing wild buckwheat	*Eriogonum ursinum* var. *erubescens*	1B.3	June-Sep	–	–
Broad-lobed leptosiphon	*Leptosiphon latisectus*	4.3	April-June	–	–
Butte County fritillary	*Fritillaria eastwoodiae*	3.2	Mar-June	–	–
Callahan's mariposa-lily	*Calochortus syntrophus*	1B.1	May-June	–	–
Depauperate milk-vetch	*Astragalus pauperculus*	4.3	Mar-June	–	–
Long-stiped campion	*Silene occidentalis* ssp. *longistipitata*	1B.2	June-Aug	–	–
Mingan moonwort	*Botrychium minganense*	2B.2	July-Sep	–	–
Sanborn's onion	*Allium sanbornii* var. *sanbornii*	4.2	May-Sep	–	–
Shield-bracted monkeyflower	*Erythranthe glaucescens*	4.3	Feb-Aug (Sep)	–	–
Watershield	*Brasenia schreberi*	2B.3	June-Sep	–	–
Woolly meadowfoam	*Limnanthes floccosa* ssp. *floccosa*	4.2	Mar-May (June)	–	–

Rare Plant Rank	
1A	Plants Presumed Extinct in California
1B	Plants Rare, Threatened or Endangered in California and Elsewhere
2	Plants Rare, Threatened, or Endangered in California, but More Common Elsewhere
3	Plants About Which We Need More Information – A Review List (generally not considered special-status, unless unusual circumstances warrant)
4	Plants of Limited Distribution – A Watch List (generally not considered special-status, unless unusual circumstances warrant)
Rare Plant Threat Rank	
0.1	Seriously Threatened in California
0.2	Fairly Threatened in California
0.3	Not Very Threatened in California

Source: *California Native Plant Society, Rare Plant Program. 2021. Inventory of Rare and Endangered Plants of California (online edition, v8-03 0.39). http://www.rareplants.cnps.org. Accessed September 27, 2021.*

TABLE 3

Potential for Special-Status Species to Occur on the Project Site

October 2021

COMMON NAME	SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
PLANTS							
Blushing wild buckwheat	*Eriogonum ursinum* var. *erubescens*	1B.3	Blushing wild buckwheat occurs on scree or talus slopes in lower montane coniferous forests and in montane chaparral. The species is reported between 4,700 and 6,300 feet in elevation. The flowering period is June through September.	No	No	No	The project area is below the known elevational range of blushing wild buckwheat. The species was not observed during the botanical surveys and is not expected to be present in the project area.
Callahan's mariposa-lily	*Calochortus syntrophus*	1B.1	Callahan's mariposa lily occurs on rocky substrates in cis-montane woodlands and grasslands between 1,400 and 4,000 feet in elevation. The flowering period is May and June.	Yes	No	No	According to CNDDB records Callahan's mariposa-lily was reported in 2010 ±0.25 miles northeast and ±0.75 miles southwest of the Canyon View Loop water tank site; and in 2013 ±750 feet south of the Canyon View Loop water tank site. Although suitable habitat is present in the project area and vicinity, this species was not observed during the botanical surveys and is not expected to be present on the project site.
Long-stiped campion	*Silene occidentalis* ssp. *longistipitata*	1B.2	Long-stiped campion occurs in grassy openings in chaparral, montane coniferous forests, and woodlands between 3,200 and 6,300 feet in elevation. The flowering period is June through August.	Yes	No	No	The long-stiped campion is recorded in CNDDB as occurring in the Lyonsville quadrangle, and marginally suitable habitat is present in the project area. However, the species was not observed during botanical surveys and is not expected to be present in the project area.

TABLE 3

Potential for Special-Status Species to Occur on the Project Site

October 2021

COMMON NAME	SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Mingan moonwort	*Botrychium minganense*	2B.2	Mingan moonwort occurs along stream sides in mixed coniferous forests. The species is reported between 3,900 and 10,800 feet in elevation.	No	No	No	The Paynes Creek portion of the study area is below the known elevational range of mingan moonwort. The species was not observed during the botanical surveys and is not expected to be present in the project area.
Watershield	*Brasenia schreberi*	2B.3	Watershield, a perennial rhizomatous herb, occurs in marshes and swamps. The species is reported between sea level and 7,300 feet in elevation. The flowering period is June through September.	No	No	No	The project area does not contain suitable habitat for watershield. The species was not observed during protocol-level botanical surveys and is not expected to be present in the project area.
INVERTEBRATES							
Vernal pool fairy shrimp	*Branchinecta lynchi*	FT	Vernal pool fairy shrimp inhabit small, clear-water sandstone-depression pools and grassed swale, earth slump or basalt-flow depression pools.	No	No	No	The project area does not contain vernal pool habitat; therefore, the vernal pool fairy shrimp would not be present on the site.
BIRDS							
American peregrine falcon	*Falco peregrinus anatum*	FD, SD, SFP	American peregrine falcons frequent water bodies in open areas with cliffs and canyons nearby for nesting. This falcon feeds and breeds near water.	No	No	No	The American peregrine falcon was reported as nesting about 1.5 miles from the project site in 2000; however no cliffs, canyons, or potentially suitable nesting habits near open bodies of water are present in or adjacent to the project site. Thus, American peregrine falcons are not expected to nest in or near the project site.

