

BIOLOGICAL RESOURCE ASSESSMENT

Aquatic, Terrestrial, and Botanical Resources

Wyndham Lane Subdivision

City of Redding, Shasta County, California

March 2023



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BIOLOGICAL RESOURCE ASSESSMENT

Wyndham Lane Subdivision

Redding, California

Section 12, Township 31N, Range 05W

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 Wyndham Lane Subdivision (Project) located north of Wyndham Lane and South of Rivella Vista Drive in Redding, Shasta County, California (**Figure 1**). The BSA is approximately 11 acres. The proposed Project involves the construction of a residential development.

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

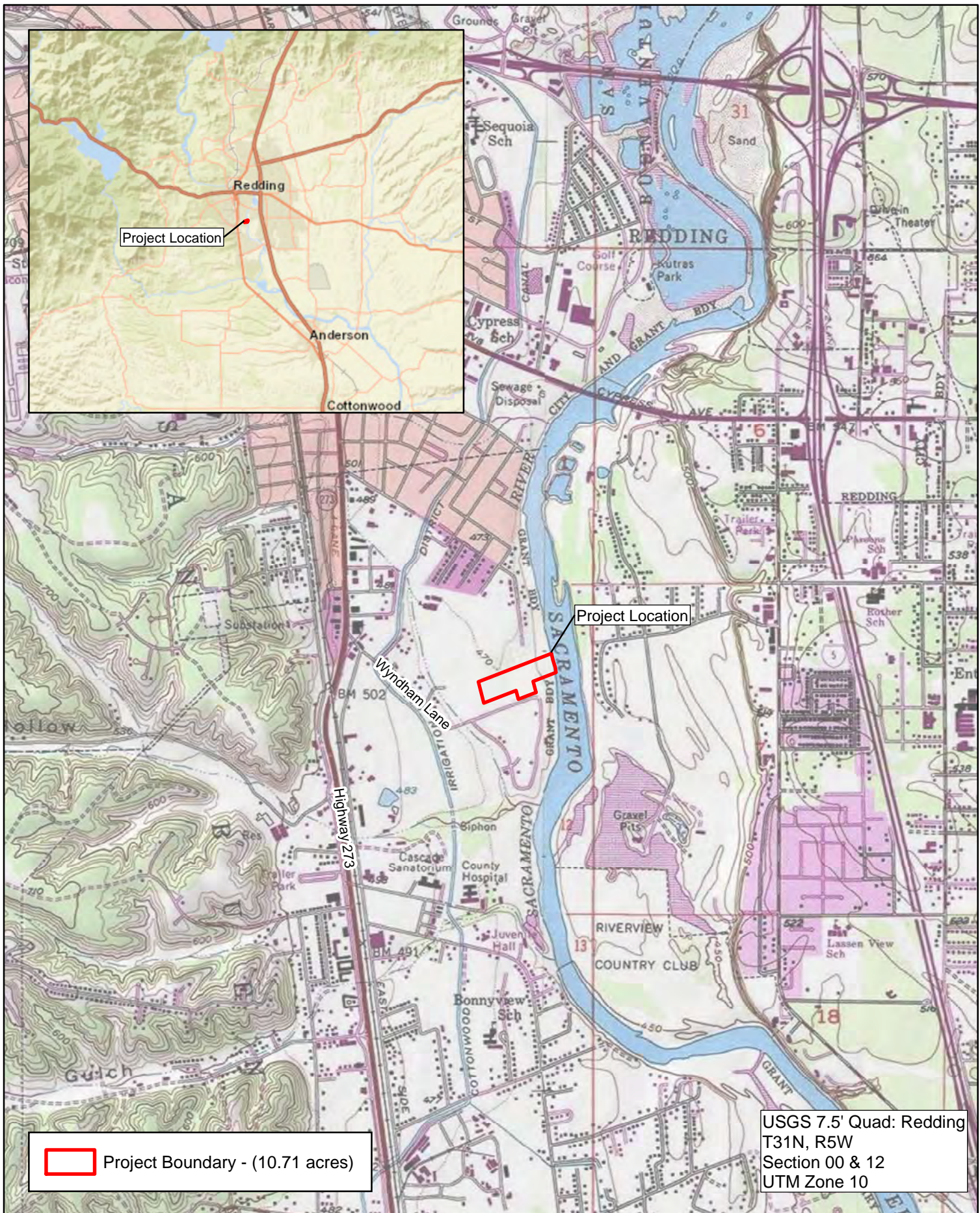
Project Location and Environmental Setting

The BSA is located within the foothills of the Klamath Mountain Range in the City of Redding. The BSA is located within the "Redding" United States Geological Survey (USGS) quadrangle, Section 12, Township 31N, Range 05W. The BSA includes a portion of Wyndham Lane to the south. The Sacramento River runs north to south along the eastern portion of the BSA. The BSA is primarily composed of annual grassland and scattered patches of valley oak woodland.

The average annual precipitation is 33.68 inches and the average annual temperature is 62.4°F in the region where the Project site is located (WRCC 2023). The Project site occurs at an elevation of approximately 436 to 462 feet above sea level. The site is sloped between 0 and 3 percent. Soils within the site are fine sandy loams.

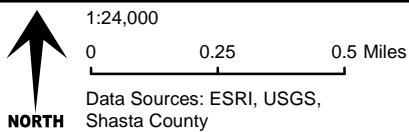
Project Description

The proposed Project will involve the development of a residential subdivision and apartment infrastructure.



 Project Boundary - (10.71 acres)

USGS 7.5' Quad: Redding
T31N, R5W
Section 00 & 12
UTM Zone 10



Wyndham Lane Subdivision
Regional Location
Figure 1



1:3,000

0 150 300 Feet

Data Sources: ESRI, City of Redding GIS 05/27/2020,
Sarah Dunlap Sawyer Inc.

Wyndham Lane Subdivision
Project Location
Figure 2

gallaway
ENTERPRISES

GE: #22-133 Map Date: 02/14/2023

METHODS

References Consulted

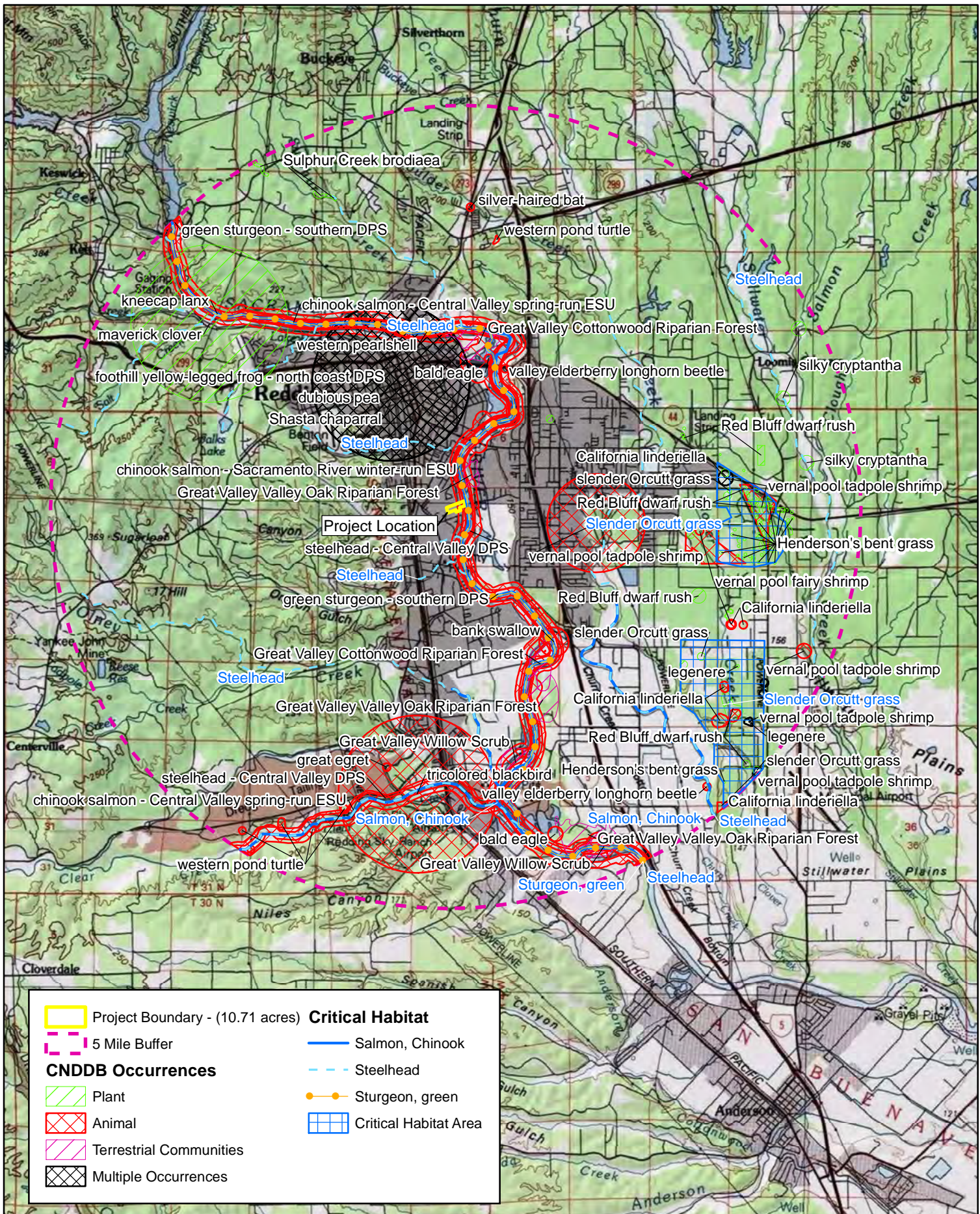
Gallaway Enterprises obtained lists of special-status species that occur in the vicinity of the BSA. The CNDDDB Geographic Information System (GIS) was also consulted and showed special-status species within a 5-mile radius of the BSA (**Figure 3**). Other primary sources of information regarding the 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 Official Species List for the BSA, March 7, 2023, (**Appendix A; Species Lists**);
- The National Oceanic and Atmospheric Administration (NOAA) National Marine Fisheries Service (NMFS) Official Species List for the 7.5-minute United States Geological Survey (USGS) “Redding” quadrangle, March 27, 2023 (**Appendix A; Species Lists**);
- The results of a species record search of the CDFW CNDDDB, RareFind 5, for the 7.5-minute USGS “Shasta Dam,” “Project City,” “Redding,” “Bella Vista,” “Palo Cedro,” and “Enterprise” quadrangles, March 23, 2023, (**Appendix A; Species Lists**);
- The review of the CNPS Inventory of Rare and Endangered Vascular Plants of California for the 7.5-minute USGS “Shasta Dam,” “Project City,” “Redding,” “Bella Vista,” “Palo Cedro,” and “Enterprise” quadrangles, March 23, 2023 (**Appendix A; Species Lists**);
- USFWS Critical Habitat Portal, March 23, 2023;
- Results from the habitat assessments conducted by Gallaway Enterprises on March 16, 2023;
- Draft delineation of aquatic resources conducted by Gallaway Enterprises on March 16, 2023;
- Protocol-level rare plant survey conducted by Gallaway Enterprises on March 16, 2023. (**Appendix B; Observed Species Lists**).

