

Natural Biological Resources

Section 3.

Introduction

This chapter summarizes information concerning the natural biological resources of the planning area, including water aquatic resources, soil and mineral soils, biological, and air resources biological communities including sensitive habitats, and special-status plant and wildlife species. It represents a compilation of existing published information combined with reconnaissance-level field surveys that have been conducted within the Town limits.

Water Aquatic Resources

Surface Water

The planning area is located within the Loomis Basin, a relatively shallow depression covering 88 square miles between the Sierra Nevada and the floor of the Sacramento Valley. Technically, the Loomis Basin is not a basin at all, as it is drained by several tributaries of westward-trending streams flowing from higher elevations. ~~The planning area lies within a portion of the Dry Creek watershed.~~ Several manmade water features, including reservoirs and canals, are also present within Loomis. The most important surface water features within the planning area are described below and shown on Figure 3-1.

Dry Creek Lower American Watershed

The Dry Creek Lower American watershed (HUC 8:18020111) encompasses the Planning Area, covers about 101 square mile in Placer and Sacramento counties, with its headwaters located in the upper portions of the Loomis Basin, near Penryn and Newcastle. Ultimately, Dry Creek empties into the Natomas East Main Drain, a man-made flood control channel that captures runoff west of the communities of Rio Linda and Robla in Sacramento County. The Natomas East Main Drain directs water southward, eventually emptying into the Sacramento River in Discovery Park. Dry Creek experiences frequent flooding events in the Rio Linda area, well downstream of the Loomis planning area. Municipal water supplies come from outside this watershed, and are brought to the area via pipes or canals from the Yuba, Bear, American, or Rubicon rivers higher in the Sierra Nevada (see Section 5, *Public Services and Facilities, Water and Sewer Services*). The major tributaries of the Dry Creek Lower American watershed within Loomis are described below.

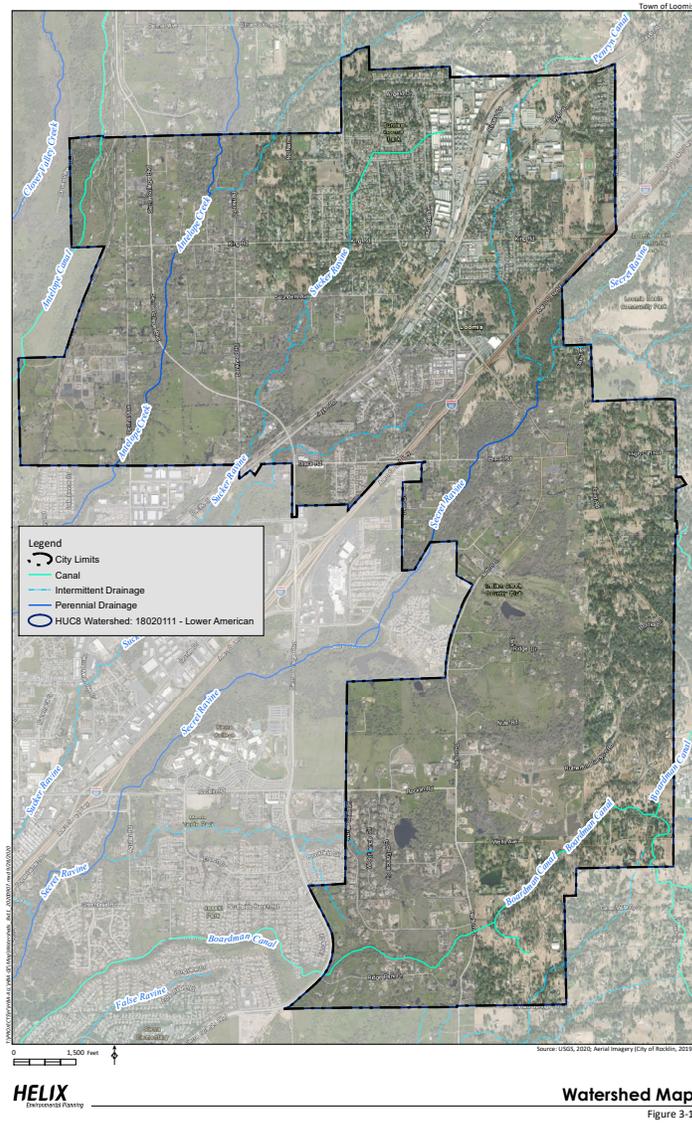
Antelope Creek

Antelope Creek is the northwesternmost of the three primary tributaries of Dry Creek within the planning area. The smallest of these tributaries, it roughly parallels Sierra College Boulevard before crossing it to the west south of King Road. In Loomis, Antelope Creek drains the ~~rural~~ western portion of the Town. Antelope Creek ultimately flows through the cities of Rocklin and Roseville before joining Dry Creek near Sculpture Park in Roseville.

Secret Ravine

Secret Ravine is the primary drainage in the Town south of Interstate 80, and roughly parallels the freeway from its headwaters in Newcastle. After leaving the Town, it flows through the City of Rocklin before joining Miners Ravine in Roseville. From there, the stream enters Dry Creek at Sculpture Park in Roseville.

Figure 3-1. Surface Water Features



Sucker Ravine

Sucker Ravine is the smallest of the primary drainages within the Loomis town limits. This minor creek system drains the ~~southwestern~~ ~~northwestern~~ part of Loomis and has been partially realigned and modified for flood control purposes. Sucker Ravine crosses under Taylor Road and Interstate 80, ultimately joining Secret Ravine in the City of Rocklin.

Clover Valley Creek

Though outside of the existing Town limits, this tributary of Antelope Creek runs in a narrow valley just inside the western edge of the planning area. It is physically separated from the Town by a distinctive ridge, and no direct roadway access from Loomis is available. It eventually empties into Antelope Creek about a mile southwest of Loomis, in the City of Rocklin.

Unnamed drainages

Two significant unnamed drainages traverse the Town, flowing from north to south. The first begins just north of Del Oro High School and crosses Taylor Road and Interstate 80 before joining Secret Ravine. The second begins in Penryn and joins Antelope Creek in the northwestern part of the Town near King Road.

Lakes and Reservoirs

No natural lakes of any substantial size are located within the Loomis planning area. However, several small unnamed reservoirs, built primarily for flood control or water storage purposes, are found within the Town. ~~None of these is greater than 800 feet across and they~~ ~~These features~~ are generally located on private property.

Canals

Several manmade canals, most notably the Boardman Canal, traverse the southern portion of Loomis. The Boardman Canal flows through the planning area and terminates in Roseville Reservoir within the City of Roseville. The canals are owned and operated by the Placer County Water Agency (PCWA), the service provider for the Town. The source of most of the water for these canals is the Yuba/Bear River (see Section 5, *Public Services & Facilities, Water and Sewer Services*, for further discussion).

Topography

The topography within the planning area ranges from nearly level interspersed with rolling hills and a few steeper escarpments, such as the Mehrten ridge at the western edge of the planning area adjacent to the eastbound Union Pacific rail line. The highest elevations range from 540-580 feet above sea level, both along the Mehrten ridge and among the rises in the southeastern portion of the planning area. The lowest elevations are along Secret Ravine and Antelope Creek (300-340 feet), which generally traverse the area from northeast to southwest. Most of downtown Loomis lies at about 400 feet, above the immediate flood plains of the two creeks. Interstate 80, Taylor Road and the rail lines follow the easiest grades as they slowly gain elevation when traveling eastbound, gaining from about 40 feet in the case of the freeway to about 160 feet in the case of Taylor Road.

Agricultural Lands

Agricultural activities in and around Loomis began as early as the turn of the 19th century. Early pioneers, prior to the Donner party and the gold rush, planted fruit trees and eventually vineyards in the area now known as Loomis. The Loomis Basin soon was known as an excellent location to grow fruit. With the construction of the Central Pacific Railroad through the town in 1864, and a local train station, Loomis soon became a focal point as a fruit shed and shipping depot.

The Town of Loomis is no longer a significant commercial agricultural area. Hobby farming occurs ~~on the southeast side of town,~~ on rural residential parcels and in adjacent areas. Residents and visitors value the open views of farming activities in the surrounding landscape.

Soils

The *Soil Survey of Placer County, Western Part* (USDA, Natural Resources Conservation Service, 1980) identified

several sixteen soil series within the planning area (Figure 3.2, Soil Map), including:

- Andregg Coarse Sandy Loam (Types 106, and 107, and 108),
- Andregg Coarse Sandy Loam, Rocky (109 and 110);
- Caperton-Andregg Coarse Sandy Loams (130 and 131);
- Caperton-Rock Outcrop Complex (133);
- Exchequer Very Stony Loam (144);
- Exchequer-Rock Outcrop Complex (145);
- Inks Cobbly Loam (152 and 153);
- Inks Very Cobbly Sandy Clay Loam (153)
- Inks-Exchequer Complex (154)
- Rubble Land (180);
- Xerofluvents, frequently flooded (194);
- Xerorthents, cut and fill areas (196); and
- Xerorthents, placer areas (197).

By far the most common of these types within the planning area are the Andregg and Caperton-Andregg soils, found throughout the planning area. In general, soils within the planning area exhibit one or more physical constraints to development. Many soils are rocky or cobbly, or percolate slowly because of a cemented underlying pan. Most soils are relatively shallow, rarely more than five feet and more typically about one to two feet. The shallow depth to rock often makes excavation difficult, while the wet-clay characteristics of the common Andregg soil inhibit many uses. Other soils are subject to flooding due to their proximity to creeks. These soil types are described below, with their most important characteristics summarized in Table 3-4.

Andregg coarse sandy loam, 2 to 9% slopes (106)

This is a moderately deep, gently rolling, well-drained soil underlain by weathered granitic bedrock. Typically, the surface layer of Andregg soil is grayish brown coarse sandy loam about 15 inches thick. The subsoil is pale brown and very pale brown coarse sandy loam. Permeability is moderately rapid and the erosion hazard is moderate.

Andregg coarse sandy loam, 9 to 15% slopes (107)

This soil type is similar to the previously described Andregg soil (106), except it is found on steeper slopes. Consequently, it has similar appearance and permeability characteristics, but exhibits a high erosion hazard. Surface runoff associated with this soil is medium to rapid.

Andregg coarse sandy loam, 15 to 30% slopes (108)

This is similar to the previously described Andregg soil (106), except it is found on steeper slopes.

Andregg coarse sandy loam, rocky, 2 to 15% slopes (109)

This is similar to the previously described Andregg soils. It is well drained. Surface runoff is low. The parent material is not classified as hydric although there are minor components of this series that are considered hydric located in drainages.

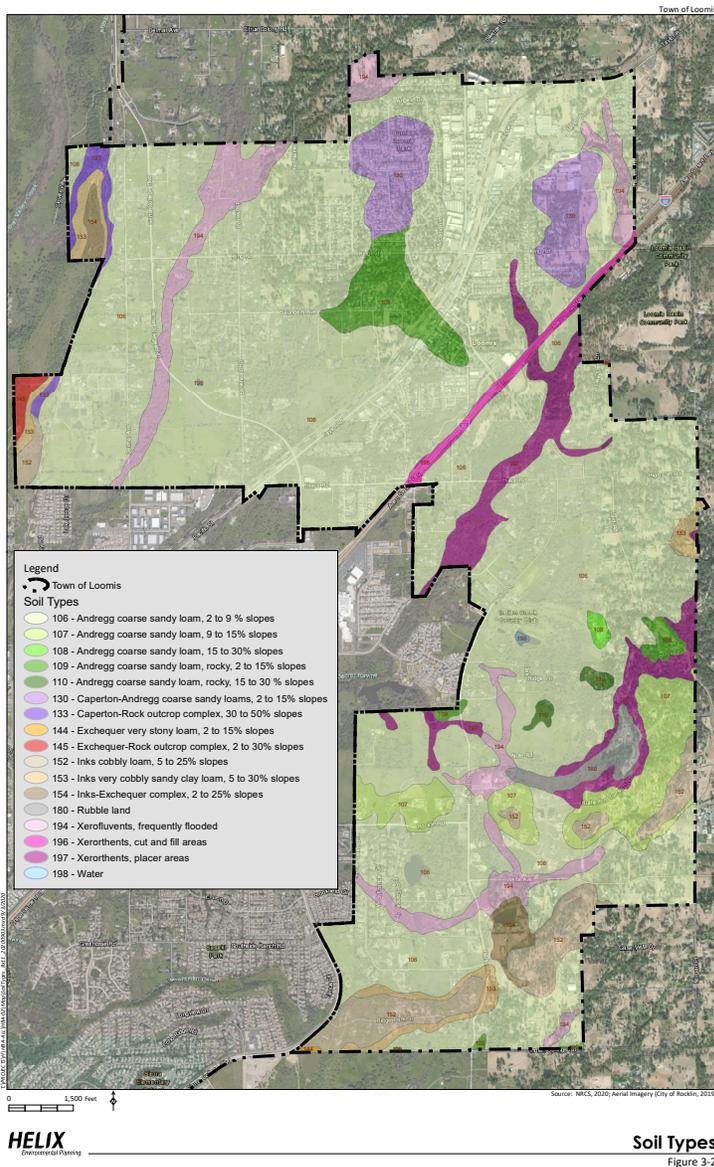
Andregg coarse sandy loam, rocky, 15 to 30% slopes (110)

This soil series is similar to the previously described Andregg soils. It is well drained. Surface runoff is classified as medium. This soil series is not classified as hydric.

