

BIOLOGICAL RESOURCE ASSESSMENT

Terrestrial Wildlife and Botanical Resources

The Village at Ruddy Creek

Thermalito, California

April 2020



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BIOLOGICAL RESOURCE ASSESSMENT

The Village at Ruddy Creek

Project Location:

Thermalito, California

Fernandez Land Grant

Section 14, Township 19N, Range 3E

INTRODUCTION

Purpose and Overview

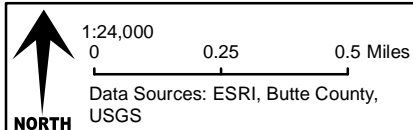
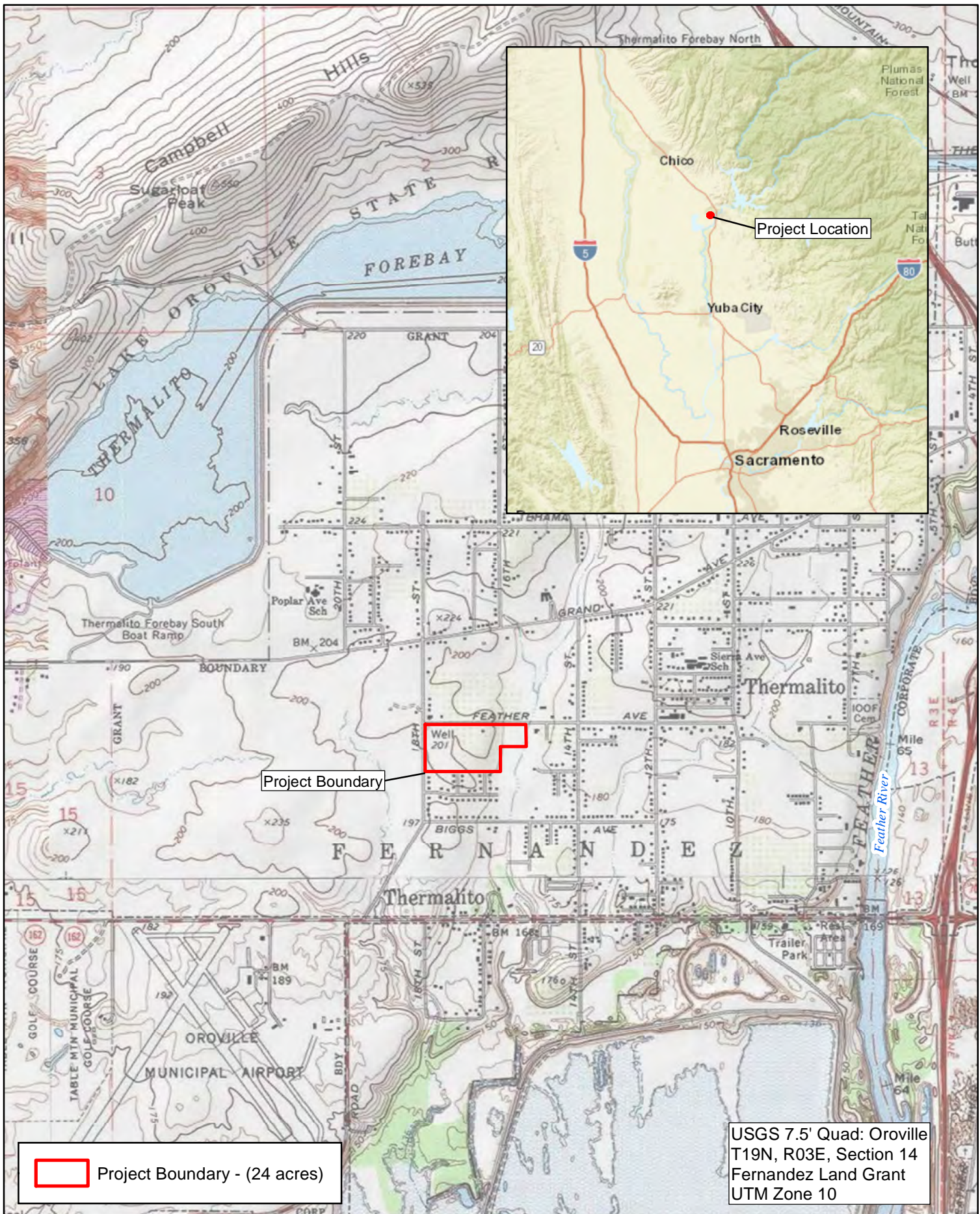
The purpose of this biological resource assessment (BRA) is to document the endangered, threatened, sensitive, and rare species and their habitats that occur or may occur in the biological survey area (BSA) of the Village at Ruddy Creek Project (Project) area located in the census-designated place Thermalito, Butte County, California (**Figure 1**). The Project area is located southeast of the intersection of Feather Avenue and 18th Street. The Project area is approximately 24 acres.

The BSA is the area where biological surveys are conducted (**Figure 2**). Gallaway Enterprises conducted biological and botanical habitat assessments in the BSA to evaluate site conditions and potential for biological and botanical species to occur. Other primary references consulted include species lists and information gathered using United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation System (IPaC), California Department of Fish and Wildlife's (CDFW) Natural Diversity Database (CNDDDB), the California Native Plant Society's (CNPS) list of rare and endangered plants, and literature review. The results of the BRA are the findings of habitat assessments and surveys and recommendations for avoidance and minimization measures.

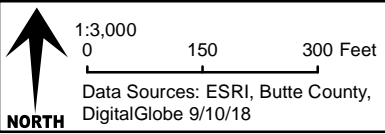
Project Location and Environmental Setting

The BSA is located within the census-designated place Thermalito, which lies west of central Oroville on the other side of the Feather River. The BSA falls within the Fernandez Land Grant: Section 14, Township 19N, Range 3E; latitude 39.505791, longitude -121.602019. The majority of the land within the BSA was historically used for agriculture, including orchards, but has been unused since at least 1998 based on review of historic aerials. A house was present in the northern center of the BSA, but only the foundation currently exists. The house foundation and surrounding orchard remnants are currently being used as an illegal garbage dump. The area surrounding the BSA consists of previously existing development including roads and residential development.

The topography of the site is relatively flat to slightly sloping, with an elevation range of approximately 180 to 200 feet above sea level. Soils within the BSA are primarily Thompsonflat-Oroville, 0 to 9 percent



The Village at Ruddy Creek
Regional Location
Figure 1



The Village at Ruddy Creek
 Project Location
 Figure 2

slopes; moderately well-drained, sandy loam with a deep restrictive layer of more than 80 inches in depth. This soil map occurs in the larger rectangle of the western section of the BSA. The smaller, eastern square of the BSA consists of Wilsoncreek-trainer loams, 0 to 2 percent slopes, occasionally flooded; moderately well-drained loam with a deep restrictive layer of more than 80 inches in depth. The average annual precipitation for the area is 28.69 inches and the average temperature is 61.9° F (Western Regional Climate Center 2020).

Project Description

The proposed project will consist of the development of a residential subdivision.

METHODS

References Consulted

Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the BSA. The CNDDDB Geographic Information System (GIS) database was also consulted and showed special-status species within a 5-mile radius of the BSA (**Figure 3**). Other primary sources of information regarding the occurrence of federally listed threatened, endangered, proposed, and candidate species and their habitats within the BSA used in the preparation of this BRA are:

- The USFWS IPaC Official Species List for the Project area, March 9, 2020, Consultation Code 08ESMF00-2020-SLI-1279 (**Appendix A; Species Lists**);
- The NOAA-NMFS Official Species List for the 7.5 minute United States Geological Survey (USGS) Oroville quadrangle (**Appendix A; Species Lists**);
- The results of a species record search of the CDFW CNDDDB RareFind 5 for the 7.5 minute USGS Oroville, Shippee, Biggs, and Palermo quadrangles (**Appendix A; Species Lists**);
- The review of the CNPS Inventory of Rare and Endangered Vascular Plants of California for the 7.5 minute USGS Oroville, Shippee, Biggs, and Palermo quadrangles (**Appendix A; Species Lists**);
- USFWS Critical Habitat Portal, March 9, 2020; and
- Results from the habitat assessments conducted by Gallaway Enterprises on March 12 and 26 and April 1, 2020 (**Appendix B; Observed Species Lists**).

Special-Status Species

Special-status species that have potential to occur in the BSA are those that fall into one of the following categories:

- Listed as threatened or endangered, or are proposed or candidates for listing under the California Endangered Species Act (CESA, 14 California Code of Regulations 670.5) or the Federal Endangered Species Act (ESA, 50 Code of Federal Regulations 17.12);
- Listed as a Species of Special Concern (SSC) by CDFW or protected under the California Fish and Game Code (CFGC) (e.g. Fully Protected species);
- Ranked by the CNPS as 1A, 1B, or 2;

- Protected under the Migratory Bird Treaty Act (MBTA);
- Protected under the Bald and Golden Eagle Protection Act; or
- Species that are otherwise protected under policies or ordinances at the local or regional level as required by the California Environmental Quality Act (CEQA §15380).