Special-Status Species

Special-status species that are considered in this BRA 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 State Species of Special Concern (SSC) by CDFW or protected under the California Fish and Game Code (CFGC) (i.e., 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).



Wyndham Lane Subdivision
CNDDB Occurrences
Figure 3

Critical Habitat

The ESA requires that critical habitat be designated for all federally listed species. 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 February 28, 2023 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. The CNDDDB was accessed on March 7, 2023 to determine if the BSA occurs within a mapped SNC.

Waters of the United States

A draft delineation of waters of the United States (WOTUS) was conducted within the BSA by Gallaway Enterprises on March 16, 2023 (**Appendix C; Draft Delineation of Waters of the U.S. Map**).

Habitat Assessments

Habitat assessments were conducted by Gallaway Enterprises staff on March 16, 2023 (**Figure 4**). Biologist/Botanist Matthew Mayer conducted the wildlife habitat assessment and the botanical habitat assessment. was conducted by.

Habitat assessments for botanical and wildlife species were conducted to determine if suitable habitat elements for special-status species occur within the BSA. The habitat assessments and protocol-level survey were conducted by walking the entire BSA 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.

Rare Plant Survey

Biologist/Botanist Matthew Mayer conducted a protocol-level rare plant survey within the BSA on March 16, 2023. The survey was conducted for all plant species with blooming periods that overlapped the date of the field site visit. The survey and evaluation were conducted by walking all areas of the Project boundary and taking inventory of observed botanical species. A Trimble GPS unit was used to record the location, extent, and estimated number of individuals of any special-status plant populations observed within the BSA. A list of botanical and wildlife species observed within the BSA during the site visit is included in Appendix B.



Project Location - (10.71 acres)
 Biological Survey Area - (10.71 acres)

Habitat Types

- Annual Grassland - (7.21 acres)
- Barren - (0.15 acres)
- Valley Foothill Riparian - (0.51 acres)
- Riverine - (0.11 acres)
- Valley Oak Woodland - (2.71 acres)



1:3,001

0 150 300 Feet

Data Sources: ESRI, City of Redding GIS 05/27/2020,
Sarah Dunlap Sawyer Inc.

Wyndham Lane Subdivision
Habitat Types
Figure 4

RESULTS

Terrestrial Habitat

Valley Oak Woodland

The eastern portion of the BSA and small areas scattered throughout the BSA are composed of Valley Oak Woodlands. Valley Oak Woodland within the BSA is characterized by an overstory of primarily valley oaks (*Quercus lobata*) and Willow (*Salix*) species in the riparian zone.

These widely scattered but sparsely occurring woodlands are dominated by valley oaks. Tree species associated with valley oak woodlands include California sycamore, California black walnut, California boxelder, Oregon ash, interior live oak, California buckeye, and blue oak. Within low elevations riparian zones, valley oak is associated with Fremont cottonwood and tree willows. Valley oak woodlands vary from open savannahs to closed canopy forests. Dense stands occur along natural drainages in deep soils. Tree density tends to be highest in lowland areas, decreasing as one moves into upland systems. The understory shrub layer can be dense along drainages and very sparse in uplands. Understory grasses and forbs are mostly introduced annuals. Mature valley oaks have well-developed crowns and reach maximum heights of 50 to 120 ft. The trunks of valley oaks often reach 6 feet in DBH and branches of mature trees dominate valley oak woodlands (UCANR 2023)

Valley Foothill Riparian

The eastern border of the BSA is composed of a Valley Foothill Riparian habitat area.

Valley Foothill Riparian areas are characterized by an overstory of primarily cottonwood (*Populus fremontii*), California sycamore (*Platanus racemose*), Valley oak (*Quercus lobata*). Subcanopy trees are white alder (*Alnus rhombifolia*), boxelder (*Acer negundo*), and Oregon ash (*Fraxinus latifolia*). Typical understory shrub layer plants include wild grape, wild rose, California blackberry, blue elderberry, poison oak, buttonbrush, and willows. The herbaceous layer consists of sedges, rushes, grasses, miner's lettuce, Douglas sagewort, poison-hemlock, and hoary nettle (CWHRS 2023)

Annual Grassland

Annual grassland makes up the majority of the BSA, and also makes up the herbaceous layer of oak-foothill pine woodland found throughout the site. Annual grassland habitats and species composition depend largely on annual precipitation, fire regimes, and grazing practices (Mayer and Laudenslayer 1988). Species observed in the annual grassland in the BSA include miners lettuce (*Claytonia perfoliata*), common vetch (*Vicia sativa*), soft chess (*Bromus hordeaceus*), wall barley (*Hordeum murinum*), broadleaf filaree (*Erodium botrys*), field mustard (*Brassica rapa*), and Himalayan blackberry (*Rubus armeniacus*). Most wildlife species use grassland habitat for foraging, but generally require some other habitat characteristic such as rocky outcrops, cliffs, caves, or ponds in order to find shelter and cover for escapement. Some rodents, such as ground squirrel (*Otospermophilus beecheyi*), utilize annual grasslands for burrowing.

Barren

Barren habitat within the BSA is comprised of the paved roadway (Wyndham Lane) and unpaved dirt roads that traverse the site. Barren habitat is typified by non-vegetated soil, rock, paved roads, and gravel areas

void of vegetation. It is typically considered low-quality habitat for most wildlife species, although some ground nesting avian species such as killdeer (*Charadrius vociferous*) and small reptiles such as western fence lizards (*Sceloporus occidentalis*) can be found breeding in barren habitat.

Aquatic Habitat

Riverine

Riverine habitat is characterized by intermittent or continually running water. The waterway that flows adjacent to the site is a river that runs north to south at the eastern terminus of the BSA. This river provides aquatic habitat throughout the year. Its substrate is composed of cobble and mud, and some vegetation was present within the banks including cottonwood (*Populus fremontii*), Himalayan blackberry (*Rubus armeniacus*), common horsetail (*Equisetum arvense*), and scattered willows (*Salix* sp.). Along with functioning as habitat for fishes and other aquatic species, riverine habitat provides food for waterfowl, herons (*Ardeidae* sp.), and many species of insectivorous birds, hawks, and their prey.

Waters of the United States

Based on the results of the draft Delineation of Waters of the United States prepared for the Project site by Gallaway Enterprises, there is one jurisdictional feature within the BSA, the Sacramento River, which is a perennial river (**Figure 5**). The results of the delineation should be considered draft until the United States Army Corps of Engineers (Corps) verifies the jurisdictional status of the features present within the BSA.

Critical Habitat

The Sacramento River is the principal river in Northern California and the largest river in California. It borders the eastern portion of the BSA. The Sacramento River is designated as critical habitat for Sacramento River winter-run chinook salmon (*Oncorhynchus tshawytscha* pop. 7), Central Valley spring-run chinook salmon (*Oncorhynchus tshawytscha* pop. 11), green sturgeon – southern DPS (*Acipenser medirostris* pop. 1), and California Central Valley steelhead (*Oncorhynchus mykiss irideus* pop.11) from Keswick Dam (River Mile 302) to Chipps Island (River Mile 0) at the westward margin of the Sacramento-San Joaquin Delta. The eastern portion of the BSA is located approximately at River Mile 294, within the critical habitat designation. The Sacramento River within the BSA is also designated as essential fish habitat for Chinook Salmon species.

Impacts to Off-site Habitat

The proposed Project is not anticipated to impact off-site habitats or species. The Sacramento River will be avoided entirely and there will be no impacts to upstream or downstream aquatic resources (**Appendix D; Proposed Development Site Plan**). General construction related water-quality concerns will be addressed through the implementation of the site-specific Storm Water Pollution Prevention Plan (SWPPP) and erosion control Best Management Practices.

Sensitive Natural Communities

There are no CDFW-designated SNCs within the BSA. There are three (3) listed SNCs within the quadrangles adjacent to the BSA, Great Valley Cottonwood Riparian Forest, Great Valley Valley Oak

Riparian Forest, and Great Valley Willow Scrub. Great Valley Valley Oak Riparian Forest SNC occurs directly upstream from the BSA on the eastern bank of the Sacramento River, approximately 0.45 miles from the BSA.

Special-Status Species and Their Potential to Occur

A summary of special-status species assessed for potential occurrence within the BSA based on the USFWS IPaC species list, CNDDDB species list, NMFS species list and the CNPS inventory of rare and endangered plants within the “Shasta Dam,” “Project City,” “Redding,” “Bella Vista,” “Palo Cedro,” and “Enterprise” USGS 7.5-minute quadrangles, and their potential to occur within the BSA are described in **Table 1**. Potential for occurrence was determined by reviewing database queries from federal and state agencies and performing field surveys to evaluate habitat characteristics.

Table 1. Special-status Species and Sensitive Natural Communities and Their Potential to Occur in the BSA of the Wyndham Lane Subdivision.

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 Valley Oak Riparian Forest	_/_SNC/_	Riparian forest.	<u>None</u> . There is no designated Great Valley Oak 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.
PLANTS			
Ahart's paronychia (<i>Paronychia ahartii</i>)	_/_1B.1	Vernal pools or vernal mesic area that are nearly barren in clay soils. (BP: Feb-Jun)	<u>None</u> . There is no suitable habitat present in the BSA.
Bellinger's meadowfoam (<i>Limnanthes floccosa</i> ssp. <i>bellingeriana</i>)	_/_1B.2	Vernally wet sites including wet edges of meadows, and damp, stony flats. Found between 290-1100 meters in elevation. (BP: Apr- Jun)	<u>None</u> . There is no suitable habitat present in the BSA.