Caperton-Andregg coarse sandy loam, 2 to 15% slopes (130 & 131)

Caperton-Andregg soils are shallow (8 to 20 inches deep) and somewhat excessively drained gravelly sandy loams that exhibit moderate erosion potential and low shrink-swell potential.

Figure 3.2 Soil Types



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Caperton-Rock Outcrop Complex, 30 to 50% slopes (133)

Caperton soils are shallow (0 to 4 inches deep) and somewhat excessively drained. The runoff class is medium. This soil series is not rated as hydric.

Exchequer Very Stony Loam, 2 to 15% slopes (144)

This soil series is shallow (0 to 11 inches deep) and somewhat excessively drained. The runoff class is medium. This soil is not classified as hydric although there are some minor unnamed components found in drainage ways and depressions that are classified as hydric.

Exchequer-Rock Outcrop Complex, 2 to 30% slopes (145)

These soils are shallow (0 to 4 inches) and somewhat excessively drained. Surface runoff is classified as medium. This soil is not classified as hydric although there are some minor unnamed components found in drainage ways and depressions that are classified as hydric.

Inks cobbly loam, 5 to 25% slopes (1522 & 153)

This is a shallow, well-drained cobbly soil underlain by andesitic conglomerate. The surface layer is generally yellowish brown cobbly loam about five inches thick. The subsoil is brown very cobbly clay loam. Permeability is moderate, surface runoff is medium to rapid, and the erosion hazard is highly variable (slight to high).

Inks very cobbly sandy clay loam, 5 to 30% slopes (153)

This is a shallow, well-drained soil. Permeability is moderate. Surface runoff is medium. This soil is not classified as hydric.

Inks-Exchequer Complex, 2 to 25% slopes (154)

These soils are shallow (0 to 11 inches) and somewhat excessively drained. Surface runoff is classified as medium. This soil is not classified as hydric although there are some minor components found in depressions that are classified as hydric.

Rubble land (180)

Rubble land is cobbly and stony mine debris and tailings from dredge or hydraulic mining. It is essentially barren; grass and brush are sparse. Nearly all soil material either has been washed away from hydraulic mining or buried from dredge mining. Surface runoff and erosion hazard are variable. Rubble land is used mainly for watershed and provides limited wildlife habitat. Some areas are a source of aggregate.

Xerofluvents, frequently flooded (194)

These soils consist of narrow stringers of somewhat poorly drained recent alluvium adjacent to stream channels. These are variably colored, stratified gravelly clay or sandy loams that generally grade to sand and gravel with increasing depth. Permeability is variable, surface runoff is slow, and erosion hazard is high. The soils are subject to frequent flooding and channelization.

Xerorthents, cut and fill areas (196)

These soils consist of stony, cobbly and gravelly material commonly adjacent to streams that have been placer mined. This soil varies in depth from 0 to 60 inches. Permeability, runoff, erosion hazard, and drainage are highly variable. This soil series is not classified as hydric.

Xerothents, placer areas (197)

These soils consist of stony, cobbly and gravelly material commonly adjacent to streams that have been placer mined. The soil material is derived from a mixture of rocks. It is stratified or poorly sorted. Such soils contain enough fine sand and silt to support some grass. The depth of this soil is highly variable, ranging from as little as 6 inches to more than five feet. Permeability, runoff, erosion hazard, and drainage are highly variable. Such areas are frequently flooded because of their typical proximity to streams.

Biological Resources: Flora & Fauna

This section provides a generalized overview of the vegetation and wildlife resources found within the Planning Area. It includes sections on plant biological communities and wildlife habitat, special-status plant and animal species, and a discussion of wildlife movement corridors.

Plant Biological Communities and Wildlife Habitat

The planning area includes both urban and rural elements in a topographically diverse setting. As such, it supports a variety of natural and artificial plant biological communities and wildlife habitat, as shown in Table 3-2:

Table 3-2: Planning Area Habitat Biological Communities and Sensitivity

Plant Biological Community/Habitat	Sensitivity *	Manual of California Vegetation Equivalents
Oak Woodland and Savanna	Sensitive	<i>Quercus</i> forest alliance, <i>Quercus douglasii</i> forest alliance, <i>Quercus wislizeni</i> woodland alliance, <i>Quercus lobata</i> forest alliance
Riparian and Stream Habitat	Sensitive	<i>Salix</i> forest and woodland alliance, <i>Populus fremontii</i> forest and woodland alliance
Wetlands and other Aquatic Resources	Sensitive	Wetlands within oak woodland and grassland alliances.
Native Perennial/Annual Grasslands	Sensitive or Common	<i>Nasella pulchra</i> alliance
Non-native Annual Grasslands	Common	<i>Lolium perenne</i> alliance, <i>Avena Bromus</i> semi-natural alliance
Chaparral	Common	
Developed/Urban Landscape	Artificial	N/A
Agriculture	Artificial	N/A

* See text following for explanation of this notation

The vegetation community descriptions in this section and in Figure 3-3 generally follow the *Preliminary Descriptions of the Terrestrial Natural Communities of California* (Holland 1986) because the vegetation community mapping currently available for the Planning Area utilizes this reference source for naming vegetation communities. However, it should be noted that *The Manual of California Vegetation* (Sawyer, Keeler-Wolf, Evens, 2009) is now generally used in the State of California to describe vegetation communities. Some equivalent communities from Sawyer, Keeler-Wolf, Evens are provided in Table 3-2. These habitat types are grouped by sensitivity, as described below.

Sensitive Natural Communities

For the purpose of this report, a sensitive natural community refers to those that are of special concern to resource agencies or those that are protected under CEQA, Section 1600 of the California Fish and Game Code (i.e., riparian areas) and/or Sections 401 and 404 of the Clean Water Act, which include wetlands and other waters of the U.S or State, or communities that are protected under the specific state and regional policies such as oak woodlands a habitat which, if substantially degraded or eliminated, would result in significant impacts under CEQA on plants, fish, or wildlife. In the planning area, oak woodland and savanna, native perennial grasslands, riparian and stream habitat, and wetlands are considered sensitive plant biological communities. These are given special consideration because they provide important ecological functions, including water

1 quality maintenance, stream bank stabilization, and the provision of essential habitat for wildlife and fisheries
2 resources. These communities are typically limited in extent compared to their historical distribution due to
3 clearing for agriculture and other development activity. Sensitive natural communities are afforded special
4 consideration under federal, state and county laws. A brief description of these communities follows. A map
5 of biological communities within the planning area is provided in Figure 3-3. Landcover mapping is based on
6 several sources including previous vegetation mapping efforts in the region and some limited aerial photo
7 interpretation (Jones and Stokes/Placer County, 2003; City of Rocklin 2018, HELIX Environmental Planning
8 2020). Vegetation community mapping should be considered preliminary unless site-specific vegetation
9 mapping has occurred. The actual extent of riparian vegetation along major drainageways within the Town is
10 almost certainly more extensive than shown in Figure 3-3. Field mapping of riparian communities within the
11 Town is considered a priority to more accurately document the extent of riparian habitat within the planning
12 area.

13 **Oak Woodland and Savanna**

14 Blue oak woodland, valley oak woodland, interior live oak woodland, and valley-oak woodland savanna are the
15 dominant oak associations that occur throughout the planning area. There are also areas of foothill hardwood
16 woodland and that contain significant oak woodland canopy mixed with other tree species such as foothill pine.

17 *Blue oak woodland* occurs primarily in the portions of the planning area that support shallow or infertile soils.
18 Typically, blue oak woodland includes a mixture of blue oak, foothill pine, buck brush, coffee berry and various
19 grassland species.

20 *Interior live oak woodland* occurs in lower-lying portions of the planning area, typically along riparian and stream
21 corridors. In some areas, interior live oaks form a dense woodland with an understory comprised of annual and
22 perennial grassland species. In other areas, interior live oaks intermix with foothill pine, California buckeye,
23 buck brush, coyote brush, poison oak, coffeeberry and grassland species.

24 *Valley oak ~~savanna woodland~~* occurs on deep alluvial soils along streams and riparian corridors in the low-lying
25 portions of the planning area. Several valley oak woodland savanna communities contain large, heritage-size
26 valley oaks. The understory in a valley oak woodland savanna is usually composed of pasture grassland and
27 annual grassland species.

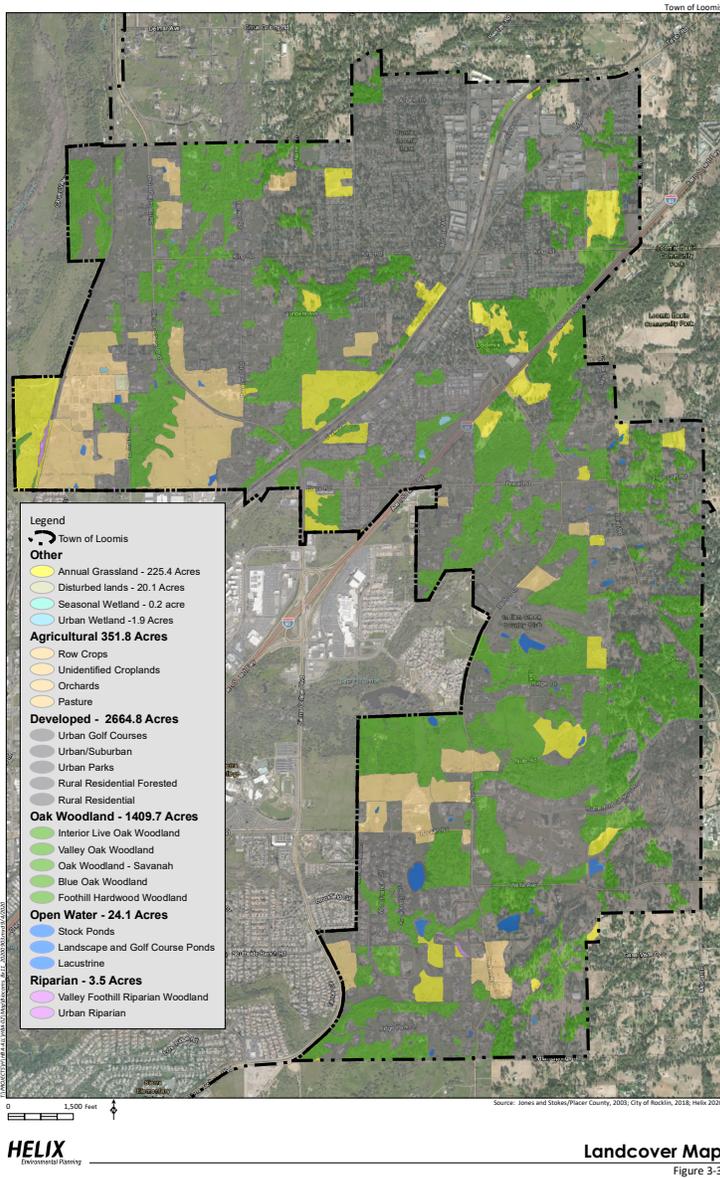
28 *Oak woodland savanna* occurs in areas with more open and non-overlapping oak canopy often in association
29 with pastures. Oak woodland and savanna provide shelter, breeding, and foraging habitat for many of the
30 wildlife species typically found in grassland or ~~chaparral~~ habitats. Oak acorns are an important food source for
31 wild turkeys, acorn woodpeckers, northern flickers, and mule deer. Oaks also provide nest sites for western
32 gray squirrels and cavity-nesting birds, including acorn woodpeckers, northern flickers, and white-breasted
33 nuthatches.

34 **Riparian Habitat**

35 Riparian communities develop in areas with high water tables that support seasonal and perennial (permanent)
36 surface water. Riparian communities are common along streams, ponds, and swales in the planning area, most
37 notably Secret Ravine and Antelope Creek. There are many variations of riparian habitat types. Three basic
38 types commonly found in the planning area include mixed riparian woodland, riparian forest, and willow scrub.
39 These are described below.

40 *Mixed riparian woodland* is the dominant riparian community in the planning area, and is characterized by
41 intermixed layers of trees, shrubs and herbaceous species. Typical plants include Fremont's cottonwood, valley
42 oak, willows, California blackberry, Himalayan blackberry, California rose, blue elderberry, poison oak, sedges,
43 rushes, and grasses.

