

9 BIOLOGICAL RESOURCES

This chapter provides an evaluation of the potential effects of implementing the proposed City of Folsom 2035 General Plan (2035 General Plan) on biological resources. As established in the Notice of Preparation for the proposed 2035 General Plan (see Appendix A, *Notice of Preparation*), urban development and other activities subject to the plan may result in adverse effects to biological resources within the City of Folsom.

The following environmental assessment includes a review of biological resources potentially affected by the implementation of the 2035 General Plan within the City of Folsom. This analysis includes a review of regulations, requirements, plans, and policies applicable to biological resources.

The existing condition of biological resources in the City of Folsom was determined by a review of federal and state databases, resource evaluations conducted within the City of Folsom, other City of Folsom environmental documents, and by survey and photographic records. Potential impacts related to biological resources were determined by comparing potential activities in implementation of the 2035 General Plan to the existing environment, based on CEQA assessment criteria in consideration of the policies, regulations, and guidelines adopted by the City of Folsom and by federal and state resource agencies.

9.1 SETTING

The environmental and regulatory settings for biological resources within the City of Folsom are described below. The environmental setting describes the surface and groundwater resources within the City of Folsom, and the regulatory setting describes the federal, state, and local policies and regulations associated with these resources.

9.1.1 ENVIRONMENTAL SETTING

This section describes existing environmental conditions related to biological resources within the 2035 General Plan study area. Information is provided for both plant and wildlife species, as well as for species and habitats that are protected by law or ordinance. Much of the information regarding the biological setting is taken from the Folsom Plan Area Specific Plan (FPASP) Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (City of Folsom 2011), which provides information about the FPASP, the portion of Folsom south of Highway 50, where the preponderance of future development under the 2035 General Plan would occur.

Folsom is located in eastern Sacramento County within the transitional zone between the Sacramento Valley and northern Sierra Nevada foothill subregions of the California Floristic Province (Hickman 1993). The majority of the city has been developed for urban and suburban uses and consists of relatively flat areas and rolling hills, but steep cliffs occur adjacent to the American River along portions of the western city limits as well as in the eastern portion of the city. Elevations within Folsom range from approximately 250 to 900 feet above mean sea level.

PLANT COMMUNITIES

Folsom contains the following major habitat types: urban/developed/ruderal, grasslands, oak woodlands, rivers/creeks/open water, riparian, and wetlands. North of Highway 50, the city is primarily composed of developed/urban areas with scattered interspersed native or semi-native vegetation types and habitats, and riparian corridors along creeks. Within the FPASP area, lands presently consist of primarily native (or naturalized) vegetation types and habitats. No recent and comprehensive vegetation mapping has been completed for Folsom. CalVeg, a statewide vegetation mapping effort, was used to estimate the vegetation types and extent within Folsom. Each of these habitat types is described below.

Upland Communities

Upland plant communities within Folsom consist mainly of developed/urban/ruderal communities, grasslands, and oak woodlands.

Developed/Urban/Ruderal

As discussed above, developed and urban areas are the predominant land cover in the city north of Highway 50. These areas include residential and commercial developments, parks, and disturbed (ruderal) areas. Within residential and urban areas, irrigated landscapes including a large diversity of horticultural trees and shrubs are common. The degree of vegetative cover within ruderal areas ranges from bare ground to moderately dense weedy species. Within ruderal areas, species commonly observed are foxtail barley (*Hordeum murinum ssp. leporinum*), prickly lettuce (*Lactuca serriola*), ripgut brome (*Bromus diandrus*), yellow star-thistle (*Centaurea solstitialis*), and common purslane (*Portula oleracea*). For most wildlife species, developed and ruderal areas typically provide low habitat value. However, western burrowing owls (*Athene cunicularia hypugea*) readily use rock and trash piles for burrowing habitat. California ground squirrels (*Spemophilus beecheyi*) often colonize ruderal areas. Other wildlife species that use disturbed areas include the European starling (*Sturnus vulgaris*), mourning dove (*Zenaidura macroura*), house sparrow (*Passer domesticus*), house finch (*Carpodacus mexicanus*), American crow (*Corvus brachyrhynchos*), Brewer's blackbird (*Euphagus cyanocephalus*), raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), and Virginia opossum (*Didelphis virginiana*).

Grasslands

Grassland habitat occurs in scattered locations north of Highway 50, but is the predominant habitat type within the FPASP area. The grassland is often dominated by nonnative annual grasses such as foxtail barley, soft chess (*Bromus hordeaceus*), and ripgut brome. Other grass species commonly observed include Italian ryegrass (*Lolium multiflorum*), Bermuda grass (*Cynodon dactylon*), and creeping wild rye (*Leymus triticoides*). The annual grassland also contains a mixture of native and nonnative forbs. Species commonly observed include hayfield tarweed (*Hemizonia congesta*), fiddleneck (*Amsinckia sp.*), California poppy (*Eschscholzia californica*), yellow star-thistle, redstem filaree (*Erodium cicutarium*), and big heronbill (*Erodium botrys*). Scattered shrubs and trees often occur within annual grasslands; representative species include coyote brush (*Baccharis pilularis*), blue elderberry (*Sambucus mexicana*), blue oak (*Quercus douglasii*), interior live oak (*Quercus wislizeni*), black walnut (*Juglans sp.*), California buckeye (*Aesculus californica*), and Fremont cottonwood (*Populus fremontii ssp. fremontii*). Rocky outcrops are often scattered throughout grasslands.