Common Name (<i>Scientific Name</i>)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Big-scale balsamroot (<i>Balsamorhiza macrolepis</i>)	_/_/1B.2	Serpentine soils in Chaparral, Cismontane woodland, Ultramafic, Valley & foothill grassland. (BP: Mar-Jun)	<u>None</u> . There are no suitable soils present within the BSA.
Boggs Lake hedge-hyssop (<i>Gratiola heterosepala</i>)	_/_SE/1B.2	Lake margins and vernal pools. (BP: Apr-Aug)	<u>None</u> . There is no suitable habitat present in the BSA.
Legenere (<i>Legenere limosa</i>)	_/_/1B.1	Vernal pools. (BP: Apr – Jun)	<u>None</u> . There are no suitable soils or habitat present within BSA and the species was not observed during the protocol-level rare plant survey.
Maverick clover (<i>Trifolium piorkowskii</i>)	_/_/1B.2	Volcanic clay, openings, often streambanks. (BP: Apr – May)	<u>None</u> . The species was not observed within the BSA during the protocol-level rare plant survey.
Oval-leaved viburnum (<i>Viburnum ellipticum</i>)	_/_/2B.3	Chaparral, cismontane woodland, lower montane coniferous forest. Found between 215-1400 meters in elevation. (BP: May-Jun)	<u>None</u> . This is out of the elevation range for this species and no suitable habitat is present within the BSA.
Red Bluff dwarf rush (<i>Juncus leiospermus</i> var. <i>leiospermus</i>)	_/_/1B.1	Vernally mesic sites. Sometimes on edges of vernal pools (BP: Mar – May)	<u>None</u> . There are no suitable soils present within the BSA and the species was not observed during the protocol-level rare plant survey.
Sanford's arrowhead (<i>Sagittaria sanfordii</i>)	_/_/1B.2	In standing or slow-moving freshwater ponds, marshes, and ditches. (BP: May-Oct [Nov])	<u>None</u> . There is no suitable habitat present in the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
PLANTS			
Shasta huckleberry (<i>Vaccinium shastense</i> <i>ssp. shastense</i>)	_/_/1B.3	Acidic, mesic. Often on streambanks; sometimes on rocky outcrops, seeps, roadsides, and disturbed areas. Found between 325-1220 meters in elevation. (BP: Dec-May [Jun-Sep])	<u>None</u> . This is out of the elevation range for this species.
Shasta snow-wreath (<i>Nevusia cliftonii</i>)	_/SC/1B.2	Shaded, north-facing, or sheltered canyons. Sometimes on limestone or volcanic or metavolcanic soils. Found between 300-590 meters in elevation. (BP: Apr-Jun)	<u>None</u> . This is out of the elevation range for this species.
Silky cryptantha (<i>Cryptantha crinita</i>)	_/_/1B.2	In gravelly streambeds (BP: Apr – May)	<u>None</u> . Suitable habitat not present and this species was not observed during the protocol-level rare plant survey.
Slender Orcutt grass (<i>Orcuttia tenuis</i>)	FT/CE/1B.1	Vernal pools and wetlands, often in gravelly substrate. (BP: May – Sep)	<u>None</u> . There are no suitable soils or habitat present within BSA and the species was not observed during the protocol-level rare plant survey.
Sulphur Creek brodiaea (<i>Brodiaea matsonii</i>)	_/_/1B.1	Streambanks. In cracks and crevices of metamorphic amphibolite schist. (BP: May-Jun)	<u>None</u> . There are no suitable soils present within BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
INVERTEBRATES			
Monarch Butterfly (<i>Danaus plexippus</i>)	FC/_/_	Egg and larval stage dependent upon milkweed. Adults migrate seasonally, amassing in in dense tree canopy, e.g. eucalyptus.	<u>None.</u> No milkweed was observed during the protocol-level rare plant survey.
Valley elderberry longhorn beetle (<i>Desmocerus californicus dimorphus</i>)	FT/_/_	Blue elderberry shrubs; usually associated with riparian areas.	<u>None.</u> There are no blue elderberry shrubs with in BSA.
Vernal pool fairy shrimp (<i>Branchinecta lynchi</i>)	FT/_/_	Vernal pools and seasonally ponded areas.	<u>None.</u> There is no suitable vernal habitat within the BSA. The wetland features present do not contain suitable hydrology to support this species.
Vernal pool tadpole shrimp (<i>Lepidurus packardii</i>)	FE/_/_	Vernal pools.	<u>None.</u> There are no vernal pools within the BSA. The wetland features present do not contain suitable hydrology to support this species.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
FISH			
Chinook salmon Central Valley spring-run ESU <i>(Oncorhynchus tshawytscha)</i>	FT/ST/_	Sacramento river and its tributaries.	Known. Central Valley (CV) Spring-run Chinook Salmon enter the Sacramento River from late March through September. (CDFW 2023).
Chinook salmon Sacramento River winter-run ESU <i>(Oncorhynchus tshawytscha)</i>	FE/SE/_	Sacramento river and its tributaries.	Known. Adult Sacramento River (SR) winter-run Chinook Salmon pass under the Golden Gate Bridge from November through May, and pass into the Sacramento River from December through early August. (CDFW 2023).
Green Sturgeon - Southern DPS <i>(Acipenser medirostris pop. 1)</i>	FT/_/_	Spawns in the Sacramento, Feather and Yuba Rivers, site fidelity. Non spawning adults occupy marine/estuarine waters. Delta Estuary is important for rearing juveniles.	Known. Southern DPS Green Sturgeon are found in the Sacramento and San Joaquin rivers and Delta. They primarily spawn in the upper mainstem of the Sacramento River.
Pacific lamprey <i>(Entosphenus tridentatus)</i>	_/_SSC/_	Found in Pacific Coast streams north of San Luis Obispo County.	Low. Historically, pacific lamprey are known to occur in the Sacramento River; however, the nearest CNDDDB occurrence is located over 15 miles from the BSA in hydrologically connected, Clover Creek.
Steelhead, Central Valley DPS <i>(Oncorhynchus mykiss irideus pop 11)</i>	FT/_/_	Occurs below man-made impassable barriers in the Sacramento and San Joaquin rivers and tributaries. Adults migrate from ocean to natal freshwater streams to spawn. Yuba River has essentially the only remaining wild steelhead fishery in Central Valley.	Known. Known to be found originating below natural and manmade impassable barriers from the Sacramento and San Joaquin Rivers and their tributaries.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
REPTILES			
Western pond turtle (<i>Emys marmorata</i>)	_/SSC/_	Bodies of water with deep pools, emergent vegetation for foraging and cover, and locations for basking and nesting.	<u>None</u> . The BSA does not contain slow or stagnant water or emergent vegetation.
AMPHIBIANS			
Foothill yellow-legged frog North Coast DPS (<i>Rana boylei pop. 1</i>)	_/SSC/_	Perennial, shallow streams and riffles with rocky substrates and partial shade; commonly found in canyons and narrow streams.	<u>None</u> . The BSA does not contain suitable aquatic habitat for the FYLF.
Western spadefoot (<i>Spea hammondi</i>)	_/SSC/_	Occurs primarily in grassland habitats. Vernal pools are essential for breeding and egg-laying.	<u>None</u> . No suitable habitat is present in the BSA.
BIRDS			
Bald eagle (<i>Haliaeetus leucocephalus</i>)	_/SE, FP/_	Ocean shore, lake margins, and rivers for both nesting and wintering. Most nests within 1 mile of water. Nests in large, old-growth, or dominant live tree with open branches.	Moderate . There is some suitable habitat within and adjacent to the BSA and a CNDDDB occurrence (#288) within 2 miles of the BSA.

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
BIRDS			
<p>Bank swallow (<i>Riparia riparia</i>)</p>	<p>_/ST/_</p>	<p>Banks and bridges near perennial bodies of water.</p>	<p><u>None</u>. There is no suitable habitat within or adjacent to the BSA, and no individuals were observed during the site visit.</p>
<p>Purple martin (<i>Progne subis</i>)</p>	<p>_/SSC/_</p>	<p>Breeds in riparian woodland, oak woodland, open coniferous forests. Secondary cavity nester. Requires nest sites close to open foraging areas of water or land.</p>	<p><u>Low</u>. Suitable habitat is present within the BSA; however, there are no CNDDDB occurrences within 10 miles of the BSA.</p>
<p>Tricolored blackbird (<i>Agelaius tricolor</i>)</p>	<p>_/ST/SSC</p>	<p>Colonial nester in large freshwater marshes. Requires open, accessible water source and does most of its foraging in open habitats such as farm fields, pastures, cattle pens, large lawns.</p>	<p><u>None</u>. Historically, tricolored blackbirds existed in this area but were determined extirpated in 1991 and no suitable emergent vegetation or marsh habitat is currently present in or near the BSA.</p>
<p>Northern Spotted Owl (<i>Strix occidentalis caurina</i>)</p>	<p>FT/ ST/_</p>	<p>Old growth forests.</p>	<p><u>None</u>. No suitable habitat is present within the BSA.</p>

Common Name (Scientific Name)	Status Fed/State/CNPS	Associated Habitats	Potential for Occurrence
MAMMALS			
<p>Fisher (<i>Pekania pennanti</i>)</p>	<p>_/SSC/_</p>	<p>Intermediate to large tree stages of coniferous forests and deciduous riparian areas with high percent canopy closure. Uses cavities, snags, logs and rocky areas for cover and denning. Needs large areas of mature, dense forest.</p>	<p><u>None</u>. No suitable habitat is present within the BSA.</p>
<p>Pallid bat (<i>Antrozous pallidus</i>)</p>	<p>_/SSC/_</p>	<p>Roosts within buildings, rock crevices, bridges, and occasionally tree hollows. Very sensitive to disturbance of roosting sites.</p>	<p><u>Low</u>. There is suitable roosting habitat present within the BSA in the barn; however, no individuals were observed and the BSA is located in a highly disturbed urban environment.</p>
<p>Spotted bat (<i>Eduerma maculatum</i>)</p>	<p>_/SSC/_</p>	<p>Feeds over water and along washes. Feeds almost entirely on moths. Needs rock crevices in cliffs or caves for roosting.</p>	<p><u>None</u>. There are no cliffs or caves within the BSA.</p>
<p>Townsend's big-eared bat (<i>Corynorhinus townsendii</i>)</p>	<p>_/SSC/_</p>	<p>Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures.</p>	<p><u>Low</u>. There is suitable roosting habitat present within the BSA, though no individuals were observed during the site visit.</p>

CODE DESIGNATIONS	
FE = Federally-listed Endangered FT = Federally-listed Threatened FC = Federal Candidate Species SE = State-listed Endangered ST = State-listed Threatened SC = State Candidate for Listing as Threatened or Endangered SR = State-listed Rare SSC = State Species of Special Concern FP = CDFW 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, Threatened or Endangered in California, more common elsewhere CRPR 3 = More information is needed 0.1 = Seriously Threatened 0.2 = Fairly Threatened 0.3 = Not very Threatened
<p>Potential for Occurrence: 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 does not 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> <p>Low: Potential habitat in the BSA is sub-marginal and/or the species is known to occur in the vicinity of the BSA.</p> <p>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.</p> <p>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.</p> <p>Known: Species was detected in the BSA or a recent reliable record exists for the BSA.</p>	

Endangered, Threatened, and Rare Plants

A botanical habitat assessment and protocol-level rare plant survey was conducted within the BSA on March 16, 2023 by Gallaway Enterprises botanist Matt Mayer. No special-status plant species were observed within the BSA; therefore, there is no potential for special-status plants to occur. A list of all of the plant species observed during the surveys is provided in **Appendix B**.