Critical Habitat

The ESA requires that critical habitat be designated for all species listed under the ESA. Critical habitat is designated for areas that provide essential habitat elements that enable a species survival and which are occupied by the species during the species listing under the ESA. Areas outside of the species range of occupancy during the time of its listing can also be determined as critical habitat if the agency decides that the area is essential to the conservation of the species.

The USFWS Critical Habitat Portal was accessed on March 9, 2020 to determine if critical habitat occurs within the BSA. Appropriate Federal Registers were also used to confirm the presence or absence of critical habitat.

Sensitive Natural Communities

Sensitive Natural Communities (SNCs) are monitored by CDFW with the goal of preserving these areas of habitat that are rare or ecologically important. Many SNCs are designated as such because they represent a historical landscape and are typically preserved as valued components of California's diverse habitat assemblage.

Habitat Assessments

Habitat assessments were conducted by Gallaway Enterprises staff on March 12, 2020. A biological habitat assessment was conducted by biologist Brittany Reaves on March 12, 2020 and a botanical habitat assessment was conducted by senior botanist Elena Gregg on March 26 and April 1, 2020.

Habitat assessments for botanical and wildlife species were conducted to determine the suitable habitat elements for special-status species within the BSA. The habitat assessments were conducted by walking the entire BSA, where accessible, and recording observed species and specific habitat types and elements. If habitat was observed for special-status species it was then evaluated for quality based on vegetation composition and structure, physical features (e.g. soils, elevation), microclimate, surrounding area, presence of predatory species and available resources (e.g. prey items, nesting substrates), and land use patterns. A list of species observed within the BSA is included in **Appendix B**.

RESULTS

Habitats

Riverine

Riverine habitat occurs within Ruddy Creek in the BSA. Ruddy Creek exhibits intermittent flow patterns. The stream is shallow, about 4 to 6 inches deep, and the bed of the stream is dominated by cobble and

mud substrate with some rush (*Juncus* sp.) vegetation. Annual grasses are growing up to the banks of the creek and there is a lack of typical riparian vegetation growing along the creek within the BSA. Ruddy Creek is not hydrologically connected to the Feather River and does not support anadromous fish species.

Deciduous Orchard/Blue Oak-Foothill Pine

The center of the BSA contains the remnants of a previously existing deciduous orchard. Though most of the orchard was uprooted some time ago, there is a cluster of olive (*Olea europaea*), almond (*Prunus* sp.), and other similar orchard trees growing unattended within the BSA. This type of orchard is not typical of the Deciduous Orchard habitat type described by Mayer and Laudenslayer (1988) as the trees and land are not maintained. These orchard trees are interspersed with some species including blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), and foothill pine (*Pinus sabiniana*) where naturally occurring Blue Oak-Foothill Pine habitat is beginning to regenerate in the absence of orchard cultivation and maintenance. The trees present within the BSA provide a large supply of food for multiple wildlife species and nesting and cover resources for many species of migratory birds and mammals, including red-shouldered hawk (*Buteo lineatus*), California scrub-jay (*Aphelocoma californica*), California quail (*Callipepla californica*), mule deer (*Odocoileus hemionus*), and western gray squirrel (*Sciurus griseus*). The trees within the BSA are potential refugia for wildlife including birds and bats.

Annual Grassland

The majority of the BSA currently consists of annual grassland. Annual grasslands occur on open, flat to gently rolling lands and are dominated by grasses and annual plants, with the dominant species varying depending on the climate and soils. This habitat type often occurs on its own or as an understory in wooded habitat types. Annual grassland occurs throughout the BSA. Some of the species observed in the annual grassland habitat within the BSA include filaree (*Erodium* spp.), well hare barley (*Hordeum murinum*), rip-gut brome (*Bromus diandrus*), wild oat (*Avena barbata*), yellow star-thistle (*Centaurea solstitialis*), black mustard (*Brassica nigra*), cutleaf geranium (*Geranium dissectum*), prickly lettuce (*Lactuca serriola*), rose clover (*Trifolium hirtum*), winter vetch (*Vicia villosa*), annual bluegrass (*Poa annua*), Himalayan blackberry (*Rubus armeniacus*), and poison oak (*Toxicodendron diversiloba*). A variety of ground nesting avian species, reptiles, and small mammals use grassland habitat for breeding, while many other wildlife species use it primarily for foraging or require other habitat characteristics such as rocky outcroppings, cliffs, caves, or ponds in order to find shelter and cover for escapement. Common species found utilizing this habitat type include western fence lizards (*Sceloporus occidentalis*), common garter snakes (*Thamnophis elegans*), California ground squirrels (*Otospermophilus beecheyi*), jackrabbits (*Lepus californicus*), and a variety of avian species.

Barren

Barren habitat is typified by non-vegetated soil, rock, and gravel. Barren habitat occurs on unpaved access roads that occur within the BSA. The barren habitat type typically provides low quality habitat to wildlife. Some ground-nesting birds, such as killdeer (*Charadrius vociferus*), will nest in gravelly, barren substrate.

Critical Habitat

There is no designated critical habitat within the BSA.

Sensitive Natural Communities

No SNCs occur within the BSA.

Special-Status Species

A summary of special-status species assessed for potential occurrence within the BSA based on the USFWS IPaC and CNDDDB species lists and the CNPS list of rare and endangered plants within the Oroville, Shippee, Biggs, and Palermo USGS 7.5 minute quadrangles is presented in **Table 1**. Potential for occurrence was determined by reviewing database queries from federal and state agencies, performing surveys, and evaluating habitat characteristics.

Table 1. Special-status species and their potential to occur in the BSA of the Village at Ruddy Creek, Butte County, CA.

Common Name (<i>Scientific Name</i>)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
SENSITIVE NATURAL COMMUNITIES			
Great Valley Cottonwood Riparian Forest	_/SNC/_	Riparian forest.	<u>None</u> . There is no designated Great Valley Cottonwood Riparian Forest within the BSA.
Great Valley Willow Scrub	_/SNC/_	Riparian scrub.	<u>None</u> . There is no designated Great Valley Willow Scrub within the BSA.
Northern Basalt Flow Vernal Pool	_/SNC/_	Vernal pools.	<u>None</u> . There is no designated Northern Basalt Flow Vernal Pool within the BSA.
Northern Hardpan Vernal Pool	_/SNC/_	Vernal pools.	<u>None</u> . There is no designated Northern Hardpan Vernal Pool within the BSA.
Northern Volcanic Mud Flow Vernal Pool	_/SNC/_	Vernal pools.	<u>None</u> . There is no designated Northern Volcanic Mud Flow Vernal Pool within the BSA.
PLANTS			
Adobe lily (<i>Fritillaria pluriflora</i>)	_/_/1B.2	Adobe soils. (Blooming Period [BP]: Feb – Apr)	<u>None</u> . There are no adobe soils present within the BSA.

Common Name (<i>Scientific Name</i>)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Ahart's dwarf rush (<i>Juncus leiospermus</i> <i>var. ahartii</i>)	_/_/1B.2	Vernal pools in valley/foothill grasslands. (BP: Mar - May)	<u>None</u> . There is no suitable habitat present within the BSA.
Ahart's paronychia (<i>Paronychia ahartii</i>)	_/_/1B.1	Vernal pools and mesic habitat in stony, barren clay soils. (BP: Feb – Jun)	<u>None</u> . There is no suitable habitat present within the BSA.
Big-scale basalmroot (<i>Balsamorhiza macrolepis</i>)	_/_/1B.2	Chaparral, cismontane woodland, ultramafic, valley & foothill grassland, sometimes on serpentine soils. (BP: Mar – Jun)	<u>None</u> . There is no suitable habitat present within the BSA.
Butte County fritillary (<i>Fritillaria eastwoodiae</i>)	_/_/3.2	Usually on dry slopes but also found in wet places; soils can be serpentine, red clay, or sandy in chaparral, cismontane woodland, lower montane coniferous forest. (BP: Mar – Jun)	<u>None</u> . There is no suitable habitat present within the BSA.
Butte County golden clover (<i>Trifolium jokerstii</i>)	_/_/1B.2	Vernal pools within valley/foothill grassland communities. (BP: Mar – May)	<u>None</u> . There is no suitable habitat present within the BSA.
Butte County meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>californica</i>)	FE/SE/1B.1	Vernal pools and wetlands within valley/foothill grasslands. (BP: Mar – May)	<u>None</u> . There is no suitable habitat present within the BSA.
Ferris' milk-vetch (<i>Astragalus tener</i> <i>var. ferrisiae</i>)	_/_/1B.1	Meadows and seeps (vernally mesic), and valley and foothill grassland (subalkaline flats). (BP: Apr – May)	<u>None</u> . There is no suitable habitat present within the BSA.
Greene's tuctoria (<i>Tuctoria greenei</i>)	FE/SR/1B.1	Vernal pools in open grasslands. (BP: May – Jul [Sept])	<u>None</u> . There is no vernal pool habitat present within the BSA.