TABLE 3

Potential for Special-Status Species to Occur on the Project Site

October 2021

COMMON NAME	SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Northern goshawk	*Accipiter gentilis*	SSSC	Northern goshawks generally nest on north-facing slopes near water in old-growth coniferous and deciduous forests. Goshawks re-use old nests and maintain alternate nest sites.	No	No	No	The northern goshawk was recorded from the Lyonsville quadrangle in 1995. The project area does not contain suitable nesting habitat and the northern goshawk was not observed during the wildlife surveys. Therefore, the northern goshawk is not expected to nest in the project area.
AMPHIBIANS							
Foothill yellow-legged frog	*Rana boylii*	SE, SSSC	Foothill yellow-legged frogs are typically found in shallow, partly shaded, perennial streams in areas with riffles and rocky substrates. This frog needs at least some cobble-sized substrate for egg-laying. Foothill yellow-legged frogs generally prefer low- to moderate-gradient streams, especially for breeding and egg-laying, although juvenile and adult frogs may utilize moderate- to steep-gradient streams during summer and early fall.	No	No	No	According to CNDDB records, foothill yellow-legged frog has been reported south of the study area near Plum Creek and North Fork Antelope Creek; however, streams in the study area are ephemeral or intermittent and do not provide suitable habitat for foothill yellow-legged frog. The species was not observed during the wildlife survey and is not expected to be present.
California red-legged frog	*Rana draytonii*	FT, SSSC	Suitable aquatic habitat for the California red-legged frog (CRLF) consists of permanent water bodies of virtually still or slow-moving fresh. The CRLF is not characteristically found in deep lakes or reservoirs. Dense, shrubby riparian vegetation and bank overhangs are important features of CRLF breeding habitat. The CRLF tends to occur in greater numbers in deeper, cooler pools with dense emergent and shoreline vegetation. The species is found at elevations ranging from sea level to approximately 5,000 feet.	No	No	No	No suitable habitat for CRLF is present in the project site; therefore, this species would not be present in the study area.

TABLE 3

Potential for Special-Status Species to Occur on the Project Site

October 2021

COMMON NAME	SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Western pond turtle	*Emys marmorata*	SSSC	The western pond turtle associates with permanent or nearly permanent water in a variety of habitats. This turtle is typically found in quiet water environments. Pond turtles require basking sites such as partially submerged logs, rocks, or open mud banks, and suitable (sandy banks or grassy open fields) upland habitat for egg-laying. Nesting and courtship occur during spring. Nests are generally constructed within 500 feet of a waterbody, but some nests have been found up to 1,200 feet away. Pond turtles leave aquatic sites in the fall and overwinter in uplands nearby. Pond turtles return to aquatic sites in spring.	No	No	No	No perennial or near-perennial water habitat is present on-site; thus, the western pond turtle would not be present in the project area.
FISH							
Chinook salmon – Central Valley spring-run ESU	*Oncorhynchus tshawytscha pop. 6*	FT, ST	Central Valley spring-run Chinook salmon enter the Sacramento-San Joaquin Delta in early January, and enter natal streams between mid-March and mid-October. Upon entering fresh water, spring-run are sexually immature and must hold in cold water habitats through summer to mature. Typically, spring-run utilize mid- to high-elevation streams that provide sufficient flow, water temperature, cover, and pool depth to allow over-summering. Spawning occurs between August and mid-October.	No	No	No	Paynes Creek in the project area is intermittent, and does not provide suitable holding and staging habitat for spring-run salmon; thus, the species would not be present in the project area.
Chinook salmon – Sacramento River winter-run ESU	*Oncorhynchus tshawytscha pop. 7*	FE, SE	Sacramento River winter-run Chinook salmon spawn almost exclusively in the Sacramento River from mid-April through August. Spawning generally occurs in swift, relatively shallow riffles or along the edges of fast runs where there is an abundance of loose gravel. The species is dependent on cold freshwater habitat year-round.	No	No	No	Paynes Creek in the project area is about 30 miles upstream of the Sacramento River spawning areas, and is dry during most of the winter-run rearing period; thus, the species would not be present in the project area.

TABLE 3

Potential for Special-Status Species to Occur on the Project Site

October 2021

COMMON NAME	SCIENTIFIC NAME	STATUS[1]	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	CRITICAL HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/COMMENTS
Delta smelt	*Hypomesus transpacificus*	FT	Delta smelt primarily inhabit the brackish waters of Sacramento-San Joaquin River Delta. Most spawning occurs in backwater sloughs and channel edgewaters.	No	No	No	The project area is outside of the known range of this species.
Steelhead-Central Valley DPS	*Oncorhynchus mykiss irideus*	FT	Central Valley steelhead inhabit cold-water tributaries of the Sacramento and San Joaquin rivers. Adults begin their upstream spawning migration between August and March. Spawning occurs between December and April. Spawning habitat is characterized by loose, clean gravel in cold, swiftly flowing, shallow water.	Yes	No	Pot.	Steelhead are known to occur in Paynes Creek, and critical habitat is present in perennial stream reaches west of the project area. Thus, there is potential for the species to be present within Paynes Creek in the project area during the wet season.
MAMMALS							
Sierra Nevada red fox	*Vulpes vulpes necator*	FPE, ST	The Sierra Nevada red fox inhabits remote mountainous areas where encounters with humans are rare. The species is found between 4,000 feet and 12,000 feet above sea level. Preferred habitat appears to be red fir and lodgepole pine forests in the subalpine and alpine zones of the Sierra Nevada. This species may hunt in forest openings, meadows, and barren rocky areas associated with its high elevation habitats.	No	No	No	Although Sierra Nevada red fox has been observed ±five miles east of the project site, known population centers in the region are restricted to Lassen Park and the Caribou Wilderness. The species would not be affected by project implementation.