Endangered, Threatened, and Special-Status Wildlife

A wildlife habitat assessment was conducted within the BSA on March 16, 2023. Suitable habitat was identified for Central Valley spring-run (CVSR) Chinook salmon, Sacramento River winter-run (SRWR) Chinook salmon, California Central Valley (CCV) steelhead, green sturgeon, western pond turtle, bank swallow, tricolored blackbird, and for avian species protected under the MBTA within or adjacent to the BSA. A complete list of wildlife species observed within the BSA can be found in **Appendix B**.

Chinook Salmon

Chinook salmon are an anadromous species which originate in freshwater environments, such as, major streams and tributaries, before migrating to oceanic environments to grow and mature, then returning to their natal freshwater environments to spawn and eventually die. Chinook salmon are the largest of the salmon species. They range in appearance throughout their developmental stages and aquatic environments. NMFS characterize Chinook salmon into evolutionary significant units (ESU) which are

defined by life history traits and distinct spawning time. ESUs identify a Pacific salmon population as a DPS, which are recognized under the ESA rather than the species. There are three Chinook salmon ESUs that occur within the BSA. The following discusses each Chinook salmon ESU and its occurrence within the BSA.

Central Valley Spring-run Chinook ESU

Central Valley (CV) Spring-run Chinook salmon are considered an Evolutionarily Significant Unit (ESU) by NMFS and their listing status is threatened under the ESA and CESA. Critical habitat was designated later 2005 (70 FR 52488). In 2014, NMFS released a final multi-species recovery plan that addresses all three listed salmonids in the California Central Valley, including the CVSR Chinook salmon (NMFS 2014).

Chinook salmon are an anadromous species which originate in freshwater environments, such as major streams and tributaries, before migrating to oceanic environments to grow and mature, then returning to their natal freshwater environments to spawn and eventually die. Chinook salmon are the largest of the salmon species. They range in appearance throughout their developmental stages and aquatic environments.

Central Valley spring-run Chinook salmon are differentiated from the other ESUs or other “runs” of Chinook salmon due to their distinct life history strategy in which natural populations migrate from the Pacific Ocean to their natal spawning habitat in Central Valley tributaries starting in the spring; as early as February for some populations. Unlike other runs of Chinook salmon, spring-run migrate upstream early in the year and then disperse throughout the upper reaches of a river and hold there over the summer months before spawning, instead of spawning quickly upon arrival. Juveniles will then emigrate during late fall and winter with increased flows to make their way to the Pacific Ocean. Key habitat for CVSR Chinook salmon includes moderately deep pools utilized for holding habitat over summer, small cobble or gravel substrate for spawning, and slow, off-channel water with debris or vegetation that juveniles utilize for rearing habitat and refuge. Shade and wood cover have been indicated as important for juvenile Chinook salmon holding habitat (Zajanc et al. 2012). Chinook salmon adults utilize deep pools for holding that usually have a large bubble curtain at the head, underwater rocky ledges, and shade cover throughout the day, or hold in smaller “pocket” water behind large rocks in fast water (Moyle 1995).

CNDDB Occurrences

There are two (2) CNDDB occurrences of Central Valley spring-run Chinook salmon in Redding, CA. The nearest CNDDB occurrence (#8) from 1995 identified three CV spring-run Chinook salmon in Clear Creek which is a tributary of the Sacramento River. The other occurrence (#13) from 1995 was observed in the Sacramento River approximately 4.5 miles northwest of the BSA.

Sacramento River Winter-run Chinook ESU

The Sacramento River (SR) winter-run Chinook salmon ESU is listed as endangered under the ESA and the CESA. The SR winter-run Chinook salmon ESU contains all naturally spawning populations of SR winter-run Chinook salmon within the Sacramento River and its tributaries within California. Two artificial populations are also included into this ESU from the Livingston Stone National Fish Hatchery (NFH) and the University of California Bodega Marine Laboratory. The SR winter-run Chinook salmon are currently

distributed throughout the Sacramento River and lower reaches of its tributaries below the Keswick Dam (RM 302), which is located northwest of Redding, California. They enter into the Sacramento River from the San Francisco Bay to spawn from November through June (Van Woert 1958, Hallock et al. 1957 cited in NMFS 1997), peaking in March.

The majority of the SR winter-run Chinook pass the Red Bluff Diversion Dam between January and May. SR winter-run Chinook generally spawn in the Sacramento River from the Keswick Dam to Tehama (NMFS 1997). Spawning occurs during late April through mid–August, peaking in May and June (Table 1). Fry emerge and disperse to downstream habitats where they hide within gravel substrates. When fry become larger, they move into other areas of the stream that offer larger refugia such as woody debris, calm channels, undercut banks, and fallen trees. Juveniles migrate to delta, bay and estuary environments at all sizes. Some juveniles migrate immediately while others take time to grow in freshwater systems before migrating into brackish and saltwater environments. Current threats facing the SR winter-run Chinook are loss of spawning habitat, dams and diversions, degraded stream habitat, reduction in Sacramento River flow, pollution and drought (NMFS 1997).

CNDDDB Occurrences

The nearest CNDDDB occurrence for the SR winter-run Chinook is over 20 miles south of the BSA in the Sacramento River near Bend, CA. This species is known to occur throughout the Sacramento River.

Status of Chinook salmon occurring in the BSA

Adult SR Winter-run Chinook Salmon

Sacramento River winter-run Chinook salmon are found off the Pacific coastline and within the mainstem of the Sacramento River. They spawn in the upper reaches of the mainstem of the Sacramento. SR winter-run Chinook salmon spawn during the hottest portion of the year and require the coldest water available for healthy embryonic development and juvenile survival. Chinook salmon eggs cannot tolerate temperatures above 62° F.

The Sacramento River near the City of Redding is designated critical habitat (58 FR 33212) for SR winter-run Chinook salmon. SR winter-run Chinook salmon spawn in the furthest accessible reaches of the mainstem of the Sacramento River where water temperatures are maintained at colder levels. There is suitable spawning habitat as temperatures generally stay within the juvenile survival threshold and adequate redd substrates are present.

Juvenile SR Winter-run Chinook Salmon

After emerging, Chinook salmon fry find shelter within gravel in dispersed areas downstream from their redd site. As fry develop they begin to move into habitats that contain calm, shallow waters that are associated with fine sediment and bank cover (e.g riparian vegetation, woody debris, undercut banks, tree roots, fallen trees). As juveniles grow larger, they begin to move to deeper and faster waters that contain coarser substrates (NMFS 1997).

The Sacramento River near the City of Redding contains a relatively low gradient, calm water environment. There are areas for refugia for juvenile salmon in this stretch of the Sacramento River such as, undercut banks, riparian vegetation, calm water channels, and woody debris. Therefore, juvenile Chinook habitat within the BSA is suitable throughout the year.

Green Sturgeon

Green sturgeon are slow growing, long lived, highly migratory, anadromous species that can range from 4.5 to 6.5 feet when reaching full maturity. They are primarily benthic feeders and have a long, toothless snout with sensory barbels. Green sturgeon lack scales and have distinctive boney plates along their curved backbone and a shark like tail fin. They inhabit coastal waters and major waterways along the Pacific Coast from the Aleutian Islands, Alaska, to Baja California, Mexico (Moyle et al. 1995 cited in NOAA 2012). Green sturgeons are primarily marine species only venturing into fresh water to spawn. While in the ocean they stay close to the oceanic shoreline and within bays and estuaries. NMFS characterize green sturgeon into distinct population segments (DPS) which are defined as being discrete from other populations from that species. Under the ESA green sturgeon are recognized by their DPS rather than the species. The green sturgeon southern DPS is the only green sturgeon DPS known to occur within the BSA. The following discusses the green sturgeon southern DPS and its occurrence within the BSA.

Green Sturgeon Southern DPS

The green sturgeon southern DPS is listed as threatened under the ESA. The green sturgeon southern DPS (referred to as green sturgeon from here on) consists of coastal and Central Valley populations south of the Eel River with the only known population in the Sacramento River. Green sturgeon enter into the Sacramento River in late February and spawn from April to July (**Table 1**) (Moyle et al. 1995 cited in NOAA 2012). They have been recorded in the Feather and Yuba River, but there have been no reports of spawning in these systems. The only confirmed spawning site for green sturgeon is within the Sacramento River near the Red Bluff Diversion Dam (Brown 2006). It is believed that green sturgeon spawn within the Sacramento River above Hamilton City possibly up to the Keswick Dam. After young green sturgeon emerge, they seek shelter within nearby substrates. After a few days of development, they begin to disperse into downstream sections of the Sacramento River. Dispersal occurs at night where young seek out open areas to forage. During the day young green sturgeon find refuge in structured, low light environments. As young green sturgeon grow, they continue to migrate downstream as long as water temperatures are optimal. After one to four years of development in freshwater environments green sturgeon begin to migrate to saltwater environments. Current threats facing green sturgeon are reduction and degradation of spawning habitat from artificial barriers, reduction in stream flow as a result of artificial barriers, agricultural practices, and bycatch from oceanic commercial harvesting (NOAA 2012).

CNDDB Occurrences

The nearest CNDDB occurrence of the green sturgeon is approximately 13 miles north of the BSA in Shasta Lake. There is also one CNDDB occurrence in the Sacramento River near Red Bluff, CA. Green sturgeon are known to occur in the Sacramento River.

