

## **7.4 Wildlife Resources**

### **7.4.1 Overview**

This section discusses wildlife resources in the vicinity<sup>1</sup> of Yuba County Water Agency's (YCWA or Licensee) Yuba River Development Project (Project) with a focus on special-status<sup>2</sup> and commercially valuable species.<sup>3</sup> In addition to this overview, Section 7.4 is divided into four subsections. Section 7.4.2 discusses general wildlife habitat in the Project Area.<sup>4</sup> Section 7.4.3 discusses special-status wildlife species that may occur in the Project Area as well as the suitable habitat types for these special-status species, their potential temporal and spatial distributions within the Project Area, and any documented occurrences within the Project Area. Section 7.4.4 discusses species listed by the California Department of Fish and Game (CDFG) as commercially valuable (i.e., harvestable) species. Section 7.4.5 describes relevant and reasonably available information regarding wildlife resources in areas upstream of the Project (i.e., on the Middle Yuba River upstream of Our House Diversion Dam, on Oregon Creek upstream of Log Cabin Diversion Dam, and on the North Yuba River upstream of New Bullards Bar Reservoir); within the Project Area; and downstream of the Project (i.e., on the Yuba River downstream of the United States Army Corps of Engineers' (USACE) Daguerre Point Dam).

### **7.4.2 Wildlife Habitat**

Based on the general vegetation patterns described in the Botanical Resources section of this Pre-Application Document (PAD) (Section 7.5), Licensee classified wildlife habitats in the Project Area using CDFG's California Wildlife Habitat Relationships (CWHR) system (de Becker and Sweet 1988; CDFG 2009d).

Table 7.4.2-1 presents the CWHR habitat types identified in the Project Area, and the corresponding United States Department of Agriculture Forest Service (Forest Service) CalVeg vegetation classification system (USFS 2004; CDFG 2009d). Descriptions of the CalVeg types and the methods used by Licensee for vegetation mapping are also presented in Section 7.5.2 (Upland Vegetation) of the Botanical Resources section. The two most dominant habitat types present are Douglas-fir and Montane Hardwood, which cover 23.2 percent and 22.7 percent of the Project Area, respectively. The third most represented habitat is lacustrine, which covers 15.8 percent of the Project Area.

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<sup>1</sup> For the purposes of this document, Project Vicinity is defined as the area surrounding the Project on the order of a United States Geological Survey (USGS) 1:24,000 topographic quadrangle.

<sup>2</sup> Refer to Section 7.4.3 for a definition of special-status wildlife species as used in this PAD.

<sup>3</sup> Refer to Section 7.4.4 for a definition of commercially valuable species as used in this PAD.

<sup>4</sup> For the purposes of this document, the Project Area is defined as the area within the FERC Project Boundary and the land immediately surrounding the FERC Project Boundary (i.e., within about 0.25 mile of the FERC Project Boundary) and includes Project-affected reaches between facilities and downstream to the next major water controlling feature or structure.

**Table 7.4.2-1. Wildlife habitat types in the Project Area and their equivalent vegetation community types.**

| CWHR <sup>1</sup>              | CalVeg Types <sup>2</sup>   | Acres <sup>3</sup> | %          |
|--------------------------------|---|--------------------|------------|
| Annual Grassland (AGS)         | Annual Grasses/Forbs  | 781                | 2.3        |
| Barren (BAR)                   | Barren  | 1,524              | 4.5        |
| Blue Oak—Foothill Pine (BOP)   | Gray Pine, Blue Oak   | 608                | 1.8        |
| Blue Oak Woodland (BOW)        | Blue Oak  | 1,328              | 3.9        |
| Cropland (CRP)                 | Agriculture   | 69                 | 0.2        |
| Douglas-fir (DFR)              | Pacific Douglas-fir, Sitka Spruce, Douglas Fir, White Fir, Ponderosa Pine, Grand Fir  | 7,872              | 23.2       |
| Fresh Emergent Wetland (FEW)   | Tule-Cattail  | 1                  | 0.003      |
| Lacustrine (LAC)               | Agriculture Ponds, Water Features, General Water (i.e., lakes, ponds, reservoirs, diversion impoundments)   | 5,359              | 15.8       |
| Mixed Chaparral (MCH)          | Lower Montane Mixed Chaparral, Manzanita Chaparral  | 273                | 0.8        |
| Montane Chaparral (MCP)        | Deerbrush, Greenleaf Manzanita, Huckleberry Oak, Pinemat Manzanita, Upper Montane, Mixed Chaparral  | 245                | 0.7        |
| Montane Hardwood—Conifer (MHC) | California Black Oak, Canyon Live Oak, Live Oak-Madrone, Interior Mixed Hardwood, Ponderosa Pine, Douglas Fir, Incense Cedar  | 2,219              | 6.5        |
| Montane Hardwood (MHW)         | California Black Oak, Canyon Live Oak, Interior Live Oak, Interior Mixed Hardwood, Montane Mixed Hardwood   | 7,683              | 22.7       |
| Montane Riparian (MRI)         | Bigleaf Maple, Black Cottonwood, Cottonwood-Alder, Dogwood, Fremont Cottonwood, Mixed Riparian Hardwood, Mountain Alder, Red Alder, Riparian Mixed Shrub, White Alder, Willow, Willow-Alder, Willow-Aspen | 17                 | 0.1        |
| Ponderosa Pine (PPN)           | Ponderosa Pine  | 2,200              | 6.5        |
| Riverine (RIV)                 | General water (i.e., rivers and streams)  | 649                | 1.9        |
| Sierran Mixed Conifer (SMC)    | Mixed Conifer-Fir, Mixed Conifer-Pine, Ponderosa Pine-White Fir   | 2,483              | 7.3        |
| Urban (URB)                    | Urban   | 239                | 0.7        |
| Valley Oak Woodland (VOW)      | Black Walnut, Valley Oak  | 32                 | 0.1        |
| Valley Foothill Riparian (VRI) | California Sycamore, Giant Reed/Pampas Grass  | 310                | 0.9        |
| Wet Meadow (WTM)               | Unknown Wet Grasses/Forbs, Wet Grasses/Forbs  | 6                  | 0.02       |
| <b>Total</b>                   | <b>20 CWHR habitat types</b>  | <b>33,897</b>      | <b>100</b> |

<sup>1</sup> de Becker and Sweet 1988, CDFG 2009a, 2009d

<sup>2</sup> USFS 2004

<sup>3</sup> Rounded to nearest acre

In addition to classifying wildlife habitat, the CWHR model predicts wildlife use based on habitat type, age class, size class, canopy closure or cover, and occurrence of specific habitat elements (e.g. natural or manmade features such as cliffs, springs, or transmission lines) that may influence thermal cover, forage, prey availability, nesting, escape cover, and breeding.

This analysis indicates that the Project Area supports a diversity of wildlife habitats and associated wildlife species that reflect wide variations in elevation, topography, and soils. Using the identified habitat types and CDFG’s CWHR system, Licensee identified 43 terrestrial vertebrate wildlife species of special-status that potentially may occur within the Project Area (CDFG 2009d). These species include 1 reptile, 29 birds, and 13 mammals. Special-status amphibians and aquatic reptiles are discussed in the Aquatic Resources Section of this PAD (Section 7.3). The complete CWHR species list is presented at the end of this section as Attachment 7.4A.

Although CWHR-generated lists are a useful tool for predicting general species occurrence, they should be interpreted cautiously because errors of omission (e.g., excluding a species that is

present) and commission (e.g., including a species that is absent) are likely when this broad-scale model is used for localized applications.

### **7.4.3 Special-Status Wildlife Species**

#### **7.4.3.1 Definition of Special-Status Wildlife Species**

For the purpose of this PAD, a special-status wildlife species is a species that has a reasonable possibility of occurring in the Project Area and meets one or more of the following criteria:

- Found on National Forest System (NFS) land managed by the Forest Service, and identified by the Forest Service as a Forest Service Sensitive (FSS) species.
- Found on NFS land managed by the Forest Service, and identified by the *Sierra Nevada Forest Management Indicator Species Amendment*, or SNFMISA (USFS 2007) list (MIS).
- Species designated by CDFG as a Species of Special Concern (SSC) (Bolster 1998, CDFG 2009a, Jennings and Hayes 1994).

Wildlife species listed as threatened (FT) or endangered (FE) under the Federal Endangered Species Act (ESA), threatened (ST) or endangered (SE) under the California Endangered Species Act (CESA), and species that are considered CDFG Fully Protected (FP) are not discussed in this section, regardless of any other special-status designations assigned to them. These species are discussed separately in the Threatened, Endangered, and Fully Protected Species Section of this PAD (Section 7.7).

#### **7.4.3.2 Special-Status Wildlife Species with the Potential to Occur in the Project Area**

Table 7.4.3-1 presents a list of special-status wildlife species that occur, or have the potential to occur, in the Project Area. CDFG's California Natural Diversity Database (CNDDDB) and the Tahoe National Forest (TNF) species occurrence database were used as the primary sources to identify previously reported occurrences of special-status species and sensitive habitats in the Project Area (CDFG 2009e; USFS 2009).<sup>5</sup> The complete CNDDDB query is presented at the end of this section as Attachment 7.4B. CNDDDB occurrence data are presented in Attachment 7.4C. The CNDDDB is a statewide inventory maintained by CDFG which is continually updated with the locations and conditions of the State's rare and declining species and habitats. Although the CNDDDB is the most current and reliable tool for tracking occurrences of special-status species, it contains only those records that have been submitted to CDFG. Occurrence data obtained from the TNF are also included in Table 7.4.3-1 and Attachment 7.4C.