[1] **Status Codes**

Federal:
- FE Federally Listed – Endangered
- FT Federally Listed – Threatened
- FC Federal Candidate Species
- FD Federal Delisted

State:
- SFP State Fully Protected
- SE State Listed - Endangered
- ST State Listed - Threatened
- SSSC State Species of Special Concern

Rare Plant Rank
- 1A Plants Presumed Extinct in California
- 1B Plants Rare, Threatened or Endangered in California and Elsewhere
- 2A Presumed extirpated in California, but more common elsewhere
- 2B Rare or Endangered in California, but more common elsewhere

Rare Plant Threat Rank
- 0.1 Seriously Threatened in California
- 0.2 Fairly Threatened in California
- 0.3 Not Very Threatened in California

TABLE 4

Potential for Migratory Birds of Conservation Concern to Occur on the Project Site

October 2021

COMMON NAME/ SCIENTIFIC NAME	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/ COMMENTS
Black-throated gray warbler *Dendroica nigrescens*	Black-throated gray warblers occur from Southern British Columbia, Canada south through central Mexico, and from the California coast east to central Texas. Breeding takes place in the northern portion of their range. The species prefer to breed in open pine forests, pine-oak woodland, and pinyon-juniper forests with a brushy understory. Breeding generally occurs between March and August.	Yes	Pot.	The pine/oak woodland habitat in the project area provides adequate nesting and foraging habitat for the black-throated gray warbler.
California thrasher *Toxostoma redivivum*	California thrashers are most common in chaparral habitats. However, within their range, they may be found in practically any lowland habitat with dense low brush, including streamside thickets and in suburban neighborhoods that have sufficient vegetation. The species habitat extends into edges of desert regions and in chaparral in mountains up to about 6,000 feet. The breeding season is January 1 to July 31.	Yes	Pot.	The California thrasher has the potential to be present within the mixed chaparral vegetation that occurs in the project area.
Golden eagle *Aquila chrysaetos*	Golden eagles inhabit oak woodlands, coniferous forests, and deserts. Nesting habitat consists of large trees in open areas or cliff-walled canyons. The breeding season is December 1 to August 31.	No	No	No cliff-walled canyon or large trees in open areas are present within the project area to provide nesting habitat for the golden eagle. Therefore, this species is not expected to be present.
Oak titmouse *Baeolophus inornatus*	Oak titmice mostly live in warm, open, dry oak or oak-pine woodlands. Many will use scrub oaks or other brush as long as woodlands are nearby. Nests are built in tree cavities and are made of grass, moss, hair, and feathers. Occasionally, oak titmice nest in stumps, fenceposts, pipes, eaves, or holes in riverbanks. They will also use nest boxes. The breeding season is March 15 to July 15.	Yes	Pot.	The oak titmouse is a commonly occurring species in the project area. There are adequate nesting and foraging sites for the species and it is expected to be present in the project site.

TABLE 4

Potential for Migratory Birds of Conservation Concern to Occur on the Project Site

October 2021

COMMON NAME/ SCIENTIFIC NAME	GENERAL HABITAT DESCRIPTION	HABITAT PRESENT (Y/N)	SPECIES PRESENT (Y/N/POT.)	RATIONALE/ COMMENTS
Olive-sided flycatcher *Contopus cooperi*	Olive-sided flycatchers breed in montane and northern coniferous forests, at forest edges and in openings around meadows and ponds. The nest is an open cup of twigs, rootlets, and lichens, placed out near the tip of a horizontal branch of a tree. The breeding season is May 20 to August 31.	Yes	Pot.	The onsite coniferous forest and the riparian borders of Paynes Creek provide adequate nesting habitat for the olive-sided flycatcher. Therefore, this species has potential to be present in the project area.
Wrentit *Chamaea fasciata*	Within its range, the wrentit inhabits most kinds of dense low growth, such as chaparral, coastal sage scrub, streamside thickets, thickets of brush in parks, and even in garden shrubs. The breeding season is March 15 to August 10.	Yes	Pot.	The wrentit is a common species in the vicinity of the project area. There is adequate nesting and foraging habitat on-site for the wrentit and a high potential for the species to be present.