Status of green sturgeon southern DPS occurring in the BSA

Adult Green Sturgeon Habitat

Green sturgeons are found in oceanic waters near the coastline, and in estuaries, bays and large river systems. Suitable spawning habitat consists of high velocity waters with gravel to cobble substrates. Cold waters are thought to be an important aspect of embryotic development. Green sturgeon occur in the mainstem of the Sacramento River below the Keswick Dam.

The Sacramento River near the City of Redding is designated critical habitat (74 FR 52300) for green sturgeon. There are recorded instances of green sturgeon spawning in the Sacramento River near the BSA, specifically in the Enterprise quadrangle. Adult green sturgeon use the Sacramento River near the City of Redding as a migration corridor to reach upstream spawning grounds, which have been reported in the northern reaches of the Sacramento River above the Project site (Heublein et al. 2008; Brown 2006).

Juvenile Green Sturgeon Habitat

Juvenile green sturgeon need two types of habitats that allow them to forage and rest. Open areas are required for foraging at night when they are most active, while structured, low light environments (e.g. rock structures, deep pools) are required during the day when they are the least active and seeking refuge. It is believed that juvenile green sturgeon rear within the Sacramento River between the Keswick Dam and Hamilton City (U.S Department of Interior 2008). Juvenile green sturgeon are able to handle higher temperatures than salmonid species but cease migration movements downstream if temperatures are too high (approximately 45°F-66°F) (U.S Department of Interior 2008; Mayfield and Cech 2004).

There are known instances of this reach of the Sacramento River providing rearing habitat for juvenile green sturgeon. From the years 1994-2000 2,608 juveniles were observed in the Upper Sacramento River from Hamilton City north to Redding. Instances were again recorded in 2001, 2005, 2006, 2008, 2009, 2010, 2011, 2012, 2015 & 2019. Adults were regularly caught or detected in 1991, 1992, 2002 to 2020 (CNDDDB 2023).

Pacific Lamprey

The Pacific lamprey is a SSC in California. This species is a parasitic, jawless, eel-shaped fish with a sucker-like disc for a mouth and 3 teeth. Unlike other fish, they lack paired fins, scales, bones, vertebrae, and a swim bladder. As adults, they are anadromous, spending about 1-3 years in the ocean, then migrating to freshwater to spawn. Historically, Pacific lamprey were abundant along the West coast North America, but populations have declined and have been extirpated in parts of southern California. Threats to this species include dewatering, flow management, and passage barriers (CDFW 2023).

CNDDDB Occurrences

The nearest CNDDDB occurrence is located approximately 15 miles from the BSA in Clover Creek.

Status of Pacific Lamprey Occurring in the BSA

Historically, the Pacific lamprey was widespread and commonly found in the Sacramento River. Suitable habitat is present and there is one record of this species in Clover Creek which is hydrologically connected to the Sacramento River. There is low potential for the Pacific lamprey to occur in the BSA.

Steelhead Salmon

Steelhead and rainbow trout are the same species and are distinguished from each other through evolutionary behaviors. Steelhead are anadromous meaning that they spend part of their life in oceanic environments. Rainbow trout are freshwater residents and remain in freshwater environments throughout their entire lifecycle. NMFS characterize steelhead into DPSs which are meant to separate steelhead from their resident form, rainbow trout. Steelhead DPSs can be recognized under the ESA rather than the species and therefore limit protection to only anadromous forms of the species. Central Valley (CV) steelhead is the only DPS that occurs within the BSA. The following discusses CV steelhead and its occurrence within the BSA.

Central Valley Steelhead DPS

The Central Valley Steelhead Distinct Population Segment (DPS) is federally listed as threatened under the ESA; originally listed in 1998 and listed again under revised criteria in 2006 (71 FR 834). In 2014, NMFS released a final multi-species recovery plan that addresses all three listed salmonids in the California Central Valley, including steelhead (NMFS 2014).

Steelhead are small-bodied in general compared to their coastal counterparts and rarely exceed 60 centimeters in fork length, which may be an adaptation to the distance inland these fish migrate to reach their spawning areas in some cases (Moyle 2002). Steelhead will spend 2 to 3 years growing in a marine environment before migrating into the Sacramento and San Joaquin River systems, as well as far upstream into the tributaries of these river systems, to spawn. Steelhead generally move quickly through the main stem of the Sacramento River to their respective spawning grounds, where they then seek out suitable spawning habitat. Steelhead require habitat with cool, permanent streams for spawning and rearing (NMFS 2014). The steelhead population is entirely a “winter-run” fish that enters the river system in November through April as fully reproductively mature adults to spawn before emigrating back to marine habitat (Moyle et al. 2008). Adult steelhead require cold, clear, relatively fast-moving water that is usually provided by snowmelt-driven stream systems at the time they are spawning. Depths required for spawning are typically 10 to 150 cm (Moyle 2002 cited in NMFS 2014), and optimum depth for spawning is 14 inches (Bovee 1978 cited in McEwan 2001). Juvenile steelhead may spend from just months up to 7 years rearing in freshwater, with most emigrating to the ocean after 1 to 2 years (NMFS 2016). For the first year or two of life, juvenile steelhead are found in cool, fast-flowing, permanent streams and rivers where riffles predominate over pools and there is ample cover from riparian vegetation or undercut banks (Moyle 2002 cited in NMFS 2014).

CNDDDB Occurrences

The nearest CNDDDB occurrence of Central Valley Steelhead DPS is located within 5 miles of the BSA in Clear Creek, a tributary of the Sacramento River. Another CNDDDB occurrence is located in the Sacramento

River approximately 13 miles southeast of the BSA. Central Valley Steelhead DPS are known to occur in the Sacramento River.

Status of Central Valley Steelhead DPS occurring in the BSA

Adult CV Steelhead

Central Valley steelhead inhabit the Pacific coastlines, as well as the Sacramento and San Joaquin rivers and their associated tributaries. They hold in the lower portions of tributaries until the flows are high enough to access the upper portions of the streams. Spawning is the most concentrated in the far reaches of the furthest accessible tributaries of the Sacramento River.

The Sacramento River near the City of Redding is designated critical habitat (70 FR 52488) for CV steelhead. CV steelhead spawn in the far reaches, of the furthest accessible tributaries, off the mainstem of the Sacramento River. There is also no suitable holding habitat for CV steelhead as CV steelhead hold in deep, calm pools within the lower portions of the Sacramento Rivers tributaries. The Sacramento River near the City of Redding is used as a migration corridor for CV steelhead to reach their spawning and holding grounds which reside either upstream or downstream of the Project site.

Juvenile CV Steelhead

After emerging, steelhead fry find shelter within coarse cobble substrates near the margin of stream banks. As fry develop they begin to move into habitats that contain more turbulent flows such as riffles, and deep runs. Eventually large juvenile steelhead find refuge in deep, cold water pools (U.S Department of the Interior 2008).

The Sacramento River near the City of Redding contains a relatively low gradient, calm water environment. There is no habitat for rearing juveniles in this stretch of the Sacramento River as it does not contain coarse cobble or turbulent waters. Water temperatures within the Redding reach of the Sacramento River are often at intolerable levels for juvenile steelhead and which are ideal for predatory fish such as striped bass. Juvenile steelhead use this stretch of the Sacramento River as a migration corridor during the winter and spring months when water temperatures are cool and they are ready to enter into salt water environments (U.S Department of the Interior 2008). Therefore, there is no suitable habitat present within the BSA for rearing juvenile steelhead.

Bald Eagle

The bald eagle is listed as California endangered. The bald eagle is a bird of aquatic ecosystems, frequenting large lakes, rivers, estuaries, reservoirs and some coastal habitats. It feeds primarily on fish, but waterfowl, gulls, cormorants, and a variety of carrion may also be consumed. Bald eagles usually nest in trees near water, but may use cliffs in the southwest United States, and ground nests have been reported from Alaska. Adults use the same breeding territory, and often the same nest, year after year. They may also use one or more alternate nests within their breeding territory.

CNDDB Occurrences

The nearest CNDDB occurrence for the bald eagle is within 2 miles from the BSA along the Sacramento River.

Status of bald eagle occurring in the BSA

The Sacramento River provides suitable foraging habitat for the bald eagle. There is moderate potential for bald eagles to occur within the BSA.

Purple Martin

Purple martin is listed as a California SSC. Purple martins are the largest of the swallow species in North America and have a distinct steel blue or purple sheen. Purple martins have patchy distribution throughout temperate North America and can use a variety of natural or manmade cavities for breeding. Purple martins require relatively abundant aerial insect prey, as they exclusively feed on insects (Brown 2013). They are most abundant in mesic areas due to high aerial insect abundance. They are most often found nesting in existing cavities in open, early seral forests. The loss of nest cavities to non-native European starlings (*Sturnus vulgaris*) is posited to lead to local extirpations.

CNDDB Occurrences

The nearest CNDDB occurrences of purple martin are more than 15 miles from the BSA along Shasta Lake.

Status of purple martin occurring in the BSA

Suitable habitat is present within the BSA in the form of woodlands and a barn for nesting and open water and fields for foraging. Due to the nearest occurrence being over 15 miles from the BSA, there is low potential for purple martins to occur in the BSA.

Pallid Bat

Pallid bats are designated as a CDFW SSC. Pallid bats roost alone, in small groups (two to 20 bats), or gregariously (hundreds of individuals). Day and night roosts include crevices in rocky outcrops and cliffs, caves, mines, trees (e.g. basal hollows of coast redwoods and giant sequoias, bole cavities of oaks, exfoliating Ponderosa pine and valley oak bark, deciduous trees in riparian areas, and fruit trees in orchards), and various human structures such as bridges (especially wooden and concrete girder designs), barns, porches, bat boxes, and human-occupied as well as vacant buildings. Roosts generally have unobstructed entrances/exits, and are high above the ground, warm, and inaccessible to terrestrial predators. However, this species has also been found roosting on or near the ground under burlap sacks, stone piles, rags, and baseboards. Lewis 1996 found that pallid bats have low roost fidelity and both pregnant and lactating pallid bats changed roosts an average of once every 1.4 days throughout the summer. Overwintering roosts have relatively cool, stable temperatures and are located in protected structures beneath the forest canopy or on the ground, out of direct sunlight. In other parts of the species' range, males and females have been found hibernating alone or in small groups, wedged deeply into

narrow fissures in mines, caves, and buildings. At low latitudes, outdoor winter activity has been reported at temperatures between –5 and 10 °C.

CNDDDB Occurrences

The nearest CNDDDB occurrence of pallid bat is approximately 9 miles east of the BSA beneath a bridge.