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<sup>5</sup> The Project Area overlaps areas of the Plumas National Forest (PNF) and TNF. At the time of this PAD's filing, PNF had not provided forest-specific information.

**Table 7.4.3-1. Special-Status wildlife species (i.e., reptiles, birds, and mammals) occurring or potentially occurring in the Project Area.**

| Common Name/<br>Scientific Name   | Status <sup>1</sup> | Suitable Habitat Type   | Temporal and<br>Spatial Distribution <sup>2</sup>                            | Occurrence in<br>Project Area   |
|---|---------------------|---|--|---|
| <b>REPTILES</b>   |                     |   |  |   |
| Coast horned lizard<br><i>Phrynosoma coronatum</i>                                      | SSC, FSS            | Occurs in a variety of habitats, including scrubland, grassland, coniferous woods, and broadleaf woodlands; typically it is found in areas with sandy soil, scattered shrubs, and ant colonies, such as along the edges of arroyo bottoms or dirt roads.      | Yearlong-AGS, BOP, BOW, MHC, PPN, VOW, VRI                                   | Potentially occur within suitable habitat.  |
| <b>BIRDS</b>  |                     |   |  |   |
| American white pelican<br><i>Pelecanus erythrorhynchos</i>                              | SSC                 | Rivers, lakes, reservoirs, estuaries, bays, marshes; sometimes inshore marine habitats.   | Summer-BAR, Yearlong & Winter-LAC  | Potentially occur within suitable habitat.  |
| Common loon<br><i>Gavia immer</i>   | SSC                 | Lakes containing both shallow and deep water.   | Yearlong- LAC  | Potentially occur within suitable habitat.  |
| Redhead<br><i>Aythya americana</i>  | SSC                 | Open water on lakes, ponds, and reservoirs.   | Winter- LAC, Yearlong - FEW  | Potentially occur within suitable habitat.  |
| Barrow's goldeneye<br><i>Bucephala islandica</i>  | SSC                 | Winters on lakes, rivers, estuaries, and bays. Usually nests near lake or pond surrounded by dense vegetation.  | Yearlong- LAC  | Potentially occur within suitable habitat.  |
| Harlequin duck<br><i>Histrionicus histrionicus</i>                                      | SSC                 | Historic breeding grounds include west slope of the Sierra Nevada along shores of swift, shallow rivers.  | Yearlong- LAC  | Potentially occur within suitable habitat.  |
| Northern harrier<br><i>Circus cyaneus</i>   | SSC                 | Marshes, meadows, grasslands, and cultivated fields.  | Yearlong-AGS, BAR, BOP, BOW, LAC, FEW, VOW, VRI, WTM                         | Potentially occur within suitable habitat.  |
| Northern goshawk<br><i>Accipiter gentilis</i>   | SSC, FSS            | Deciduous, coniferous, and mixed forests. Prefers large tracts of mature forest, especially those dominated with ponderosa pine, aspen, fir, cedar, hemlock, or spruce. Usually nests on north slopes near water.   | Summer-DFR, MCP, MHC, MHW, PPN, SMC, MRI                                     | Potentially occur within suitable habitat.  |
| Sooty (blue) grouse<br><i>Dendragapus obscurus</i> or<br><i>Dendragapus fuliginosus</i> | MIS                 | Mixed forests dominated by Black Oak, Lodgepole Pine, Red Fir, Mountain Hemlock and White Pine dominated forest from 1200 ft to 7500 ft elevation   | Yearlong-DFR, MCP, MHC, MHW, PPN, SMC, MRI, Winter-BOP, BOW, VOW, VRI        | Three occurrences within Project area quads on CNDDB.   |
| Mountain quail<br><i>Oreortyx pictus</i>  | MIS                 | Mixed forests dominated by Black Oak, Lodgepole Pine, Red Fir, Mountain Hemlock and White Pine dominated forest from 1200 ft to 7500 ft elevation and mountain chaparral  | Yearlong-MHC, SMC, PPN, WFR, SCN, MRI  | Potentially occur within suitable habitat.  |
| Black tern<br><i>Chlidonias niger</i>   | SSC                 | Marshes, along sloughs, rivers, lakeshores, and impoundments, or in wet meadows.  | Summer- LAC, FEW, WTM  | Potentially occur within suitable habitat.  |
| Burrowing owl<br><i>Athene cucularia</i>  | SSC                 | Open grasslands, especially prairie, plains, and savanna, sometimes in open areas such as vacant lots near human habitation or airports.  | Yearlong-AGS, BAR, BOP, BOW, MCP, PPN, VOW, VRI, WTM                         | Potentially occur within suitable habitat.  |
| Long-eared owl<br><i>Asio otus</i>  | SSC                 | Riparian bottomland forest with overstory of willows and cottonwoods; Riparian forest along stream corridors (often dominated by live oak trees). Wooded areas with dense vegetation needed for roosting and nesting, adjacent open areas needed for hunting. | Yearlong-AGS, BOP, BOW, MCP, MHC, MHW, PPN, SMC, VOW, VRI, WTM, Summer - MRI | Potentially occur within suitable habitat: one occurrence within Project Area quads on CNDDB. |
| Short-eared owl<br><i>Asio flammeus</i>   | SSC                 | Broad expanses of open land with low vegetation for nesting and foraging are required.  | Yearlong-AGS, FEW, VRI, WTM<br>Winter-BOP, BOW, DFR, MHC, PPN, SMC, MRI, VOW | Potentially occur within suitable habitat.  |

Table 7.4.3-1. (continued)

| BIRDS (continued)  |                     |   |  |   |
|--|---------------------|---|--|---|
| Common Name/<br>Scientific Name                                  | Status <sup>1</sup> | Suitable Habitat Type   | Temporal and<br>Spatial Distribution <sup>2</sup>                                | Occurrence in<br>Project Area   |
| California spotted owl<br><i>Strix occidentalis occidentalis</i> | SSC, FSS,<br>MIS    | Mixed forests dominated by Black Oak, Lodgepole Pine, Red Fir from 1200 ft to 5500 ft elevation   | Yearlong-BOP, MHW, VRI.<br>Summer-MRI  | 16 observations made by USFS within Project Area. USFS observations are shown in Attachment 7.4C – Wildlife Observations Map. |
| Purple martin<br><i>Progne subis</i>                             | SSC                 | A wide variety of open and partly open situations, frequently near water or around towns.   | Summer-AGS, BOP, BOW, DFR, MHC, MHW, PPN, SMC, LAC, FEW, MRI, VOW, WTM           | Potentially occur within suitable habitat.  |
| Loggerhead shrike<br><i>Lanius ludovicianus</i>                  | SSC                 | Open country with scattered trees and shrubs, savanna, desert scrub, and, occasionally, open woodland; often perches on poles, wires or fence posts.  | Yearlong-AGS, BAR, BOP, BOW, MCH, MHC, MHW, PPN, VOW, VRI, WTM. Summer-MRI       | Potentially occur within suitable habitat.  |
| Yellow-breasted chat<br><i>Icteria virens</i>                    | SSC                 | Second growth, shrubby old pastures, thickets, bushy areas, scrub, woodland undergrowth, and fence rows, including low wet places near streams, pond edges, or swamps; thickets with few tall trees   | Yearlong- LAC, VRI. Summer-VRI.<br>Migrant-MRI                                   | Potentially occur within suitable habitat.  |
| Yellow warbler<br><i>Dendroica petechia</i>                      | SSC, MIS            | Open scrub, second-growth woodland, thickets, farmlands, and gardens, especially near water; riparian woodlands, especially of willows, in the West.  | Summer-BOP, BOW, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI.<br>Migrant-DFR          | Potentially occur within suitable habitat.  |
| Common yellowthroat<br><i>Geothlypis trichas</i>                 | SSC                 | Marshes (especially cattail), thickets near water, bogs, brushy pastures, and old fields. In migration and winter in brushy and shrubby areas in both moist and arid regions.   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, VRI, WTM. Summer-MRI  | Potentially occur within suitable habitat.  |
| Fox sparrow<br><i>Passerella iliaca</i>                          | MIS                 | Dense thickets in coniferous or mixed woodlands, chaparral, along rivers and creeks. Requires dense brushy cover during the nesting season.   | Yearlong-MHC, MCH  | Potentially occur within suitable habitat.  |
| Oregon vesper sparrow<br><i>Pooecetes gramineus affinis</i>      | SSC                 | Plains, prairie, dry shrublands, savanna, weedy pastures, fields, sagebrush, arid scrub, and woodland clearings.  | Winter-AGS, BOP, BOW, VOW.<br>Summer-MCP   | Potentially occur within suitable habitat.  |
| Grasshopper sparrow<br><i>Ammodramus savannarum</i>              | SSC                 | Prefer grasslands of intermediate height and are often associated with clumped vegetation interspersed with patches of bare ground. Other habitat requirements include moderately deep litter and sparse coverage of woody vegetation.                        | Summer-AGS, WTM  | Potentially occur within suitable habitat.  |
| Olive-sided flycatcher<br><i>Contopus cooperi</i>                | SSC                 | Forest and woodland, in burned-over areas with standing dead trees, in taiga, subalpine coniferous forest and mixed coniferous-deciduous forest. Also swampy edges of lakes, marshy streams, backwaters of rivers.  | Summer-DFR, MHC, MHW, PPN, SMC, MRI. Migrant-BOP                                 | Potentially occur within suitable habitat.  |
| Yellow-headed blackbird<br><i>Xanthocephalus xanthocephalus</i>  | SSC                 | Fresh-water marshes of cattail, tule, or bulrushes. Nests in wet grasses, reeds, cattails. Also in open cultivated lands, pastures and fields.  | Yearlong- LAC, FEW. Summer-AGS, WTM  | Potentially occur within suitable habitat.  |
| Tricolored blackbird<br><i>Agelaius tricolor</i>                 | SSC                 | Fresh-water marshes of cattails, tule, bulrushes, and sedges. Nests in vegetation of marshes or thickets, sometimes nests on the ground. Historically strongly tied to emergent marshes; in recent decades much nesting has shifted to non-native vegetation. | Yearlong-AGS, FEW, VRI, WTM  | Potentially occur within suitable habitat.  |
| Black swift<br><i>Cypseloides niger</i>                          | SSC                 | Nests in moist crevices or caves, or on cliffs near waterfalls in deep canyons. Forages widely over many habitats.  | Summer-AGS, BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, LAC, MRI, VOW, VRI, WTM | Potentially occur within suitable habitat.  |