Figure 3-3 Landcover Map



1 Riparian forest is found in the planning area particularly along Secret Ravine. Two basic types of riparian forest
2 are present, cottonwood and oak, both of which are structurally complex and varied plant communities.
3 Cottonwood riparian forest is characterized by a canopy of Fremont's cottonwood, valley oak, and alders,
4 overtopping a tangle of Himalayan blackberry, poison oak, wild honeysuckle, and arroyo willow. The canopy
5 of oak riparian forest is dominated by mature valley oaks, with scattered black willow. The understory is
6 comprised of poison oak, pipevine, creeping wild rye, and Himalayan blackberry.

7
8 *Willow scrub* is an early-colonizing riparian community dominated by sandbar willow, mugwort, rush and sedge.
9 It also forms along small creeks and drainages that lack the water supply necessary to develop woodland and
10 forest communities.

11
12 Riparian and stream communities provide habitat for a variety of plant and wildlife species in the planning area.
13 The multi-layered riparian community provides escape cover, forage and nesting opportunities for a variety of
14 species. Typical wildlife that are found in riparian and stream habitats include California quail, Bewick's wren,
15 song sparrow, red-shouldered hawk, Cooper's hawk, raccoon, coyote, cottontail, opossum, striped skunk, gray
16 fox, and mule deer. Central Valley (CV) fall/late fall run Chinook salmon and CV steelhead utilize Dry Creek,
17 Secret Ravine, and Antelope Creek for spawning and rearing habitat and are designated as Critical Habitat for
18 CV steelhead.

19 **Native Perennial Grassland**

20 These grasslands are dominated by native grasses such as purple needlegrass, woodland ryegrass, and California
21 melic grass. Perennial grasslands historically extended throughout the state and comprised one of the most
22 extensive plant associations in the state, but native grasslands have largely been replaced by annual grasslands
23 composed of Mediterranean species that had adapted to heavy grazing pressure. For this reason, most native
24 grassland associations are considered sensitive by the California Natural Diversity Data Base. Besides grasses,
25 perennial grasslands typically support a larger number of native forb species and wildflowers than the annual
26 grasslands. Annual wildflowers include harvest brodiaea, soap plant, tarplant, lupine, and mariposa lily. Native
27 perennial grasslands typically occur on north-facing, mesic slopes near oak woodlands and savannas.

30 **Riparian and Stream Habitat**

31 Riparian communities develop in areas with high water tables that support seasonal and perennial (permanent)
32 surface water. Riparian communities are common along streams, ponds, and swales in the planning area, most
33 notably Secret Ravine and Antelope Creek. There are many variations of riparian habitat types. Three basic
34 types commonly found in the planning area include mixed riparian woodland, riparian forest, and willow scrub.
35 These are described below:

36
37 *Mixed riparian woodland* is the dominant riparian community in the planning area, and is characterized by
38 intermixed layers of trees, shrubs and herbaceous species. Typical plants include Fremont's cottonwood, valley
39 oak, willows, California blackberry, Himalayan blackberry, California rose, blue elderberry, poison oak, sedges,
40 rushes and grasses.

41
42 *Riparian forest* is found in the planning area particularly along Secret Ravine. Two basic types of riparian forest
43 are present, cottonwood and oak, both of which are structurally complex and varied plant communities.
44 Cottonwood riparian forest is characterized by a canopy of Fremont's cottonwood, valley oak, and alders,
45 overtopping a tangle of Himalayan blackberry, poison oak, wild honeysuckle, and arroyo willow. The canopy
46 of oak riparian forest is dominated by mature valley oaks, with scattered black willow. The understory is
47 comprised of poison oak, pipevine, creeping wild rye, and Himalayan blackberry.

48
49 *Willow scrub* is an early-colonizing riparian community dominated by sandbar willow, mugwort, rush and sedge.
50 It also forms along small creeks and drainages that lack the water supply necessary to develop woodland and
51 forest communities.

52
53 Riparian and stream communities provide the highest quality habitat for wildlife in the planning area. The multi-
54 layered riparian community provides escape cover, forage and nesting opportunities for a variety of species.

1 Typical wildlife that are found in riparian and stream habitats include California quail, Bewick's wren, song
2 sparrow, red-shouldered hawk, Cooper's hawk, raccoon, coyote, cottontail, opossum, striped skunk, gray fox,
3 and mule deer.

Commented [DB1]: This text was kept, but moved to revised riparian section above.

4 **Wetlands and other Aquatic Resources**

5 Wetlands include a variety of habitats that are characterized by a prevalence of hydrophytic (water-loving)
6 vegetation, hydric soils, and wetland hydrology. Natural and artificially-created wetlands exist throughout the
7 low-lying portions of the planning area, typically along drainages or in topographic depressions. Wetlands and
8 other aquatic resource types in the planning area include ephemeral streams, intermittent streams, perennial
9 streams, ponds, marsh, ditches, canals, swales, seeps and springs, and seasonal drainage-freshwater wetlands,
10 including vernal pools.
11

12 Seasonal freshwater wetlands occur within perennial-annual grasslands as swales and shallow depressions
13 underlain by slowly permeable soils. These wetlands are typically wet from November to June-May. Vegetation is
14 a mix of wetland and upland species including perennial ryegrass, popcornflower, creek monkeyflower, spikerush,
15 soft chess, tarweed, long-beak filaree, and medusa-head grass. Vernal pools occur on the impermeable Mehrten
16 breccia that exists on ridge tops within the planning area.
17

18 Vernal pools, intermittent drainages, and other seasonal wetlands represent unique natural resource habitats
19 within the planning area and the state. Vernal pools are considered sensitive habitat areas not only due to their
20 limited occurrence and distribution, but also because they support several unique, and often rare, plant and
21 animal species that are endemic to this kind of habitat. Intermittent drainages and seasonally wet swales within
22 the planning area, while typically low in plant and wildlife species diversity, provide important watershed sources
23 to vernal pools and are also limited in occurrence and distribution.
24

25 *Streams*

26 Streams within the Planning Area are classified as ephemeral, intermittent, or perennial depending on their
27 hydrology. Ephemeral streams flow only during and for a short duration after rain events. Intermittent streams
28 flow during wet seasons, but generally are dry during summer months. Perennial streams contain some water
29 during all times of the year with the potential exception of during drought events.
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31 A delineation of wetlands and other aquatic resources within the planning area has been conducted sporadically,
32 and generally in conjunction with development proposals. The National Wetlands Inventory mapper for the
33 Town of Loomis includes data for several types of wetlands within the Planning Area including freshwater
34 pond, freshwater emergent wetland, and freshwater forested shrub wetland.
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36 Many wildlife species depend on wetland habitats for foraging, nesting, water, and cover. Ponds in the planning
37 area provide important resting and foraging habitat for migrating birds, such as Canada goose, mallard, and
38 cinnamon teal. Wetlands also provide habitat for ring-necked duck, American and-coot, great blue heron, great
39 egret, and black phoebe as well as aquatic species such as western pond turtle and fish such as steelhead and
40 salmon. The Dry Creek Conservancy organizes volunteer surveyors to conduct an annual salmon spawner
41 survey in Dry Creek and its major tributaries, including Dry Creek, Secret Ravine, Antelope Creek, and others,
42 after the first major storm event of the season and lasting until fish are no longer observed. Since 2010, annual
43 escapement of CV fall-run Chinook salmon is estimated to range from zero to several hundred adult spawners,
44 largely based on carcass and redd counts. CV steelhead are also observed, but since steelhead do not necessarily
45 die after spawning, few carcasses are observed. Although not quantified, annual steelhead populations are
46 estimated to be far less than Chinook salmon.
47

48 Please refer to the *Regulatory Framework* section that follows for more information regarding federal and state
49 protections for wetlands and other aquatic resources within the Planning Area.
50

51 and upland species including perennial ryegrass, popcornflower, creek monkeyflower, spikerush, soft chess,
52 tarweed, long-beak filaree, and medusa-head grass. Vernal pools occur on the impermeable Mehrten breccia that
53 exists on ridge tops within the planning area.
54

Vernal pools, intermittent drainages, and other seasonal wetlands represent unique natural resource habitats within the study area and the state. Vernal pools are considered sensitive habitat areas not only due to their limited occurrence and distribution, but also because they support several unique, and often rare, plant and animal species that are endemic to this kind of habitat. Intermittent drainages and seasonally wet swales within the planning area, while typically low in plant and wildlife species diversity, provide important watershed sources to vernal pools and are also limited in occurrence and distribution.

A comprehensive wetland survey for the planning area has not been conducted. Delineation of wetlands within the planning area has been conducted sporadically, and generally in conjunction with development proposals.

Many wildlife species depend on wetland habitats for foraging, nesting, water, and cover. Ponds in the planning area provide important resting and foraging habitat for migrating birds, such as Canada goose, mallard, and cinnamon teal. Wetlands also provide habitat for ring-necked duck, American coot, great blue heron, great egret, and black phoebe.

Common Natural Communities

Common natural communities are native or apparently native landscapes that have not been substantially altered by farming or other land disturbance. Annual grassland and chaparral are considered a common communities community because of its their abundance in the planning area and throughout California.

Grasslands

Grassland is an herbaceous community characterized by annual and perennial grasses and forbs. Grasslands occur in pastures, along fence rows, and more extensively in undisturbed rural areas. Three types of grassland associations occur in the planning area: annual grassland, native perennial grassland, and pasture grassland. Native perennial grasslands were previously discussed above.

Non-native Annual grasslands are dominated by annual grasses intermixed with annual forbs and perennial forbs, including wild oat, ripgut brome, soft chess, fescue, clover, summer mustard, wild radish, yellow star-thistle, and elegant clarkia. While the dominant plants that make up this association are often exotic species that originated primarily from the Mediterranean area, these plants have been present in California sufficiently long that this can be considered a “naturalized” community.

Pasture grasslands are typically dominated by perennial sod-forming grasses, such as ~~harding~~ **Harding** grass, orchard grass, Kentucky fescue, and common velvet grass. Pasture grasslands are maintained through artificial irrigation systems.

Grasslands provide nesting and foraging habitat for several wildlife species, including red-tailed hawk, American pipit, western meadowlark, lesser goldfinch, American kestrel, California ground squirrel, and California vole.

Chaparral

Chaparral communities are characterized by evergreen, hard-leaved shrubs adapted to dry, infertile soils. The herbaceous layer is usually sparse because chaparral shrubs produce growth-inhibiting oils that prevent the establishment of herbaceous species. Buck brush and chamise chaparral are the two chaparral types found within the planning area. Buck brush chaparral is dominated by buck brush with scattered chamise, toyon, coffee berry, poison oak, and interior live oak. Chamise chaparral occurs on recently burned hillsides and is usually dominated by chamise. Chaparral provides high-quality cover and roosting habitat for western rattlesnake, California thrasher, wren-tit, California quail, gray fox and mule deer.

Artificial Plant Communities

Artificial plant communities are human-created landscapes that provide some wildlife habitat value. Urban landscape and agricultural areas are the primary artificial communities located in the planning area.

Developed/Urban Landscape

Developed/Urban landscape exists around commercial, residential, golf course, and park sites within the

Commented [DB2]: This text was kept, but moved to the vernal pool discussion above.

Commented [DB3]: Chaparral is not included in the vegetation community sources for the current land use within the Town.

1 planning area. Urban This landscape is composed of primarily non-native plants, shrubs and trees. These areas
2 provide habitat for a variety of native and non-native wildlife, including northern mockingbird, European
3 starling, house sparrow, house finch, acorn woodpecker, mourning dove, Brewer's blackbird, gopher snake,
4 and western toad.

6 **Agricultural Land**

7 Orchards and irrigated crops are the primary types of agricultural within the planning area. Agriculture is
8 dispersed throughout the planning area, forming a mosaic between grasslands, oak woodland, and riparian
9 habitats.

10 Areas along fence rows and drainage ditches that support some remnant native vegetation or weedy species
11 provide limited habitat for common wildlife species, which include: western meadowlark, red-tailed hawk,
12 American kestrel, and red-winged blackbird. Migrant birds also use agricultural areas for winter foraging and
13 roosting. Typical migrant species that occur on agricultural land in the planning area include rough-legged hawk,
14 American pipit, Canada goose, and house finch.

16 **Special-Status Plant and Wildlife Species**

17 Special status species are plants and animals legally protected, either under federal, state, or local law, or through
18 documentation put forth by the scientific community. Table 3-3 illustrates the most commonly-recognized
19 definitions of what qualifies as "special status."

20 Special status species include those that are Special status species are plant and wildlife species that have been
21 afforded special recognition by federal, State, or local resource agencies or organizations. They are generally of
22 relatively limited distribution and may require specialized habitat conditions. Special status species are defined
23 as meeting one or more of the following criteria:

- 24 • Listed or proposed for listing under CESA or FESA;
- 25 • Protected under other regulations (e.g., Migratory Bird Treaty Act);
- 26 • Included on the California Department of Fish and Wildlife (CDFW) Special Animals List;
- 27 • Identified as Rare Plant Rank 1 to 4 by CNPS; or
- 28 • Receive consideration during environmental review under CEQA.