Status of pallid bats occurring in the BSA

Suitable habitat is present within the BSA in the form of valley oak woodland and riparian habitat and a barn; however, this species is highly sensitive to human disturbance. Potential for occurrence within the BSA is low.

Townsend's Big-eared Bat

Townsend's Big-eared bats are designated as a CDFW SSC. Townsend's Big-eared bats colonial species. Maternity colonies form between March and June, with the timing varying based on local climate, elevation, and latitude. Colonies typically range from a few dozen to several hundred individuals, although colonies of over 1,000 have been documented. Townsend's big-eared bat prefers open surfaces of caves or cave-like structures, such as mine adits and shafts. It has also has been reported in such structures as buildings, bridges, and water diversion tunnels that offer a cave-like environment. It has been found in rock crevices and, like a number of bat species, in large hollow trees. Foraging associations include edge habitats along streams and areas adjacent to and within a variety of wooded habitats. (CDFW 2016)

CNDDDB Occurrences

The nearest CNDDDB occurrence of Townsend's big-eared bat is approximately 7 miles northwest of the BSA.

Status of Townsend's big-eared bat occurring in the BSA

Suitable habitat is present within the BSA in the form of trees and a barn; however, this species is extremely sensitive to human disturbance. Potential for occurrence within the BSA is low.

Migratory birds and raptors

Nesting birds are protected under the MBTA (16 USC 703) and the CFGC (§3503). 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). Activities that involve the removal of vegetation including trees, shrubs, grasses, and forbs or ground disturbance has the potential to affect bird species protected by the MBTA. 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.”

CNDDB Occurrences

The majority of migratory birds and raptors protected under the MBTA and CFGC are not recorded on the CNDDB 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 ground, shrub, and tree nesting avian species throughout the BSA. A list of the bird species observed flying through or utilizing the BSA during the field survey is provided as **Appendix B**.

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

Waters of the United States, Clean Water Act, Section 404

The US Army Corps of Engineers (Corps) and the U.S. Environmental Protection Agency (EPA) regulate the discharge of dredged or fill material into jurisdictional waters of the United States, under the Clean Water Act (§404). The term “waters of the United States” is an encompassing term that includes “wetlands” and “other waters.” Wetlands have been defined for regulatory purposes as follows: “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 CFR 328.3, 40 CFR 230.3). Wetlands generally include swamps, marshes, bogs, and similar areas.” Other waters of the United States are seasonal or perennial water bodies, including lakes, stream channels, drainages, ponds, and other surface water features, that exhibit an ordinary high-water mark but lack positive indicators for one or more of the three wetland parameters (i.e., hydrophytic vegetation, hydric soil, and wetland hydrology) (33 CFR 328.4).

The Corps may issue either individual permits on a case-by-case basis or general permits on a program level. General permits are pre-authorized and are issued to cover similar activities that are expected to cause only minimal adverse environmental effects. Nationwide permits are general permits issued to cover particular fill activities. All nationwide permits have general conditions that must be met for the permits to apply to a particular project, as well as specific conditions that apply to each nationwide permit.

Clean Water Act, Section 401

The Clean Water Act (§401) requires water quality certification and authorization for placement of dredged or fill material in wetlands and Other Waters of the United States. In accordance with the Clean Water Act (§401), criteria for allowable discharges into surface waters have been developed by the State

Water Resources Control Board, Division of Water Quality. The resulting requirements are used as criteria in granting National Pollutant Discharge Elimination System (NPDES) permits or waivers, which are obtained through the Regional Water Quality Control Board (RWQCB) per the Clean Water Act (§402). Any activity or facility that will discharge waste (such as soils from construction) into surface waters, or from which waste may be discharged, must obtain an NPDES permit or waiver from the RWQCB. The RWQCB evaluates an NPDES permit application to determine whether the proposed discharge is consistent with the adopted water quality objectives of the basin plan.

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).

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.”

Magnuson-Stevens Fishery Conservation and Management Act

The Magnuson-Stevens Fishery Conservation and Management Act (MSA) established procedures designed to identify, conserve, and enhance essential fish habitat (EFH) for those species regulated under a federal fisheries management plan (FMP). The MSA requires federal agencies to consult with the National Marine Fisheries Service (NMFS) on all actions, or proposed actions, authorized, funded, or undertaken by the agencies that may adversely affect EFH (MSA section 305[b][2]). A component of this consultation process is the preparation and submittal of an Essential Fish Habitat Assessment (EFHA). The EFH mandate applies to all species managed under an FMP. For the Pacific coast (excluding Alaska), there are three FMPs covering groundfish, coastal pelagic species, and Pacific salmon.

State of California

California Endangered Species Act

The 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 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.

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 CFGC 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.

Lake and Streambed Alteration Agreement, CFGC (§1602)

The CDFW is a trustee agency that has jurisdiction under the CFGC (§1600 et seq.). The CFGC (§1602), requires that a state or local government agency, public utility, or private entity must notify CDFW if a proposed Project will “substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds... except when the department has been notified pursuant to Section 1601.” If an existing fish or wildlife resource may be substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow protection of those resources. If these measures are agreeable to the parties involved, they may enter into an agreement with CDFW identifying the approved activities and associated mitigation measures.

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 (CFGC §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 and/or seeds 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.”

CONCLUSIONS AND RECOMMENDATIONS

Endangered, Threatened and Rare Plants

There are no special-status botanical species present within the BSA; therefore, there will be no effects to special-status botanical species or their habitats and no avoidance and minimization measures are proposed.

Endangered, Threatened, and Special-status Wildlife

The following are the recommended minimization and mitigation measures to 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.

Anadromous fishes

Green sturgeon, Chinook, and steelhead are known to occur in the Sacramento River. Pacific lamprey may also occur. The portion of the Sacramento River where the Project occurs is used predominately as a migration corridor for adult and juvenile green sturgeon, Chinook and steelhead to reach northerly spawning grounds and facilitate outward migration, but there is potential for spawning to occur. It is also potentially used by juvenile Chinook as an area for refugia during the wet/winter season. It is unknown if juvenile green sturgeon rear or occupy the Redding reach of the Sacramento River. It is also unknown if there is suitable holding habitat for CV spring-run Chinook salmon. It is known that green sturgeon, Chinook and steelhead use this portion of the Sacramento River for migration.

Potential impacts to the Sacramento River, if any, are unknown at the time of writing this document. If potential impacts to the Sacramento River are proposed the development of a Biological Assessment (BA) in support of federal Endangered Species Act consultation will be required. The BA will detail project specific impacts, avoidance and minimization measures and compensatory mitigation, if necessary, in support of NMFS review and approval.

- An erosion control plan that incorporates erosion BMPs shall be created and implemented prior to the wet season (October 15 – April 1) in order to avoid sediment from entering into the waters of the U.S.
- BMPs shall be implemented that are necessary to minimize the risk of sedimentation, turbidity, and hazardous material spills. Applicable BMPs will include permanent and temporary erosion control measures, including use of straw bales, mulch or wattles, silt fences, filter fabric, spill remediation material such as absorbent booms, and ultimately seeding and revegetating.
- All fueling and/or equipment maintenance shall occur 250 feet from all water bodies and riparian areas, except for pile drivers or other stationary equipment, and a spill prevention plan (SPP) and cleanup will be created and implemented if a spill or equipment leak occurs during construction activities. Any spill within the active channel of the Sacramento River will be reported to NMFS, CDFG and other appropriate resource agencies within 48 hours.
- A spill prevention plan (SPP) and storm water pollution prevention plan (SWPPP) shall be developed and implemented by the contractor. Spill prevention measures will include stockpiling absorbent booms, staging hazardous materials at least 25 feet away from the river, and maintaining and checking construction equipment to prevent fuel and lubrication leaks. SWPPP measures will utilize applicable BMPs such as use of silt fences, straw bales, and other methods necessary to minimize storm water discharge associated with construction activities.

- The contractor should have absorbent booms available within 250 feet of the live channel during all in channel work to be further prepared for quick containment of any spills within or adjacent to the Sacramento River.

Bats

- If mature trees are proposed for removal, they should be removed and/or fallen between September 16 – March 15, outside of the bat maternity season.
- Trees should be removed at dusk to minimize impacts to roosting bats. If trees cannot be removed during dusk, then a qualified biologist shall be onsite to monitor for the presence of bats during tree removal activities.
- A preconstruction bat survey should be conducted prior to any building demolition. If bats are found, bat exclusion devices shall be installed by a qualified biologist. No demolition shall occur until all bats have left the building, as determined by the qualified biologist.

Migratory birds and raptors

- 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 will 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 U.S 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 U.S, authorization under a Nationwide Permit or Individual Permit shall be obtained from the Corps. 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 (§1602) shall be obtained.

Oak Woodland

Impacts to oaks within the BSA must be mitigated as required by the City of Redding. The City of Redding enacted a Tree Preservation Ordinance (Chapter 18.45 of the Municipal Code) and oak tree preservation guide.¹ Prior to Project entitlement a Tree Protection Plan, which includes a tree delineation, impacts assessment, tree health survey, and tree protection requirements will be required. The Tree Protection Plan will identify the type, location, and number of trees that will be preserved on-site.

¹ City of Redding. Trees & Construction, A Guide to Preservation. Document retrieved from: <http://www.cityofredding.org/home/showdocument?id=3720>

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LIST OF PREPARERS

Alexander Smither (B.S. Recreation Administration: Parks and Natural Resources Management, California State University, Chico) has 4 years of experience working in the biological field conducting wildlife surveys and habitat assessments, field data collection, and preparing technical documents and reports.

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Mitchell Hackett. GIS Analyst and Environmental Planning. B.S. in Geography with a certificate in Geographical Information Systems, Oregon State University. Mitchell has more than 5 years of experience working with GIS to create high quality maps and analysis of datasets for technical reports.

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:
Project Code: 2023-0059542
Project Name: Wyndham Lane Subdivision

March 23, 2023

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, 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 U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

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>

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see <https://www.fws.gov/birds/policies-and-regulations.php>.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see <https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php>.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit <https://www.fws.gov/birds/policies-and-regulations/executive-orders/e0-13186.php>.

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 Code 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

Project Code: 2023-0059542
Project Name: Wyndham Lane Subdivision
Project Type: New Constr - Above Ground
Project Description: Redding
Project Location:

The approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/@40.5595759,-122.37759786175694,14z>



Counties: Shasta County, California

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 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.