Table 7.4.3-1. (continued)

| Common Name/<br>Scientific Name                                   | Status <sup>1</sup> | Suitable Habitat Type  | Temporal and<br>Spatial Distribution <sup>2</sup>   | Occurrence in<br>Project Area  |
|---|---------------------|--|---|--|
| <b>BIRDS (continued)</b>  |                     |  |   |  |
| Vaux's swift<br><i>Chaetura vauxi</i>                             | SSC                 | Found in mature forests but also forages and migrates over open country.   | Summer-BOP, DFR, MCP, MHC, MHW, PPN, SMC, LAC, FEW, MRI, VRI, WTM                             | Potentially occur within suitable habitat.   |
| Black-backed woodpecker<br><i>Picoides arcticus</i>               | MIS                 | Associated with boreal and montane coniferous forests, especially in areas with standing dead trees such as burns, bogs, and windfalls; less frequently in mixed forest  | Yearlong-SMC, MHC   | Potentially occur within suitable habitat.   |
| Hairy woodpecker<br><i>Picoides villosus</i>                      | MIS                 | Found in mixed conifer and riparian deciduous habitat from sea level to 9000ft.  | Yearlong-MHC, MHW   | Potentially occur within suitable habitat.   |
| <b>MAMMALS</b>  |                     |  |   |  |
| Western red bat<br><i>Lasiurus blossevillii</i>                   | SSC, FSS            | Roosts in foliage, forages in open areas (sea level up through mixed conifer forests).   | Yearlong-AGS, BOP, BOW, MCP, MHC, MRI, VOW, VRI, WTM.<br>Summer-DFR, MHW, PPN, SMC, LAC, FEW  | Potentially occur within suitable habitat: two occurrences within Project Area quads on CNDDB. |
| Spotted bat<br><i>Eidemia maculatum</i>                           | SSC                 | Possibly occupies coniferous stands in summer and migrates to lower elevations in late summer/early fall.  | Yearlong-AGS, BOP, BOW, MCP, MHC, PPN, SMC, LAC, MRI, VOW, VRI, WTM                           | Potentially occur within suitable habitat.   |
| Townsend's big-eared bat<br><i>Corynorhinus townsendii</i>        | SSC, FSS            | Maternity and hibernation colonies typically are in caves and mine tunnels. Prefers relatively cold places for hibernation, often near entrances and in well-ventilated areas.   | Yearlong-BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI. Summer-AGS, LAC, WTM     | Potentially occur within suitable habitat.   |
| Pallid bat<br><i>Antrozous pallidus</i>                           | SSC, FSS            | Arid deserts and grasslands, often near rocky outcrops and water. Less abundant in evergreen and mixed conifer woodland. Usually roosts in rock crevice or building, less often in cave, tree hollow, mine, etc.   | Yearlong-AGS, BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI, WTM.<br>Summer- LAC | Potentially occur within suitable habitat: one occurrence within Project Area quads on CNDDB.  |
| Western mastiff bat<br><i>Eumops perotis</i>                      | SSC                 | Roosts in crevices and shallow caves on the sides of cliffs and rock walls, and occasionally buildings. Roosts usually high above ground with unobstructed approach. Most roosts are not used throughout the year. May alternate between different day roosts. | Yearlong-AGS, BAR, BOP, BOW, MCP, MHC, MHW, PPN, FEW, MRI, VOW, VRI, WTM                      | Potentially occur within suitable habitat.   |
| Sierra Nevada snowshoe hare<br><i>Lepus americanus talhoensis</i> | SSC                 | Montane riparian habitats (5,000–8,000 ft)   | Yearlong-DFR, SMC, MRI  | Potentially occur within suitable habitat.   |
| Northern flying squirrel<br><i>Glaucomys sabrinus</i>             | FSS, MIS            | Coniferous and mixed forest, but will utilize deciduous woods and riparian woods.  | Yearlong-BOP, BOW, DFR, MHC, MHW, PPN, SMC, MRI, VOW, VRI                                     | Potentially occur within suitable habitat.   |
| American marten<br><i>Martes americana sierra</i>                 | FSS, MIS            | Mixed evergreen forest with > 40% crown closure.   | Yearlong-BAR, DFR, MHC, PPN, SMC, MRI, WTM  | Potentially occur within suitable habitat: one occurrence within Project Area quads on CNDDB.  |
| Pacific fisher<br><i>Martes pennantii pacifica</i>                | FSS, SSC            | Dense riparian-deciduous and open, brushy stages of most forest types.   | Yearlong – DFR, MHC, PPN, SMC, MRI.   | Potentially occur within suitable habitat.   |

**Table 7.4.3-1. (continued)**

| Common Name/<br>Scientific Name                                     | Status <sup>1</sup> | Suitable Habitat Type  | Temporal and<br>Spatial Distribution <sup>2</sup>                                    | Occurrence in<br>Project Area              |
|---|---------------------|--|--|--|
| Mule deer<br><i>Odocoileus hemionus</i>                             | MIS                 | Early to intermediate successional stages of most forest, woodland, and brush habitats interspersed with herbaceous openings, dense brush or tree thickets, riparian areas, and abundant edge. | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, FEW, MRI, VOW, VRI, WTM. Summer-PPN, SMC | Potentially occur within suitable habitat. |
| <b>MAMMALS (continued)</b>  |                     |  |  |  |
| American badger<br><i>Taxidea taxus</i>                             | SSC                 | Prefers open areas and may also frequent brushlands with little groundcover. When inactive, occupies underground burrow.   | Yearlong-AGS, BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, WTM             | Potentially occur within suitable habitat. |
| Sierra Nevada mountain beaver<br><i>Aplodontia rufa californica</i> | SSC                 | Dense riparian-deciduous and open, brushy stages of most forest types  | Yearlong-MCH, MHC, SMC, MRI, WTM   | Potentially occur within suitable habitat. |

Sources: CDFG 2009 d.e.; Humple and Geupel 2004; NatureServe 2009; USFS 2008; USFWS 2009a

<sup>1</sup> Status:

FSS = Forest Service Sensitive Species (CDFG 2009d,e);

MIS = Forest Service Management Indicator Species (USFS 2008)

SSC = California Species of Special Concern (CDFG 2009d,e)

<sup>2</sup> CWHR Habitat Types:

AGS = Annual Grass

BAR = Barren

BOP = Blue Oak Foothill Pine

BOW = Blue Oak Woodland

CRP = Cropland

DFR = Douglas Fir

FEW = Fresh Emergent Wetland

LAC = Agriculture Ponds, Water Features, General Water (i.e., lakes, ponds, reservoirs, diversion impoundments)

MCH = Mixed Chaparral

MCP = Montane Chaparral

MHC = Montane Hardwood Conifer

MHW = Montane Hardwood

MRI = Montane Riparian

PPN = Ponderosa Pine

RFR = Red Fir

RIV = Riverine

SCN = Subalpine Conifer

SMC = Sierran Mixed Conifer

URB = Urban

VOW = Valley Oak Woodland

VRI = Valley Foothill Riparian

WFR = White Fir

WTM = Wet Meadow

Potential occurrences of special-status wildlife species and their corresponding temporal and spatial information were derived from a query of the CWHR database (CDFG 2009d). Habitat types known or likely to occur within the Project Area (listed in Table 7.4.2-1) were used as the search criteria within CWHR (CDFG 2009d). Descriptions of suitable habitat types used by each species were synthesized from species accounts found online at NatureServe® and the CDFG CWHR life history database (NatureServe 2009; CDFG 2009f). Temporal data provided in this table correspond to the seasonal occurrence of the species within the Project Area. Spatial data provided in the table correspond to the habitat types typically supporting each species. Additional sources of information were queried for potentially occurring special-status species. These additional sources included the United States Department of Interior, Fish and Wildlife Service (USFWS) Sacramento Field Office database of listed species (USFWS 2009b), TNF species occurrence database (USFS 2009), and other published sources located during Licensee's gathering of relevant and reasonably available information.