29 Table 3-3 below illustrates the most commonly-recognized definitions of what qualifies as "special status."

30 listed as rare, threatened, or endangered by the CDFG or the U.S. Fish and Wildlife Service; candidates for either
31 state or federal listing; species designated as "fully protected" or "species of special concern" by the CDFG. The
32 CDFG-CDFW utilizes the California Natural Diversity Database (CNDDDB), the USFWS IPaC database for
33 federally listed species, and the CNPS database of special status plant occurrences to document occurrences of
34 special status species. The CNDDDB includes information on plant species prepared by the California Native Plant
35 Society (CNPS). An updated inquiry query of the California Department of Fish and Game's Natural Diversity
36 Data Base-CNDDDB for the Rocklin Quadrangle and the eight surrounding quadrangles Rocklin Quadrangle
37 was conducted to determine the location of any known sensitive plants, animals, and communities in the vicinity
38 of Loomis (CDFG-CDFW, June 18 May 1, 1998 2020). A list of sensitive plants and animal species that could
39 potentially occur in the planning area was also compiled from available literature including previously prepared
40 environmental documents within the planning area. Tables 3-4 a-c summarizes the results of the literature search
41 this query. Table 3-4 is subdivided into federal and state-listed species (3-4 A), species subject to CEQA review (3-
42 4 B), and other species of interest (3-4 C).

Table 3-3: Definition of Special-Status Species

Plant Species	Animal Species
<ul style="list-style-type: none"> ◆ Plants listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.12); ◆ Plants that are candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (55 CFR 6184.2-21-90); ◆ Plants that meet the definition of rare or endangered under CEQA (<i>CEQA Guidelines</i>, Section 15380); ◆ Plants considered by the CNPS to be “rare, threatened or endangered” in California (Lists 1B and 2 in Skinner and Pavlik, 1994, per NDDB, April 1998); ◆ Plants considered by the CNPS about which more information is needed and plants of limited distribution (Lists 3 and 4 in Skinner and Pavlik, 1994, per NDDB, April 1998); ◆ Plants listed or proposed for listing by the State as threatened or endangered under the California Endangered Species Act (14 CCR 670.5); ◆ Plants listed under the California Native Plant Protection Act (CFG Code 1900 et. seq.); ◆ Plants considered sensitive by other federal agencies, state and local agencies or jurisdictions; ◆ Plants considered sensitive or unique by the scientific community or occurring at the limits of its natural range (<i>CEQA Guidelines</i>, Appendix G). 	<ul style="list-style-type: none"> ◆ Animals listed or proposed for listing as threatened or endangered under the federal Endangered Species Act (50 CFR 17.11 and various notices); ◆ Animals that are candidates for possible future listing as threatened or endangered under the federal Endangered Species Act (54 CFR 554); ◆ Animals that meet the definition of rare or endangered under CEQA (<i>CEQA Guidelines</i>, Section 15380); ◆ Animals listed or proposed for listing by the State as threatened or endangered under the California Endangered Species Act (14 CCR 670.5); ◆ Animal species of special concern to the CDFWG (Natural Diversity Data Base, March 1998); ◆ Animal species that are fully-protected in California (CEG Code, Section 3511, 4700 and 5050).

Table 3-4A: Special-Status Federal and State-listed Species Potentially Occurring in the Town of Loomis

Special-Status Species	Regulatory Status	Habitat Requirements
Invertebrates		
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	FT; --; --	Sole hosts are elderberry (<i>Sambucus</i> sp.) shrubs typically associated with riparian areas. This species is known from portions of the Central Valley of California and several elderberry shrubs are known to occur along Secret Ravine within the Planning Area. This species has an elevational range limit of 500 feet above MSL (USFWS).
Vernal pool fairy shrimp <i>Branchinecta lynchi</i>	FT; --; --	Typically found in vernal pools, but can also be found in other natural ephemeral habitats (alkali pools, seasonal drainages, stock ponds, vernal swales and rock outcrops), and artificial ephemeral habitats (railroad toe-drains, roadside ditches, abandoned agricultural drains, deep tire ruts, and firebreak depressions).
Vernal pool tadpole shrimp <i>Lepidurus packardii</i>	FE; --; --; --	Inhabits vernal pools, swales, and ephemeral freshwater habitat. Known from Alameda, Butte, Colusa, Contra Costa, Fresno, Glenn, Kings, Merced, Placer, Fresno, San Joaquin, Shasta, Solano, Stanislaus, Sutter, Tehama, Tulare, Yolo, and Yuba counties.
Fish		
Central Valley steelhead DPS <i>Oncorhynchus mykiss irideus</i>	FT; --; --; --	Found in cool, clear, fast-flowing streams and rivers with riffles and ample cover from riparian vegetation or overhanging banks. Spawning occurs in streams with pool and riffle complexes. The species requires cold water and gravelly streambed to successfully breed. Spawn in the Sacramento and American rivers and tributaries before migrating to the Delta and Bay Area. Critical habitat for this species is designated throughout the Dry Creek watershed.
Amphibians/ Reptiles		
California red-legged frog <i>Rana draytonii</i>	FT; CSC; --	Breeding sites are in aquatic habitats including pools and backwaters within streams and creeks, ponds, marshes, springs, sag ponds, dune ponds and lagoons from 0 to 1,500 meters. Additionally, frequently breed in artificial impoundments such as stock ponds. Typically found in or within 300 feet of aquatic habitat, but may disperse up to two miles between suitable aquatic habitat. This species is unlikely to occur in Loomis based on the current known range of the species.
Foothill yellow-legged frog <i>Rana boylei</i>	--; CE; CSC	Found in streams and rivers with rocky substrate and open, sunny banks in forests, chaparral and woodlands. Sometimes found in isolated pools, vegetated backwaters and deep shaded spring fed pools. Occurs from 0 to 1,830 meters. Rarely encountered far from permanent water sources. Inactive periods (e.g. overwintering during cold weather) will seek refuge under rocks in streams or along the shore within a few meters from water.

Special-Status Species	Regulatory Status	Habitat Requirements
Birds		
Bald eagle <i>Haliaeetus leucocephalus</i>	FD; CE; --	Breeding habitat most commonly includes areas within 2.5 miles (4.0 kilometers) of coastal areas, bays, rivers, lakes, and reservoirs. Nests usually are in tall trees or on pinnacles or cliffs near water.
California black rail <i>Laterallus jamaicensis coturniculus</i>	--; CT; CFP	Inhabits saltwater, brackish, and freshwater marshes. Nesting occurs on the ground within dense vegetation in high spots of salt marshes (i.e. pickleweed), in shallow areas of freshwater marshes, in wet meadows and in flooded grassy vegetation.
Swainson's hawk <i>Buteo swainsoni</i>	--; CT; --; --	Nest peripherally to Valley riparian systems lone trees or groves of trees in agricultural fields. Most commonly used nest trees in the Central Valley, include valley oak, Fremont cottonwood, walnut, and large willows, and occasionally eucalyptus, pine and redwood trees. Forages in row, hay and grain agricultural crops, especially post-harvest when the height of the vegetation is short and easy to observe prey.
Tricolored blackbird <i>Agelaius tricolor</i>	--; CT; CSC; --	Breeding habitat is freshwater marshes that include cattails, tules, bulrushes and sedges. Nests are made in the dense vegetation of the marsh or thickets, and sometimes on the ground. In migration and winter, will inhabit open cultivated lands and pastures as well as marshes.

Table 3.4B — Species Subject to CEQA Review

Special-Status Species	Regulatory Status	Habitat Requirements
Plants		
Big-scale balsamroot <i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	--; --; 1B	Perennial herb sometimes found on serpentinite soil in chaparral, cismontane woodland, and valley and foothill grassland from 90 to 1,555 meters in elevation.
Legenere <i>Legenere limosa</i>	--; --; 1B	Annual herb found in vernal pools from 1 to 880 meters in elevation.
Red Bluff dwarf rush <i>Juncus leiostermus</i> var. <i>leiostermus</i>	--; --; --; 1B	Annual herb found in vernal mesic chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland, and vernal pools from 35 to 1,250 meters in elevation.
Ahart's dwarf rush <i>Juncus leiostermus</i> var. <i>ahartii</i>	--; --; --; 1B	Annual herb found in mesic areas in valley and foothill grassland from 30 to 229 meters in elevation.
Dwarf downingia <i>Downingia pusilla</i>	--; --; --; 2B	An annual herb found in mesic areas within valley and foothill grassland and vernal pool habitats from 1 to 445 meters in elevation.
Red Hills soaproot <i>Chlorogalum grandiflorum</i>	--; --; 1B	Perennial bulbiferous herb sometimes found on serpentinite and gabbroic soil in chaparral, cismontane woodland, lower coniferous forests from 245 to 1,690 meters in elevation.
Sanford's arrowhead <i>Sagittaria sanfordii</i>	--; --; --; 1B	Perennial rhizomatous herb found in marshes and swamps in assorted shallow freshwater areas from 0 to 650 meters.

Special-Status Species	Regulatory Status	Habitat Requirements
Brazilian watermeal <i>Wolffia brasiliensis</i>	--; --; 2B	An aquatic perennial herb found in assorted shallow and freshwater marshes and swamps from 20 to 100 meters in elevation.
Invertebrates		
California linderiella <i>Linderiella occidentalis</i>	--; CSA; --; --	Found in a variety of natural, and artificial seasonally ponded freshwater habitats, including vernal pools, swales, ephemeral drainages, stock ponds, reservoirs, ditches, backhoe pits, and ruts caused by vehicular activity.
Fish		
Central Valley fall/late fall run Chinook salmon ESU and Essential Fish Habitat <i>Oncorhynchus tshawytsca</i>	CSC	Fall-run Chinook salmon spawn from October through December and late fall run spawn from January through mid-April in habitats similar those described for steelhead.
Reptiles and Amphibians		
Western pond turtle <i>Emys marmorata</i>	--; CSC; --	Typically associated with permanent ponds, lakes, streams, irrigation ditches and canals, and marshes, or pools in intermittent drainages, usually lined with abundant vegetation and either rocky or muddy bottom substrates. Requires aquatic basking sites, such as logs, rocks, cattail mats or exposed banks. Turtles are active from February to November, in which breeding occurs from April to May. Overwintering occurs in upland terrestrial habitats (approximately 300 feet) close to water sources, in which they will bury themselves under loose soil.
Western spadefoot <i>Spea hammondi</i>	--; CSC; --; --	Found in a variety of upland habitats, including lowlands, foothills, grasslands, open chaparral, and pine-oak woodlands. Habitat preferences include shortgrass plains, and sandy or gravelly soils for burrowing (e.g. alkali flats, washes, alluvial fans). Fossorial species that hibernates/aestivates for most of the year underground. Breeds temporary rain pools, and slow-moving streams (e.g. areas flooded by intermittent streams), and other artificial bodies of water as long as surrounding habitat is not developed or irrigated for agricultural purposes.
Birds		
American peregrine falcon <i>Falco peregrinus</i>	FD; CFP; --	Found in areas containing cliffs and almost always nest near water. Use open habitats for foraging. Non-breeding peregrine falcons may also occur in open areas without cliffs. Many artificial habitats like towers, bridges and buildings are also used.
Burrowing owl <i>Athene cucularia</i>	--; CSC; --	Nests in burrows in the ground, often in old ground squirrel burrows or badger, within open dry grassland and desert habitat. The burrows are found in dry, level, open terrain, including prairie, plains, desert, and grassland with low height vegetation for foraging and available perches, such as fences, utility poles, posts, or raised rodent mounds.
Cooper's hawk <i>Accipiter cooperii</i>	--; WL--	Nests in riparian woodlands and occasionally in developed areas. Forages in open woodland areas.
Ferruginous hawk <i>Buteo regalis</i> (wintering)	--; WL--	Winters in California in grasslands and open habitats along the coast and Central Valley.