Grasslands are used by a large variety of wildlife species. Amphibians in this community include the western toad (*Anaxyrus boreas*) and Pacific tree frog (*Pseudacris regelia*). Reptiles that occur in annual grassland habitats include the western fence lizard (*Sceloporus occidentalis*), western skink (*Eumeces skiltonianus*), California horned lizard (*Phrynosoma coronatum frontale*), gopher snake (*Pituophis catenifer*), and western rattlesnake (*Crotalus viridis*). Mammals typically found in this habitat include the California vole (*Microtus californicus*), western harvest mouse (*Reithrodontomys megalotis*), deer mouse (*Peromyscus maniculatus*), California ground squirrel, black-tailed jackrabbit (*Lepus californicus*), and coyote (*Canis latrans*). Annual grasslands are used by many species of birds as nesting habitat and provide foraging habitat for many raptor species, including Swainson's hawk (*Buteo swainsoni*) and white-tailed kite (*Elanus leucurus*). Western meadowlark (*Sturnella neglecta*), and California horned lark (*Eremophila alpestris*) are common birds that breed in annual grasslands; western burrowing owl nest in annual grasslands where ground squirrel burrows are present. Other wildlife species occupy annual grassland only when special habitat features (such as cliffs, caves, ponds, or woody plants) are available for breeding, resting, or as escape cover. Larger oak and walnut trees occurring in or adjacent to annual grasslands provide nesting habitat for raptors.

Oak Woodlands

Several types of oak woodlands occur within Folsom. Species commonly encountered include blue oaks, valley oaks (*Quercus lobata*), and interior live oaks. Foothill pines (*Pinus sabiniana*) are often also encountered, especially near the American River corridor. A well-developed shrub understory is common in these habitats with elderberry (*Sambucus ssp*), toyon (*Heteromeles arbutifolia*), coyote brush, and poison oak (*Toxicodendron diversilobum*) commonly observed. The herbaceous layer in woodlands is similar to the grassland described above, however native diversity is often higher in oak woodlands. Many of the same wildlife species that can be found in annual grassland habitat are found in oak woodlands. Oak woodlands provide nesting and foraging habitat for many bird species. More information about oak woodlands is provided below under *Sensitive Natural Communities*.

Aquatic Communities

Rivers, Streams, and Open Water

Aquatic habitats are present in Folsom in the form of rivers, streams, and open water bodies (lakes and ponds). Rivers, creeks, and open water often qualify as waters of the United States under the Clean Water Act and are regulated by federal and state agencies. Although they are not listed as sensitive natural communities by the California Department of Fish and Wildlife (CDFW), they are often considered as sensitive because of their importance for wildlife habitat, special status species, and/or functions and values. Creeks and rivers and open waters are used for foraging by species such as the great egret (*Ardea alba*), great blue heron (*Ardea herodias*), belted kingfisher (*Megasceryle alcyon*), raccoon, and striped skunk. Seasonal and perennial creeks also provide habitat for aquatic insects and breeding habitat for amphibians, depending on the duration of water flow.

The only river in Folsom is the American River, which flows out of Folsom Lake (created by Folsom Dam) and into Lake Natoma, created by Nimbus Dam. The American River provides habitat for several special-status fish species, but only in the portion below Nimbus Dam, which is not within Folsom. Five named creeks flow through Folsom: Alder, Gold, Hinkle, Humbug, and Willow creeks. Numerous other small "blue-line streams" also appear on USGS topographic maps although most are likely seasonal or intermittent. For more information about these water bodies, please see Chapter 14, *Hydrology and Water Quality*.

Folsom Lake and Lake Natoma are the two principle open water bodies within Folsom, though there are also numerous smaller lakes and ponds, some public water storage facilities and other private facilities.

Riparian Habitat

The perennial rivers and creeks described above often have well developed riparian corridors. Riparian trees, when present, include valley oaks, Fremont cottonwoods, black walnut (*Juglans ssp.*), interior live oak, and western sycamore (*Platanus racemosa*). Commonly encountered shrubs include elderberry, willows (*Salix spp.*), California buckeye, and blackberry (*Rubus discolor*). Although they are not listed as sensitive natural communities by CDFW, riparian habitats are often considered sensitive because of their importance for wildlife habitat, special status species, and/or functions and values.

The vegetation in riparian communities is diverse and well developed; therefore, these communities provide high-value habitat for many wildlife species, including special-status species. Invertebrates, amphibians, and aquatic reptiles (e.g., turtles and garter snakes) live in riparian and adjacent upland habitats. Raptors, herons and egrets, and other birds nest in the upper canopy. A variety of songbirds use the shrub canopy for foraging and nesting, and cavity-nesting birds occupy dying trees and snags. Raccoons and striped skunks are common in riparian communities, as are many species of small mammals.