Table 7.4.3-1 includes 43 wildlife species: 1 reptile, 29 birds, and 13 mammals. This list includes:

- Twenty-six species listed only as SSC. These include: common loon (*Gavia immer*), American white pelican (*Pelecanus erythrorhynchos*), northern harrier (*Circus cyaneus*), black tern (*Chlidonias niger*), long-eared owl (*Asio otus*), short-eared owl (*Asio flammeus*), burrowing owl (*Athene cunicularia*), purple martin (*Progne subis*), loggerhead shrike (*Lanius ludovicianus*), yellow-breasted chat (*Icteria virens*), common yellowthroat (*Geothlypis trichas*), Oregon vesper sparrow (*Pooecetes gramineus affinis*), grasshopper sparrow (*Ammodramus savannarum*), olive-sided flycatcher (*Contopus cooperi*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), tricolored blackbird (*Agelaius tricolor*), black swift (*Cypseloides niger*), Vaux's swift (*Chaetura vauxi*), redhead (*Aythya americana*), Barrow's goldeneye (*Bucephala islandica*), harlequin duck (*Histrionicus histrionicus*), spotted bat (*Euderma maculatum*), western mastiff bat (*Eumops perotis*), American badger (*Taxidea taxus*), Sierra Nevada snowshoe hare (*Lepus americanus tahoensis*), and Sierra Nevada mountain beaver (*Aplodontia rufa californica*).
- Six species listed only as MIS. These include: mountain quail (*Oreortyx pictus*), fox sparrow (*Passerella iliaca*), hairy woodpecker (*Picoides villosus*), black-backed woodpecker (*Picoides arcticus*), sooty (blue) grouse (*Dendragapus obscurus* or *Dendragapus fuliginosus*), and mule deer (*Odocoileus hemionus*).
- Ten species listed as special-status species by two or more agencies. These include: coast horned lizard (*Phrynosoma coronatum*), northern goshawk (*Accipiter gentilis*), California spotted owl (*Strix occidentalis occidentalis*), yellow warbler (*Dendroica petechia*), western red bat (*Lasiurus blossevillii*), Townsend's big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), northern flying squirrel (*Glaucomys sabrinus*), American marten (*Martes americana*) and Pacific fisher (*Martes pennanti pacifica*).

#### 7.4.4 Commercially Valuable Wildlife Species

Thirty-eight bird and 19 mammal species that have been designated as commercially valuable by CDFG have the potential to occur within the Project Area. Table 7.4.4-1 lists these species

(CDFG 2009d,e). Table 7.4.4-1 also includes temporal and spatial information and descriptions of suitable habitat used by each of the species. CWHR system habitat types listed in Table 7.4.2-1 were used to query the CWHR computer program in order to obtain temporal and spatial information for each species (CDFG 2008e). Temporal data correspond to the seasonal occurrence of the species within the Project Area. Spatial data provided in the table correspond to the habitat types typically supporting each species; these spatial data can be used in conjunction with vegetation descriptions and mapping presented in the Botanical Resources section of this PAD (Section 7.5). Descriptions of suitable habitat types were synthesized from species accounts found online at NatureServe<sup>®</sup> and the CDFG CWHR life history database (NatureServe 2009; CDFG 2009f).

Of the commercially valuable (i.e., harvestable) species, seven species are also special-status wildlife species that are known to occur or have the potential to occur in the Project Area (Table 7.4.3-1). Four are designated as SSC and they include American badger, Barrow's goldeneye, harlequin duck, and redhead (CDFG 2009a; USFWS 2009b). The remaining three harvest species are designated as MIS, and they include sooty (blue) grouse, mountain quail, and mule deer (CDFG 2009a; USFWS 2009b).

**Table 7.4.4-1. Commercially valuable wildlife species occurring or potentially occurring in the Project Area.**

| Common Name/<br>Scientific Name  | Suitable Habitat Type  | Temporal and<br>Spatial Distribution <sup>2</sup>                             | Occurrence in<br>Project Area              |
|--|--|---|--|
| <b>BIRDS</b>   |  |   |  |
| Snow goose<br><i>Chen caerulescens</i>   | Freshwater wetlands, wet prairies and extensive sandbars, foraging in pastures, cultivated lands and flooded fields  | Winter-AGS, LAC, FEW, WTM   | Potentially occur within suitable habitat. |
| Ross's goose<br><i>Chen rossii</i>   | Marshy lakes, wet prairies, foraging in grassy areas, pastures and cultivated fields   | Winter-AGS, LAC, FEW, WTM   | Potentially occur within suitable habitat. |
| Canada goose<br><i>Branta canadensis</i>   | Overhead while migrating, marshes with tall grass and sedges near water  | Yearlong-AGS, URB, LAC, FEW, WTM  | Potentially occur within suitable habitat. |
| Wood duck<br><i>Aix sponsa</i>   | Inland waters near woodlands such as swamps and marshes  | Yearlong-BOP, BOW, DFR, MHW, SMC, PPN, MHC, LAC, FEW, MRI, VOW, VRI           | Potentially occur within suitable habitat. |
| Sooty (blue) grouse <sup>1</sup><br><i>Dendragapus obscurus</i> or<br><i>Dendragapus fuliginosus</i> | Mixed forests dominated by Black Oak, Lodgepole Pine, Red Fir, Mountain Hemlock and White Pine dominated forest from 1200 ft to 7500 ft elevation  | Yearlong-MHC, SMC, PPN, WFR, SCN, MRI   | Potentially occur within suitable habitat. |
| Chukar<br><i>Alectoris chukar</i>  | Rocky hillsides, mountain slopes with grassy vegetation, open and flat desert with sparse grasses, and barren plateaus.  | Yearlong-AGS, MRI, VRI  | Potentially occur within suitable habitat. |
| California quail<br><i>Callipepla californica</i>  | Lower elevations and transition zone of mixed conifer forest between 1200 and 7000 ft elevation  | Yearlong-AGS, BOP, BOW, DFR, MCH, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI, WTM | Potentially occur within suitable habitat. |
| Greater white-fronted goose<br><i>Anser albifrons</i>  | Wetlands, grain fields, grassy fields, marshes, lakes and ponds. Breeds on arctic tundra on edge of marshes, lakes, sloughs, rivers  | Yearlong-AGS, LAC. Winter-FEW, WTM  | Potentially occur within suitable habitat. |
| Northern pintail<br><i>Anas acuta</i>  | Lakes, rivers, marshes and ponds in grasslands, barrens, dry tundra, open boreal forest, or cultivated fields. Most breeding associated with seasonal and semi-permanent wetlands.         | Yearlong-AGS, LAC, FEW, WTM. Winter-LAC                                       | Potentially occur within suitable habitat. |
| Gadwall<br><i>Anas strepera</i>  | Open water on lakes, ponds, reservoirs and backwaters  | Yearlong-AGS, LAC, FEW, WTM   | Potentially occur within suitable habitat. |
| Redhead <sup>1</sup><br><i>Aythya americana</i>  | Open water on lakes, ponds and reservoirs  | Winter-LAC. Yearlong - FEW  | Potentially occur within suitable habitat. |
| American wigeon<br><i>Anas americana</i>   | Open water on lakes, ponds, reservoirs and backwaters  | Yearlong-AGS, LAC, FEW, WTM   | Potentially occur within suitable habitat. |
| Eurasian wigeon<br><i>Anas penelope</i>  | Winters primarily in freshwater (marshes, lakes) and brackish situations in coastal areas but migrates extensively through inland regions; occurs in shallow water and fields and meadows. | Winter-AGS, LAC, FEW  | Potentially occur within suitable habitat. |
| Mallard<br><i>Anas platyrhynchos</i>   | Primarily shallow waters such as ponds, lakes, marshes, and flooded fields.  | Yearlong-AGS, LAC, FEW, MRI, VRI, WTM   | Potentially occur within suitable habitat. |
| Bufflehead<br><i>Bucephala albeola</i>   | Lakes, ponds, rivers and seacoasts. Breeds in tree cavities in mixed coniferous-deciduous woodland near lakes and ponds.   | Yearlong-LAC, FEW. Summer-MRI. Winter-VRI                                     | Potentially occur within suitable habitat. |
| Cinnamon teal<br><i>Anas cyanoptera</i>  | Shallow open water on lakes, ponds, reservoirs and in marshes  | Summer-AGS, WTM. Yearlong-LAC, FEW, VRI                                       | Potentially occur within suitable habitat. |
| Northern shoveler<br><i>Anas clypeata</i>  | Open water on lakes, ponds and reservoirs  | Yearlong-AGS, LAC, FEW, WTM   | Potentially occur within suitable habitat. |

Table 7.4.4-1. (continued)