Special-Status Species	Regulatory Status	Habitat Requirements
Golden eagle <i>Aquila chrysaetos</i>	--; --; CFP; --	Occurs in open and semi-open habitats. Typically found in areas with cliffs, ridges, or canyonlands. Most often nests on cliffs and may also nest in trees, on the ground, or tall man-made structures such as transmission towers or windmills. This species avoids developed areas and fragmented urbanized environments.
Grasshopper sparrow <i>Ammodramus savannarum</i>	--; CSC; --; --	Frequents dense, dry, or well drained grassland, especially native grassland. Nests at base of overhanging clump of grass. This species is known from Los Angeles, Mendocino, Orange, Placer, Sacramento, San Diego, San Luis Obispo, Solano, and Yuba counties, in California.
Great blue heron <i>Ardea herodias</i>	--; CSA; -- (Nesting colony)	Variety of habitats close to bodies of water including fresh and saltwater marshes, wet meadows, lake edges and shorelines. Colonial nester in tall trees, cliff sides and sequestered spots on marshes.
Great egret <i>Ardea alba</i>	--; CSA; --; -- (Nesting colony)	Found in marshes, swampy woods, tidal estuaries, lagoons, mangroves, streams, lakes, ponds, fields and meadows. Nests primarily in tall trees, or in woods or thickets near water.
Loggerhead shrike <i>Lanius ludovicianus</i>	--; CSC; --	Forages in open areas such as grasslands, oak savannah, and deserts. Nests in dense thickets of shrubs or trees.
Merlin <i>Falco columbarius</i>	--; WL; --	Winter migrant in California. Found in a variety of habitats during winter. Requires dense vegetation for cover.
Northern harrier <i>Circus hudsonius</i>	--; CSC; --; --	Found in coastal scrub, Great Basin grassland, marsh and swamp, riparian scrub, valley and foothill grassland, wetland. Nests and forages in grasslands, from salt grass in desert sink to mountain cienagas. Nests on ground in shrubby vegetation usually at marsh edge; nests built of a large mound of sticks in wet areas.
Prairie falcon <i>Falco mexicanus</i>	--; WL; --	Found in open grasslands, savannahs, and coastal areas. Usually nests on cliffs or sheltered ledges.
Purple martin <i>Progne subis</i>	--; CSC; --; --	Nests in wide variety of open and partly open habitats that are often near water or around towns. Nests in tree cavities, abandoned woodpecker holes, crevices in rocks, and sometimes in bird houses or gourds put up by humans.
Sharp-shinned hawk <i>Accipiter striatus</i>	--; WL; --	Winter resident in the Central Valley of California. Forages in woodland edges and pastures with brush cover.
Short-eared owl <i>Asio flammeus</i>	--; CSC; --	Typically a winter migrant in the Central Valley of California. Limited nesting occurs along the North Coast and east side of Sierras and Modoc Plateau.
Song sparrow (Modesto population) <i>Melospiza melodia</i>	--; CSC; --; --	Found in a wide range of habitats including forest, shrub, and riparian habitat. Early in the season will nest on the ground on clumps of dead grasses and weeds, and later in the season will nest in thorny bushes, willows, cattails, cordgrass, and small conifers (0.5-10 meters high).

Special-Status Species	Regulatory Status	Habitat Requirements
Yellow-breasted chat <i>Icteria virens</i>	--; CSC; --; --	Found in dense shrubby areas, often containing blackberry bushes, along rivers. Breeding habitat is second growth areas, shrubby old pastures, thickets, bushy areas, scrub, woodland undergrowth, and fence rows near low wet places near streams, pond edges, or swamps. Will also breed in thickets with few tall trees that are commonly close to human habitation. Nests in bushes, brier tangles, vines, and low trees generally within dense vegetation that is less than 2 meters above the ground.
Yellow warbler <i>Setophaga petechia</i>	--; CSC; --; --	Nests in thickets and other disturbed or re-growing habitats, particularly along streams and wetlands in elevations up to 9,000 feet. Overwintering can occur in mangrove forests, dry scrub, marshes, and forests, typically in lowlands but occasionally up to 8,500 feet.
White-tailed kite <i>Elanus leucurus</i>	--; CFP; -- (nesting)	Inhabit savanna, open woodlands, marshes, desert grassland, partially cleared lands and cultivated fields. Nests in trees, often near a marsh in savanna, open woodland, partially cleared lands, and cultivated fields. Foraging occurs within ungrazed or lightly-grazed fields and pastures.
Mammals		
American badger <i>Taxidea taxus</i>	--; CSC; --; --	Found in a variety of grassland, shrublands, and open woodlands throughout California. Suitable burrowing habitat requires friable soil.
Pallid bat <i>Antrozous pallidus</i>	--; CSC; --; --	Found in grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forest habitats. Roosts in colonies usually in rock crevices, caves, mines, hollow trees, and buildings.
Townsend's big-eared bat <i>Corynorhinus townsendii</i>	--; CSC; --	Found in subalpine and alpine habitats. Requires caves, mines, tunnels, buildings, or other human-made structures for roosting. Hibernation sites are cold, but not below freezing temperatures. Maternity sites are warm and similar to roosting sites.

Table 3.4B includes state species of concern, watch list species, and Rank 1 and 2 CNPS species.

Table 3.4C — Other Species of Interest

Special-Status Species	Regulatory Status	Habitat Requirements
Plants		
Brandegee's clarkia <i>Clarkia biloba</i> ssp. <i>brandegeae</i>	--; --; 4.2	Annual herb often found in roadcuts in the chaparral, cismontane woodland, lower montane coniferous forest from 75 to 915 meters in elevation.
Butte County fritillary <i>Fritillaria eastwoodiae</i>	--; --; 3	A perennial bulbiferous herb found sometimes in serpentine soils within chaparral, cismontane woodland, and openings of lower montane coniferous forests from 50 to 1,500 meters in elevation.
Dubious pea <i>Lathyrus sulphureus</i> var. <i>argillaceus</i>	--; --; 3	A perennial herb found within cismontane woodland, and upper and lower montane coniferous forests from 150 to 930 meters in elevation.
Humboldt lily <i>Lilium humboldtii</i> ssp. <i>humboldtii</i>	--; --; 4.2	Perennial bulbiferous herb found in openings in chaparral, cismontane woodland, lower montane coniferous forest from 90 to 1,280 meters in elevation.
Valley brodiaea <i>Brodiaea rosea</i> ssp. <i>vulnicola</i>	--; --; --; 4.2	Perennial bulbiferous herb found on silty, sandy, and gravelly loam on old alluvial terraces within swales in valley and foothill grassland and vernal pools from 10 to 335 meters.
Invertebrates		
Western bumble bee <i>Bombus occidentalis</i>	--; CCE; --	Found in open grassy areas, urban parks and gardens, chaparral and shrub areas, and mountain meadow. Nest underground in abandoned rodent burrows or other cavities. Associated food plants include <i>Ceanothus</i> , <i>Centaurea</i> , <i>Chrysothamnus</i> , <i>Geranium</i> , <i>Grindelia</i> , <i>Lupinus</i> , <i>Melilotus</i> , <i>Monardella</i> , <i>Rubus</i> , <i>Solidago</i> , and <i>Trifolium</i> .

Table 3.4-C includes Rank 3 and 4 CNPS species and non-listed invertebrates, which may not be subject to CEQA review.

Common-Name	Scientific-Name	Status	Habitat
PLANTS			
Big-seale balsamroot	<i>Balsamorhiza macrolepis</i> var. <i>macrolepis</i>	4B	GR
Dwarf-downingia	<i>Downingia pusilla</i>	2	VP, WET
Legenere	<i>Legenere limosa</i>	4B	VP
Hispid bird's-beak	<i>Cordylanthus mollis</i> ssp. <i>hispidus</i>	4B	alkaline soils
Boggs-lake-hedge-hyssop	<i>Gratiola heterosepala</i>	4B	VP, WET
INVERTEBRATES			
Vernal-pool-fairy-shrimp	<i>Branchinecta lynchi</i>	4F	VP
Conservancy-fairy-shrimp	<i>Branchinecta conservatio</i>	4E	VP
Vernal-pool-tadpole-shrimp	<i>Lepidurus packardii</i>	4E	VP
California-linderebella	<i>Linderebella occidentalis</i>	SA	VP
Valley-elderberry-longhorn-beetle	<i>Desmocerus californicus dimorphus</i>	4F	WDL
AMPHIBIANS and REPTILES			
Western-spade-foot	<i>Scaphiopus hammondi</i>	CSC	SAV, GR
Foothill-yellow-legged-frog	<i>Rana boylei</i>	CSC	WET
California-red-legged-frog	<i>Rana aurora draytoni</i>	4F, CSC	Stream-pools
Northwestern-pond-turtle	<i>Clemmys marmorata marmorata</i>	CSC	Stream-pools
BIRDS			
Great-blue-heron (rookery)	<i>Ardea herodias</i>	SA	WDL
Cooper's-hawk (nesting)	<i>Accipiter cooperii</i>	CSC	WDL, GR
Sharp-shinned-hawk (nesting)	<i>Accipiter striatus</i>	CSC	WDL
Tricolored-blackbird (nesting)	<i>Agelaius tricolor</i>	CSC	WET
Golden-eagle (nest & winter)	<i>Aquila chrysaetos</i>	CSC	GR, CH, WDL

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Long-eared owl (nesting)	<i>Asio otus</i>	CSC	WDL
Short-eared owl (nesting)	<i>Asio flammeus</i>	CSC	GR
Barrowing owl	<i>Athene cucularia</i>	CSC	GR
Swainson's hawk (nesting)	<i>Buteo swainsoni</i>	SF	WDL, GR
Ferruginous hawk (wintering)	<i>Buteo regalis</i>	CSC	GR
Northern harrier (nesting)	<i>Circus cyaneus</i>	CSC	GR
White-tailed kite (nesting)	<i>Elanus caeruleus</i>	SA	WDL, GR
Merlin (wintering)	<i>Falco columbarius</i>	CSC	WDL, GR
Prairie falcon (nesting)	<i>Falco mexicanus</i>	CSC	GR
Loggerhead shrike	<i>Lanius ludovicianus</i>	CSC	GR
Yellow-breasted chat (nesting)	<i>Icteria virens</i>	CSC	WDL
MAMMALS			
Pallid bat	<i>Antrozous pallida</i>	CSC	GR, WDL
Townsend's big-eared bat	<i>Corynorhinus townsendii townsendii</i>	CSC	GR, WDL
American badger	<i>Taxidea taxus</i>	SA	GR

KEY:

Status Codes:

FD	Federally Delisted	CE	California Endangered
FE	Federally Endangered	CT	California Threatened
FT	Federally Threatened	CSC	California Species of Special Concern
		CFP	California Fully Protected
		CSA	California Special Animal
		CCE	California Candidate Endangered
		WL	Watch List

CNPS Threat Ranks

1B	Plants Rare, Threatened, or Endangered in California and elsewhere
2B	Plants presumed extirpated in California but common elsewhere
3	Plants about which we need more information – A Review List
4.2	Plants of limited distribution – A Watch List (moderately threatened in California)

STATUS CODES:

FE	Federally listed Endangered	SE	State listed Endangered
FT	Federally listed Threatened	ST	State listed Threatened
PFE	Proposed Federal Endangered	SR	State listed Rare (plants only)
FC	Federal Candidate	SCE	State Endangered Candidate
SCT	State Threatened Candidate	4B	CNPS: Rare, Threatened, Endangered in CA
CSC	California Species of Special Concern	2	CNPS: Rare, Threatened, Endangered in CA but more common elsewhere
S-A	Special Animal per CDWG, March 1998		

HABITAT CODES:

GR	Grassland	S-VZ	Savanna
CH	Chaparral	WDL	Oak/Riparian Woodland
WET	Wetland	VP	Vernal Pool

Source: CDFG, June 18, 1998; CDFG, March 1998; CDFG, April 1998.

Commented [DB4]: Species in this table are included in new expanded species table above.

Special-Status Plants

Five Thirteen special-status plants have been reported in the general vicinity the potential to occur within, but none are reported to be within the planning area the Town of Loomis. However, based on known habitat requirements and distributions, † No federal or state-listed plant species are expected to occur within the Town limits. he special-status species listed in Table 3-4 have the potential to occur in the planning area. Several of these plants are associated with vernal pools that occur within old volcanic mud flows, which are generally located southwest of the planning area. However, they could also occur within vernal pools in the planning area. General habitat requirements for potentially occurring special-status plant species are included in Table 3-4. Focused plant surveys are recommended in areas that have the potential to support special-status plants within the Town limits.

Special-Status Wildlife

The Department of Fish and Game’s Natural Diversity Data Base (CDFG, June 18, 1998) listed one special-status wildlife species, the valley elderberry longhorn beetle, as known to occur in the planning area. However, based on known habitat requirements and distributions, the 3628 special-status species listed in Table 3-4 have the potential to occur in the planning area. General habitat requirements for potentially occurring special-status wildlife species are included in Table 3-4. Many site-specific wildlife surveys have been conducted in the planning area and Table 3-5 lists the wildlife observed during several surveys previous surveys conducted within the planning area. This list does not include all wildlife species that would be expected to occur within the Planning Area, only those species documented in wildlife surveys as part of proposed projects. Special-status wildlife species previously observed have been marked with an asterisk.