Common Name <i>(Scientific Name)</i>	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Pink creamsacs <i>(Castilleja rubicundula var. rubicundula)</i>	_/_/1B.2	Seeps and mesic area in serpentine soils. (BP: Apr-Jun)	<u>None</u> . There is no suitable habitat present within the BSA.
Recurved larkspur <i>(Delphinium recurvatum)</i>	_/_/1B.2	Alkaline soils, chenopod scrub, cismontane woodlands, and valley/foothill grasslands. (BP: Mar – Jun)	<u>None</u> . There is no vernal pool habitat present within the BSA.
Red Bluff dwarf rush <i>(Juncus leiospermus var. leiospermus)</i>	_/_/1B.1	Vernal pools and vernal mesic sites. (BP: Mar-Jun)	<u>None</u> . There is no suitable habitat present within the BSA.
Sanford's arrowhead <i>(Sagittaria sanfordii)</i>	_/_/1B.2	Marshes, swamps and wetlands. (BP: May – Oct[Nov])	<u>None</u> . There is no suitable habitat present within the BSA.
Slender Orcutt grass <i>(Orcuttia tenuis)</i>	FT/SE/1B.1	Vernal pools, typically deep . (BP: May – Sep[Oct])	<u>None</u> . There is no suitable habitat present within the BSA.
Woolly rose mallow <i>(Hibiscus lasiocarpus var. occidentalis)</i>	_/_/1B.2	Freshwater marshes and swamps, often in rip-rap. (BP: Jun – Sep)	<u>None</u> . There is no suitable habitat present within the BSA.
INVERTEBRATES			
Valley elderberry longhorn beetle <i>(Desmocerus californicus dimorphus)</i>	FT/_/_	Elderberry (<i>Sambucus</i> sp.) shrubs.	<u>None</u> . There is one small elderberry shrub present. It is not located within riparian habitat, is not located within 800 meters of any nearby known occurrences, and no exit holes were observed.
Conservancy fairy shrimp <i>(Branchinecta conservatio)</i>	FE/_/_	Moderately turbid, deep, cool-water vernal pool.	<u>None</u> . There are no vernal pools within the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
INVERTEBRATES			
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT/_/_	Vernal pools.	<u>None</u> . There are no vernal pools within the BSA.
Vernal pool tadpole shrimp (<i>Lepidurus packardi</i>)	FE/_/_	Vernal pools.	<u>None</u> . There are no vernal pools within the BSA.
FISH			
Chinook salmon Central Valley spring-run (<i>Oncorhynchus tshawytscha</i>)	FT/ST/_	Sacramento River and its tributaries.	<u>None</u> . Ruddy Creek does not have a hydrologic connection to the Feather River and does not support anadromous fishes.
Steelhead Central Valley DPS (<i>Oncorhynchus mykiss</i>)	FT/_/_	Sacramento River and its tributaries.	<u>None</u> . Ruddy Creek does not have a hydrologic connection to the Feather River and does not support anadromous fishes.
Delta smelt (<i>Oncorhynchus mykiss</i>)	FT/SE/_	Found only from the San Pablo Bay upstream through the Delta in Contra Costa, Sacramento, San Joaquin, Solano, and Yolo Counties.	<u>None</u> . The BSA is not within the range of Delta smelt, nor is there suitable aquatic habitat present.
HERPTILES			
Coast horned lizard (<i>Phrynosoma blainvillii</i>)	_/SSC/_	Most common in open areas with sandy soils and low vegetation. Requires open areas for sunning, bushes for cover, patches of loose soil for burial, and abundant supply of ants and other insects.	<u>Low</u> . The BSA contains suitable sandy loam soils and shrubby vegetation that could support this species. The nearest CNDDB occurrence (#617) is located 7 miles northeast of the BSA and was recorded in 2002. The BSA is located outside of CDFW predicted suitable habitat (Gogol-Prokurat 2014).

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
HERPTILES			
California red-legged frog (<i>Rana draytonii</i>)	FT/SSC/_	Ponds in humid forests, woodlands, grasslands, coastal scrub, and streamsides with plant cover.	<u>None</u> . California red-legged frogs have been extirpated from the Central Valley since the 1960s (USFWS 2002).
Foothill yellow-legged frog Feather River clade (<i>Rana boylei</i>)	_/ST/_	Partly shaded, shallow streams and riffles with rocky substrates in a variety of habitats, commonly found in canyons and narrow streams.	<u>None</u> . The BSA does not contain suitable aquatic habitat during the FYLF breeding period (April – July) and tadpole development period (3-4 months after breeding) (Zeiner et al. 1990). The only CNDDDB occurrence (#1347) within 5 miles of the BSA is extirpated. The BSA is located outside of the species' current known range (Gogol-Prokurat 2019). The species was not observed during the March 12, 2020 site visit.
Giant garter snake (<i>Thamnophis gigas</i>)	FT/ST/_	Prefers freshwater marsh and low gradient streams. Has adapted to drainage canals and irrigation ditches.	<u>None</u> . The intermittent drainage present within the BSA does not provide suitable habitat components for this species during the giant garter snake active season.
Western pond turtle (<i>Emys marmorata</i>)	_/SSC/_	Perennial to intermittent bodies of water with deep pools, locations for haul out, and locations for oviposition.	Moderate . Ruddy Creek within the BSA provides suitable habitat for this species.
Western spadefoot (<i>Spea hammondi</i>)	_/SSC/_	Occurs primarily in grassland habitats. Vernal pools and seasonal drainages are typically used for breeding and egg-laying.	Moderate . Ruddy Creek within the BSA provides suitable breeding habitat and the adjacent grasslands provide suitable aestivation habitat.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
BIRDS			
Bank swallow (<i>Riparia riparia</i>)	_/ST/_	Requires vertical banks/cliffs with fine-textured/sandy soils near streams, rivers, lakes, ocean to dig nesting hole.	<u>None</u> . There are is no suitable nesting habitat present within the BSA.
Burrowing owl (<i>Athene cunicularia</i>)	_/SSC/_	Open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation.	<u>Low</u> . There is low potential for burrowing owl to occur in the open grassland areas present within the BSA. The nearest CNDDDB occurrence (#1003) is located 3 miles southwest of the BSA.
California black rail (<i>Laterallus jamaicensis coturniculus</i>)	_/ST, FP/_	Brackish and fresh emergent wetlands with dense vegetation (bulrushes and cattails).	<u>None</u> . There is no suitable habitat within or adjacent to the BSA.
Greater sandhill crane (<i>Antigone canadensis tabida</i>)	_/ST, FP/_	Nests in wetland habitats in northeastern California; winters in the Central Valley. Prefers grain fields within 4 miles of a shallow body of water used as a communal roost site; irrigated pasture used as loafing sites.	<u>None</u> . There is no suitable habitat within or adjacent to the BSA.
Loggerhead shrike (<i>Lanius ludovicianus</i>)	_/SSC/_	Broadleaved upland forest, riparian woodland, woodland/grassland interface.	<u>Moderate</u> . There is suitable nesting and foraging habitat present within the BSA.
Northern harrier (<i>Circus hudsonius</i>)	_/SSC/_	Marshes, wetlands, and grasslands.	<u>Moderate</u> . There is suitable nesting and foraging habitat present within the BSA.
Swainson's hawk (<i>Buteo swainsoni</i>)	_/ST/_	Valleys and low foothills. Requires tall trees for nesting and open land for foraging, preferably grasslands and grain or pasture fields.	<u>Moderate</u> . There is suitable nesting and foraging habitat present within the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
BIRDS			
Tricolored blackbird (<i>Agelaius tricolor</i>)	_/ST/_	Colonial nester in large freshwater marshes. Forages in open habitats such as farm fields, pastures, cattle pens, large lawns.	Low. There is marginal nesting and foraging habitat present within the BSA.
Yellow warbler (<i>Setophaga petechia</i>)	_/SSC/_	Wet thickets and riparian habitat that contain shrubby willow species and cottonwoods in close proximity of water.	None. There is no suitable nesting habitat present within the BSA.
MAMMALS			
Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)	_/SSC/_	Roost in caves and cave-like cavities, occasionally in bridges.	None. There is no suitable habitat within or adjacent to the BSA.
Western mastiff bat (<i>Eumops perotis californicus</i>)	_/SSC/_	Roosts in crevices on cliff faces, rock outcrops with a minimum 2 meter drop-off, bridges, and buildings.	None. There is no suitable habitat within or adjacent to the BSA.
CODE DESIGNATIONS			
FE or FT = Federally listed as Endangered or Threatened FC = Federal Candidate Species SE or ST = State listed as Endangered or Threatened SC = State Candidate Species SR = State Rare Species SSC = State Species of Special Concern FP = State Fully Protected Species SNC = CDFW Sensitive Natural Community		CNPS California Rare Plant Rank (CRPR): CRPR 1B = Rare or Endangered in California or elsewhere CRPR 2 = Rare or Endangered in California, more common elsewhere CRPR 3 = More information is needed CRPR 4 = Plants with limited distribution 0.1 = Seriously Threatened 0.2 = Fairly Threatened 0.3 = Not very Threatened	
<p>Potential for Occurrence: for plants it is considered the potential to occur during the survey period; for birds and bats it is considered the potential to breed, forage, roost, or over-winter in the BSA during migration. Any bird or bat species could fly over the BSA, but this is not considered a potential occurrence. The categories for the potential for occurrence include:</p> <p>None: The species or natural community is known not to occur, and has no potential to occur in the BSA based on sufficient surveys, the lack suitable habitat, and/or the BSA is well outside of the known distribution of the species.</p>			

Low: Potential habitat in the BSA is sub-marginal and/or the species is known to occur in the vicinity of the BSA.