| Common Name/<br>Scientific Name                                 | Suitable Habitat Type   | BIRDS (continued) | Temporal and<br>Spatial Distribution <sup>2</sup>                               | Occurrence in<br>Project Area              |
|---|---|-------------------|---|--|
| Green-winged teal<br><i>Anas crecca</i>                         | Open water on lakes, ponds, reservoirs and in marshes.  |                   | Yearlong-AGS, LAC, FEW, MRI, WTM, Winter- LAC                                   | Potentially occur within suitable habitat. |
| Blue-winged teal<br><i>Anas discors</i>                         | Open water on lakes, ponds, reservoirs and in Marshes.  |                   | Yearlong- LAC, Summer-AGS, FEW, WTM, Winter- FEW                                | Potentially occur within suitable habitat. |
| Canvasback<br><i>Aythya valisineria</i>                         | Open water on lakes, ponds, reservoirs, and Marshes.  |                   | Winter- LAC, Yearlong-FEW   | Potentially occur within suitable habitat. |
| Ring-necked duck<br><i>Aythya collaris</i>                      | Open water on lakes, ponds, and reservoirs.   |                   | Winter- LAC, Summer-FEW, WTM  | Potentially occur within suitable habitat. |
| Lesser scaup<br><i>Aythya affinis</i>                           | Open water on lakes, ponds and reservoirs.  |                   | Winter- LAC, Yearlong-FEW, Summer-WTM   | Potentially occur within suitable habitat. |
| Greater scaup<br><i>Aythya marila</i>                           | Open water and on emergent wetlands. Breeds primarily in tundra and northern borders of the taiga.  |                   | Summer-AGS, Yearlong- LAC   | Potentially occur within suitable habitat. |
| Common goldeneye<br><i>Bucephala clangula</i>                   | Open water on lakes, ponds and reservoirs.  |                   | Winter- LAC, VRI  | Potentially occur within suitable habitat. |
| Barrow's goldeneye <sup>1</sup><br><i>Bucephala islandica</i>   | Open water on lakes, ponds and reservoirs   |                   | Yearlong- LAC   | Potentially occur within suitable habitat. |
| Harlequin duck <sup>1</sup><br><i>Histrionicus histrionicus</i> | Nests along fast-moving rivers and mountain streams on rocky islands or rocky banks.  |                   | Yearlong- LAC   | Potentially occur within suitable habitat. |
| Hooded merganser<br><i>Mergus cucullatus</i>                    | Open water on lakes, ponds and reservoirs.  |                   | Winter- LAC, FEW, VRI   | Potentially occur within suitable habitat. |
| Common merganser<br><i>Mergus merganser</i>                     | Open water on lakes, ponds and reservoirs.  |                   | Yearlong- LAC, FEW, MRI, VRI, Summer - WTM                                      | Potentially occur within suitable habitat. |
| Red-breasted merganser<br><i>Mergus serrator</i>                | Open water on lakes, ponds and reservoirs.  |                   | Winter- LAC   | Potentially occur within suitable habitat. |
| Ruddy duck<br><i>Oxyura jamaicensis</i>                         | Open water on lakes, ponds, reservoirs and Marshes.   |                   | Yearlong- LAC, FEW, VRI   | Potentially occur within suitable habitat. |
| Ring-necked pheasant<br><i>Phasianus colchicus</i>              | Open country (especially cultivated areas, scrubby wastes, open woodland and edges of woods), grassy steppe, desert oases, riverside thickets, swamps and open mountain forest. |                   | Yearlong-AGS, BOP, FEW, VRI, WTM  | Potentially occur within suitable habitat. |
| Wild turkey<br><i>Meleagris gallopavo</i>                       | Pinyon-Juniper woodlands.   |                   | Yearlong-AGS, BOP, BOW, MCH, MCP, MHC, MHW, PPN, MRI, VOW, VRI, WTM, Summer-SMC | Potentially occur within suitable habitat. |
| Band-tailed pigeon<br><i>Columba fasciata</i>                   | Lower elevations and transition zone of mixed conifer forest between 1200 and 5500 ft elevation.  |                   | Yearlong-MHC, MHW, PPN, VRI, Winter-BOP, BOW, VOW, Summer-MCP, SMC, MRI         | Potentially occur within suitable habitat. |
| Mountain quail <sup>1</sup><br><i>Oreortyx pictus</i>           | Mixed forests dominated by Black Oak, Lodgepole Pine, Red Fir, Mountain Hemlock and White Pine dominated forest from 1200 ft to 7500 ft elevation and mountain Chaparral.       |                   | Yearlong-AGS, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VRI, WTM, Winter-BOP           | Potentially occur within suitable habitat. |
| Common moorhen<br><i>Gallinula chloropus</i>                    | Freshwater marshes, canals, quiet rivers, lakes, ponds, mangroves, primarily in areas of emergent vegetation and grassy borders.  |                   | Yearlong- LAC, FEW  | Potentially occur within suitable habitat. |

Table 7.4.4-1. (continued)

| Common Name/<br>Scientific Name                      | Suitable Habitat Type   | BIRDS (continued) | Temporal and<br>Spatial Distribution <sup>2</sup>                                  | Occurrence in<br>Project Area              |
|--|---|-------------------|--|--|
| American coot<br><i>Fulica americana</i>             | Open water areas, along lake shores and stream edges, and in marshes.   |                   | Winter-AGS, Yearlong- LAC, FEW, Summer-WTM   | Potentially occur within suitable habitat. |
| Mourning dove<br><i>Zenaidura macroura</i>           | Lower elevations and transition zone of mixed conifer forest between 1200 and 5500 ft elevation.  |                   | Yearlong-AGS, BOP, BOW, DFR, MHC, SMC, VOW, VRI, WTM. Summer-MCP, MHW, PPN, MRI    | Potentially occur within suitable habitat  |
| American crow<br><i>Corvus brachyrhynchos</i>        | Open and partly open country: agricultural lands, suburban areas, orchards, and tidal flats.  |                   | Yearlong-AGS, BOP, BOW, DFR, MHW, LAC, VOW, VRI. Migrant-MHC, PPN, SMC, MRI        | Potentially occur within suitable habitat. |
| <b>MAMMALS</b>                                       |   |                   |  |  |
| Virginia opossum<br><i>Didelphis virginiana</i>      | Very adaptable; may be found in most habitats. Prefers wooded riparian habitats. Also in suburban areas. Abandoned burrows, buildings, hollow logs, and tree cavities are generally used for den sites.     |                   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, MRI, VOW, VRI, WTM      | Potentially occur within suitable habitat. |
| Desert cottontail<br><i>Sylvilagus audubonii</i>     | Various habitats; dry uplands as well as low valleys and canyons. May inhabit open grasslands, brushlands, edges of foothill woodlands, willow thickets, sometimes in cultivated fields or under buildings. |                   | Yearlong-AGS, BOP, BOW. Summer-MCP, VOW, VRI, WTM                                  | Potentially occur within suitable habitat. |
| Black-tailed jackrabbit<br><i>Lepus californicus</i> | Open plains, fields, and deserts; open country with scattered thickets or patches of shrubs.  |                   | Yearlong-AGS, BOP, BOW, MCH, MHW, CRC, URB, VOW, VRI, WTM. Summer-MRI              | Potentially occur within suitable habitat. |
| American beaver<br><i>Castor canadensis</i>          | Readily occupy artificial ponds, reservoirs, and canals if food is available.   |                   | Yearlong-AGS, BOW, MCP, MHC, SMC, LAC, FEW, MRI, VOW, VRI, WTM                     | Potentially occur within suitable habitat. |
| Common muskrat<br><i>Onidatra zibethicus</i>         | Fresh or brackish marshes, lakes, ponds, swamps, and other bodies of slow-moving water. Rare or absent in artificial impoundments with fluctuating water levels.  |                   | Yearlong- LAC, FEW, MRI, VRI, WTM  | Potentially occur within suitable habitat. |
| Coyote<br><i>Canis latrans</i>                       | Wide range of habitats in its extensive range, from open prairies of the west to the heavily forested areas of the Northeast; sometimes found in cities.  |                   | Yearlong-AGS, BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, MRI, VOW, VRI, WTM | Potentially occur within suitable habitat. |
| Gray fox<br><i>Urocyon cinereoargenteus</i>          | Often found in woodland and shrubland in rough, broken country.   |                   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, MRI, VOW, VRI, WTM      | Potentially occur within suitable habitat. |
| Raccoon<br><i>Procyon lotor</i>                      | Various habitats; usually in moist situations, often along streams and shorelines.  |                   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, LAC, FEW, MRI, VOW, VRI, WTM | Potentially occur within suitable habitat. |
| Ermine<br><i>Mustela erminea</i>                     | Prefers wooded areas with thick understory near watercourses. Rarely occurs in heavily forested regions.  |                   | Yearlong-DFR, MCP, MHC, MHW, PPN, SMC, MRI, WTM                                    | Potentially occur within suitable habitat. |
| Long-tailed weasel<br><i>Mustela frenata</i>         | Wide variety of habitats, usually near water. Favored habitats include brushland and open woodlands, field edges, riparian grasslands, swamps, and marshes.   |                   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI, WTM           | Potentially occur within suitable habitat. |
| American mink<br><i>Mustela vison</i>                | Favors forested permanent or semi permanent wetlands with abundant cover, marshes, and riparian zones.  |                   | Yearlong- LAC, FEW, MRI, VRI   | Potentially occur within suitable habitat. |

Table 7.4.4-1. (continued)

| Common Name/<br>Scientific Name                      | Suitable Habitat Type  | Temporal and<br>Spatial Distribution <sup>2</sup>                                       | Occurrence in<br>Project Area              |
|--|--|---|--|
| <b>MAMMALS (continued)</b>                           |  |   |  |
| Striped skunk<br><i>Mephitis mephitis</i>            | Semi-open country with woodland and meadows interspersed, brushy areas, bottomland woods. Frequently found in suburban areas.  | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, MRI, VOW, VRI, WTM           | Potentially occur within suitable habitat. |
| Douglas' squirrel<br><i>Tamiasciurus douglasii</i>   | Coniferous forests, in upper pine belt and in fir, spruce, and hemlock forests.  | Yearlong-DFR, MHC, MHW, PPN, SMC, MRI   | Potentially occur within suitable habitat. |
| Western gray squirrel<br><i>Sciurus griseus</i>      | Dependent upon mature stands of mixed conifer and oak habitats, closely associated with oaks.  | Yearlong-BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI                          | Potentially occur within suitable habitat. |
| Black bear<br><i>Ursus americanus</i>                | Occur in fairly dense, mature stands of many forest habitats mostly above 3000 feet elevation, and feed in a variety of habitats including brushy stands of forest, valley foothill riparian and wet meadows.                    | Yearlong-AGS, BOP, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VRI, WTM, Summer-LAC, Migrant-LAC | Potentially occur within suitable habitat. |
| American badger <sup>1</sup><br><i>Taxidea taxus</i> | Prefers open areas and may also frequent brushlands with little groundcover. When inactive, occupies underground burrow.   | Yearlong-AGS, BAR, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI, WTM           | Potentially occur within suitable habitat. |
| Mule deer <sup>1</sup><br><i>Odocoileus hemionus</i> | Early to intermediate successional stages of most forest, woodland, and brush habitats interspersed with herbaceous openings, dense brush or tree thickets, riparian areas, and abundant edge.                                   | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, FEW, MRI, VOW, VRI, WTM, Summer-PPN, SMC    | Potentially occur within suitable habitat. |
| Bobcat<br><i>Felis rufus</i>                         | Various habitats including deciduous-coniferous woodlands and forest edge, hardwood forests, swamps, forested river bottomlands, brushlands, deserts, mountains, and other areas with thick undergrowth.                         | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, FEW, MRI, VOW, VRI, WTM           | Potentially occur within suitable habitat. |
| Wild pig<br><i>Sus scrofa</i>                        | Densely forested mountainous terrain, brushlands, dry ridges, swamps; sometimes in fields, marshes. Often in mixed hardwood forest with permanent water source. Seasonal changes in habitat use are linked to food availability. | Yearlong-AGS, BOP, BOW, DFR, MCP, MHC, MHW, PPN, SMC, MRI, VOW, VRI, WTM                | Potentially occur within suitable habitat. |