Wetland Habitats

Various types of wetlands are common in the 2035 Plan Evaluation Area. North of Highway 50, freshwater emergent marsh (permanent wetland) is the most common type of wetland, although scattered seasonal wetlands are also present. Within the FPASP area, seasonal wetlands and vernal pools are common. Freshwater emergent marsh is commonly dominated by cattail (*Typha spp.*) and tule (*Scirpus acutus*) although other perennial hydrophytic (aquatic) plant species are also common. Seasonal wetlands are often dominated by Italian ryegrass, pennyroyal (*Mentha pulegium*) and tall flatsedge (*Cyperus eragrostis*), and other annual or perennial species adapted to seasonal drying during the summer months. Vernal pools are depressions in the landscape that pond water intermittently during the rainy season and are completely dry during late spring and summer. Vernal pools pond because they contain an impervious soil layer that prevents water from infiltrating into the lower soil layers. Because of their unique hydrologic regime, they support a highly specialized flora and fauna adapted to prolonged inundation and subsequent dry periods. Vernal pools were historically widespread throughout the region, but their extent is now limited due to development and agricultural conversion over the last 150 years.

Freshwater emergent wetlands are among the most productive wildlife habitats. They provide food, cover, and water for many species of amphibians, reptiles, birds, and mammals. Sierran treefrog (*Pseudacris sierra*), and western toad use emergent marshes for breeding habitat; and common garter snake (*Thamnophis sirtalis*), beaver (*Castor canadensis*), and raccoon use emergent wetlands for foraging, rearing, or cover. A variety of migratory birds such as mallard (*Anas platyrhynchos*), wood duck (*Aix sponsa*), and red-winged blackbird (*Agelaius phoeniceus*) use these habitats. Seasonal wetlands and vernal pools provide suitable breeding habitat for several species of amphibians, including Sierran tree frog, western toad, and western spadefoot (*Spea hammondi*). Birds, such as great egrets (*Ardea alba*), great blue herons (*Ardea Herodias*), and mallards use seasonal wetlands and vernal pools as foraging habitat when they are inundated.

WILDLIFE

The FPASP area supports an abundant and diverse group of fauna. This large and mostly contiguous block of open space, dominated by natural plant communities, is particularly important to native wildlife species associated with grassland, oak woodland, and riparian habitats. It provides habitat for both resident breeding and migratory raptors that prefer large tracts of open grassland for foraging. The oak woodland and riparian communities are attractive to many of the common wildlife species in Sacramento County, as well as a few special-status wildlife species, which are discussed separately below under “Sensitive Biological Resources.”

A few of the many common wildlife species expected to occur in the FPASP area include red-tailed hawk (*Buteo jamaicensis*), western kingbird (*Tyrannus verticalis*), oak titmouse (*Baeolophus inornatus*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark, gopher snake (*Pituophis catenifer*), western fence lizard, coyote, and black-tailed jackrabbit.

Tracts of open space located throughout Folsom provide wildlife movement corridors for fish, amphibians, reptiles, birds, and mammals. Riparian creek corridors associated with American River, Humbug Creek, and Alder Creek allow a wide variety of wildlife species to forage, disperse, and migrate and the waterways provide movement corridors for fish species and aquatic invertebrates.

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources addressed in this section include those that are afforded consideration or protection under the California Environmental Quality Act (CEQA), California Fish and Game Code, California Endangered Species Act (CESA), Federal Endangered Species Act (FESA), Clean Water Act (CWA), or the Porter-Cologne Water Quality Control Act (Porter-Cologne Act). Protection is provided to both individual species and to certain types of rare habitats.

Special-Status Species

Special-status species include plants and animals in the following categories:

- Species listed or proposed for listing as threatened or endangered under FESA
- Species that are candidates for possible future listing as threatened or endangered under FESA
- Animal species of special concern to California Department of Fish and Wildlife (CDFW)
- Animals fully protected in California (California Fish and Game Code, Sections 3511 [birds], 4700 [mammals], 5050 [amphibians and reptiles], and 5515 [fish])
- Species listed or proposed for listing by the State of California as threatened or endangered under CESA
- Species that meet the definitions of rare or endangered under CEQA
- Plants listed as rare under the California Native Plant Protection Act
- Plants considered by the California Native Plant Society (CNPS) to be “rare, threatened, or endangered in California” (Lists 1B and 2)
- Plants listed by CNPS as plants about which more information is needed to determine their status and plants of limited distribution (Lists 3 and 4); plants on these lists may be included as special-status species on the basis of local significance or recent biological information.

More information regarding the laws providing protection for biological resources may be found below under *Regulatory Setting* and in Appendix C.

The Biological Resources Technical Appendix, attached to this document as Appendix F, contains Tables F-1 and F-2. These tables list special-status species known to occur, or with potential to occur within Folsom, or within a 10-mile radius from the center of the city. These tables were developed using queries of the California Natural Diversity Database (CNDDDB) (CDFW 2018) and the CNPS Inventory of Rare and Endangered Plants (CNPS 2018). Previous biological studies prepared for projects within Folsom or its vicinity were also reviewed for specific information on previously documented occurrences of special-status within a 10-mile radius of the City of Folsom. Figure 9-1 shows all of the occurrences of special-status plants within a 10-mile radius of the City of Folsom. Figure 9-2 shows all of the occurrences of special-status wildlife species within a 10-mile radius of the City of Folsom.