Moderate: Suitable habitat is present in the BSA and/or the species is known to occur in the vicinity of the BSA. Pre-construction surveys may be required.

High: Habitat in the BSA is highly suitable for the species and there are reliable records close to the BSA, but the species was not observed. Pre-construction surveys required, with the exception of indicators for foraging habitat.

Known: Species was detected in the BSA or a recent reliable record exists for the BSA.

The following special-status species have potential to occur within the BSA based on the presence of suitable habitat and/or known records of species occurrence within the vicinity of the BSA.

Endangered, Threatened, and Rare Plants

There were no endangered, threatened, or rare plants observed within the BSA during the botanical habitat assessment conducted on March 12, 2020.

Endangered, Threatened, and Special-status Wildlife

A wildlife habitat assessment was conducted within the BSA on March 12, 2020. Suitable habitat was identified for coast horned lizard, western pond turtle, western spadefoot, burrowing owl, loggerhead shrike, northern harrier, Swainson's hawk, tricolored blackbird, and several avian species protected under the MBTA and CFGC. A complete list of wildlife species observed within the BSA can be found in **Appendix B**.

Valley Elderberry Longhorn Beetle

The valley elderberry longhorn beetle (VELB) is listed as threatened under the federal ESA. The VELB is a medium-sized (0.8 inch long) beetle that is endemic to the Central Valley of California. The beetle is found only in association with its host plant, elderberry (*Sambucus* spp.). Adults feed on the foliage and flowers of elderberry shrubs and are present from March through early June. During this period the beetles mate and females lay eggs on living elderberry plants. The first instar larvae bore to the center of elderberry stems where they feed on the pith of the plant for 1 to 2 years as they develop. Prior to forming their pupae, the wood-boring larvae chew through the bark and then plug the holes with wood shavings. In the pupal chamber, the larvae metamorphose into their pupae and then into adults where upon they emerge between mid-March through June (USFWS 1991). The most prominent threat to VELB is riparian habitat destruction causing extirpation, fragmentation, and isolation of beetle populations (USFWS 1991).

CNDDDB Occurrences

There is one (1) occurrence of VELB within 5 miles of the BSA (#102). This occurrence located approximately 4 miles southwest of the BSA and is associated with the riparian zone of the Feather River. There are no CNDDDB documented occurrences of VELB within Ruddy Creek.

Status of VELB occurring within the BSA

There is one (1) small elderberry (*Sambucus cerulea*) shrub present within the BSA (**Figure 4**). Gallaway Enterprises conducted informal consultation with USFWS regarding the potential for VELB to occur in the elderberry shrub present within the BSA (S. Sosa, personal communication, April 7, 2020). The USFWS determined that, due to its isolation from riparian habitat and lack of exit holes, the shrub does not provide habitat suitable for VELB. There is no potential for VELB to occur within the BSA.

Coast Horned Lizard

The coast horned lizard, formerly Blainville's horned lizard, is listed as a SSC in the state of California. The coast horned lizard has a relatively compressed oval figure, with enlarged spines across the entire body and tail and a crown of showy horns around the head. They occur in the Sierra Nevada foothills, from Butte County to Kern County and in the central and southern coastal range. Suitable habitat includes areas with loose, sandy soils in valley-foothill hardwood, mixed woodlands, dry coniferous forests, chaparral, and grassland habitats. Ideal habitats typically are associated with active ant communities, which is a primary food source, and brittle soils, which are used for burrowing to escape predators and extreme temperatures. There is little known about the coast horned lizard reproduction, but it is thought that loose, sandy soils play an essential role in nest-building and egg-laying. In southern California, egg-laying has been reported from late May to June. Current threats facing the coast horned lizard include urban development, agriculture development, and the introduction of non-native ants that displace their primary food resource, the harvester ant (*Pogonomyrmex* spp.).

CNDDB Occurrences

There is one (1) CNDDB occurrence of coast horned lizard (#617) located approximately 7 miles northeast of the BSA; it was recorded in 2002.

Status of coast horned lizard occurring within the BSA

In a predicted habitat suitability analysis performed by CDFW, the BSA falls within an area that is marked as not suitable for coast horned based on vegetation, distance to water, and elevation (Gogol-Prokurat 2014). Additionally, there are no CNDDB occurrences of this species within 5 miles of the BSA. Due to these factors, there is **low** potential for coast horned lizard occurring within the BSA.

Western Pond Turtle

The western pond turtle is a SSC in California. Western pond turtles are drab, darkish-colored turtles with a yellowish to cream colored head. They range from the Washington Puget Sound to the California Sacramento Valley. Suitable aquatic habitats include slow moving to stagnant water, such as back waters and ponded areas of rivers and creeks, semi-permanent to permanent ponds and irrigation ditches. Preferred habitats include features such as hydrophytic vegetation, for foraging and cover, and basking areas to regulate body temperature. In early spring through early summer, female turtles begin to move over land in search for nesting sites. Eggs are laid on the banks of slow-moving streams. The female digs a hole approximately four inches deep and lays up to eleven eggs. Afterwards the eggs are



Project Boundary - (24 acres)



Elderberry Shrub Location Point



1:3,000
0 150 300 Feet

Data Sources: ESRI, Butte County, DigitalGlobe 9/10/18

The Village at Ruddy Creek
Elderberry Shrub Location
Figure 4



GEP: #19-142 Map Date: 3/30/20

covered with sediment and are left to incubate under the warm soils. Eggs are typically laid between March and August (Zeiner 1990). Current threats facing the western pond turtle include loss of suitable aquatic habitats due to rapid changes in water regimes and removal of hydrophytic vegetation.

CNDDB Occurrences

There are multiple occurrences of western pond turtle within 5 miles of the BSA (#331, 492, 1272, 1273, 1275). All occurrences are located more than 3 miles from the BSA and none of the occurrences are hydrologically connected to Ruddy Creek.

Status of western pond turtle occurring within the BSA

Western pond turtles are known to bask on banks and woody debris, such as logs, along the sides of perennial aquatic features. They are also known to travel up to 400 meters from aquatic habitat into upland areas to nest (Reese and Welsh 1997), and they may aestivate in upland areas along intermittent drainages for several months during dry periods (Belli 2015). Due to the intermittent nature of Ruddy Creek, there is **moderate** potential for western pond turtle to occur within the BSA.

Western Spadefoot

The western spadefoot is a SSC in California. It is an endemic species of the state. The western spadefoot is distinguished from other toad species by its vertically elliptical pupils, teeth in the upper jaw, smooth skin, and sharp-edged “spades” on the hind feet. Individuals of this species range in size from 1.5 to 2.5 inches. Adults will forage on insects, worms, and other invertebrates. The typical breeding season is from January to May in seasonal pools. Eggs are laid on plant stems or dead plant material in the bottom of pools. Larval development takes from 3 to 11 weeks and must be completed before pools dry. The western spadefoot is found from Tehama County to San Diego County, typically below 3,000 feet elevation, but has been found as high as 4,500 feet. The biggest threat to the species is loss of habitat and non-native predators. As extant populations of this species become fragmented, threats are more significant and the potential for recolonization is reduced (USFWS 2005).

CNDDB Occurrences

There are multiple CNDDB occurrences of western spadefoot within 5 miles of the BSA (#489, 490, 491, 492); however, they are all dated from 1978 or earlier.

Status of western spadefoot occurring within the BSA

The BSA contains an intermittent drainage that could support breeding habitat for western spadefoot when water is present and adjacent grasslands could provide suitable aestivation habitat. There is **moderate** potential for western spadefoot to occur within the BSA.