Sources: CDFG 2009d,e; NatureServe 2009

1. Special-Status Species (see table 7.4.3-1)

2. CWHR Habitat Types:

- AGS = Annual Grass
- BAR = Barren
- BOP = Blue Oak Foothill Pine
- BOW = Blue Oak Woodland
- CRC = Chamise-Redshank Chaparral
- CRP = Cropland
- DFR = Douglas Fir
- FEW = Fresh Emergent Wetland
- LAC = Agriculture Ponds, Water Features, General Water (i.e., lakes, ponds, reservoirs, diversion impoundments)
- MCH = Mixed Chaparral
- MCP = Montane Chaparral
- MHC = Montane Hardwood Conifer
- MHW = Montane Hardwood
- MRI = Montane Riparian
- PPN = Ponderosa Pine
- RIV = Riverine

- SCN = Subalpine Conifer
- SMC = Sierran Mixed Conifer
- URB = Urban
- VOW = Valley Oak Woodland
- VRI = Valley Foothill Riparian
- WFR = White Fir
- WTM = Wet Meadow

## 7.4.5 Wildlife Resources of the Yuba River

### 7.4.5.1 Upstream of Project Area

In addition to the information provided above, Licensee found the information described below regarding special-status wildlife upstream of the Project Area. The source documents<sup>6</sup> for special-status wildlife upstream of the Project Area include Nevada Irrigation District's (NID) PAD, the SNFMISA, the Downieville/Nevada City Deer Herd Management Plan, the Bucks Mountain/Mooretown Deer Herd Management Plan, CDFG's An Assessment of Mule and Black-tailed Deer Habitats and Populations in California, CWHR query, CNDDDB query, and a special-status bat study performed by NID.

#### 7.4.5.1.1 Nevada Irrigation District Pre-Application Document

NID prepared a PAD for the Yuba-Bear Hydroelectric Project relicensing and identified 44 special-status wildlife species that could potentially occur in the Yuba-Bear Hydroelectric Project Area (NID 2008). The Yuba-Bear Hydroelectric Project is located both upstream and to the southeast of the Project on the Middle and South Yuba rivers, approximately 35 miles east and southeast of the Project Area. The 44 species are special-status species and include 1 reptile, 27 birds, and 16 mammals. The 44 special-status species are as follows: coast horned lizard, yellow warbler, northern goshawk, California spotted owl, sooty (blue) grouse, fox sparrow, mountain quail, hairy woodpecker, black-backed woodpecker, common loon, merlin (*Falco columbarius*), double-crested cormorant (*Phalacrocorax auritus*), osprey (*Pandion haliaetus*), long-eared owl, short-eared owl, purple martin, gray vireo (*Vireo vicinior*) yellow-breasted chat, Barrow's goldeneye, harlequin duck, sharp-shinned hawk (*Accipiter striatus*), Cooper's hawk (*Accipiter cooperii*), California gull (*Larus californicus*), black swift, ferruginous hawk (*Buteo regalis*), long-billed curlew (*Numenius americanus*), black tern, California horned lark (*Eremophila alpestris actia*), western red bat, American marten, western small-footed myotis (*Myotis ciliolabrum*), Yuma myotis (*Myotis yumanensis*), long-eared myotis (*Myotis evotis*), fringed myotis (*Myotis thysanodes*), spotted bat, western mastiff bat, northern flying squirrel, Townsend's big-eared bat, pallid bat, Sierra Nevada snowshoe hare, mule deer, Sierra Nevada mountain beaver, and white tailed hare (*Lepus townsendii*).

A query of the CNDDDB for the Yuba-Bear Hydroelectric Project PAD indicated that three of these species have been reported within 0.25 mile of the Yuba-Bear Hydroelectric Project FERC Project Boundary. The species were northern goshawk, osprey, and California spotted owl (NID 2008). In addition, important deer habitat areas occur throughout the Yuba-Bear Hydroelectric Project Area, particularly surrounding Project water bodies (NID 2008).

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<sup>6</sup> A source document is a document reporting original surveys or data.

#### 7.4.5.1.2 Sierra Nevada Forest Management Indicator Species Amendment

In 2007, the SNFMISA Record of Decision, revised the MIS listings and associated monitoring strategies for ten National Forests in the Sierra Nevada, including Plumas National Forest (PNF) and TNF (USFS 2007). The revision created a single MIS list for all ten national forests rather than each individual national forest maintaining its own list. The revised MIS list includes 12 species: fox sparrow, greater sage-grouse (*Centrocercus urophasianus*), mule deer, yellow warbler, Pacific treefrog (*Pseudacris sierra* formerly known as *P. regilla*), mountain quail, sooty (blue) grouse, California spotted owl, American marten, northern flying squirrel, hairy woodpecker, and black-backed woodpecker. The MIS identified for ten national forests in the Sierra Nevada replace the former MIS identified under each of the ten National Forests' individual Land and Resource Management Plans (LRMP). Of the 12 MIS species, the TNF identified 10 species as having the potential to occur on TNF lands: fox sparrow, mule deer, yellow warbler, mountain quail, sooty (blue) grouse, California spotted owl, northern flying squirrel, American marten, hairy woodpecker, and black-backed woodpecker (USFS 2007). These same species, excluding American marten, were also identified for PNF (USFS 2007).

#### 7.4.5.1.3 Downieville/Nevada City Deer Herd Management Plan

CDFG identifies four deer herds in the Project Vicinity: the Downieville, Nevada City, Bucks Mountain, and Mooretown deer herds. The four herds are managed under two separate management plans: the Downieville/Nevada City Deer Herd Management Plan and the Bucks Mountain/Mooretown Deer Herd Management Plan.

The Nevada City deer herd occupies lands on the west slope of the Sierra Nevada, upstream of the Project. The boundary to the north includes the Middle Yuba River and Jackson Meadows Reservoir. The eastern boundary includes the area near White Rock Lake. The southern boundary parallels Interstate 80 and continues down the Bear River to the Chicago Park area. The western boundary runs from the Chicago Park area north to the Middle Yuba River. In 1983, the estimated population was around 3,600 individuals (Wagner and Finn 1985). The Downieville deer herd is discussed in Section 7.4.5.2, Wildlife Resources in the Project Area.

#### 7.4.5.1.4 Bucks Mountain/Mooretown Deer Herd Management Plan

The Bucks Mountain deer herd is located in western Plumas and eastern Butte counties, and includes portions of Lassen and Plumas national forests. The southern boundary includes a section of the Middle Fork Feather River. The total range area is approximately 728 square miles (Snowden and Perkins 1983). The Mooretown deer herd borders the southern boundary of the Bucks Mountain herd, and extends into northwestern Sierra and northeastern Yuba counties. The total range area is approximately 703 square miles (Snowden and Perkins 1983). The Mooretown deer herd is discussed further in Section 7.4.5.2, Wildlife Resources in the Project Area.

#### 7.4.5.1.5 An Assessment of Mule and Black-tailed Deer Habitats and Populations in California

Currently little information exists as to the effectiveness of the solutions and prescriptions identified by the management plans with respect to betterment of herd populations and no information was found specific to the four herds in the Project Vicinity. In 1998 the CDFG, in cooperation with the Forest Service and BLM, published *An Assessment of Mule and Black-tailed Deer Habitats and Populations in California*, which was a product of a workshop that discussed deer population trends, habitat status, habitat issues, and opportunities for changes in habitat condition among CDFG's 11 Deer Assessment Units in California (Loft 1998). According to this report, Deer Assessment Unit 5, which encompasses the Central Sierra Nevada and includes the Nevada City and Bucks Mountain herds, has seen a recent downward trend in population from 120,000-130,000 to 50,000-90,000.

#### 7.4.5.1.6 California Wildlife Habitat Relationships

A query of the CWHR database for Sierra County showed that 32 special-status species have the potential to occur upstream of the Project Area (CDFG 2009d):

- Eighteen species are listed only as SSC. These are: common loon, American white pelican, northern harrier, black tern, long-eared owl, short-eared owl, purple martin, yellow warbler, yellow-breasted chat, vesper sparrow (*Pooecetes gramineus*), olive-sided flycatcher, yellow-headed blackbird, black swift, Vaux's swift, burrowing owl, spotted bat, western mastiff bat, and Sierra Nevada snowshoe hare.
- Six species are listed as SSC and are harvestable species. These are: sooty (blue) grouse, redhead, harlequin duck, black-tailed jackrabbit (*Lepus californicus*), American badger, and greater sage-grouse.
- Eight species are listed as special-status species by two or more agencies. These are: northern goshawk, California spotted owl, western red bat, Townsend's big-eared bat, pallid bat, northern flying squirrel, and American marten.

#### 7.4.5.1.7 California Natural Diversity Database

A query of the CNDDDB for special-status species for quadrangles located immediately upstream of the Project identified nine special-status species (CDFG 2009e). Queries were conducted for Clio, Calpine, Antelope Valley, Loyaltan, Beckwourth Pass, Constantina, Evans Canyon, Frenchman Lake, and McKesick Peak United States Geological Survey (USGS) topographic quadrangles. Documented special-status species included two birds and seven mammals: northern goshawk, long-eared owl, spotted bat, pallid bat, Sierra Nevada snowshoe hare, western white-tailed jackrabbit (*Lepus townsendii townsendii*), American marten, and American badger.