BIRDS

NAME	STATUS
Northern Spotted Owl <i>Strix occidentalis caurina</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1123	Threatened

INSECTS

NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate
Valley Elderberry Longhorn Beetle <i>Desmocerus californicus dimorphus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7850	Threatened

CRUSTACEANS

NAME	STATUS
Conservancy Fairy Shrimp <i>Branchinecta conservatio</i> There is final critical habitat for this species. Your location does not overlap 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 does not overlap 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 does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/2246	Endangered

FLOWERING PLANTS

NAME	STATUS
Slender Orcutt Grass <i>Orcuttia tenuis</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/1063	Threatened

CRITICAL HABITATS

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

IPAC USER CONTACT INFORMATION

Agency: Gallaway Enterprises
Name: Alexander Smither
Address: 117 Meyers Street
Address Line 2: Suite 120
City: Chico
State: CA
Zip: 95928
Email: alexsmither91@gmail.com
Phone: 5303329909



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



Query Criteria: Quad IS (Shasta Dam (4012264) OR Project City (4012263) OR Redding (4012254) OR Bella Vista (4012262) OR Palo Cedro (4012252) OR Enterprise (4012253))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Acipenser medirostris pop. 1</i> green sturgeon - southern DPS	AFCAA01031	Threatened	None	G2T1	S1	
<i>Agelaius tricolor</i> tricolored blackbird	ABPBXB0020	None	Threatened	G1G2	S1S2	SSC
<i>Agrostis hendersonii</i> Henderson's bent grass	PMPOA040K0	None	None	G2Q	S2	3.2
<i>Anthicus antiochensis</i> Antioch Dunes anthicid beetle	IICOL49020	None	None	G3	S3	
<i>Anthicus sacramento</i> Sacramento anthicid beetle	IICOL49010	None	None	G4	S4	
<i>Antrozous pallidus</i> pallid bat	AMACC10010	None	None	G4	S3	SSC
<i>Ardea alba</i> great egret	ABNGA04040	None	None	G5	S4	
<i>Balsamorhiza macrolepis</i> big-scale balsamroot	PDAST11061	None	None	G2	S2	1B.2
<i>Branchinecta lynchi</i> vernal pool fairy shrimp	ICBRA03030	Threatened	None	G3	S3	
<i>Brodiaea matsonii</i> Sulphur Creek brodiaea	PMLIL0C0H0	None	None	G1	S1	1B.1
<i>Clarkia borealis ssp. borealis</i> northern clarkia	PDONA05062	None	None	G3T4	S4	4.3
<i>Corynorhinus townsendii</i> Townsend's big-eared bat	AMACC08010	None	None	G4	S2	SSC
<i>Cryptantha crinita</i> silky cryptantha	PDBOR0A0Q0	None	None	G2	S2	1B.2
<i>Desmocerus californicus dimorphus</i> valley elderberry longhorn beetle	IICOL48011	Threatened	None	G3T2T3	S3	
<i>Emys marmorata</i> western pond turtle	ARAAD02030	None	None	G3G4	S3	SSC
<i>Entosphenus tridentatus</i> Pacific lamprey	AFBAA02100	None	None	G4	S3	SSC
<i>Erethizon dorsatum</i> North American porcupine	AMAFJ01010	None	None	G5	S3	
<i>Euderma maculatum</i> spotted bat	AMACC07010	None	None	G4	S3	SSC
<i>Gratiola heterosepala</i> Boggs Lake hedge-hyssop	PDSCR0R060	None	Endangered	G2	S2	1B.2



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Great Valley Cottonwood Riparian Forest Great Valley Cottonwood Riparian Forest	CTT61410CA	None	None	G2	S2.1	
Great Valley Valley Oak Riparian Forest Great Valley Valley Oak Riparian Forest	CTT61430CA	None	None	G1	S1.1	
Great Valley Willow Scrub Great Valley Willow Scrub	CTT63410CA	None	None	G3	S3.2	
Haliaeetus leucocephalus bald eagle	ABNKC10010	Delisted	Endangered	G5	S3	FP
Helminthoglypta hertleini Oregon shoulderband	IMGASC2280	None	None	G3Q	S1S2	
Hydromantes shastae Shasta salamander	AAAAD09030	None	Threatened	G3	S3	
Juncus leiospermus var. leiospermus Red Bluff dwarf rush	PMJUN011L2	None	None	G2T2	S2	1B.1
Lanx patelloides kneecap lanx	IMGASL7030	None	None	G2?	S2	
Lasionycteris noctivagans silver-haired bat	AMACC02010	None	None	G3G4	S3S4	
Lathyrus sulphureus var. argillaceus dubious pea	PDFAB25101	None	None	G5T1T2Q	S1S2	3
Legenere limosa legenere	PDCAM0C010	None	None	G2	S2	1B.1
Lepidurus packardi vernal pool tadpole shrimp	ICBRA10010	Endangered	None	G4	S3	
Limnanthes floccosa ssp. bellingeriana Bellinger's meadowfoam	PDLIM02041	None	None	G4T3	S1	1B.2
Limnanthes floccosa ssp. floccosa woolly meadowfoam	PDLIM02043	None	None	G4T4	S3	4.2
Linderiella occidentalis California linderiella	ICBRA06010	None	None	G2G3	S2S3	
Margaritifera falcata western pearlshell	IMBIV27020	None	None	G4G5	S1S2	
Monadenia troglodytes wintu Wintu sideband	IMGASC7092	None	None	G1G2T1T2	S2	
Nevusia cliftonii Shasta snow-wreath	PDROS14020	None	Candidate Endangered	G2	S2	1B.2
Oncorhynchus mykiss irideus pop. 11 steelhead - Central Valley DPS	AFCHA0209K	Threatened	None	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 11 chinook salmon - Central Valley spring-run ESU	AFCHA0205L	Threatened	Threatened	G5T2Q	S2	
Oncorhynchus tshawytscha pop. 7 chinook salmon - Sacramento River winter-run ESU	AFCHA0205B	Endangered	Endangered	G5T1Q	S2	



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



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
<i>Orcuttia tenuis</i> slender Orcutt grass	PMPOA4G050	Threatened	Endangered	G2	S2	1B.1
<i>Paronychia ahartii</i> Ahart's paronychia	PDCAR0L0V0	None	None	G3	S3	1B.1
<i>Pekania pennanti</i> Fisher	AMAJF01020	None	None	G5	S2S3	SSC
<i>Progne subis</i> purple martin	ABPAU01010	None	None	G5	S3	SSC
<i>Rana boylei pop. 1</i> foothill yellow-legged frog - north coast DPS	AAABH01051	None	None	G3T4	S4	SSC
<i>Riparia riparia</i> bank swallow	ABPAU08010	None	Threatened	G5	S2	
<i>Sagittaria sanfordii</i> Sanford's arrowhead	PMALI040Q0	None	None	G3	S3	1B.2
<i>Spea hammondii</i> western spadefoot	AAABF02020	None	None	G2G3	S3S4	SSC
<i>Trifolium piorkowskii</i> maverick clover	PDFAB40410	None	None	G2	S2	1B.2
<i>Trilobopsis roperi</i> Shasta chaparral	IMGASA2030	None	None	G2	S1	
<i>Vaccinium shastense ssp. shastense</i> Shasta huckleberry	PDERI181Z1	None	None	G4T3	S3	1B.3
<i>Vespericola shasta</i> Shasta hesperian	IMGASA4070	None	None	G3	S3	
<i>Viburnum ellipticum</i> oval-leaved viburnum	PDCPR07080	None	None	G4G5	S3?	2B.3

Record Count: 53

CNPS Rare Plant Inventory



CALIFORNIA
NATIVE PLANT SOCIETY

Search Results

28 matches found. Click on scientific name for details

Search Criteria: Quad is one of [4012264:4012263:4012254:4012262:4012252:4012253]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	STATE RANK	CA RARE PLANT RANK
<u><i>Adiantum shastense</i></u>	Shasta maidenhair fern	Pteridaceae	perennial herb	Apr-Aug	None	None	S3	4.3
<u><i>Agrostis hendersonii</i></u>	Henderson's bent grass	Poaceae	annual herb	Apr-Jun	None	None	S2	3.2
<u><i>Allium sanbornii</i> var. <i>sanbornii</i></u>	Sanborn's onion	Alliaceae	perennial bulbiferous herb	May-Sep	None	None	S3S4	4.2
<u><i>Arctostaphylos malloryi</i></u>	Mallory's manzanita	Ericaceae	perennial evergreen shrub	Apr-Jul	None	None	S3	4.3
<u><i>Arnica venosa</i></u>	Shasta County arnica	Asteraceae	perennial rhizomatous herb	May-Jul(Sep)	None	None	S3	4.2
<u><i>Astragalus pauperculus</i></u>	depauperate milk-vetch	Fabaceae	annual herb	Mar-Jun	None	None	S4	4.3
<u><i>Balsamorhiza macrolepis</i></u>	big-scale balsamroot	Asteraceae	perennial herb	Mar-Jun	None	None	S2	1B.2
<u><i>Brodiaea matsonii</i></u>	Sulphur Creek brodiaea	Themidaceae	perennial bulbiferous herb	May-Jun	None	None	S1	1B.1
<u><i>Bulbostylis capillaris</i></u>	thread-leaved beakseed	Cyperaceae	annual herb	Jun-Aug	None	None	S3	4.2
<u><i>Clarkia borealis</i> ssp. <i>borealis</i></u>	northern clarkia	Onagraceae	annual	Jun-Sep	None	None	S4	4.3
<u><i>Cryptantha crinita</i></u>	silky cryptantha	Boraginaceae	annual herb	Apr-May	None	None	S2	1B.2
<u><i>Eriogonum tripodum</i></u>	tripod buckwheat	Polygonaceae	perennial deciduous shrub	May-Jul	None	None	S4	4.2
<u><i>Gratiola heterosepala</i></u>	Boggs Lake hedge-hyssop	Plantaginaceae	annual herb	Apr-Aug	None	CE	S2	1B.2
<u><i>Iris bracteata</i></u>	Siskiyou iris	Iridaceae	perennial rhizomatous herb	May-Jun	None	None	S3	3.3
<u><i>Juncus leiospermus</i> var. <i>leiospermus</i></u>	Red Bluff dwarf rush	Juncaceae	annual herb	Mar-Jun	None	None	S2	1B.1
<u><i>Lathyrus sulphureus</i> var. <i>argillaceus</i></u>	dubious pea	Fabaceae	perennial herb	Apr-May	None	None	S1S2	3
<u><i>Legenere limosa</i></u>	legenere	Campanulaceae	annual herb	Apr-Jun	None	None	S2	1B.1
<u><i>Leptosiphon latisectus</i></u>	broad-lobed leptosiphon	Polemoniaceae	annual herb	Apr-Jun	None	None	S4	4.3
<u><i>Limnanthes floccosa</i> ssp. <i>bellingiana</i></u>	Bellinger's meadowfoam	Limnanthaceae	annual herb	Apr-Jun	None	None	S1	1B.2