APPENDIX A

RESUMES

Donald Burk, Environmental Services Manager

Allison Loveless, Wildlife Biologist

DONALD M. BURK

Environmental Services Manager

Education

M.S. Botany
California State University, Chico

B.A. Chemistry and Biological Sciences
California State University, Chico

Professional Affiliations and Certifications

Society of Wetland Scientists
California Botanical Society
California Native Plant Society
Association of Environmental Professionals

Donald Burk has an in-depth background in a broad spectrum of environmental studies. His academic background includes graduate studies in environmental analysis methodology, biological sciences, and community planning. He has continued his professional development through completion of specialized courses in wetland delineation; wetland impacts and mitigations; vernal pool restoration and creation; noise assessments; Surface Mining and Reclamation Act regulations; erosion control practices; and hazardous materials evaluation and remediation. As environmental services manager with ENPLAN, Mr. Burk is instrumental in the preparation of environmental documents such as site assessment reports, environmental impact reports, biological studies, and noise evaluations. His responsibilities include project team management, key decision-making, coordination with applicable agencies, and final review of environmental documents. Having worked in the environmental consulting field since 1981, Mr. Burk has the skills and experience to manage studies to achieve reliable data and concise, effective documentation in a timely and cost-efficient manner.

While attending CSU, Chico, Mr. Burk was recognized as “Outstanding Organic Chemist of the Year,” received an award of merit from the American Botanical Society, and delivered the valedictory address for the School of Natural Sciences. His Master’s thesis was granted the first annual “Outstanding Thesis Award” by CSU, Chico.

Representative Experience

- *CEQA/NEPA Compliance.* Prepared environmental impact reports, environmental impact statements, and other environmental compliance documentation for a multitude of projects, including 516- and 1,244-acre industrial parks; public facilities projects including several sewage treatment plants, a 90-foot-high earthen dam and 15-acre reservoir, a 6-mile-long, 8-lane roadway, other new road corridors, and water supply projects; shopping centers and highway commercial developments; a 10,000-seat church; a 475-acre recreation ranch; ski areas; a softball park; four new schools; a 1-million cubic yard reservoir dredging project; numerous residential developments and many other projects.

- *Environmental Site Assessments.* Managed preparation of Phase I, II and III site investigations for a number of commercial and industrial facilities. Investigations have addressed wood-products manufacturing facilities, a major clothing manufacturing operation, dry cleaners, a medical clinic, ranches, a regional transmission transformer site, automotive shops and service stations, abandoned sewage treatment ponds, office buildings, shopping centers, and other uses.
- *Biological Studies.* Managed preparation of technical field studies, including wildlife and botanical studies for a 1,016-acre site in Sacramento County; fisheries, aquatic macroinvertebrate, and riparian vegetation studies for a 38-mile reach of the North Fork Feather River; botanical surveys for 175-mile and 265-mile underground telephone cable corridors; botanical surveys for over 2,400 acres on Mount Shasta proposed for ski area development; biological surveys for a 200-acre park site; spotted owl surveys; vernal pool fairy/tadpole shrimp and valley elderberry longhorn beetle assessments; and numerous other projects.
- *Wetland Delineations.* Managed preparation of wetland delineations and/or U.S. Army Corps of Engineers permit applications for a 1,016-acre site east of Sacramento, a 200-acre site in north Redding, a 580-acre site in the City of Weed, a 100-acre site near the Redding Municipal Airport, a transmission corridor project in east Redding, a 78-acre industrial parcel in the City of Benicia, and many other parcels throughout northern California.
- *Noise Studies.* Prepared noise studies for a variety of projects, including numerous traffic corridors; large industrial facilities such as a co-generation plant, food processing plant, and a regional scrap metal recycling facility; recreation facilities such as a new ski area and a community sports complex; many new residential developments; schools; and other facilities. Testified as an expert witness in a court case involving noise generated by electric- and diesel-powered water well pumps.
- *Reclamation Plans/Stream Restoration Projects.* Prepared mine reclamation plans and/or technical studies for projects including an aggregate pit adjacent to Cow Creek in Shasta County, a pumice quarry in Napa County, and underground gold mines in Shasta and Trinity Counties. Managed preparation of a stream restoration project for a reach of the Susan River, which involved hydraulic analysis, preparation of an earth-work plan, supervision of all on-site construction activities, preparation of a revegetation/erosion control plan and supervision of its implementation, and preparation of a monitoring program. Developed a plan, and obtained all agency approvals, for creation of 10 acres of riparian forest habitat along the Sacramento River to mitigate losses on a nearby parcel.

Publications

Burk, Donald et al. (29 contributing authors). Technical Editors Gary Nakamura, UC Cooperative Extension Service and Julie Kierstead Nelson, USDA Forest Service, Shasta-Trinity National Forest. 2001. *Illustrated Field Guide to Selected Rare Plants of Northern California.* University of California, Agriculture and Natural Resources. Publication 3395.

Luper, J. and D. Burk. 2014. Noteworthy collections: *Froelichia gracilis* (Amaranthaceae). Madrono 61(4):413-413.

ALLISON LOVELESS

Environmental Scientist/Wildlife Biologist

Education

M.S. Zoology
Oklahoma State University, Stillwater

B.S. Geography (Environmental Studies)
University of California, Los Angeles

Prior to her career in the environmental services sector, Allison Loveless conducted field surveys for listed plants species with Sierra Pacific Industries, conducted morphological and geospatial research on mammals while at Oklahoma State University, and participated in genetic research on gray wolves during an internship with the Wyoming Fish and Game Wildlife Forensic Laboratory. Additionally, Allison has experience conducting genetic and morphological based research on isolated reptile and amphibian species, and in developing range predictions and assessments using both field and environmental modeling techniques.