Burrowing Owl

The western burrowing owl is listed as a SSC in the state of California. They are distributed throughout the western United States from Minnesota to the Pacific Coast, and into Canada and Mexico. In California, burrowing owls are distributed along the south and southeastern desert areas, throughout the Central Valley, and patchy areas around the Bay Area and southern coast lines and the north eastern

high desert areas. The western burrowing owl is a small, slender owl with long tarsi, no ear tufts, and has a light to chocolate brown coloration with variable white spots. Suitable habitat includes open plains, grasslands, desert scrub and mima mound topography. Burrowing owls primarily nest in previously made mammal burrows, but will also use rock crevices and other dry natural and man-made cavities that provide cover from predators. Current threats facing the western burrowing owl include habitat loss and fragmentation, decline in burrowing rodents, and the spread of invasive plant species.

CNDDDB Occurrences

The nearest CNDDDB occurrence (#1003) is located approximately 2.5 miles southwest of the BSA in more suitable, open grassland habitat that is devoid of trees and structures. There are no other occurrences of burrowing owl within 5 miles of the BSA.

Status of burrowing owl occurring within the BSA

Suitable habitat for burrowing owls consists of annual grasslands that contain suitable nesting or wintering burrows. The annual grassland habitat within the site is poor habitat for burrowing owls due to tall, dense overgrowth of annual grasses and adjacent trees and structures. As burrowing owls avoid nesting near trees or structures, the suitable grassland habitat within the BSA is limited. Given the poor quality habitat within the BSA and the more desirable foraging and potential nesting habitat in adjacent grasslands to the west, there is **low** potential for burrowing owls to occur within the BSA.

Loggerhead Shrike

The loggerhead shrike (*Lanius ludovicianus*) is a SSC in the state of California. They range throughout California in the northeastern desert, the Central Valley, southern coast, and low elevations of southeastern desert lands. Loggerhead shrikes are the size of a songbird, but have a thick, hooked, black bill. They have a bold, black eye stripe and gray and black markings along the rest of the body. Suitable foraging and nesting habitat includes a mixture of shrubs, grasslands, bare ground and tall trees. Loggerhead shrikes sit on low, exposed perches and scan for rodents, lizards, birds, and insects. An essential component for suitable habitat includes thorn bushes, sharp branches, or barbed wire to impale prey items on. Loggerhead shrikes nest at varying heights in shrubs. Current threats facing loggerhead shrikes are poorly understood, but could include loss of nesting and wintering habitat, urban development, and conversion of suitable agricultural crops to unsuitable agricultural crops (Shuford and Gardali 2008).

CNDDDB Occurrences

The nearest CNDDDB occurrence (#19) is located 6 miles north of the BSA along Gold Run Creek and was last seen in 2002.

Status of loggerhead shrike occurring in the BSA

The BSA contains suitable nesting and foraging habitat that could support loggerhead shrike. The BSA also contains barbed wire fencing and thorny blackberry bushes that loggerhead shrike could use to impale prey. There is **moderate** potential for loggerhead shrike to occur within the BSA.

Northern Harrier

The northern harrier (*Circus hudsonius*) is a SSC in the state of California. They range throughout California in low elevation areas such the Central Valley, desert and coastal regions. Northern harriers are dimorphic. Male harriers feature grey-toned plumage, while females and juveniles display a rusty brown coloring. Suitable habitat for foraging and breeding include fresh water and coastal marshes, annual and perennial grasslands, pastures and low growing crops, sagebrush scrub and desert sinks. Northern Harriers nest on the ground among tall grasses or shrubs. Current threats facing northern harriers include loss of foraging and nesting habitat, small mammal control, and human disturbances (Shuford and Gardali 2008).

CNDDDB Occurrences

There is one (1) CNDDDB occurrence (#17) located 5 miles west of the BSA that was recorded in 1986. There are no other CNDDDB occurrences of northern harrier within 5 miles of the BSA.

Status of northern harrier occurring within the BSA

There is **moderate** potential for northern harrier to occur within the BSA.

Swainson's Hawk

Swainson's hawks are listed under the CESA as threatened. They are found throughout the western part of the United States and from Canada to Mexico. Swainson's hawks are a fairly large, slender hawk with three different color morph displays. The most common morph in northern California is the dark morph, which demonstrates black to dark brown under coverts and flight feathers. Suitable habitat includes open grasslands or agricultural fields that are adjacent to a riparian forest or oak woodland. Swainson's hawks primarily nest in riparian forests next to open fields that provide foraging opportunities. Nesting and courtship begin in April. Current threats facing the Swainson's hawk are loss of nesting and foraging habitat, change in agricultural regimes, pesticides, poaching, and human disturbances (CDFW 1994).

CNDDDB Occurrences

There are two (2) CNDDDB occurrences of Swainson's hawk within 10 miles of the BSA. Only one (1) active nest was observed in the last 5 years on July 16, 2015 (#1530). This occurrence is located approximately 6 miles south of the BSA on the Feather River.

Status of Swainson's hawk occurring within the BSA

Swainson's hawks forage for small mammals and insects in open grasslands, low-growing crops, and pastures. Adjacent land surrounding the BSA consists of open grasslands and residential development. Swainson's hawks nest in trees taller than 10 feet in wetlands and along drainages, or in windbreaks in fields and around farmsteads (Tesky 1994). There are several trees taller than 10 feet within the BSA; therefore, there is suitable nesting habitat for Swainson's hawks within the BSA. There is suitable foraging habitat within the BSA in the form of open grasslands.

Swainson's hawks will forage up to 10 miles from their nest. Suitable nest trees and foraging habitat occur within the BSA, and there is at least one (1) active nesting occurrence within 10 miles. There is **moderate** potential for Swainson's hawks to nest or forage within the BSA.

Tricolored Blackbird

The tricolored blackbird is listed as threatened under the CESA. They range from southern Oregon through the Central Valley, and coastal regions of California into the northern part of Mexico. Tricolored blackbirds are medium-sized birds with black plumage and distinctive red marginal coverts bordered by whitish feathers. Tricolored blackbirds nest in large colonies within agricultural fields, marshes with thick herbaceous vegetation, or in clusters of large blackberry bushes near a source of water and suitable foraging habitat. They are nomadic migrators, so documenting occurrence at any location does not mean that they will necessarily return to that area. Current threats facing tricolored blackbirds include colonial breeding in regards to small population size, habitat loss, overexploitation, predation, contaminants, extreme weather events, and drought, water availability, and climate change (CDFW 2018).

CNDDDB Occurrences

There are three (3) CNDDDB occurrences of tricolored blackbird within 5 miles of the BSA (#556, 570, 901). Occurrences 566 and 570 were recorded in the 1970s. Occurrence 901 is located 4.5 miles west of the BSA at the Thermalito Afterbay where a large colony was observed nesting in 2015.

Status of tricolored blackbirds occurring within the BSA

The Himalayan blackberry shrubs provide marginal nesting habitat and the low-gradient stream and adjacent grasslands provide suitable foraging habitat for tricolored blackbird. For successful breeding, tricolored blackbirds require a source of water and historically their nesting substrate occurred primarily in freshwater wetlands dominated by cattails and tules (CDFW 2018). As the water source (Ruddy Creek) is typically dry through some or all of the tricolored blackbird nesting season, there is a **low** potential for tricolored blackbirds to occur within the BSA.

Migratory Birds and Raptors

Nesting birds are protected under the MBTA (16 USC 703), the CFGC (§3503), and the California Migratory Bird Protection Act (CMBPA, AB 454). The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13).

The CFGC (§3503.5) states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that "it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto."

The CMBPA amends the CFGC (§3513) to mirror the provisions of the MBTA and allow the State of California to enforce the prohibition of take or possession of any migratory nongame bird as designated in the federal MBTA, including incidental take. Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance have the potential to affect bird species protected by the MBTA and the CFGC.

CNDDDB occurrences

The majority of migratory birds and raptors protected under the MBTA and CFGC are not recorded on the CNDDDB because they are abundant and widespread.

Status of migratory birds and raptors occurring in the BSA

There is suitable nesting habitat for a variety of avian species within and adjacent to the BSA.

REGULATORY FRAMEWORK

The following describes federal, state, and local environmental laws and policies that may be relevant if the BSA were to be developed or modified.

Federal

Federal Endangered Species Act

The United States Congress passed the ESA in 1973 to protect species that are endangered or threatened with extinction. The ESA is intended to operate in conjunction with the National Environmental Policy Act (NEPA) to help protect the ecosystems upon which endangered and threatened species depend.

Under the ESA, species may be listed as either “endangered” or “threatened.” Endangered means a species is in danger of extinction throughout all or a significant portion of its range. Threatened means a species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range. All species of plants and animals, except non-native species and pest insects, are eligible for listing as endangered or threatened. The USFWS also maintains a list of “candidate” species. Candidate species are species for which there is enough information to warrant proposing them for listing, but that have not yet been proposed. “Proposed” species are those that have been proposed for listing, but have not yet been listed.

The ESA makes it unlawful to “take” a listed animal without a permit. Take is defined as “to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect or attempt to engage in any such conduct.” Through regulations, the term “harm” is defined as “an act which actually kills or injures wildlife. Such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or sheltering.”