Table 3-5: Wildlife Species Observed in the Planning Area

Common Name	Scientific Name	Source
INVERTEBRATES		
Valley elderberry longhorn beetle	<i>Desmocerus californicus dimorphus</i>	8
BIRDS		
Cooper’s hawk *	<i>Accipiter cooperii</i>	4
Red-winged blackbird	<i>Agelaius phoeniceus</i>	2
Mallard	<i>Anas platyrhynchos</i>	4
California scrub jay	<i>Aphelocoma californica - Aphelocoma coerulescens</i>	1, 2, 4
Red-tailed hawk	<i>Buteo jamaicensis</i>	1
Red-shouldered hawk	<i>Buteo lineatus</i>	1
Swainson’s hawk *	<i>Buteo swainsoni</i>	6
California quail	<i>Callipepla californica</i>	1, 4
American goldfinch	<i>Spinus tristis - Carduelis tristis</i>	4
Purple finch	<i>Carpodacus purpureus</i>	4
Turkey vulture	<i>Cathartes aura</i>	4
Wrentit	<i>Chamaea fasciata</i>	1
Killdeer	<i>Charadrius vociferus</i>	1
Northern flicker	<i>Colaptes auratus</i>	1, 2
Western wood-pewee	<i>Contopus sordidulus</i>	1
American crow	<i>Corvus brachyrhynchos</i>	1
Raven	<i>Corvus corax</i>	2
Warbler sp.	<i>Dendroica sp.</i>	4
Black-shouldered White-tailed kite *	<i>Elanus caermiens leucurus</i>	1, 2, 4
Brewer’s blackbird	<i>Enphagus cyanacephalus</i>	1
Acorn woodpecker	<i>Melanerpes formicivorus</i>	2, 4
Northern mockingbird	<i>Mimus polyglottos</i>	4
Ash-throated flycatcher	<i>Myiarchus cinerascens</i>	4
Plain Oak titmouse	<i>Baeolophus Panus inornatus</i>	2, 4
Savannah sparrow	<i>Passerculus sandwichensis</i>	4
Ring-necked pheasant	<i>Phasianus colchicus</i>	4
Grosbeak	<i>Phenacicus sp.</i>	4

Common Name	Scientific Name	Source
Nuttall's woodpecker	<i>Picoides nuttallii</i>	1, 4
Bushtit	<i>Psaltriparus minimus</i>	1
Black phoebe	<i>Sayornis nigricans</i>	1, 4
Western bluebird	<i>Sialia mexicana</i>	4
White-breasted nuthatch	<i>Sitta carolinensis</i>	4
Western meadowlark	<i>Sturnella neglecta</i>	1
European starling	Sturnus <i>Sturnus vulgaris</i>	1
Barn owl	<i>Tyto alba</i>	1
Solitary vireo	<i>Vireo solitarius</i>	4
Canada goose	<i>Branta canadensis</i>	Known occurrences
Wild turkey	<i>Meleagris gallopavo</i>	Known occurrences
Mourning dove	<i>Zenaidura macroura</i>	1, 2, 4
Golden-crowned sparrow	<i>Zonotrichia atricapilla</i>	2
White-crowned sparrow	<i>Zonotrichia leucophrys</i>	2
MAMMALS		
Coyote	<i>Canis latrans</i>	1
Black-tailed jackrabbit	<i>Lepus californicus</i>	1
Black-tailed deer	<i>Odocoileus hemionus</i>	1
Raccoon	<i>Procyon lotor</i>	2
Botta's pocket gopher	<i>Thomomys bottae</i>	1, 2
Skunk	<i>Mephitis mephitis</i>	5
REPTILES AND AMPHIBIANS		
Western pond turtle *	Glemmys <i>Emys marmorata</i>	4
Western skink	Plestiodon skiltonianus Emmeis <i>skiltonianus</i>	2
Western fence lizard	Sceloporus <i>Sceloporus occidentalis</i>	2, 4
Alligator lizard	Gerrhonotus <i>Elegania</i> sp.	4
Pacific chorus frog	<i>Pseudacris (Hyla) regilla</i>	2, 4
Bullfrog	<i>Rana catesbeiana</i>	4
Common garter snake	<i>Thamnophis sirtalis</i>	4
Side-blotched lizard	<i>Uta stansburiana</i>	4
FISH		
Central Valley steelhead	<i>Oncorhynchus mykiss</i>	7
Central Valley fall/late fall run Chinook salmon <i>O. tshawytscha</i>	<i>O. tshawytscha</i>	7
Sacramento sucker	<i>Catostomus occidentalis</i>	3
Brown bullhead	<i>Ictalurus nebulosus</i>	3
Green sunfish	<i>Lepomis cyanellus</i>	3
Bluegill	<i>Lepomis macrochirus</i>	3
Largemouth bass	<i>Micropterus salmoides</i>	3
Sacramento squawfish	<i>Ptychocheilus grandis</i>	3
Key:		
1	Shadowbrook Recirculated Draft EIR, ESA, 1997	
2	K-8 Elementary School Site Draft EIR, Quad, 1994	
3	Jones & Stokes Secret Ravine survey, March 1988	
4	Laird Road survey, Jones & Stokes, 1993.	
5	Town staff, 1998.	
6	Town of Loomis Costen, Recirculated Draft EIR, AECOM, 2019.	
7	CDI-W. 2020. California Natural Diversity Database Records.	
8	Turtle Island Draft EIR, Town of Loomis, 1996.	

Following is a description of the sensitive wildlife species that are known to exist, or have the potential to exist, in the planning area.

1
2
3
4

1
2
3 **Invertebrates**

4 **Vernal pool fairy shrimp (*Branchinecta lynchi*)**. Status: Federally threatened. The vernal pool fairy shrimp
5 is a large freshwater shrimp, approximately two centimeters long. It is endemic to California and is known from
6 32 populations that are located from Stillwater Plain in Shasta County through most of the length of the Central
7 Valley to Pixley in Tulare County, and along the central coast range from northern Solano County to Pinnacles
8 in San Benito County. The fairy shrimp is restricted to seasonal wetlands (primarily vernal pools) with clear to
9 tea-colored water. They hatch, breed, and produce eggs during the period of pool inundation. Highly resistant
10 eggs remain dormant until the following winter rains.

11 **Conservancy fairy shrimp (*Branchinecta conservatio*)**. Status: Federally endangered. The conservancy fairy
12 shrimp is known from six disjunct populations in Tehema, Glenn, Solano, Merced and Ventura Counties. This
13 fairy shrimp inhabits vernal pools and swales with highly turbid water and has a similar life cycle to that of the
14 vernal pool fairy shrimp.

15 **Vernal pool tadpole shrimp (*Lepidurus packardii*)**. Status: Federally endangered. The tadpole fairy shrimp
16 is known from 18 populations in the Central Valley, ranging from east of Redding in Shasta County south
17 through the Central Valley, to the San Luis National Wildlife Refuge in Merced County, and from a single
18 vernal pool complex located on the San Francisco Bay National Wildlife Refuge in the City of Fremont,
19 Alameda County. Preferred habitat consists of vernal pools with clear to turbid water; pools size ranges from a
20 few square yards to several acres.

21 **California linderiella (*Linderiella occidentalis*)**. Status: California Species of Special Concern. The California
22 linderiella is more abundant in the Central Valley than previously known and the proposal to list the linderiella
23 as endangered was withdrawn by the USFWS. The linderiella inhabits vernal pools and swales with clear to tea-
24 colored water. This species is often associated with other fairy shrimp species.

25 **Valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)**. Status: Federally threatened. The
26 valley elderberry longhorn beetle occurs at scattered locations in San Joaquin and Sacramento Valleys from
27 Tehema to Kern County and is known to occur in Secret Ravine within the planning area (Town of Loomis,
28 1996, *Turtle Island Draft EIR*). This subspecies is a live wood pith boring beetle that is dependent on the
29 elderberry (*Sambucus* spp.) as its host plant. Females deposit eggs within crevices on the elderberry bark. Shortly
30 thereafter, the eggs hatch and the larvae bore into the pith where they remain for up to two years. Suitable
31 elderberry branches for larvae are greater than one inch in diameter. The presence of emergence holes in
32 elderberry stems is the accepted measure of valley elderberry longhorn beetle presence and habituse.

33 **Amphibians**

34 **Western spadefoot toad (*Scaphiopus hammondi*)**. Status: California Species of Special Concern. The
35 western spadefoot toad occurs in the Central Valley and surrounding foothills and Coast Ranges south of San
36 Francisco Bay. It prefers open vegetation and inhabits grasslands, open chaparral, and pine oak woodlands with
37 sandy or gravelly soil. Breeding and egg laying occur in winter and spring almost exclusively in shallow,
38 temporary pools formed by heavy winter rains (e.g. vernal pools). Spadefoots are primarily active at night during
39 spring rains. Dry periods are spent in burrows in upland habitats.

40 **California red-legged frog (*Rana aurora draytoni*)**. Status: Federal threatened and California Species of
41 Special Concern. The California red-legged frog formerly ranged from northern California south along the
42 Pacific Coast, west of the Cascade Mountains and the Sierra Nevada, to northern Baja California at elevations
43 from near sea level to 8,000 feet. Red-legged frogs frequent marshes, lakes, reservoirs, ponds, slow parts of
44 streams, and other usually permanent water in lowlands, foothill woodlands and grasslands. Red-legged frogs
45 require areas with extensive emergent vegetation. High value habitats are deep water ponds with dense stands
46 of overhanging willows and a fringe of cattails. There is a moderate potential for this species to still survive in
47 the planning area along areas such as Secret Ravine.

48 **Reptiles**

Commented [DB5]: These species accounts have been revised and included in species table above.

1 **Northwestern pond turtle (*Clemmys marmorata marmorata*).** Status: California Species of Special
2 Concern. The western pond turtle occurs primarily in foothills west of the Cascade-Sierra crest throughout
3 California. The northwestern subspecies ranges north of the San Francisco Bay area and intergrades with the
4 southwestern pond turtle in the southern portion of the Central Valley. Pond turtles inhabit rivers, permanent
5 streams, irrigation ditches, ponds, lakes and marshes. Preferred aquatic habitat typically has a rocky or muddy
6 bottom and contains emergent vegetation, such as cattails and other aquatic plants.
7

8 **Birds**

9 **Great blue heron (*Ardea herodias*).** Status: CDFG is concerned that nest sites of this species are closely
10 associated with a habitat that is declining in California. Heron rookeries are protected. The great blue heron is
11 a fairly common resident throughout most of California. It inhabits shallow estuaries and water bodies,
12 freshwater marshes, brackish and other wetlands. It usually nests in colonies in tops of large snags or live trees
13 in groves near shallow water-feeding areas, but a feeding area may be as much as ten miles from a particular
14 nest sites.
15

16 **White-tailed kite (*Elanus caeruleus*).** Status: California fully protected. The white-tailed kite occurs in coastal
17 and valley lowlands, usually associated with agricultural lands and open fields throughout California. Nests are
18 constructed in treetops with dense foliage.
19

20 **Northern harrier (*Circus cyaneus*).** Status: California Species of Special Concern. The northern harrier is a
21 migratory hawk that occurs throughout most of California, except at higher elevations. Harrier populations are
22 most concentrated in the Central Valley. During the winter months, migrant harrier numbers increase
23 throughout the state. The northern harrier nests on the ground near freshwater and salt marshes. Open areas,
24 such as desert sinks and mountain meadows, provide foraging habitat for the species. Loss of wetland breeding
25 habitat is the main threat to harrier populations in California.
26

27 **Sharp-shinned hawk (*Accipiter striatus*).** Status: California Species of Special Concern. The sharp-shinned
28 hawk ranges throughout California and forages in most habitats. Preferred breeding habitats include mid-
29 elevation riparian deciduous forest, conifer forest, and oak woodlands. However, breeding distribution is poorly
30 documented. The study area provides winter foraging and roosting habitat for the sharp-shinned hawk in the
31 oak riparian forest/blue oak woodland.
32

33 **Cooper's hawk (*Accipiter cooperii*).** Status: California Species of Special Concern. This species is considered
34 sensitive due to the loss of riparian nesting habitat and possible pesticide poisoning. It is a breeding resident
35 throughout most of the wooded portions of California. Preferred nesting habitat is dense stands of live oak,
36 riparian, or other forest habitat near water. Hunting for small birds and mammals occurs in broken woodlands
37 and edge habitats. Suitable nesting and foraging habitat is present throughout much of the planning area.
38

39 **Swainson's hawk (*Buteo swainsoni*).** Status: California threatened. The Swainson's hawk is a summer migrant
40 to the Central Valley and northeastern portion of the state. The Swainson's hawk in California has become
41 almost entirely dependent on agricultural lands such as alfalfa, grain crops, and fallow fields for foraging habitat.
42 Most of the native grasslands that formerly provided foraging habitat have disappeared. The hawk's food
43 source, usually rodents or insects, may only be accessible when vegetative cover is low, such as when a field is
44 disked, fallow, or newly planted. Mature oaks and cottonwoods in riparian areas or individual trees near
45 agricultural fields and grasslands provide suitable nest sites, as do oak riparian forest and blue oak woodland.
46

47 **Ferruginous hawk (*Buteo regalis*).** Status: California Species of Special Concern. Resource agencies are
48 particularly concerned about wintering habitats for this species. The ferruginous hawk is an uncommon winter
49 resident and migrant on the Modoc Plateau, Central Valley and Coast Ranges but does not breed in California.
50 Foraging habitats include open, dry terrain such as grasslands and scrub habitats. This hawk may occasionally
51 occur in the planning area during winter.
52

53 **Golden eagle (*Aquila chrysaetos*).** Status: California Species of Special Concern and fully protected species.
54 The golden eagle is an uncommon, permanent resident and migrant throughout California, except the center

of the Central Valley. Habitat typically includes rolling hills, mountain areas, sage juniper flats, and deserts. Nests are constructed on cliffs and in large trees in open areas. The territories of these raptors in California range from 36 to 48 square miles.