Allison now has over three years of experience working in environmental services throughout northern California. Her projects have included biological studies such as endangered species surveys and nesting bird surveys, delivering on-site environmental trainings and monitoring, as well as delivering products by preparation of technical environmental documents including environmental impact reports, biological study reports, wetland delineations, biological assessments, and figure and map creation.

Representative Experience

- *Biological Studies*. Experience conducting habitat assessments, general wildlife surveys with an emphasis on species of concern, and pre-construction nesting bird surveys.
- *Wildlife Surveys.* Performed habitat assessments and general wildlife surveys, with an emphasis on species of concern. Such work has typically included pre-field review of available records including the California Natural Diversity Data Base (CNDDB), the U.S. Fish and Wildlife Service IPAC reports, and other available data sources.
- *Wetland Studies*. Performed wetland delineations and report preparation in compliance with the standards as defined by the U.S. Army Corps of Engineers.
- *GIS Mapping and Data Collection*. Skilled field data collection using GPS and Trimble units, map construction, managing, querying, and analyzing data within ArcGIS.
- *CEQA/NEPA Documentation*. Responsible for drafting environmental compliance documentation including biological study reports, natural environment studies, and biological sections of environmental impact reports and environmental impact statements.

Publications

Loveless, A.M. and K. McBee. 2017. *Nyctimene robinsoni* (Chiroptera: Pteropodidae). Mammalian Species 49 (949): 68-75.

Loveless, A.M., M. Papeş, D.M. Reding, and P.M. Kapfer. 2016. *Combining ecological niche modeling and morphology to assess the range-wide population genetic structure of bobcats (Lynx rufus).* The Biological Journal of the Linnean Society 117: 842-857.

APPENDIX B

REPRESENTATIVE PHOTOGRAPHS

Paynes Creek, view upstream to existing pipeline crossing. April 29, 2021.

Existing pipeline crossing at Paynes Creek. April 29, 2021.

Mixed chaparral habitat on slope above Paynes Creek. April 29, 2021.

Ponderosa pine forest habitat at Canyon View Loop tank site. April 29, 2021.

Seasonal wetland adjacent to Vanguard Avenue. April 29, 2021.

Urban habitat along Ponderosa Way. April 29, 2021.

APPENDIX C

U.S. FISH AND WILDLIFE SPECIES AND NATIONAL MARINE FISHERIES SERVICE 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 28, 2021
Consultation Code: 08ESMF00-2022-SLI-0228
Event Code: 08ESMF00-2022-E-00663
Project Name: Sky View County Water District Water System Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location 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

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). 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.

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

Project Summary

Consultation Code: 08ESMF00-2022-SLI-0228
Event Code: Some(08ESMF00-2022-E-00663)
Project Name: Sky View County Water District Water System Improvements
Project Type: WATER SUPPLY / DELIVERY
Project Description: The project site is located in an unincorporated area of Tehama County, generally 35 miles northeast of Red Bluff, between the unincorporated communities of Paynes Creek and Mineral. The proposed project includes improvements to the Sky View County Water District water distribution system. Improvements include replacing the existing well building, raising the well casing by 18 inches, installing a new vertical turbine pump, constructing an access bridge across Paynes Creek to improve access for maintenance, and installing a production flow meter. Approximately 2,130 feet of existing 8-inch diameter transmission main between the well and the proposed water tank on Ponderosa Way would be replaced with a 6-inch diameter pipe. Existing water lines, services, meters, and fire hydrants would be replaced.

Additionally, the District is expanding its distribution system to serve existing customers on Canyon View Loop, north of Highway 36. Improvements associated with the extension of services include installing a new waterline, water services, meters, and fire hydrants; constructing a new water tank off of Canyon View Loop; and construction of a new booster pump station. The purpose of the proposed project is to replace aging infrastructure, improve fire flows, improve fire protection, reduce ongoing maintenance costs, improve redundancy, improve distribution capacity, and ensure a safe and reliable potable water supply for customers in the District’s water service area.

Project Location:

Approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@40.34380025,-121.7809714594274,14z

Counties: Tehama County, California

Endangered Species Act Species

There is a total of 4 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[1], 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.

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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.

Amphibians

NAME	STATUS
California Red-legged Frog *Rana draytonii*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/2891

Fishes

NAME	STATUS
Delta Smelt *Hypomesus transpacificus*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/321

Insects

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

Crustaceans

NAME	STATUS
Vernal Pool Fairy Shrimp *Branchinecta lynchi*	Threatened

There is **final** critical habitat for this species. The location of the critical habitat is not available.
Species profile: https://ecos.fws.gov/ecp/species/498

Critical habitats

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

Quad Name **Finley Butte**
Quad Number **40121-C7**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

Quad Name **Lyonsville**
Quad Number **40121-C6**

ESA Anadromous Fish

SONCC Coho ESU (T) -
CCC Coho ESU (E) -
CC Chinook Salmon ESU (T) -
CVSR Chinook Salmon ESU (T) - **X**
SRWR Chinook Salmon ESU (E) - **X**
NC Steelhead DPS (T) -
CCC Steelhead DPS (T) -
SCCC Steelhead DPS (T) -
SC Steelhead DPS (E) -
CCV Steelhead DPS (T) - **X**
Eulachon (T) -
sDPS Green Sturgeon (T) -