Migratory Bird Treaty Act

The MBTA (16 USC §703) prohibits the killing of migratory birds or the destruction of their occupied nests and eggs except in accordance with regulations prescribed by the USFWS. The bird species covered by the MBTA includes nearly all of those that breed in North America, excluding introduced (i.e. exotic) species (50 Code of Federal Regulations §10.13).

State of California

California Endangered Species Act

The California Endangered Species Act (CESA) is similar to the ESA, but pertains to state-listed endangered and threatened species. The CESA requires state agencies to consult with the CDFW when preparing documents to comply with the California Environmental Quality Act (CEQA). The purpose is to ensure that the actions of the lead agency do not jeopardize the continued existence of a listed species or result in the destruction, or adverse modification of habitat essential to the continued existence of those species. In addition to formal listing under the federal and state endangered species acts, “species of special concern” receive consideration by CDFW. Species of special concern are those whose numbers, reproductive success, or habitat may be threatened.

California Fish and Game Code (§3503.5)

The CFGC (§3503.5) states that it is “unlawful to take, possess, or destroy any birds in the order Falconiformes (hawks, eagles, and falcons) or Strigiformes (all owls except barn owls) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto.” Take includes the disturbance of an active nest resulting in the abandonment or loss of young. The CFGC (§3503) also states that “it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto.”

California Migratory Bird Protection Act

The CMBPA amends the CFGC (§3513) to mirror the provisions of the MBTA and allow the State of California to enforce the prohibition of take or possession of any migratory nongame bird as designated in the federal MBTA, including incidental take.

Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance have the potential to affect bird species protected by the MBTA and CFGC. Thus, vegetation removal and ground disturbance in areas with breeding birds should be conducted outside of the breeding season (approximately March 1 through August 31). If vegetation removal or ground-disturbing activities are conducted during the breeding season, then a qualified biologist must determine if there are any nests of bird species protected under the MBTA and CFGC present in the Project area prior to commencement of vegetation removal or ground-disturbing activities. If active nests are located or presumed present, then appropriate avoidance measures (e.g. spatial or temporal buffers) must be implemented.

Rare and Endangered Plants

The CNPS maintains a list of plant species native to California with low population numbers, limited distribution, or otherwise threatened with extinction. This information is published in the Inventory of Rare and Endangered Vascular Plants of California. Potential impacts to populations of CNPS California Rare Plant Rank (CRPR) plants receive consideration under CEQA review. The CNPS CRPR categorizes plants as follows:

- Rank 1A: Plants presumed extinct in California;
- Rank 1B: Plants rare, threatened, or endangered in California or elsewhere;
- Rank 2A: Plants presumed extirpated or extinct in California, but not elsewhere;
- Rank 2B: Plants rare, threatened, or endangered in California, but more numerous elsewhere;
- Rank 3: Plants about which we need more information; and
- Rank 4: Plants of limited distribution.

The California Native Plant Protection Act (CFGF §1900-1913) prohibits the taking, possessing, or sale within the state of any plants with a state designation of rare, threatened, or endangered as defined by CDFW. An exception to this prohibition allows landowners, under specific circumstances, to take listed plant species, provided that the owners first notify CDFW and give the agency at least 10 days to retrieve (and presumably replant) the plants before they are destroyed. Fish and Game Code §1913 exempts from the ‘take’ prohibition “the removal of endangered or rare native plants from a canal, lateral channel, building site, or road, or other right of way.”

California Environmental Quality Act Guidelines §15380

Although threatened and endangered species are protected by specific federal and state statutes, CEQA Guidelines §15380(d) provides that a species not listed on the federal or state list of protected species may be considered rare or endangered if the species can be shown to meet certain specified criteria. These criteria have been modeled based on the definition in the ESA and the section of the CFGF dealing with rare, threatened, and endangered plants and animals. The CEQA Guidelines (§15380) allows a public agency to undertake a review to determine if a significant effect on species that have not yet been listed by either the USFWS or CDFW (e.g. candidate species, species of concern) would occur. Thus, CEQA provides an agency with the ability to protect a species from a project’s potential impacts until the respective government agencies have an opportunity to designate the species as protected, if warranted.

CONCLUSIONS AND RECOMMENDATIONS

Endangered, Threatened, and Rare Plants

There are no special-status botanical species present within the BSA and no suitable habitat for special-status botanical species was identified within the BSA; therefore, there will be no effects to botanical species and no avoidance and minimization measures are proposed.

Endangered, Threatened, and Special-status Wildlife

The following are the recommended minimization and mitigation measures to further reduce or eliminate Project-associated impacts to special-status wildlife species. These proposed measures may be amended or superseded by the Project-specific permits issued by the regulatory agencies.

Valley Elderberry Longhorn Beetle

Per USFWS, the elderberry shrub present within the BSA is not suitable habitat for VELB and no mitigation is required for the removal of the shrub.

Coast Horned Lizard

To minimize impacts to coast horned lizard, the following avoidance and minimization measures are proposed:

- A preconstruction survey for coast horned lizard shall be conducted prior to the initiation of ground-disturbing activities. Should any life stages of coast horned lizard be found, they will be relocated to appropriate habitat by a qualified biologist.

Western Pond Turtle

To minimize impacts to western pond turtle, the following avoidance and minimization measures are proposed:

- Immediately prior to conducting work within 200 feet of suitable aquatic habitat, a qualified biologist shall conduct a western pond turtle clearance survey.
- A qualified biologist shall be onsite during all vegetation removal within 200 feet of suitable aquatic habitat and during the installation or removal of water diversions.
- If western pond turtles are identified in an area where they will be impacted by Project activities, then the biologist will relocate the turtles outside of the work area or create a species protection buffer (determined by the biologist) until the turtles have left the work area.
- Before initiating any ground disturbances, restrictive silt fencing will be installed between Ruddy Creek and construction area to prevent western pond turtle from entering the construction site from the adjacent aquatic settings and to prevent construction equipment and personnel from entering sensitive habitat from the construction site.

Western Spadefoot

To minimize impacts to western spadefoot, the following avoidance and minimization measures are proposed:

- Clearance surveys shall be conducted by a qualified biologist immediately prior to the initiation of work when water is present within the BSA. Should any life stages of western spadefoot be found, they will be relocated to appropriate habitat by a qualified biologist.

Burrowing Owl

To minimize impacts to burrowing owl, the following avoidance and minimization measures are proposed:



- Construction activities should occur outside of the western burrowing owl nesting season (February 1 – August 31). If construction cannot be conducted outside of the nesting season then the following avoidance and minimization measures shall be implemented.
 - For construction occurring during the breeding season (February 1 – August 31), prior to any ground disturbing activities within the site, a pre-construction survey for western burrowing owls shall be conducted by a qualified biologist within 14 days of ground disturbing activities per the recommendations described in the *Burrowing Owl Survey Protocol and Mitigation Guidelines* (California Burrowing Owl Consortium 1993).
 - If an active burrowing owl nest is observed within 250 feet of the project footprint, then a 250 foot buffer shall be established and CDFW contacted for further consultation.

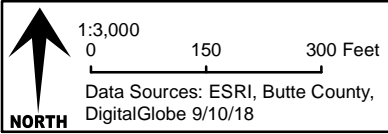
Swainson's Hawk

In order to minimize and mitigate impacts to Swainson's hawks and their habitat, the following avoidance and minimization measures are recommended:

- A protocol-level nesting raptor survey shall be conducted within 7 days prior to the initiation of Project activities to determine the presence or absence of active Swainson's hawk nests within the BSA or within 500 feet of the Project boundary, where feasible. If an active Swainson's hawk nest is found, no work should occur within 500 feet of the active nest and CDFW shall be consulted.
- Per the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFW 1994), projects within 10 miles of an active nest tree but greater than 5 miles from an active nest tree shall provide 0.5 acres of Habitat Management land for each acre of urban development authorized (0.5:1 ratio). There is 8.1 acres of suitable Swainson's hawk foraging habitat present within the BSA (**Figure 5**); therefore, depending on the final site plan and conversion of suitable foraging habitat, Habitat Management land credits shall be purchased consistent with *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* from a CDFW-approved conservation bank that services the Project area. A preliminary search did not identify any conservation banks with available Swainson's hawk foraging habitat credits that service the Project area. Dolan Ranch Mitigation Bank, which does service the Project area, has only 0.177 Swainson's hawk



	Project Boundary - (24 acres)
	Swainson's Hawk Foraging Habitat - (8.1 acres)



The Village at Ruddy Creek
Swainson's Hawk Foraging Habitat
Figure 5

foraging habitat credits remaining. The *Staff Report Regarding Mitigation* indicates that Habitat Management lands protected under this requirement may be protected through fee title acquisition or a conservation easement on agricultural lands or other suitable habitats which provide foraging habitat for Swainson's hawk; however, the high cost of purchasing land along with the small scope of this Project makes this mitigation method infeasible. Meridian Ranch Mitigation Bank, Bryte Ranch Conservation Bank, and Van Vleck Mitigation Bank are three nearby mitigation banks that provide Swainson's hawk foraging habitat credits that may be utilized for Project mitigation at the lead agency's discretion.