The U.S. Fish and Wildlife Service (USFWS) and the National Marine Fisheries Service (NMFS) are also responsible under the Endangered Species Act for defining “critical habitat” for listed species. Critical habitat is defined as specific geographic areas that contain features essential to the conservation of an endangered or threatened species and that may require special management and protection. Figure 9-3 shows the critical habitat areas that have been designated within or adjacent to Folsom.

Special-Status Plant Species

Record searches of the CNDDDB, CNPS’s online Inventory of Rare and Endangered Plants of California, and USFWS lists within 10 miles of Folsom identified 18 special-status plant species as having the potential to occur in Folsom (CDFW 2018; CNPS 2018; USFWS 2018). The legal status, geographic distribution, habitat requirements, and blooming period of these species are provided in Appendix F, Table F-1.

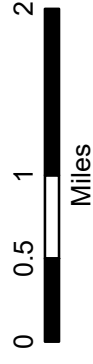
Nine of the species are unlikely to be present in the study area (denoted as None or Unlikely in Table F-1), and nine of the special-status plant species were identified as likely to occur within the study area (denoted as either Present or Possible in Table F-1) based on the presence of suitable habitat and known nearby occurrences. The nine species likely to occur in Folsom include Brandegee’s clarkia (*Clarkia biloba ssp. brandegeae*), dwarf downingia (*Downingia pusilla*), stinkbells (*Fritillaria agrestis*), Boggs Lake hedge-hyssop (*Gratiola heterosepala*), legenere (*Legenere limosa*), pincushion navarretia (*Navarretia myersii ssp. myersii*), slender orcutt grass (*Orcuttia tenuis*), Sacramento orcutt grass (*Orcuttia viscid*), and Sanford’s arrowhead (*Sagittaria sanfordii*). Three of these species – Brandegee’s clarkia, Sacramento orcutt grass, Sanford’s arrowhead – have known historic occurrences within the city limits (CDFW 2018). Critical habitat for one species, Sacramento orcutt grass, has been designated for a small area within unincorporated Sacramento County west of Folsom, but none has been designated within Folsom.

Figure 9-1

City of Folsom

Special-Status Plant Species Occurrences

- 2035 General Plan Planning Area
- Folsom City Boundary
- Brandegee's clarkia
- Northern Hardpan Vernal Pool
- Sacramento Orcutt grass
- Sanford's arrowhead
- Valley Needlegrass Grassland



Created by Planning Partners 2018.

Additional Sources:
City of Folsom, 2017;
Biological Source Data:
California Department of Fish and Wildlife (2017);
ESRI Base Maps (2016).