ESA Anadromous Fish Critical Habitat

SONCC Coho Critical Habitat -
CCC Coho Critical Habitat -
CC Chinook Salmon Critical Habitat -
CVSR Chinook Salmon Critical Habitat - **X**
SRWR Chinook Salmon Critical Habitat -
NC Steelhead Critical Habitat -
CCC Steelhead Critical Habitat -
SCCC Steelhead Critical Habitat -
SC Steelhead Critical Habitat -
CCV Steelhead Critical Habitat - **X**
Eulachon Critical Habitat -
sDPS Green Sturgeon Critical Habitat -

ESA Marine Invertebrates

Range Black Abalone (E) -
Range White Abalone (E) -

ESA Marine Invertebrates Critical Habitat

Black Abalone Critical Habitat -

ESA Sea Turtles

East Pacific Green Sea Turtle (T) -
Olive Ridley Sea Turtle (T/E) -
Leatherback Sea Turtle (E) -
North Pacific Loggerhead Sea Turtle (E) -

ESA Whales

Blue Whale (E) -
Fin Whale (E) -
Humpback Whale (E) -
Southern Resident Killer Whale (E) -
North Pacific Right Whale (E) -
Sei Whale (E) -
Sperm Whale (E) -

ESA Pinnipeds

Guadalupe Fur Seal (T) -
Steller Sea Lion Critical Habitat -

Essential Fish Habitat

Coho EFH -
Chinook Salmon EFH - **X**
Groundfish EFH -
Coastal Pelagics EFH -
Highly Migratory Species EFH -

MMPA Species (See list at left)

ESA and MMPA Cetaceans/Pinnipeds

See list at left and consult the NMFS Long Beach office 562-980-4000

MMPA Cetaceans -
MMPA Pinnipeds -

APPENDIX D

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

April 29, May 21, and May 31, 2021

Agavaceae	**Century-plant Family**
Chlorogalum pomeridianum var. *pomeridianum*	Wavy-leaved soap plant
Anacardiaceae	**Sumac Family**
Rhus aromatica	Green amaranth
Toxicodendron diversilobum	Poison-oak
Apiaceae	**Carrot Family**
Daucus pusillus	Rattlesnake weed
Oenanthe sarmentosa	Pacific oenanthe
Osmorhiza berteroi	Mountain sweet-cicely
Sanicula bipinnatifida	Purple sanicle
Tauschia hartwegii	Hartweg's tauschia
Torilis arvensis	Field hedge-parsley
Torilis nodosa	Knotted hedge-parsley
Apocynaceae	**Dogbane Family**
Apocynum androsaemifolium	Bitter dogbane
Asclepias eriocarpa	Indian milkweed
Vinca major	Greater periwinkle
Aristolochiaceae	**Birthwort Family**
Asarum hartwegii	Hartweg's wild ginger
Asteraceae	**Sunflower Family**
Achillea millefolium	Common yarrow
Artemisia douglasiana	Mugwort
Centaurea solstitialis	Yellow star thistle
Cichorium intybus	Chicory
Cirsium occidentale	Cobwebby thistle
Erigeron inornatus	California rayless fleabane
Eriophyllum lanatum	Woolly sunflower
Lessingia virgata	Wand lessingia
Madia exigua	Thread-stemmed madia
Madia subspicata	Spiked tarweed
Matricaria discoidea	Pineapple weed
Micropus californicus var. *californicus*	Slender cottonweed
Rigiopappus leptocladus	Rigiopappus
Taraxacum officinale	Dandelion
Tragopogon dubius	Goat's beard
Uropappus lindleyi	Silverpuffs
Berberidaceae	**Barberry Family**
Berberis aquifolium var. *dictyota*	Jepson's barberry

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Boraginaceae	**Borage Family**
Cryptantha simulans	Pine cryptantha
Cynoglossum grande	Western hound's tongue
Eriodictyon californicum	Yerba santa
Nemophila heterophylla	Variable-leaved nemophila
Nemophila pedunculata	Meadow nemophila
Phacelia heterophylla subsp. *virgata*	Vari-leaf phacelia
Plagiobothrys tenellus	Slender popcorn-flower
Brassicaceae	**Mustard Family**
Athysanus pusillus	Petty athysanus
Cardamine breweri	Brewer's bittercress
Hirschfeldia incana	Shortpod mustard
Streptanthus tortuosus	Mountain jewelflower
Thysanocarpus curvipes	Lace pod
Turritis glabra	Tower-mustard
Caprifoliaceae	**Honeysuckle Family**
Lonicera interrupta	Chaparral honeysuckle
Caryophyllaceae	**Pink Family**
Arenaria serpyllifolia subsp. *serpyllifolia*	Thymeleaf sandwort
Cerastium glomeratum	Mouse-eared chickweed
Dianthus armeria subsp. *armeria*	Deptford pink
Herniaria hirsuta var. *hirsuta*	Gray herniaria
Minuartia cismontana	Cismontane sandwort
Petrorhagia dubia	Grass pink
Scleranthus annuus subsp. *annuus*	German knotgrass
Silene lemmonii	Lemmon's catchfly
Comandraceae	**Bastard Toadflax Family**
Comandra umbellata subsp. *californica*	Bastard toadflax
Convolvulaceae	**Morning Glory Family**
Calystegia occidentalis subsp. *occidentalis*	Chaparrel false bindweed
Crassulaceae	**Stonecrop Family**
Dudleya cymosa subsp. *cymosa*	Canyon dudleya
Cucurbitaceae	**Gourd Family**
Marah fabacea	California man-root
Cupressaceae	**Cypress Family**
Calocedrus decurrens	Incense-cedar
Cyperaceae	**Sedge Family**
Carex feta	Green-sheathed sedge
Carex fracta	Fragile-sheathed sedge
Carex multicaulis	Many-stemmed sedge