- At the time of preparation of this document, there is one (1) Swainson's hawk nest within 10 miles of the BSA that is considered active (i.e. used during 1 or more of the last 5 years) (CNDDDB #1530, July 16, 2015). Prior to land-clearing activities, it is recommended that the status of the active nest tree and CNDDDB be evaluated by a biologist to determine the status of the nest and whether or not compensatory mitigation is required based on the mitigation requirements. If the nest is considered active at the time of land-clearing activities, mitigation shall be implemented consistent with the *Staff Report Regarding Mitigation for Impacts to Swainson's Hawks (Buteo swainsoni) in the Central Valley of California* (CDFW 1994), as described above.

Tricolored Blackbird

To avoid impacts to tricolored blackbird, the following avoidance and minimization measures are proposed:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the tricolored blackbird nesting season (March 15 – July 31).
- If Project activities cannot be initiated outside of the tricolored blackbird nesting season, then the following will occur:
 - If construction is initiated in the project work area during the tricolored blackbird nesting season, three (3) surveys shall be conducted within 15 days prior to the construction activity, with one of the surveys within 3 days prior to the start of the construction.
 - During the nesting season, a qualified biologist will conduct two (2) surveys of foraging habitat within 3 miles of a known colony site. The qualified biologist will survey the project site to determine whether foraging habitat is being actively used by tricolored blackbird. The surveys will be conducted approximately one week apart, with the second survey occurring no more than two (2) calendar days prior to ground-disturbing activities. The qualified biologist will survey foraging habitat on the Project site and a minimum 300-foot radius around the project site for foraging tricolored blackbirds by observing and listening from accessible vantage points that provide views of the entire survey area. Each survey shall last 4 hours, and begin no later than 8:00 AM. If such vantage points are not available, the qualified biologist will survey from multiple vantage points to ensure that the entire survey area is covered.

- If an active tricolored blackbird nesting colony is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then consultation with CDFW will be required.

Loggerhead Shrike, Northern Harrier, and Migratory Birds and Raptors

To avoid impacts to loggerhead shrike, northern harrier, and avian species protected under the MBTA and the CFGC, the following avoidance and minimization measures are recommended:

- Project activities including site grubbing and vegetation removal shall be initiated outside of the bird nesting season (February 1 – August 31).
- If Project activities cannot be initiated outside of the bird nesting season, then the following will occur:
 - A qualified biologist shall conduct a pre-construction survey within 250 feet of the BSA, where accessible, within 7 days prior to the start of Project activities.
 - If an active nest (i.e. containing egg[s] or young) is observed within the BSA or in an area adjacent to the BSA where impacts could occur, then a species protection buffer will be established. The species protection buffer will be defined by the qualified biologist based on the species, nest type and tolerance to disturbance. Construction activity shall be prohibited within the buffer zones until the young have fledged or the nest fails. Nests shall be monitored by a qualified biologist once per week and a report submitted to the CEQA lead agency weekly.

Other Natural Resources

Waters of the United States

If activities occur within the ordinary high water mark and/or result in fill or discharge to any waters of the United States which include but are not limited to, intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, vernal pools or natural ponds, then the following will need to be obtained:

- Prior to any discharge or fill material into waters of the United States, authorization under a Nationwide Permit or Individual Permit shall be obtained from the Corps (Clean Water Act §404). For fill requiring a Corps permit, a water quality certification from the Regional Water Quality Board (Clean Water Act §401) shall also be obtained prior to discharge of dredged or fill material.
- Prior to any activities that would obstruct the flow of or alter the bed, channel, or bank of any perennial, intermittent or ephemeral creeks, notification of streambed alteration shall be submitted to the CDFW, and, if required, a Lake and Streambed Alteration Agreement (CFGC §1602) shall be obtained.

Mitigation requirements for the fill of waters of the United States will be implemented through an onsite restoration plan, and/or an In Lieu Fund and/or a certified mitigation bank with a Service Area that covers the Project area. These agreements, certifications and permits may be contingent upon successful completion of the CEQA process.

REFERENCES

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PERSONAL COMMUNICATIONS

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LIST OF PREPARERS

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Appendix A

Species 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:

March 09, 2020

Consultation Code: 08ESMF00-2020-SLI-1279

Event Code: 08ESMF00-2020-E-04084

Project Name: The Village at Ruddy Creek

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

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: 08ESMF00-2020-SLI-1279

Event Code: 08ESMF00-2020-E-04084

Project Name: The Village at Ruddy Creek

Project Type: DEVELOPMENT

Project Description: development

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/39.5056528489457N121.60247859195792W>



Counties: Butte, CA

Endangered Species Act Species

There is a total of 8 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 Fisheries¹, 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.

Reptiles

NAME	STATUS
Giant Garter Snake <i>Thamnophis gigas</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/4482	Threatened

Amphibians

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

Fishes

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

Insects

NAME	STATUS
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850 Habitat assessment guidelines: https://ecos.fws.gov/ipac/guideline/assessment/population/436/office/11420.pdf	Threatened

Crustaceans

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8246	Endangered
Vernal Pool Fairy Shrimp <i>Branchinecta lynchi</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/498	Threatened
Vernal Pool Tadpole Shrimp <i>Lepidurus packardii</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

Flowering Plants

NAME	STATUS
Butte County Meadowfoam <i>Limnanthes floccosa ssp. californica</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4223	Endangered

Critical habitats

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



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad IS (Shippee (3912156) OR Biggs (3912146) OR Oroville (3912155) OR Palermo (3912145))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
adobe-lily <i>Fritillaria pluriflora</i>	PMLIL0V0F0	None	None	G2G3	S2S3	1B.2
Ahart's dwarf rush <i>Juncus leiospermus var. ahartii</i>	PMJUN011L1	None	None	G2T1	S1	1B.2
Ahart's paronychia <i>Paronychia ahartii</i>	PDCAR0L0V0	None	None	G3	S3	1B.1
bank swallow <i>Riparia riparia</i>	ABPAU08010	None	Threatened	G5	S2	
big-scale balsamroot <i>Balsamorhiza macrolepis</i>	PDAST11061	None	None	G2	S2	1B.2
Brandegees clarkia <i>Clarkia biloba ssp. brandegeeeae</i>	PDONA05053	None	None	G4G5T4	S4	4.2
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S3	SSC
Butte County fritillary <i>Fritillaria eastwoodiae</i>	PMLIL0V060	None	None	G3Q	S3	3.2
Butte County golden clover <i>Trifolium jokerstii</i>	PDFAB40310	None	None	G2	S2	1B.2
Butte County meadowfoam <i>Limnanthes floccosa ssp. californica</i>	PDLIM02042	Endangered	Endangered	G4T1	S1	1B.1
California black rail <i>Laterallus jamaicensis coturniculus</i>	ABNME03041	None	Threatened	G3G4T1	S1	FP
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
chinook salmon - Central Valley spring-run ESU <i>Oncorhynchus tshawytscha pop. 6</i>	AFCHA0205A	Threatened	Threatened	G5	S1	
coast horned lizard <i>Phrynosoma blainvillii</i>	ARACF12100	None	None	G3G4	S3S4	SSC
foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050	None	Candidate Threatened	G3	S3	SSC
giant gartersnake <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	
great blue heron <i>Ardea herodias</i>	ABNGA04010	None	None	G5	S4	
Great Valley Cottonwood Riparian Forest <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA	None	None	G2	S2.1	
Great Valley Willow Scrub <i>Great Valley Willow Scrub</i>	CTT63410CA	None	None	G3	S3.2	



Selected Elements by Common 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
greater sandhill crane <i>Antigone canadensis tabida</i>	ABNMK01014	None	Threatened	G5T4	S2	FP
Greene's tuctoria <i>Tuctoria greenei</i>	PMPOA6N010	Endangered	Rare	G1	S1	1B.1
least Bell's vireo <i>Vireo bellii pusillus</i>	ABPBW01114	Endangered	Endangered	G5T2	S2	
loggerhead shrike <i>Lanius ludovicianus</i>	ABPBR01030	None	None	G4	S4	SSC
North American porcupine <i>Erethizon dorsatum</i>	AMAFJ01010	None	None	G5	S3	
Northern Basalt Flow Vernal Pool <i>Northern Basalt Flow Vernal Pool</i>	CTT44131CA	None	None	G3	S2.2	
Northern Hardpan Vernal Pool <i>Northern Hardpan Vernal Pool</i>	CTT44110CA	None	None	G3	S3.1	
northern harrier <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
Northern Volcanic Mud Flow Vernal Pool <i>Northern Volcanic Mud Flow Vernal Pool</i>	CTT44132CA	None	None	G1	S1.1	
osprey <i>Pandion haliaetus</i>	ABNKC01010	None	None	G5	S4	WL
pink creamsacs <i>Castilleja rubicundula</i> var. <i>rubicundula</i>	PDSCR0D482	None	None	G5T2	S2	1B.2
recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2?	1B.2
Red Bluff dwarf rush <i>Juncus leiospermus</i> var. <i>leiospermus</i>	PMJUN011L2	None	None	G2T2	S2	1B.1
Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
silver-haired bat <i>Lasiorycteris noctivagans</i>	AMACC02010	None	None	G5	S3S4	
slender Orcutt grass <i>Orcuttia tenuis</i>	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	AFCHA0209K	Threatened	None	G5T2Q	S2	
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S3	
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010	None	None	G3G4	S2	SSC
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G2G3	S1S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T2	S2	