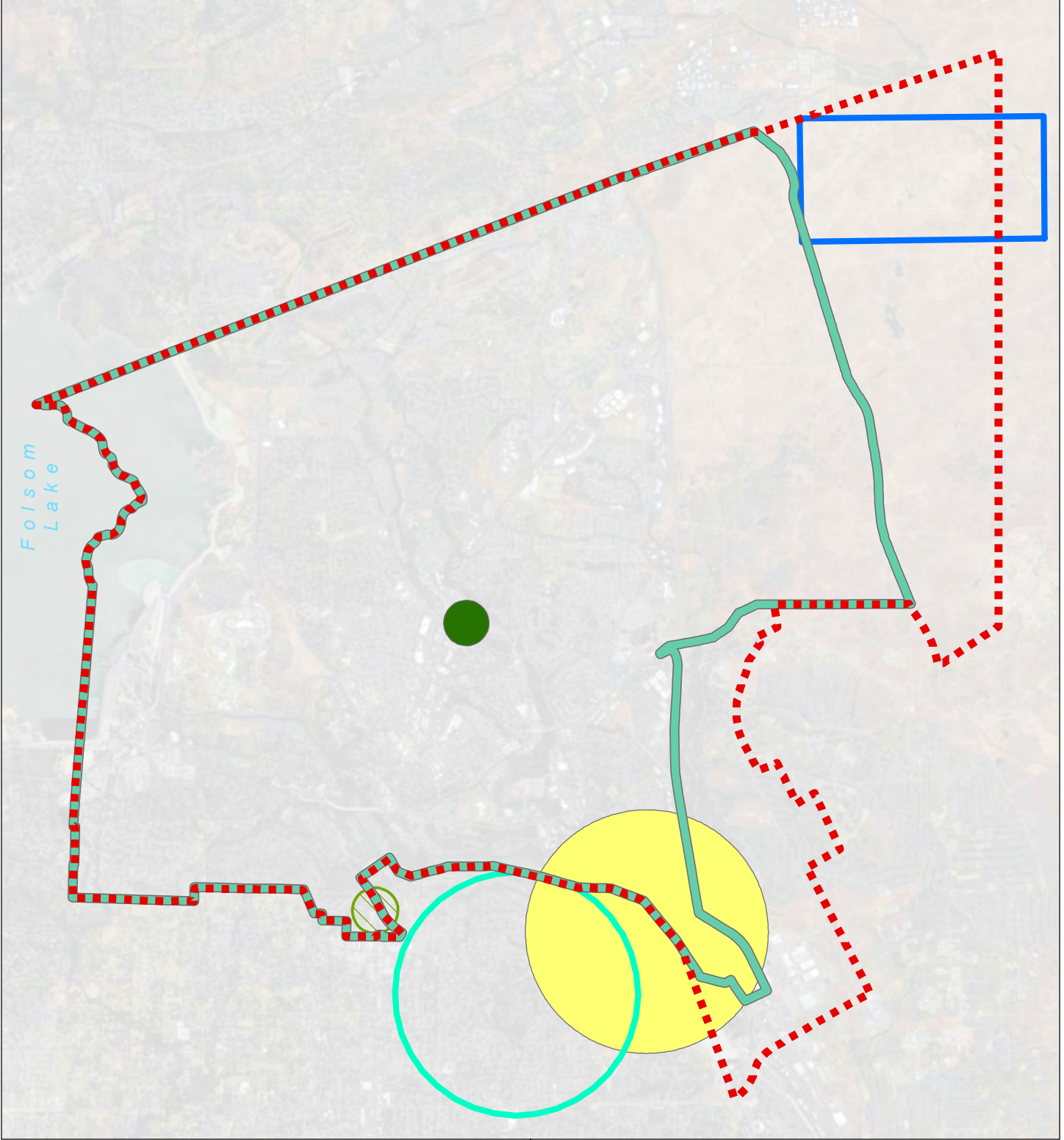
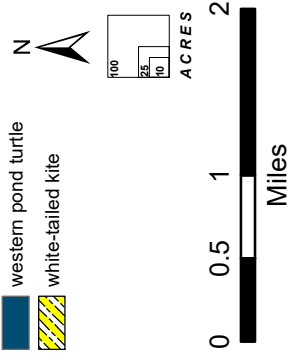
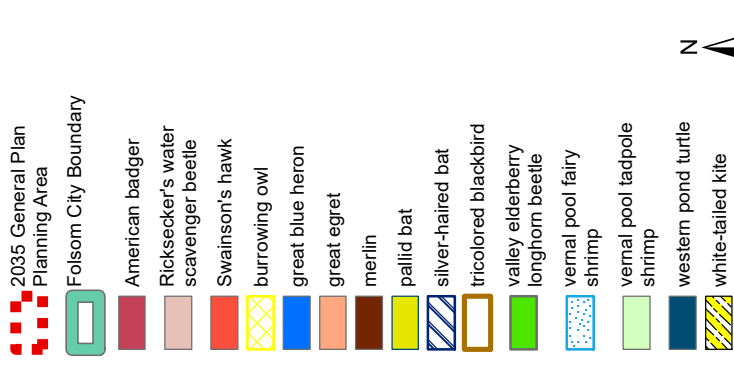


Figure 9-2

City of Folsom

Special-Status Wildlife Species Occurrences



Created by
Planning Partners 2018.

Additional Sources:
City of Folsom, 2017;
Biological Source Data:
California Department of Fish
and Wildlife (2017);
ESRI Base Maps (2016).