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Ericaceae	**Heath Family**
Arctostaphylos patula	Green-leaved manzanita
Arctostaphylos viscida	White-leaf manzanita
Euphorbiaceae	**Spurge Family**
Euphorbia crenulata	Chinese caps
Fabaceae	**Legume Family**
Acmispon americanus var. *americanus*	Spanish lotus
Acmispon brachycarpus	Hairy lotus
Acmispon parviflorus	Miniature lotus
Cercis occidentalis	Western redbud
Coronilla valentina ssp. *glauca*	Mediterranean crown-vetch
Lathyrus angulatus	Angular-seeded pea
Lathyrus latifolius	Perennial sweet pea
Lathyrus sulphureus var. *sulphureus*	Snub pea
Lupinus arbustus	Spurred lupine
Lupinus bicolor	Bicolored lupine
Lupinus nanus	Valley sky lupine
Robinia pseudoacacia	Black locust
Spartium junceum	Spanish broom
Trifolium ciliolatum	Ciliate clover
Trifolium columbinum	Olive clover
Trifolium dubium	Little hop clover
Trifolium hirtum	Rose clover
Trifolium microcephalum	Small-headed clover
Trifolium willdenovii	Tomcat clover
Vicia villosa	Winter vetch
Fagaceae	**Oak Family**
Quercus chrysolepis	Canyon live oak
Quercus garryana var. *breweri*	Brewer oak
Quercus kelloggii	California black oak
Garryaceae	**Silktassel Family**
Garrya fremontii	Fremont's silktassel
Geraniaceae	**Geranium Family**
Erodium cicutarium	Red-stemmed filaree
Grossulariaceae	**Gooseberry Family**
Ribes roezlii var. *roezlii*	Sierra gooseberry
Hydrangeaceae	**Mock Orange Family**
Philadelphus lewisii	Wild mock orange
Hypericaceae	**St. John's-wort Family**
Hypericum perforatum	Klamath weed
Iridaceae	**Iris Family**
Iris sp.	Iris (horticultural)
Iris tenuissima ssp. tenuissima	Slender-tubed iris

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Juncaceae	**Rush Family**
Juncus bufonius	Toad rush
Juncus ensifolius	Sword-leaved rush
Juncus tenuis	Slender rush
Luzula parviflora ssp. *parviflora*	Small-flowered wood rush
Lamiaceae	**Mint Family**
Lamium amplexicaule	Giraffe heads
Marrubium vulgare	Horehound
Mentha sp.	Mint
Monardella sp.	Monardella
Scutellaria californica	California skullcap
Scutellaria siphocampyloides	Gray-leaved skullcap
Liliaceae	**Lily Family**
Calochortus monophyllus	Yellow star-tullip
Fritillaria recurva	Scarlet fritillary
Linaceae	**Flax Family**
Hesperolinon micranthum	Smallflower dwarf-flax
Malvaceae	**Mallow Family**
Fremontodendron californicum	California flannelbush
Malva sp.	Mallow
Sidalcea hartwegii	Hartweg's sidalcea
Melanthiaceae	**False-Hellebore Family**
Trillium albidum	White trillium
Toxicoscordion paniculatum	Panicled zigadene
Montiaceae	**Miner's Lettuce Family**
Claytonia parviflora	Small-flowered miner's lettuce
Myrsinaceae	**Myrsine Family**
Lysimachia latifolia	Pacific starflower
Oleaceae	**Olive Family**
Fraxinus dipetala	California ash
Syringa sp.	Lilac
Onagraceae	**Evening-Primrose Family**
Clarkia arcuata	Kellogg's clarkia
Clarkia purpurea ssp. *quadrivulnera*	Four-spot
Clarkia rhomboidea	Diamond clarkia
Orobanchaceae	**Broom-rape Family**
Castilleja affinis ssp. *affinis*	Lay and Collie's Indian-paintbrush
Castilleja applegatei subsp. *pinetorum*	Applegate's paintbrush
Orobanche fasciculata	Clustered broom-rape
Pedicularis densiflora	Indian warrior