Selected Elements by Common 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
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
vernal pool tadpole shrimp <i>Lepidurus packardi</i>	ICBRA10010	Endangered	None	G4	S3S4	
western mastiff bat <i>Eumops perotis californicus</i>	AMACD02011	None	None	G5T4	S3S4	SSC
western pond turtle <i>Emys marmorata</i>	ARAAD02030	None	None	G3G4	S3	SSC
western spadefoot <i>Spea hammondi</i>	AAABF02020	None	None	G3	S3	SSC
woolly rose-mallow <i>Hibiscus lasiocarpus var. occidentalis</i>	PDMAL0H0R3	None	None	G5T3	S3	1B.2
yellow warbler <i>Setophaga petechia</i>	ABPBX03010	None	None	G5	S3S4	SSC

Record Count: 47

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

Plant List

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

Search Criteria

California Rare Plant Rank is one of [1A, 1B, 2A, 2B], Found in Quads 3912155, 3912146 3912145 and 3912156;

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

Scientific Name	Common Name	Family	Lifeform	Blooming Period	CA Rare Plant Rank	State Rank	Global Rank
Astragalus tener var. ferrisiae	Ferris' milk-vetch	Fabaceae	annual herb	Apr-May	1B.1	S1	G2T1
Balsamorhiza macrolepis	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	1B.2	S2	G2
Castilleja rubicundula var. rubicundula	pink creamsacs	Orobanchaceae	annual herb (hemiparasitic)	Apr-Jun	1B.2	S2	G5T2
Delphinium recurvatum	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	1B.2	S2?	G2?
Fritillaria pluriflora	adobe-lily	Liliaceae	perennial bulbiferous herb	Feb-Apr	1B.2	S2S3	G2G3
Hibiscus lasiocarpus var. occidentalis	woolly rose-mallow	Malvaceae	perennial rhizomatous herb (emergent)	Jun-Sep	1B.2	S3	G5T3
Juncus leiospermus var. ahartii	Ahart's dwarf rush	Juncaceae	annual herb	Mar-May	1B.2	S1	G2T1
Juncus leiospermus var. leiospermus	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	1B.1	S2	G2T2
Limnanthes floccosa ssp. californica	Butte County meadowfoam	Limnanthaceae	annual herb	Mar-May	1B.1	S1	G4T1
Orcuttia tenuis	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	1B.1	S2	G2
Paronychia ahartii	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	1B.1	S3	G3
Sagittaria sanfordii	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	1B.2	S3	G3
Trifolium jokerstii	Butte County golden clover	Fabaceae	annual herb	Mar-May	1B.2	S2	G2
Tuctoria greenei	Greene's tuctoria	Poaceae	annual herb	May-Jul(Sep)	1B.1	S1	G1

Suggested Citation

California Native Plant Society, Rare Plant Program. 2020. Inventory of Rare and Endangered Plants of California

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Contributors

[The Calflora Database](#)

[The California Lichen Society](#)

[California Natural Diversity Database](#)

[The Jepson Flora Project](#)

[The Consortium of California Herbaria](#)

[CalPhotos](#)

Questions and Comments

rareplants@cnps.org

Appendix B

Observed Species Lists

Plant Species Observed within the Ruddy Creek Property March 26 and April 1, 2020

Scientific Name	Common Name
<i>Achyrachaena mollis</i>	Blow-wives
<i>Acmispon sp</i>	Lotus
<i>Ailanthus altissima</i>	Tree-of-heaven
<i>Arundo donax</i>	Giant reed
<i>Avena fatua</i>	Wild oats
<i>Brassica nigra</i>	Black mustard
<i>Briza maxima</i>	Greater quaking-grass
<i>Bromus diandrus</i>	Rip-gut brome
<i>Bromus hordeaceus</i>	Soft chess
<i>Carya illinoensis</i>	Pecan
<i>Centaurea solstitialis</i>	Yellow star thistle
<i>Cichorium intybus</i>	Chicory
<i>Citrus x sinensis</i>	Sweet orange
<i>Claytonia perfoliata</i>	Miner's lettuce
<i>Convolvulus arvensis</i>	Bindweed
<i>Cytisus scoparius</i>	Scotch broom
<i>Elymus caput-medusae</i>	Medusahead
<i>Elymus multisetus</i>	Big squirreltail grass
<i>Erodium botrys</i>	Long-beaked stork's-bill
<i>Erodium brachycarpum</i>	Foothill filaree
<i>Erodium cicutarium</i>	Cut-leaf filaree
<i>Eucalyptus cinerea</i>	Argyle apple
<i>Eucalyptus sideroxylon</i>	Red iron bark
<i>Festuca perennis</i>	Rye-grass
<i>Ficus carica</i>	Wild fig
<i>Galium aparine</i>	Bedstraw
<i>Geranium dissectum</i>	Cut-leaved geranium
<i>Hordeum murinum</i>	Wall hare barley
<i>Hypochaeris glabra</i>	Smooth cat's ear
<i>Iris sp.</i>	Iris
<i>Juglans hindsii</i>	Black walnut
<i>Lactuca serriola</i>	Prickly lettuce
<i>Lepidium nitidum</i>	Shinning pepperweed
<i>Lepidium strictum</i>	Upright pepper-grass
<i>Lupinus nanus</i>	Sky lupine
<i>Malva sp.</i>	Bull mallow
<i>Matricaria discoidea</i>	Common pineapple weed
<i>Medicago praecox</i>	Mediterranean bur-clover
<i>Olea europaea</i>	Olive
<i>Oxalis pes-caprae</i>	Bermuda buttercup
<i>Pinus sp.</i>	Pine
<i>Pinus sabiniana</i>	Gray pine
<i>Plantago erecta</i>	Erect plantain

Scientific Name	Common Name
<i>Plantago lanceolata</i>	English plantain
<i>Poa annua</i>	Annual bluegrass
<i>Portulaca oleracea</i>	Common purslane
<i>Prunus cerasifera</i>	Cherry plum
<i>Prunus dulcis</i>	Almond
<i>Quercus douglasii</i>	Blue oak
<i>Quercus lobata</i>	Valley oak
<i>Quercus wislizeni</i>	Live oak
<i>Ranunculus muricatus</i>	Prickle-seeded buttercup
<i>Rubus armeniacus</i>	Himalayan blackberry
<i>Rumex crispus</i>	Curly dock
<i>Salix sp.</i>	Willow
<i>Sambucus nigra ssp. caerulea</i>	Blue elderberry
<i>Sherardia arvensis</i>	Field-madder
<i>Sonchus asper</i>	Sow thistle
<i>Torilis arvensis</i>	Hedge parsley
<i>Toxicodendron diversilobum</i>	Poison oak
<i>Trifolium hirtum</i>	Rose clover
<i>Tryphisaria ericaria</i>	Johnnytuck
<i>Vicia sativa</i>	Garden vetch
<i>Vicia villosa</i>	Winter vetch
<i>Zantedeschia aethiopica</i>	Calla lily

Wildlife Species Observed within the Ruddy Creek Property March 12, 2020	
Scientific Name	Common Name
<i>Aphelocoma californica</i>	Scrub jay
<i>Cathartes aura</i>	Turkey vulture
<i>Corvus corax</i>	Crow
<i>Meleagris gallopavo</i>	Wild turkey
<i>Melospiza melodia</i>	Song sparrow
<i>Mimus polyglottos</i>	Northern mockingbird
<i>Odocoileus hemionus</i>	Mule deer
<i>Pipilo maculatus</i>	Spotted towhee
<i>Sayornis nigricans</i>	Black phoebe
<i>Sceloporus occidentalis</i>	Western fence lizard
<i>Turdus migratorius</i>	American robin

Appendix C

Project Site Photos Taken March 12, 2020

Project Site Photos

Taken March 12, 2020



Looking east at annual grassland habitat.



Looking south at annual grassland habitat.



Looking west at Himalayan blackberry.



Remnant orchard is currently used as an illegal dumping site.



Looking south at Ruddy Creek.



Looking east towards remnant orchard.