#### 7.4.5.1.6 Nevada Irrigation District Special-Status Bat Survey

In 2007, NID conducted interior and exterior visual surveys of powerhouses and auxiliary buildings in order to verify the presence of bats. Inspections focused on the presence of

individuals, guano, and/or staining of walls to determine occupancy or use. The inspections occurred at Bowman Powerhouse, Dutch Flat No. 3 Powerhouse, Chicago Park Powerhouse, and Rollins Powerhouse. No signs of bat activity or access points were found at any of the survey locations, but bats of unknown species were observed nearby at the Pacific Gas and Electric Company Drum-Spaulding Project site (NID 2008).

In 2009, acoustic surveys and mist-netting surveys for bats were conducted in support of the Yuba-Bear Hydroelectric Project. Survey locations nearest the project area and within the Yuba River drainage were located in the upper reaches of the Middle Fork Yuba River at Milton Diversion Impoundment; and at Sawmill Dam and Bowman Powerhouse on Canyon Creek, a tributary to the South Yuba River. The following special-status bat species were either recorded acoustically or trapped during Yuba-Bear Hydroelectric Project bat studies: western red bat, spotted bat, Townsend's big-eared bat, pallid bat, and western mastiff bat.

#### **7.4.5.2 Wildlife Resources in Project Area**

Licensee found nine source documents regarding wildlife resources in the Project Area. These documents were the 2007 Final Environmental Impact Report/Environmental Impact Statement (FEIR/EIS) for the Lower Yuba River Accord (Accord), the Downieville/Nevada City Deer Herd Management Plan, the Bucks Mountain/Mooretown Deer Herd Management Plan, CDFG's Am Assessment of Mule and Black-tailed Deer Habitats and Populations in California, the University of California Agriculture and Natural Resources Sierra Foothill Research and Extension Center's (SFREC) *Birds of SFREC*, the Final Environmental Impact Report on the Cumulative Impact of Rural Residential Development on Migratory Deer in Yuba County, the Downieville Deer Herd Trapping Program – 1977, the D3 Deer Telemetry study – Preliminary Report, and the 2008 California Deer Kill Report.

The Licensee was also provided with three letters from the CDFG to Yuba County dated July 2, 1991, April 7, 1992, and April 25, 1996, as well as a document titled Defining Annual Deer Habitat Needs as Related to Disturbances. The three letters were reviewed but are not summarized below because they provided direction for county zoning and planning with respect to urban development and not study specific data related to mule deer within the Project Area. The document titled Defining Annual Deer Habitat needs as Related to Disturbances was also reviewed but is not summarized below because it only contains general habitat descriptions related to mule deer, and not study specific data related to mule deer within the Project Area.

##### **7.4.5.2.1 Lower Yuba River Accord Final EIR/EIS**

A FEIR/EIS was prepared in 2007 for the Yuba Accord (YCWA et al. 2007). The FEIR/EIS contains a discussion of the wildlife resources within the Yuba Accord study area that may be affected by its implementation. The Yuba Accord study area extends from USACE's Englebright Dam downstream to the confluence of the Yuba River with the Feather River. Because the Yuba Accord study area overlaps with the lower extent of the Project Area (i.e., the portion of the Yuba River between USACE's Englebright Dam and Daguerre Point Dam), all information pertaining to wildlife resources obtained from the FEIR/EIS explicitly identified as occurring within USGS quadrangles common to both the Project and the Accord are included

here. All other terrestrial wildlife information gathered from the FEIR/EIS not explicitly identified as occurring within USGS quadrangles common to both the Project and the Yuba Accord are included in Section 7.4.5.3 below.

As part of the FEIR/EIS, a special-status species list was generated from three sources: a query of the CNDDDB; and requests for information from the USFWS regarding a list of special-status species that are known to occur or have the potential to occur in the area; and a review of the range, distribution, and habitat associations for all species listed under the CESA. The FEIR/EIS special-status species list included ESA and CESA listed, proposed, and candidate species, as well as fully protected species, and SSC. The special-status species list created for the FEIR/EIS is included in Table 7.4.5-1. The FEIR/EIS identified eight special-status species with the potential to occur within the FEIR/EIS Project Study Area. The FEIR/EIS did not identify any occurrences of the eight special-status species within the Project Area.

**Table 7.4.5-1. Special-Status species identified in the Lower Yuba River Accord FEIR/EIS as having the potential to occur within, and be affected by the Lower Yuba River Accord Proposed Project/Action alternatives.**

| Common Name/<br>Scientific Name                                 | Status  | Habitat Associations <sup>1</sup> | Notes   |
|---|---|-----------------------------------|---|
| American white pelican<br><i>Pelecanus erythrorhynchos</i>      | SSC   | FAL, FEW, SEW                     | Nests on lakes and reservoirs throughout California. Forages within lakes, rivers, reservoirs, and larger farm ponds.   |
| Black tern<br><i>Chlidonias niger</i>                           | SSC   | FAL, FEW                          | Spring and summer visitor to fresh emergent wetlands.   |
| Long-eared owl<br><i>Asio otus</i>                              | SSC   | FRF, CRF, ORF, POW, BOW           | Uncommon winter visitor to the Central Valley. Nests in riparian areas.   |
| Northern harrier<br><i>Circus cyaneus</i>                       | SSC   | FAL, FEW, SEW, NNG                | Nests in wetland and riparian areas.  |
| Tricolored blackbird<br><i>Agelaius tricolor</i>                | No listing provided in FEIR/EIS, but species was included in document. Designated as SSC on July 2009 CDFG Special Animals list | FEW, FRF, CRF, ORF                | Requires open water, protected nesting substrate, and foraging area with insect prey within a few kilometers of colony. |
| Yellow warbler<br><i>Dendroica petechia brewsteri</i>           | SSC   | FRF, CRF, ORF, POW, BOW           | Nests and feeds in riparian areas.  |
| Yellow-breasted chat<br><i>Icteria virens</i>                   | SSC   | FEW, FRF, CRF, ORF                | Uncommon summer resident in valley foothill riparian in the foothills of the Sierra Nevada                              |
| Yellow-headed blackbird<br><i>Xanthocephalus xanthocephalus</i> | SSC   | FEW                               | Nests and feeds in wetland areas.   |

Source: Proposed Lower Yuba River Accord FEIR/EIS. Terrestrial Resources. pp 11-8, 11-9

<sup>1</sup> Habitat Associations Definitions:

- BOW = Blue Oak Woodland
- CHA = Chaparral
- CRF = Great Valley Cottonwood Riparian Forest
- FAL = Seasonally Flooded Agricultural Lands
- FEW = Freshwater Emergent Wetlands
- FRF = Valley Foothill Riparian Forest
- MIC = Mixed Conifer
- MOH = Montane Hardwood
- N/A = Species does not occur within one of the primary vegetative communities found within the study area
- NNG = Non-Native Grassland
- OAV = Orchards And Vineyards
- ORF = Great Valley Oak Riparian Forest
- POW = Foothill Pine-Oak Woodland
- SEW = Saline Emergent Wetlands
- VEP = Vernal Pools

#### 7.4.5.2.2 Downieville/Nevada City Deer Herd Management Plan

CDFG identifies two main deer herds in the Project Vicinity: Downieville and Nevada City (Wagner and Finn 1985). The Nevada City deer herd was discussed previously in Section 7.4.5.1 and its range does not overlap with the Project Area. The Downieville deer herd winter range occupies land on the northeastern and southeastern sides of New Bullards Bar Reservoir. The winter range is defined as lower elevation habitat that provides forage and cover during the winter months (Wagner and Finn 1985).

#### 7.4.5.2.3 Bucks Mountain/Mooretown Deer Herd Management Plan

CDFG identified two other herds in the Project Vicinity: Bucks Mountain and Mooretown (Snowden and Perkins 1983). The Bucks Mountain deer herd was discussed previously in Section 7.4.5.1 and does not overlap with the Project Area. The Mooretown deer herd borders the Bucks Mountain herd to the north and includes a portion of the South Fork Feather River. The Mooretown deer herd's winter range also extends through the western portion of New Bullards Bar Reservoir, which overlaps with the Project Area (Snowden and Perkins 1983).

The Mooretown deer herd's winter range occupies 232,000 acres, ranging in elevation from 500 to 3,800 feet. Only 10% of the Mooretown Deer herd winter range occurs on publicly owned lands (Forest Service, BLM, or State of California administered lands), with an additional 10% occurring on lands owned by timber companies. The remaining 80% is under private ownership and is dominated by residential and grazing uses (Snowden and Perkins 1983). According to CDFG's Bucks Mountain/Mooretown Deer Herd Management Plan (Snowden and Perkins 1983) non-hunting related cause for deer mortality includes illegal kill and crippling loss during hunting season, poaching, road kill, weather, drowning in canals and reservoirs, depredation hunting, natural predation, and disease. No data specific to the Project was available with regards to drowning in canals and reservoirs. The management plan also identifies 11 factors that limit herd populations, which include rural sprawl, reforestation and brush management, loss of oaks, roads, fire suppression, water impoundments, grazing, poaching, predation, hunting and weather. Rural sprawl is considered to be the greatest limiting factor on herd populations especially within the winter range.