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Papaveraceae	**Poppy Family**
Eschscholzia californica	California poppy
Phrymaceae	**Lopseed Family**
Erythranthe guttata	Common monkey-flower
Erythranthe moschata	Musk monkey-flower
Pinaceae	**Pine Family**
Abies concolor	White fir
Pinus ponderosa	Ponderosa pine
Pinus sabiniana	Grey pine
Pseudotsuga menziesii var. *menziesii*	Douglas-fir
Plantaginaceae	**Plantain Family**
Collinsia tinctoria	Sticky Chinese-houses
Keckiella breviflora var. *glabrisepala*	Gaping keckiella
Penstemon azureus var. *azureus*	Azure penstemon
Plantago lanceolata	English plantain
Poaceae	**Grass Family**
Aegilops triuncialis	Barbed goatgrass
Aira caryophyllea	Silver hairgrass
Avena barbata	Slender wild oats
Avena fatua	Wild oats
Bromus diandrus	Ripgut grass
Bromus hordeaceus	Soft chess
Bromus madritensis subsp. *rubens*	Red brome
Bromus sitchensis var. *carinatus*	California brome
Bromus sterilis	Poverty brome
Bromus tectorum	Downy brome
Cynosurus echinatus	Hedgehog dogtail
Danthonia unispicata	One-spiked oatgrass
Elymus caput-medusae	Medusahead
Elymus glaucus	Blue wild rye
Elymus multisetus	Big squirreltail
Festuca arundinacea	Tall fescue
Festuca bromoides	Six-weeks fescue
Festuca microstachys	Reflexed fescue
Festuca myuros	Foxtail fescue
Festuca perennis	Annual ryegrass
Hordeum marinum subsp. *gussoneanum*	Mediterranean barley
Hordeum murinum	Foxtail barley
Melica californica	California melic
Poa bulbosa	Bulbous bluegrass
Poa compressa	Canadian bluegrass
Poa secunda subsp. *secunda*	One-sided bluegrass
Stipa lemmonii var. *lemmonii*	Lemmon's needlegrass
Ventenata dubia	North Africa grass

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Polemoniaceae	**Phlox Family**
Allophyllum divaricatum	Pink allophyllum
Gilia capitata	Blue-headed gilia
Leptosiphon bolanderi	Bolander's linanthus
Leptosiphon ciliatus	Whisker brush
Microsteris gracilis	Slender phlox
Navarretia intertexta	Needle-leaf navarretia
Polygalaceae	**Milkwort Family**
Polygala cornuta var. *cornuta*	Sierra milkwort
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
Eriogonum nudum	Naked buckwheat
Polygonum aviculare	Common knotweed
Rumex sp.	Dock
Primulaceae	**Primrose Family**
Primula hendersonii	Henderson’s shooting star
Pteridaceae	**Brake Family**
Pellaea mucronata	Bird's-foot fern
Pentagramma triangularis subsp. *triangularis*	Goldback fern
Ranunculaceae	**Buttercup Family**
Clematis lasiantha	Pipestem
Delphinium hesperinum ssp. hesperinum	Western larkspur
Delphinium nudicaule	Red larkspur
Ranunculus occidentalis	Western buttercup
Rhamnaceae	**Buckthorn Family**
Ceanothus cuneatus var. *cuneatus*	Buckbrush
Ceanothus integerrimus	Deer brush
Ceanothus prostratus	Squaw carpet
Frangula rubra	Sierra coffeeberry
Rosaceae	**Rose Family**
Cercocarpus betuloides var. *betuloides*	Birch-leaved mountain-mahogany
Drymocallis glandulosa var. *reflexa*	Greene's cinquefoil
Horkelia tridentata var. *tridentata*	Three-toothed horkelia
Physocarpus capitatus	Pacific ninebark
Prunus subcordata	Sierra plum
Rosa sp.	Wild rose
Rubus parviflorus	Thimbleberry
Rubiaceae	**Madder Family**
Galium aparine	Cleavers
Galium bolanderi	Bolander's bedstraw
Galium parisiense	Wall bedstraw
Galium porrigens var. *tenue*	Climbing bedstraw

CHECKLIST OF VASCULAR PLANT SPECIES OBSERVED

Sky View County Water District

Salicaceae	**Willow Family**
Populus fremontii subsp. *fremontii*	Fremont cottonwood
Salix laevigata	Red willow
Salix lasiolepis	Arroyo willow
Salix scouleriana	Scouler's willow
Sapindaceae	**Soapberry Family**
Acer macrophyllum	Big-leaved maple
Aesculus californica	California buckeye
Saxifragaceae	**Saxifrage Family**
Heuchera micrantha	Alum root
Lithophragma bolanderi	Bolander's woodlandstar
Scrophulariaceae	**Snapdragon Family**
Verbascum blattaria	Moth mullein
Verbascum thapsus	Woolly mullein
Selaginellaceae	**Spike-moss Family**
Selaginella hansenii	Hansen's spike-moss
Smilacaceae	**Smilax Family**
Smilax californica	California greenbrier
Themidaceae	**Brodiaea Family**
Brodiaea elegans subsp. *elegans*	Elegant brodiaea
Dichelostemma capitatum subsp. *capitatum*	Blue dicks
Dichelostemma congestum	Fork-tooth ookow
Dichelostemma multiflorum	Round-toothed ookow
Violaceae	**Violet Family**
Viola sheltonii	Shelton's violet
Viscaceae	**Mistletoe Family**
Phoradendron leucarpum subsp. *tomentosum*	Oak mistletoe
Vitaceae	**Grape Family**
Vitis californica	Wild grape
Woodsiaceae	**Cliff Family**
Cystopteris fragilis	Fragile fern