Merlin (*Falco columbarius*). Status: California Species of Special Concern. The merlin is a winter migrant throughout the western portion of the state in grassland to woodland habitats, but does not breed in California. This falcon may occasionally occur in the region during winter.

Prairie falcon (*Falco mexicanus*). Status: California Species of Special Concern. The prairie falcon occurs throughout California, except along the coast and east of the Sierra Nevada. It is primarily associated with grasslands, agricultural lands, and desert scrub areas. Nests are usually constructed on cliffs. The Central Valley is primarily used for winter foraging. Although this falcon probably does not nest in the planning area, it may occur in the area during winter.

Burrowing owl (*Athene cunicularia*). Status: California Species of Special Concern (burrow sites). The burrowing owl is a resident of California, where it inhabits open grasslands, deserts, rolling hills, open pine habitats and agricultural land throughout the state. Old ground squirrel burrows and other mammal dens provide breeding sites for the burrowing owl. Grasslands within the planning area could provide potential habitat for the burrowing owl.

Long-eared owl (*Asio otus*). Status: California Species of Special Concern. The long-eared owl occurs in most of California, except in high Sierra Nevada, Coast Ranges, and Cascade Ranges. Riparian vegetation is required nesting habitat, but the species also uses oak tree thickets. The Central Valley, including in the general vicinity of Loomis, is primarily used for winter foraging.

Short-eared owl (*Asio flammeus*). Status: California Species of Special Concern. The short-eared owl occurs in California primarily as a winter migrant to the Central Valley but occasionally breeds in northern California. This owl is usually found in open habitats such as grasslands and wetlands.

Loggerhead shrike (*Lanius ludovicianus*). Status: California Species of Special Concern. The loggerhead shrike occurs in lowlands and foothills throughout most of California. Preferred habitats include open-canopied oak and pine woodlands, and foothill and desert riparian habitats with perches such as fences, posts, and scattered trees and shrubs. Suitable nesting and foraging habitat is present in the planning area.

Tricolored blackbird (*Agelaius tricolor*). Status: California Species of Special Concern. The tricolored blackbird is a nomadic resident of the Sacramento and San Joaquin Valleys and lower foothills of the Sierra Nevada. This species nests near freshwater in dense cattails and bulrush, and also in thickets of willow, blackberry, wild rose, and tall herbs. Estimates for colony size range from 15 to 47,000 birds. Flooded lands, pond margins, and grass fields constitute typical foraging habitat. Agricultural fields also provide foraging habitat.

Yellow-breasted chat (*Icteria virens*). Status: California Species of Special Concern. The yellow-breasted chat is an uncommon summer resident and migrant in coastal California and in the foothills of the Sierra Nevada. It prefers riparian woodland that contains willow thickets and other brushy tangles that are near water. Suitable habitat for this species occurs in drainages in the planning area, particularly along Secret Ravine.

Mammals

Pallid bat (*Antrozous pallida*). Status: California Species of Special Concern. Pallid bats are locally common species of low elevations in California, occurring throughout the state except for the high Sierra Nevada and the northwestern corner of the state. It occupies a wide variety of habitats, including grasslands, shrublands, woodlands, and forests. The species is most common in open, dry habitats with rocky areas that are suitable for roosting. It is very sensitive to disturbance of its roosting sites, which are typically in caves, crevices, and mines.

Townsend's big-eared bat (*Plecotus townsendii*). Status: California Species of Special Concern. This bat is found throughout California except for subalpine and alpine habitats, and was formerly considered common

but is now uncommon within the state. It is most abundant in moister climes. It is extremely sensitive to disturbance of roosting sites and requires caves, mines, tunnels, buildings, or other structures for roosting.

American badger (*Taxidea taxus*). Status: Listed in the NDDB as a Special Animal. Badgers are uncommon residents throughout the state in most shrub, forest, and herbaceous habitats, occurring most frequently in open grasslands where there is an abundance of ground squirrels and gophers. While badgers are a fur-bearing mammal and are still trapped, the loss of suitable habitat, indiscriminate trapping, and use of persistent pesticides has resulted in substantial declines in its population level.

Aquatic Habitat

Streams in the planning area provide important habitat for several species. Portions of Dry Creek, Secret Ravine and Antelope Creek provide the highest quality habitat because these waterways have moderate perennial flows, clear water, rocky stream beds, and overhanging riparian vegetation.

Climate and hydrology interact to create conditions conducive to supporting two distinct fish communities: a cold-water community of anadromous fall/late fall-run chinook salmon and steelhead during the late fall, winter and spring, and warm water resident fishes year-round. The local climatic pattern is Mediterranean in which almost all precipitation occurs during the fall through spring and virtually none during the summer. Since the first annual rain normally occurs in the fall and winter, the high stream flows are cold and attract adult. This is when cold water species such as fall-run chinook salmon and steelhead to migrate upstream to spawn occur in streams. These fish may be either returning adults returning to their natal spawning streams or fish that have strayed (non-natal) from their native spawning streams, or migrating stream-dwelling juveniles may also that move into the system to rear (non-natal stream rearing). In either case, non-natal stream rearing may account for many fish that rear in the local drainages (Maslin and McKenney 1994, Maslin *et al.* 1997).

The cold-water condition in the local streams is not prolonged during the spring because headwaters of the local streams are too low in elevation to collect snowpack. As streamflow declines from spring and throughout the summer, the streams warm. At temperatures approaching 15 to 17°C, juvenile steelhead begin to outmigrate as smolts (physiological process by which juvenile steelhead are able to live in salt water). Juvenile Chinook salmon outmigrate at somewhat lower temperatures. Although salmonids are able to rear in water temperatures up to 20°C (or higher in streams with abundant cover and food resources), and those species with wide temperature tolerances (i.e., warm water species) remain.

The cold water condition in the local streams is not prolonged during the spring because headwaters of the local streams are too low in elevation to collect snowpack. As streamflow declines from spring and throughout the summer, the streams warm. At some temperature the streams become unsuitable for cold water species and they leave for more suitable stream temperatures, and only those with wide temperature tolerances or warm water species remain.

Environmental assessments must recognize the nature of this dual fish community. Therefore, it is imperative to survey streams for potential habitat-altering impacts during periods when species of interest are expected to occur.

Secret Ravine is a perennial stream used by fall-run chinook salmon (*Oncorhynchus tshawytscha*) and steelhead trout (*Oncorhynchus mykiss*) for spawning and rearing of juveniles (Town of Loomis, *Turtle Island Draft EIR*, 1996). Fall-run chinook salmon is a federal candidate threatened species state species of special concern, and steelhead is a federal threatened species. California Department of Fish and Game CDFW has documented chinook salmon spawning in Secret Ravine from its confluence with Dry Creek upstream to Penryn (Gerstung 1965). Of the streams that are tributary to Natomas East Drain and the Natomas Cross Canal, Secret Ravine has supported the most the greatest number of spawning salmon. Approximately 60 percent of the 1,000 fish run in this drainage in 1964 spawned in Secret Ravine (Gerstung 1965). Fall-run chinook salmon typically spawn from November to January, and most juvenile salmon migrate downstream the following spring to the Sacramento River and through the Sacramento-San Joaquin Delta to the Pacific Ocean. Steelhead trout typically spawn January through March. In contrast to chinook salmon, however, juvenile steelhead may reside in freshwater in California as long as two years before migrating to the Pacific Ocean. In addition to these cold water anadromous salmonids, Secret Ravine also supports resident warm water freshwater species that include

largemouth bass (*Micropterus salmoides*), green sunfish (*Lepomis cyanellus*), bluegill (*Lepomis macrochirus*), golden shiner (*Notemigonus crysoleucas*), hitch (*Lavinia exilicauda*), Sacramento sucker (*Catostomus occidentalis*), Sacramento pike-minnow (*Ptychocheilus grandis*) and may also include California roach (*Hesperoleucus symmetricus*) and Sacramento splittail (*Pogonichthys macrolepidotus*).

Antelope Creek is a perennial stream that has supported at least fall-run chinook salmon in the past (Gerstung 1965). It may provide non-natal rearing habitat for both fall-run chinook salmon and steelhead trout. Non-natal rearing occurs when juvenile salmonids born elsewhere migrate into the system to rear. California roach and Sacramento splittail may also occur here. Antelope Creek does provide habitat for several game species such as largemouth bass, bluegill, green sunfish, brown bullhead (*Ictalurus nebulosus*), Sacramento sucker, golden shiner and mosquitofish (*Gambusia affinis*). In addition, both Secret Ravine and Antelope Creek provide habitat for bullfrog (*Rana catesbeiana*), Pacific tree-frog (*Hyla pseudacris regilla*), northwestern pond turtle (*Emmys marmorata*), as well as potential habitat for federal threatened foothill yellow-legged frog (*Rana boylei*) and the federal endangered California red-legged frog (*Rana aurora draytonii*).

There are several unnamed tributaries within the Town. The intermittent nature of these streams does not preclude fish species if the water occurs at the appropriate time and remains for a sufficient duration (Erman and Hawthorne 1976).

Critical Habitat

The Central Valley steelhead distinct population segment (DPS) was listed as threatened under the ESA on January 5, 2008, last updated on April 14, 2014. Critical Habitat for Central Valley steelhead was designated by the National Marine Fisheries Service on September 2, 2005 (70 FR 52488). This distinct population segment includes all naturally-spawned anadromous steelhead populations below natural and manmade impassable barriers in the Sacramento and San Joaquin Rivers and their tributaries. Steelhead are anadromous fish that spawn in rivers and streams with cool, clear, water and suitable gravel substrate. Hatchlings migrate downstream to the sea to mature before returning inland to spawn (NMFS 2016). The current Project area is located within designated critical habitat for the Central Valley steelhead DPS.

A recovery plan for the ESUs of Sacramento River winter-run Chinook salmon, Central Valley spring-run Chinook salmon and the DPS of Central Valley steelhead was prepared by NMFS in July 2014 (NMFS 2014). The draft plan describes key threats and identifies recovery strategies and actions to achieve goals and objectives. While habitat conditions for CV steelhead have slightly improved over the past decade, access to historic habitat generally remains blocked and the quality of the species remaining habitat remains largely degraded (Lindley et al. 2009; Cummins et al. 2008).

Regulatory Framework

Special-Status Plant and Wildlife Species

The federal Endangered Species Act of 1973 (50 CFR 17) provides legal protection and requires definition of critical habitat and development of recovery plans for plant and animal species in danger of extinction. California has a parallel mandate embodied in the California Endangered Species Act of 1984 and the California Native Plant Protection Act of 1977. These laws regulate the listing of plant and animal species as endangered, threatened, or in the case of plants, rare.

The federal Endangered Species Act requires federal agencies to make a finding on all federal actions, including the approval by an agency of a public or private action, as to the potential to jeopardize the continued existence of any federally listed species potentially impacted by the action. Section 9 of the federal Endangered Species Act prohibits the “take” of any member of an endangered species. “Take” is defined by the act as, “...to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct.” The USFWS has

further defined the terms “harass” and “harm.” Harass is defined as

“...an intentional or negligent act or omission that creates the likelihood of injury to a listed species by annoying it to such an extent as to significantly disrupt normal behavior patterns which include, but are not limited to, breeding, feeding, or sheltering.” Harm is further defined to include “...significant habitat modification or degradation that results in death or injury to listed species by significantly impairing behavioral patterns such as breeding, feeding, or sheltering.”

Section 10(a) of the federal Endangered Species Act permits the incidental “take” of an endangered species if the take is “incidental to, and not the purpose of, the carrying out of an otherwise lawful activity.”

The federal Migratory Bird Treaty Act (MBTA) prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations prescribed by the Secretary of Interior. The Bald and Golden Eagle Protection Act (Eagle Act) prohibits the taking or possession of and commerce in bald and golden eagles with limited exceptions. Under the Eagle Act, it is a violation to “take, possess, sell, purchase, barter, offer to sell, transport, export or import, at any time or in any manner, any bald eagle commonly known as the American eagle, or golden eagle, alive or dead, or any part, nest, or egg, thereof.” Take is defined to include pursue, shoot, shoot at, poison, wound, kill, capture, trap, collect, destroy, molest, and disturb. Disturb is further defined in 50 CFR Part 22.3 as “to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior.”