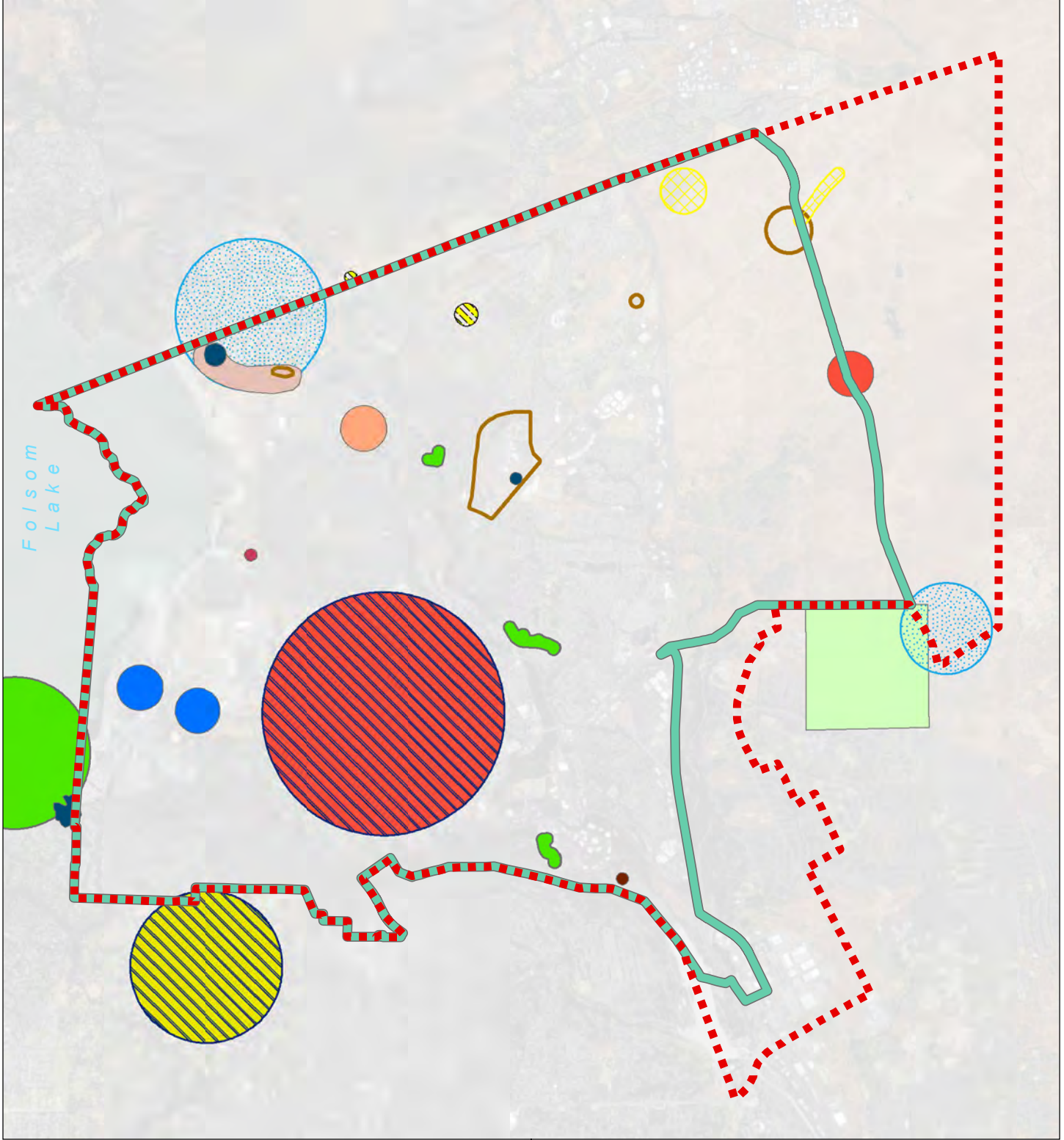
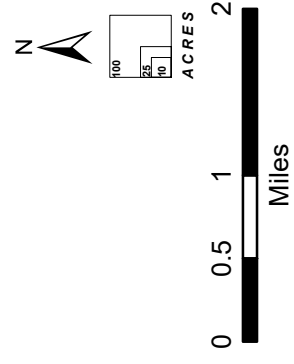


Figure 9-3

City of Folsom

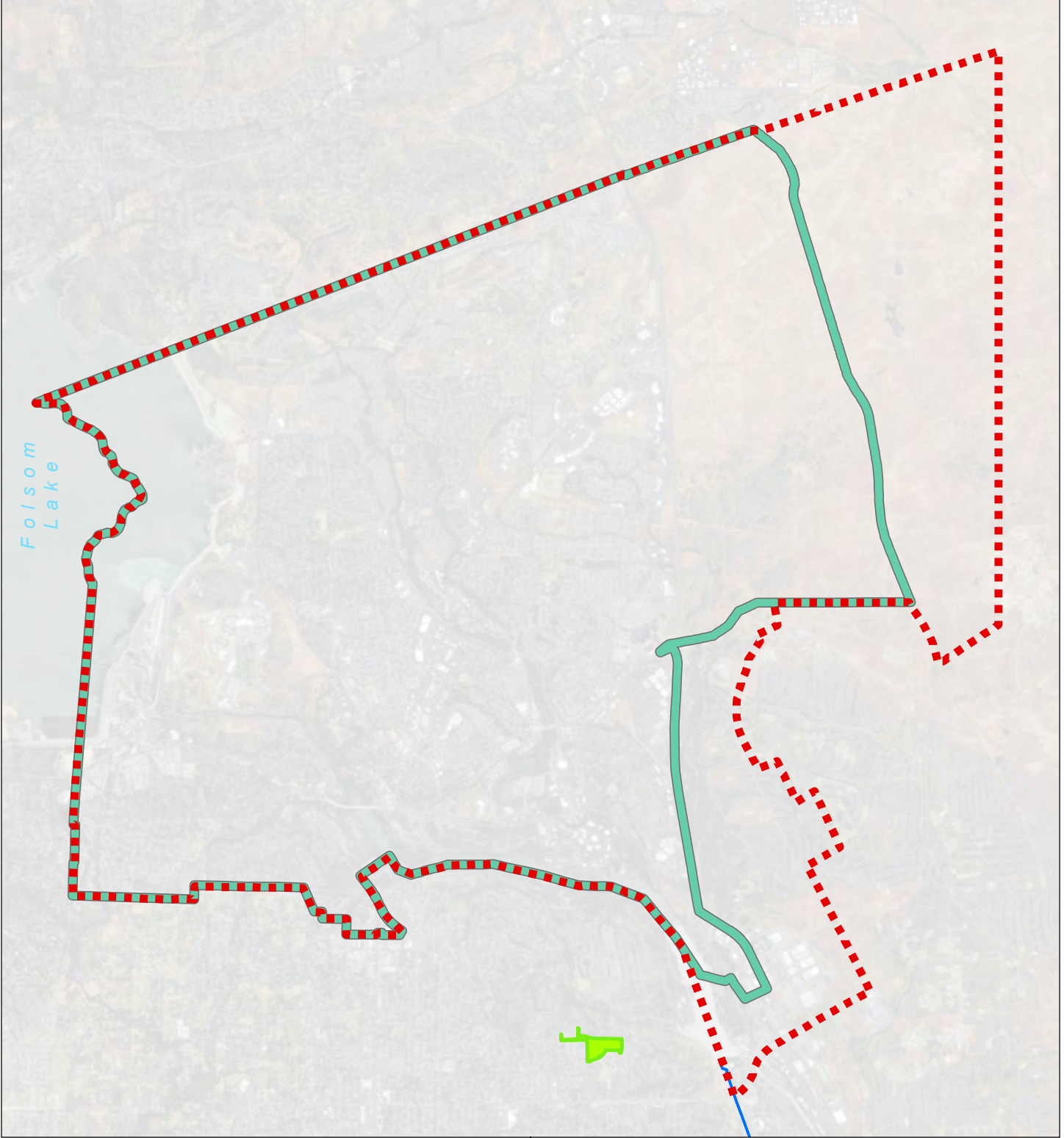
Location of Critical Habitat in the Folsom Area