<u><i>Limnanthes floccosa</i> ssp. <i>floccosa</i></u>	woolly meadowfoam	Limnanthaceae	annual herb	Mar-May(Jun)	None	None	S3	4.2
<u><i>Neviusia cliftonii</i></u>	Shasta snow-wreath	Rosaceae	perennial deciduous shrub	Apr-Jun	None	CC	S2	1B.2
<u><i>Orcuttia tenuis</i></u>	slender Orcutt grass	Poaceae	annual herb	May-Sep(Oct)	FT	CE	S2	1B.1
<u><i>Paronychia ahartii</i></u>	Ahart's paronychia	Caryophyllaceae	annual herb	Feb-Jun	None	None	S3	1B.1
<u><i>Sagittaria sanfordii</i></u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May-Oct(Nov)	None	None	S3	1B.2
<u><i>Sidalcea celata</i></u>	Redding checkerbloom	Malvaceae	perennial herb	Apr-Aug	None	None	S2S3	3
<u><i>Trifolium piorkowskii</i></u>	maverick clover	Fabaceae	annual herb	Apr-May	None	None	S2	1B.2
<u><i>Vaccinium shastense</i> ssp. <i>shastense</i></u>	Shasta huckleberry	Ericaceae	perennial deciduous shrub	(Jun-Sep)Dec-May	None	None	S3	1B.3
<u><i>Viburnum ellipticum</i></u>	oval-leaved viburnum	Viburnaceae	perennial deciduous shrub	May-Jun	None	None	S3?	2B.3

Showing 1 to 28 of 28 entries

Suggested Citation:

California Native Plant Society, Rare Plant Program. 2023. Rare Plant Inventory (online edition, v9.5). Website <https://www.rareplants.cnps.org> [accessed 23 March 2023].

Wyndham Lane Subdivision

Quad Name **Redding**

Quad Number **40122-E4**

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) - **X**

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 - **X**
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 - **X**

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 -

Lead Agency:
S & J Development, Inc.

Applicant:
S & J Development, Inc.
2960 Innsbruck Drive
Redding, CA 96003

Alexander Smither
Gallaway Enterprises
530.332.9909

Appendix B

Observed Species Lists

Observed Wildlife Species at Wyndham Lane Subdivision on March 27, 2023

Scientific Name	Common Name
<i>Neovison vison</i>	American mink
<i>Odocoileus hemionus</i>	Mule deer

Plant Species Observed within Wyndham Lane Subdivision March 16, 2023

Scientific Name	Common Name
<i>Claytonia perfoliata</i>	miners lettuce
<i>Quercus lobata</i>	valley oak
<i>Vicia sativa</i>	common vetch
<i>Bromus hordeaceus</i>	soft brome
<i>Erodium botrys</i>	broadleaf filaree
<i>Medicago polymorpha</i>	bur clover
<i>Brassica rapa</i>	field mustard
<i>Nemophila heterophylla</i>	white nemophilia
<i>Rubus armeniacus</i>	himalayan blackberry
<i>Ligustrum lucidum</i>	glossy privet
<i>Marrubium vulgare</i>	white horehound
<i>Prunus persica</i>	peach
<i>Torilis arvensis</i>	field hedge parsley
<i>Vinca major</i>	bigleaf periwinkle
<i>Raphanus raphanistrum</i>	wild radish
<i>Madia sativa</i>	coast tarweed
<i>Malva parviflora</i>	cheeseweed
<i>Nadina domestica</i>	sacred bamboo
<i>Quercus wislizeni</i>	interior live oak
<i>Erodium cicutarium</i>	red stemmed filaree
<i>Nemophila parviflora</i>	small flowered nemophilia
<i>Lupinus bicolor</i>	annual lupine
<i>Prunus amygdalus</i>	almond
<i>Arctostaphylos manzanita</i>	common manzanita
<i>Opuntia spp</i>	pricklypear
<i>Equisetum arvense</i>	common horsetail
<i>Salix spp</i>	willows
<i>Hedera helix</i>	english ivy
<i>Hordeum murinum</i>	wall barley
<i>Acacia dealbata</i>	siler wattle
<i>Eschscholzia californica</i>	california poppy
<i>Veronica persica</i>	birdeye speedwell

Appendix C

Draft Delineation of Waters of the United States Map

Draft Delineation of Aquatic Resources								
Other Waters of the U.S.								
Label	Cowardin	Description	Location (Lat, Long)		Width +	Length (ft)	Area (sq ft)	Acres
OW01	R6	Perennial	40.560235	-122.375514	26.7	314.3	7818.1	0.18
Other Waters Totals =						314.3	7818.1	0.18
Aquatic Resources Totals =						314.3	7818.1	0.18

+ Widths are represented as averages



*See Figure 3, Ground Photographs Map, for additional information on Photo Points.

The features represented on this graphic are considered preliminary until verified by the USACE.

Coordinate System: NAD1983 California State Plane I (Feet)
 Projection: Lambert Conformal Conic
 Datum: North American 1983
 Vertical Datum: NAVD 88

Made in accordance with the Updated Map & Drawing Standards for the South Pacific Division Regulatory Program

- Project Boundary - (10.71 acres)
- Photo Points - P#*
- ▶ Flow Direction
- OHWM Transect - 'X-X'
- 5 Foot Contour

Other Waters of the U.S.

- Perennial - (0.18 acres)

NORTH ↑

1:3,000 1 inch = 250 feet

0 125 250 Feet

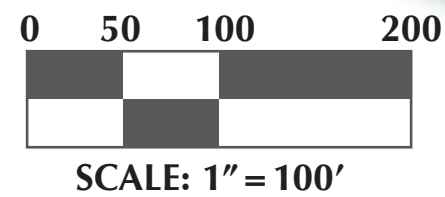
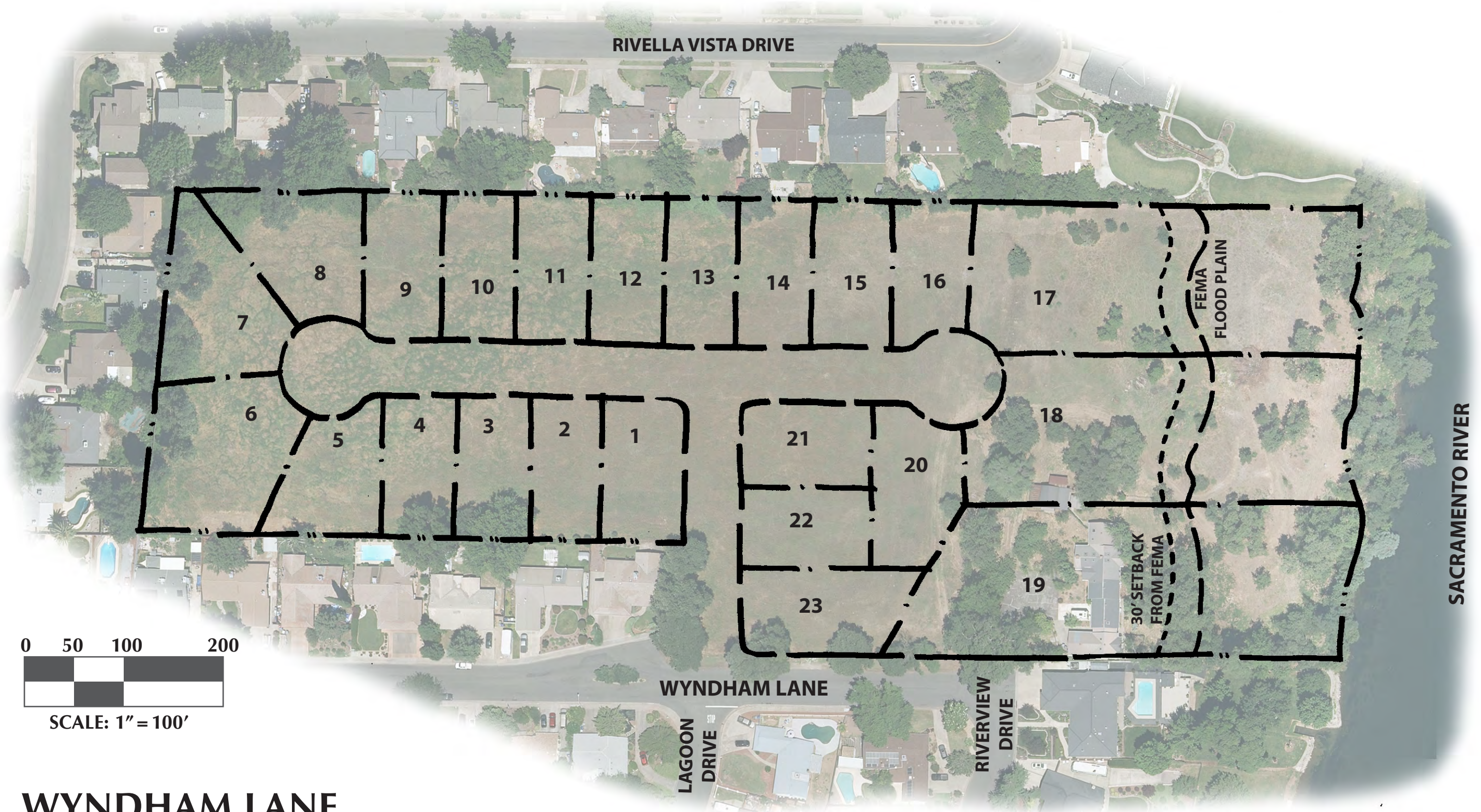
Data Sources: ESRI, City of Redding GIS 05/27/2020, Sarah Dunlap Sawyer Inc.

Wyndham Lane Subdivision
 Delineation of Aquatic Resources
 Figure 4



Appendix D

Proposed Site Development Plan



WYNDHAM LANE SINGLE-FAMILY SUBDIVISION CONCEPT

JUNE 29, 2021

Appendix E

Project Site Photos

Project Site Photos

(Taken March 27, 2023)



Gravel adjacent to the Sacramento River.



Open field within BSA.



Mule deer sighted in field within the BSA.



Barn within the BSA



Burn Pile and Rock Pile within the BSA.



Riparian Vegetation along the Sacramento River.