According to the management plan, the state of California has set forth goals to... "Restore and maintain healthy populations and to provide for high quality, diversified use of the herds." The statewide goals originally specified that deer populations observed in 1965 were the benchmark for restoration, and specify a population goal of 9,463 deer for the Mooretown Herd (Snowden and Perkins 1983). However loss of winter range habitat has made that goal impractical for the Mooretown herd, and the current population goal set forth by CDFG for the Mooretown herd is 7,600 deer (Snowden and Perkins 1983). Other population goals include a fall buck to doe ratio of 20 to 100 and a spring fawn ratio of 45 to 55 fawns per 100 does. With respect to habitat, the management plan specifies preservation of winter range habitat, increase in forage quality and quantity, mitigation to compensate for impacts causing habitat loss or degradation, avoiding elimination of habitat components from herd ranges, and relocating or altering structural impedances that adversely impact habitat or behavior (Snowden and Perkins 1983).

In order to achieve the goals set forth by the plan, CDFG has identified seven solutions and prescriptions (Snowden and Perkins 1983). These include: 1) inventory and investigation, which includes population monitoring of the Mooretown herd; 2) mortality control, which includes mitigation against losses due to road and water projects via appropriate legal and licensing requirements, disease, take from hunting, and human encroachment, as well as land use descriptions and habitat improvements; 3) habitat, which includes reduction of impacts resulting from human encroachment on winter range, such as road construction, fuelwood cutting, reforestation, and reservoir and hydroelectric projects, as well as promoting habitat improvements through use of fire, large open space and resource conservation land use elements within local government planning documents, increased public support for programs that provide for the betterment of habitat, habitat retention, reduction of overgrazing on winter range, and urging of public agencies to remove recreation facilities and buildings from meadows; 4) utilization, which includes hunting; 5) communication, which includes public education; 6) law enforcement, which consists of increased warden patrol and additional deterrents to poachers; and 7) regular review and update of the management plan (Snowden and Perkins 1983).

Included in the management plan were the results of the Mooretown Deer Herd telemetry study progress report. According to the report 114 deer were caught between 1980 and 1982, of which five migratory does were radio tagged. The study suggested that spring migration movement began in late April and early May with fall migration beginning late September to mid-October. Movement during migration was consistent with other reports that suggested that migration routes followed major ridge systems.

#### 7.4.5.2.4 An Assessment of Mule and Black-tailed Deer Habitats and Populations in California

Currently little information exists as to the effectiveness of the solutions and prescriptions identified by the management plans with respect to betterment of herd populations and no information was found specific to the four herds in the Project Vicinity. In 1998 the CDFG, in cooperation with the Forest Service and BLM, published *An Assessment of Mule and Black-tailed Deer Habitats and Populations in California*, which was a product of a workshop that discussed deer population trends, habitat status, habitat issues, and opportunities for changes in habitat condition among CDFG's 11 Deer Assessment Units in California (Loft 1998). According to this report, Deer Assessment Unit 5, which encompasses the Central Sierra Nevada and includes the Downieville and Mooretown herds, has seen a recent downward trend in population from 120,000-130,000 to 50,000-90,000.

#### 7.4.5.2.5 University of California Agriculture and Natural Resources, SFREC

SFREC borders the northwest shores of USACE's Englebright Reservoir and northern banks of the Yuba River below USACE's Englebright Dam. SFREC encompasses 5,721 acres of mixed hardwood and open annual grassland habitats between 220 and 2,020 feet above mean sea level. SFREC has identified 113 species of seasonal migrant or year-long resident birds, 92 of whom use the habitats of the field station for breeding, cover, or food (Block and Morrison 1990).

#### 7.4.5.2.6 Final Environmental Impact Report (FEIR) on the Cumulative Impacts of Rural

## Residential Development on Migratory Deer in Yuba County

The FEIR considers all future division of land for residential development in the foothill and mountain areas of Yuba County with an immediate focus on proposed 29 construction projects and their impacts to mule deer movement and habitat (Yuba County 1985). According to the FEIR a study was developed to identify deer migratory routes as well as feeding and fawning areas in Yuba County. Twenty-nine parcels were reviewed and the effects of land development were summarized. The study began on June 5, 1984, and was completed on August 6, 1984. The summary indicated that a majority of the developments would occur within areas used by deer during migration, and would have a significant impact on mule deer by creation of barriers (fences, dogs, roads). As a result of the study, mitigations measures were recommended and included both direct measures to be applied to individual projects and amendments to the County's General Plan and Zoning Ordinance. In general these measures included restriction of development across migratory corridors, retention of habitat buffers that allow for unrestricted deer movement around developments, clustering of home sites on the least environmentally sensitive portion of the site, improving habitat in areas outside of the proposed development, and implementation of mitigation fees.

### 7.4.5.2.7 Downieville Deer Herd Trapping Program – 1977

In 1977 a trapping program was implemented as part of the Sierra County Wildlife Conservation Element Study (Sierra County 1977). The goal was to obtain information regarding the location of deer winter and summer ranges and their migration corridors. Trapping occurred at two sites (Oregon Peak and Our House). Eight deer were trapped and four adult does were outfitted with a radio transmitter and monitored via aerial telemetry flights between March 11 1977 and November 9, 1977. Winter range was identified along Hwy 49 between Downieville and Pittsburg Hill, and north of the Middle Yuba River between Plumbago Road and the confluence of Clear Creek and Middle Yuba River. The spring migration route for deer captured at Our House was north of the Middle Yuba River along Lafayette/Henness Pass Road. During the summer months, the Our House trap site deer moved south of the Middle Yuba River to the vicinity of Haystack Peak. The fall migration route (from summer range back to the trapping site) was from Haystack Peak west towards the trap site, crossing the Middle Yuba River in the vicinity of North Columbia. The spring migration route for the deer trapped at Oregon Peak was north and east around New Bullards Bar Reservoir and continued upslope between Canyon Creek and the North Yuba River. The fall migration route followed the Port Wine Ridge north of Canyon Creek.

### 7.4.5.2.8 D3 Deer Telemetry Study Preliminary Report

The Project Area is located within CDFG's Deer Hunt Zone D3 (CDFG 1986). In 1985 the CDFG initiated a deer telemetry study within portions of the D3 deer hunting zone. Three sites were chosen for trapping, of which the Richards Ranch site was closest to the Project Area (located just west of New Colgate Powerhouse). Of the thirteen deer captured, six adult does were radio collared and one adult doe was tagged. All but one of the deer captured at Richards Ranch began their spring migration during the first part of May. During migration telemetry data

indicated that the Richards Ranch deer migrated in a northeasterly direction around the north shore and south shores of New Bullards Bar Reservoir.

#### 7.4.5.2.9 2008 California Deer Kill Report

According to CDFG's 2008 report, 763 mule deer bucks were harvested in zone D3, which is above the five year average (2004 – 2008) of 714 (CDFG 2008f). However, the CDFG estimates harvest numbers to be higher than reported (around 1,080) because of unreported hunter take.

### 7.4.5.3 Downstream of the Project Area

Licensee found one source document regarding wildlife resources downstream of the Project and queried additional special-status species information from the CNDDDB. Both the source document and the CNDDDB query have been summarized below.

#### 7.4.5.3.1 Lower Yuba River Accord FEIR/EIS

A FEIR/EIS was prepared in 2007 for the Yuba Accord (discussed in Section 7.4.5.2 above; YCWA et al. 2007). Information pertaining to wildlife resources from the FEIR/EIS that are explicitly identified as occurring within USGS quadrangles common to both the Project and Accord were included in Section 7.4.5.2 (above). Wildlife resources obtained from the FEIR/EIS that were not explicitly identified as occurring within USGS quadrangles common to both the Project and Accord are described below.

A list of vegetation communities and habitats within the Accord study area that may be affected by the Proposed Project/Action and alternatives was derived from the USGS Gap Analysis of Mainland California (GAP) vegetation categorization and the CDFG's Wetland and Riparian Classification System. The list was then compared to Holland's 1986 classification system to determine synonymous category nomenclature. The resulting list of primary vegetation communities and habitats include freshwater emergent wetlands, valley foothill riparian forest, great valley cottonwood riparian forest, great valley oak riparian forest, and early successional riparian woodland (YCWA et al. 2007).

The list of special-status species included in the FEIR/EIS was restricted to those associated with the vegetation communities and habitats that may be impacted by the Proposed Project/Action alternatives. The special-status species list was derived from three sources, which included: a query of the CNDDDB; requests for information from the USFWS regarding a list of special-status species that are known to occur or have the potential to occur; and a review of the range, distribution and habitat associations for all species listed under the CESA.

The Accord FEIR/EIS CNDDDB query did not reveal any special-status species occurrences in the quadrangle downstream of the Project.

#### 7.4.5.3.2 California Natural Diversity Database

A query of the CNDDDB for special-status species within quadrangles located immediately downstream of the Project (e.g., Browns Valley and Yuba City), confirmed documented occurrences of three special-status wildlife species (CDFG 2009e). Documented special-status species included two birds (tricolored blackbird and burrowing owl) and one aquatic reptile (CDFG 2009e).

### **7.4.6 List of Attachments**

This section includes three attachments:

- Attachment 7.4A - CWHR for habitats within the Yuba River Development Project
- Attachment 7.4B - CNDDDB results for species accounts within the Yuba River Development Project Area
- Attachment 7.4C - CNDDDB Wildlife Occurrences and USFS Wildlife Observation Maps

## **Section 7.4**

# **Wildlife Resources Attachment**

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- **Attachment 7.4A: CWHR Species List**

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## **Section 7.4**

### **Wildlife Resources Attachment**

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- **Attachment 7.4B: CNDDDB Query (361 KB, Adobe PDF Format)**

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## **Section 7.4**

### **Wildlife Resources Attachment**

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- **Attachment 7.4C: Wildlife Observations Map (3, 853 KB, Adobe PDF Format)**

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