- 2035 General Plan Planning Area
- Folsom City Boundary
- Sacramento Orcutt grass
- Steelhead



Created by Planning Partners 2018.

Additional Sources:
City of Folsom, 2017;
Biological Source Data:
California Department of Fish and Wildlife (2017);
ESRI Base Maps (2016).



Special-Status Wildlife Species

Record searches of the CNDDDB and the USFWS list of Federally threatened or endangered species identified 25 special-status wildlife species that could occur within Folsom (CDFW 2018; USFWS 2018). The legal status, geographic distribution, habitat requirements, and potential of these species to occur in the study area are provided in Appendix F, Table F-2. Five of the wildlife species were identified as unlikely to be present in the study area (denoted as None or Unlikely in Table F-1) because of either a lack of suitable habitat or because Folsom is outside of the species' range. The remaining 20 wildlife species identified as likely to occur within the study area (denoted as either Present or Possible in Table F-1) are discussed below.

Valley Elderberry Longhorn Beetle (VELB) - The VELB is listed as threatened under the FESA. Its range extends throughout the Central Valley and associated foothills, from the 3,000-foot contour in the Sierra Nevada foothills, across the valley floor, to the Central Valley watershed in the foothills of the Coast Ranges (USFWS 2006a). VELB's life cycle is entirely dependent on its host plants – blue elderberry (*Sambucus cerulea*) and red elderberry (*Sambucus racemosa*) (Collinge et al. 2001). Red and blue elderberry both occur commonly in riparian forest patches along the Sacramento, American, and San Joaquin Rivers and their tributaries and may also be found as isolated bushes or clumps of bushes in elderberry savannas adjacent to riparian vegetation (Collinge et al. 2001). Elderberry shrubs usually co-occur with other woody riparian plants, including Fremont cottonwood, California sycamore (*Platanus racemosa*), various willows (*Salix spp.*), wild grape (*Vitis californica*), blackberry, and poison-oak (Collinge et al. 2001).

The emergence of the adult beetles results in a characteristic exit hole that is 0.5-1.0 cm in diameter. No other insect in the Central Valley makes exit holes of similar size and shape (Collinge et al. 2001). Because observations of adult VELB are extremely rare, the known distribution of the species is based on observations of these exit holes (USFWS 2006a).

CNDDDB (2018) reports 21 occurrences of VELB within 10 miles of Folsom, including four reported occurrences within the city, as shown in Figure 9-1. Elderberry shrubs that occur within Folsom provide potential VELB habitat.

Vernal Pool Fairy Shrimp (VPFS) - VPFS is listed as threatened under FESA. The shrimp is found at scattered locations throughout California's Central Valley, ranging from the Millville Plains and Stillwater Plains in Shasta County south through most of the length of the Central Valley and to the eastern margins of the Coast Ranges, from San Benito County south to Ventura County (USFWS 2005).

VPFS inhabits clear to turbid water in earth sumps and grass- or mud-bottom vernal pools and swales in unplowed grasslands and basalt-flow vernal pools. The species also has been observed in rock outcrop pools, roadside ditches, road ruts, bulldozer scrapes, and backhoe pits. Fairy shrimp produce cysts (eggs) that lie dormant in the soil over summer and hatch during the winter rainy season, when favorable environmental conditions prevail: when pools are inundated, the water temperature is cool, and high oxygen concentrations are present (Eriksen and Belk 1999).

CNDDDB (2018) reports 19 VPFS occurrences within 10 miles of Folsom, including two occurrences within the city. Vernal pools and other seasonal wetlands within Folsom provide potential VPFS habitat.

Vernal Pool Tadpole Shrimp (VPTS) - VPTS is listed as endangered under FESA. The species is found in scattered locations throughout the Sacramento and San Joaquin Valleys and has also been reported from the Sacramento–San Joaquin River Delta (USFWS 2005).