The Magnuson-Stevens Fishery Conservation and Management Act (Magnuson-Stevens Act) establishes a management system for marine and estuarine fishery resources. The Act applies to Pacific salmon, groundfish, and several pelagic species found in the Pacific Ocean and San Francisco Bay and Delta and pertains to Federal Agencies that carry out projects with the potential to affect Essential Fish Habitat (EFH). Essential fish habitat is defined as those waters and substrate necessary for fish spawning, breeding, feeding, or growth to maturity. For the purposes of interpreting the definition of EFH, “waters” include aquatic areas and their associated physical, chemical, and biological properties that are used by fish, and may include areas historically used by fish where appropriate; “substrate” includes sediment, hard bottom, structures underlying the waters, and associated biological communities; “necessary” means habitat required to support a sustainable fishery and a healthy ecosystem; and “spawning, breeding, feeding, or growth to maturity” covers a species’ full life cycle. Habitat for Central Valley fall/late fall–run Chinook salmon (MSA managed species) are at least occasionally present in the vicinity of the Project area and are federally managed by the Pacific States Marine Fisheries Council (PSMFC) under the Pacific Salmon Fisheries Management Plan (FMP).

The State of California enacted the California Endangered Species Act (CESA) in 1984. CESA is similar to the FESA but pertains to State-listed endangered and threatened species. CESA requires state agencies to consult with the California Department of Fish and Wildlife (CDFW), when preparing CEQA documents. The purpose is to ensure that the State lead agency actions 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, if there are reasonable and prudent alternatives available (Fish and Game Code §2080). CESA directs agencies to consult with CDFW on projects or actions that could affect listed species. It also directs CDFW to determine whether jeopardy would occur and allows CDFW to identify “reasonable and prudent alternatives” to the project consistent with conserving the species. CESA allows CDFW to authorize exceptions to the State’s prohibition against take of a listed species if the “take” of a listed species is incidental to carrying out an otherwise lawful project that has been approved under CEQA (Fish & Game Code § 2081). Species listed by the State are not necessarily protected by the federal protection statutes. Under the State laws, the CDFW is empowered to review projects for their potential impacts to listed species and their habitats.

In addition to formal endangered and threatened listings, the State of California also lists *Species of Special Concern* based on limited distribution, declining populations, diminishing habitat, or unusual scientific, recreational, or educational value. These species are not afforded the same legal protection as listed species, but may be added to

official lists in the future.

Federal Candidate species include taxa for which the USFWS currently has compiled substantial information on biological vulnerability and potential threats in order to support the appropriateness of proposing to list the taxa as endangered or threatened species. The State of California also maintains lists for Candidate-Endangered Species (CE) and Candidate-Threatened Species (CT).

A number of species have been designated as “fully protected” species under Sections 5515, 5050, 3511, and 4700 of the Fish and Game Code, but are not listed as endangered (Section 2062) or threatened (Section 2067) species under CESA. Except for take related to scientific research, all take of fully protected species is prohibited. The California Fish and Game Code defines take as “hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.” Additionally, Sections 3503, 3503.5, and 3513 of the California Fish and Game Code prohibits the killing of birds or the destruction of bird nests.

The Native Plant Protection Act (NPPA), enacted in 1977, allows the Fish and Game Commission to designate plants as rare or endangered. The NPPA prohibits take of endangered or rare native plants, with some exceptions for agricultural and nursery operations and emergencies. Vegetation removal from canals, roads, and other sites, changes in land use, and certain other situations require proper advance notification to CDFW.

Wetland-Aquatic Resource Regulatory Frameworkulation

Development in the planning area is subject to various local, state, and federal regulations and permits regarding the use of aquatic resources. The Placer County Flood Control and Water Conservation District, California Department of Water Resources, and Central Valley Regional Water Quality Control Board are the primary agencies responsible for the protection of watersheds, floodplains, and water quality. The Placer County Department of Health and Medical Services is the primary agency responsible for establishing design standards and permitting septic tanks and wells. The federal government administers the National Pollutant Discharge Elimination System (NPDES) permit program, which regulates discharges into surface waters. Section 404 of the Clean Water Act prohibits the discharge of dredged or fill materials into Waters of the United States or adjacent wetlands without a permit from the U.S. Army Corps of Engineers. Placement of dredge or fill into regulated aquatic resources, including wetlands, depending on type, are regulated by the federal and/or state government. The Army Corps of Engineers regulates impacts to waters of the U.S. under Section 404 of the federal Clean Water Act. The Clean Water Act regulates the discharge of dredge and fill materials in aquatic resources deemed waters of the U.S. The State of California also regulates impacts to waters of the U.S. under Section 401 of the federal Clean Water Act and regulates impacts to waters of the State through the Porter Cologne Water Quality Control Act. On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) that is outlined below. Wetlands are defined by the federal government as “...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. Wetlands generally include swamps, marshes, bogs, and similar areas.” This definition was developed for the purpose of identifying wetlands subject to regulation under Section 404 of the Clean Water Act, which is the principal law regulating the discharge of dredged and/or fill material into waters of the US. This definition differs from the functional definition of wetlands used by the U.S. Fish and Wildlife Service, which defines wetlands for inventory (not regulatory) purposes as “...lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water.”

The U.S. Fish and Wildlife Service definition includes both vegetated and non-vegetated wetlands, recognizing that some areas may lack vegetation (e.g., mud flats, rocky shores, gravel bars, sand beaches), but still provide functional wetland habitat elements for fish and wildlife. Some FWS-defined wetlands are not necessarily subject to regulation under Section 404, which formerly defines wetlands based on the presence of hydric soils, hydrology, and hydrophytic vegetation. It is important to note, however, that the California Department of Fish and Game has adopted the FWS definition as a matter of policy (Rollins, 1987). As such, wetland impacts are generally more expansive under the California Environmental Quality Act (CEQA) than under the National Environmental Policy Act (NEPA) and Clean Water Act. Under CEQA, impacts can also be determined significant for areas that do not

meet Federal wetland criteria if they are considered locally rare or unique. Wetland communities are considered Rare by the California Department of Fish and Game.

The U.S. Army Corps of Engineers has regulatory authority for certain fill activities within “waters of the United States.” These waters include perennial and intermittent streams, wetlands, vernal pools, natural lakes and ponds. All these wetland habitat types can be subject to regulatory jurisdiction of the U.S. Army Corps of Engineers (ACOE) under the provisions of Section 404 of the Clean Water Act.

Federal Requirements

Any person, firm, or agency planning to alter or work in “waters of the U.S.,” including the discharge of dredged or fill material, must first obtain authorization from the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA; 33 USC 1344). Permits, licenses, variances, or similar authorization may also be required by other federal, state, and local statutes. Section 10 of the Rivers and Harbors Act prohibits the obstruction or alteration of navigable waters of the U.S. without a permit from USACE (33 USC 403).

On April 21, 2020, the Environmental Protection Agency (EPA) and USACE published the Navigable Waters Protection Rule to define “Waters of the United States” in the Federal Register. On June 22, 2020 the Navigable Waters Protection Rule: Definition of “Waters of the United States” (NWPR) became effective in 49 states, including California, and in all US territories.

The NWPR regulates traditional navigable waters and perennial or intermittent tributary systems, and defines four categories of regulated waters including:

- The territorial seas and traditional navigable waters;
- Perennial and intermittent tributaries to those waters;
- Certain lakes, ponds, and impoundments; and
- Wetlands adjacent to jurisdictional waters.

The NWPR also defines 12 categories of exempted aquatic resources:

- Waters not listed as WOTUS
- Groundwater
- Ephemeral features
- Diffuse stormwater run-off
- Ditches not identified as WOTUS
- Prior converted cropland (PCC)
- Artificially irrigated areas
- Artificial lakes and ponds
- Water-filled depressions incidental to mining or construction activity
- Stormwater control features
- Groundwater recharge, water reuse, and wastewater recycling structures
- Waste treatment systems

With non-tidal waters, in the absence of adjacent wetlands, the extent of USACE jurisdiction extends to the ordinary high-water mark (OHWM) – the line on the shore established by fluctuations of water and indicated by a clear, natural line impressed on the bank, shelving, changes in soil character, destruction of terrestrial vegetation, or the presence of litter and debris. Wetlands are defined in 33 CFR Part 328 as: “those areas that are inundated or saturated by surface or ground water at a frequency and duration to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

Federal and state regulations pertaining to waters of the U.S., including wetlands, are discussed below.

1 Clean Water Act (33 USC 1251-1376). The CWA provides guidance for the restoration and maintenance of the
2 chemical, physical, and biological integrity of the nation's waters.

3
4 Section 401 requires that an applicant for a federal license or permit that allows activities resulting in a discharge
5 to waters of the U.S. must obtain a state certification that the discharge complies with other provisions of CWA.
6 The Regional Water Quality Control Board (RWQCB) administers the certification program in California and
7 may require State Water Quality Certification before other permits are issued.

8
9 Section 402 establishes a permitting system for the discharge of any pollutant (except dredged or fill material)
10 into waters of the U.S.

11
12 Section 404 establishes a permit program administered by USACE that regulates the discharge of dredged or fill
13 material into waters of the U.S. (including wetlands). Implementing regulations by USACE are found at 33 CFR
14 Parts 320-332. The Section 404 (b)(1) Guidelines were developed by the USEPA in conjunction with USACE
15 (40 CFR Part 230), allowing the discharge of dredged or fill material for non-water dependent uses into special
16 aquatic sites only if there is no practicable alternative that would have less adverse impacts.

17 **State Requirements**

18 **Waters of the State**

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22 Any action requiring a CWA Section 404 permit, or a Rivers and Harbors Act Section 10 permit, must also
23 obtain a CWA Section 401 Water Quality Certification. The State of California Water Quality Certification
24 (WQC) Program was formally initiated by the State Water Resources Control Board (SWRCB) in 1990 under
25 the requirements stipulated by section 401 of the Federal CWA. Although the Clean Water Act is a Federal law,
26 Section 401 of the CWA recognizes that states have the primary authority and responsibility for setting water
27 quality standards. In California, under Section 401, the State and Regional Water Boards are the authorities that
28 certify that issuance of a federal license or permit does not violate California's water quality standards (i.e., that
29 they do not violate Porter-Cologne and the Water Code). The WQC Program currently issues the WQC for
30 discharges requiring U.S. Army Corps of Engineers' (Corps) permits for fill and dredge discharges within Waters
31 of the United States, and now also implements the State's wetland protection and hydromodification regulation
32 program under the Porter Cologne Water Quality Control Act.

33
34 On April 2, 2019, the SWRCB adopted a State Wetland Definition and Procedures for Discharges of Dredged
35 or Fill Material to Waters of the State (Procedures), for inclusion in the forthcoming Water Quality Control Plan
36 for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California. The Procedures
37 consist of four major elements: 1) a wetland definition; 2) a framework for determining if a feature that meets
38 the wetland definition is a water of the state; 3) wetland delineation procedures; and 4) procedures for the
39 submittal, review and approval of applications for Water Quality Certifications and Waste Discharge
40 Requirements for dredge or fill activities. The Office of administrative Law approved the Procedures on August
41 28, 2019, and the Procedures became effective May 28, 2020.

42
43 Under the Procedures and the State Water Code (Water Code §13050(e)), "Waters of the State" are defined as
44 "any surface water or groundwater, including saline waters, within the boundaries of the state." Unless excluded
45 by the Procedures, any activity that could result in discharge of dredged or fill material to Waters of the State,
46 which includes Waters of the U.S. and non-federal Waters of the State, requires filing of an application under
47 the Procedures.

48
49 The Porter-Cologne Water Quality Control Act (Porter-Cologne Act, Water Code Section 13000 et seq.) is
50 California's statutory authority for the protection of water quality in conjunction with the federal CWA. The
51 Porter-Cologne Act requires the SWRCB and RWQCBs under the CWA to adopt and periodically update water
52 quality control plans, or basin plans. Basin plans are plans in which beneficial uses, water quality objectives, and
53 implementation programs are established for each of the nine regions in California. The Porter-Cologne Act also
54 requires dischargers of pollutants or dredged or fill material to notify the RWQCBs of such activities by filing

1 Reports of Waste Discharge and authorizes the SWRCB and RWQCBs to issue and enforce waste discharge
2 requirements, National Pollution Discharge Elimination System (NPDES) permits, Section 401 water quality
3 certifications, or other approvals.

4
5 **California Department of Fish and Wildlife**

6
7 The CDFW is a trustee agency that has jurisdiction under Section 1600 et seq. of the California Fish and Game
8 Code. Under Sections 1602 and 1603, a private party must notify CDFW if a proposed project will “substantially
9 divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the
10 department, or use any material from the streambeds...except when the department has been notified pursuant to Section 1601.”
11 Additionally, CDFW asserts jurisdiction over native riparian habitat adjacent to aquatic features, including
12 native trees over 4-inches in diameter at breast height (DBH). If an existing fish or wildlife resource may be
13 substantially adversely affected by the activity, CDFW may propose reasonable measures that will allow
14 protection of those resources. If these measures are agreeable to the parties involved, they may enter into an
15 agreement with CDFW identifying the approved activities and associated mitigation measures. Generally,
16 CDFW recommends submitting an application for a Streambed Alteration Agreement (SAA) for any work
17 done within the lateral limit of water flow or the edge of riparian vegetation, whichever is greater.
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