VPTS have been found in grassland pools with clear to highly turbid water, low conductivity, low alkalinity, and low total dissolved solids. It has also been observed in stock ponds, pools in old alluvial soil, grass bottom swales, and other seasonal wetlands. The life history of the VPTS is similar to that of the VPFS described above, except the tadpole shrimp are longer lived, usually persisting well into the early spring. These crustaceans hatch when the rains first inundate the habitat, maturing to adult in 20 to 30 days, mating, shedding their cysts (eggs), and dying. The resting cysts lie in the soil crust through the summer, hatching with the next seasons' rains. The cysts may lie dormant for decades before hatching (USFWS 2005).

CNDDDB (2018) reports 19 VPTS occurrences within 10 miles of Folsom, including one occurrence within the city. Vernal pools and other seasonal wetlands within Folsom provide potential VPTS habitat.

California Red-legged Frog - The California red-legged frog is federally listed as threatened under FESA and is a California species of special concern. Critical habitat was designated by USFWS on April 13, 2006, but Folsom does not contain any critical habitat (USFWS 2006b, Figure 9-3).

Red-legged frogs use a variety of aquatic, riparian, and upland habitat types. Red-legged frogs require cool-water habitats, including pools, streams, and ponds, with emergent and submergent vegetation. Red-legged frogs are found in habitats with deep (at least 2.3 feet [0.7 meter]) and still or slow-moving water, and vegetation consisting of willows, tules, or cattails. Juvenile frogs seem to favor open, shallow aquatic habitats with dense submergent vegetation. Although red-legged frogs can inhabit either ephemeral or permanent streams or ponds, populations probably cannot persist in ephemeral streams in which all surface water disappears (Jennings and Hayes 1994; USFWS 2002).

As adults, red-legged frogs are highly aquatic when active but depend less on permanent water bodies than do other frog species. Although red-legged frogs typically remain near streams or ponds, marked and radio-tagged frogs have been observed to move more than two miles (3.2 kilometers) through upland habitat, typically along riparian corridors (USFWS 2002). Accessibility to sheltering habitat is essential for the survival of red-legged frogs within a watershed and can be a factor limiting frog population numbers and survival (Fellers and Kleeman 2007).

CNDDDB (2018) reports one California red-legged frog occurrence within 10 miles of Folsom, but none within Folsom. Vernal pools, seasonal wetlands, and ponded stream areas within Folsom provide potential breeding habitat.

California Tiger Salamander - The central population of California tiger salamander is listed as threatened under both the federal FESA and CESA. Critical habitat was designated on August 23, 2005, but Folsom does not contain any designated critical habitat (USFWS 2005, Figure 9-3). The species is endemic to the San Joaquin–Sacramento River Valleys, bordering foothills, and coastal valleys of central California. (Jennings and Hayes 1994)

The California tiger salamander is a lowland species restricted to annual grasslands and foothill oak savanna regions where its breeding habitat occurs. Breeding habitat consists of temporary ponds or pools, some permanent waters, and rarely, slower portions of streams. Permanent aquatic sites are unlikely to be used for breeding unless they lack predators. California tiger salamanders also require dry-season refuge sites in the vicinity of breeding sites. California ground squirrel burrows are important dry-season refuge sites for adults and juveniles (Jennings and Hayes 1994). Other types of small mammal burrows, logs, and shrink-swell cracks also are utilized for dry-season refuge.

In addition to traveling long distances during migration to or from ponds, tiger salamanders may reside in burrows that are a far distance from ponds. Dry-season refuge sites within approximately one mile of suitable breeding habitat are likely a necessary requirement for this species, since this species is absent from sites with seemingly suitable breeding habitat, but where small mammal burrows are absent in surrounding upland habitats (Jennings and Hayes 1994).

CNDDDB (CDFW 2018) reports no California tiger salamander occurrences within 10 miles of Folsom. Vernal pools and other seasonal wetlands within Folsom provide potential breeding habitat and annual grasslands and oak woodlands adjacent to vernal pools and seasonal wetlands provide potential aestivation habitat.

Western Spadefoot - Western spadefoot is a California species of special concern. It is distributed among the Sierra Nevada foothills, Central Valley, Coast Ranges, and coastal counties in southern California (Jennings and Hayes 1994).

Western spadefoot can be found in dry grassland habitat close to seasonal wetlands such as vernal pool complexes, typically near extensive areas of friable (but usually not sandy) soil, and it requires seasonal wetlands for reproduction and metamorphosis (Stebbins 2003). Adult western spadefoots spend most of the year in self-excavated underground retreats and possibly in mammal burrows. They emerge from underground retreats during heavy rains in autumn and winter and spawn in seasonal wetlands, such as vernal pools, in late winter or early spring. Eggs hatch in less than a week, and larvae metamorphose in 30 to 80 days, apparently dependent on the duration of pool depth sufficient to support larvae and possibly on pool temperature (Jennings and Hayes 1994).

CNDDDB (2018) reports 3 occurrences of western spadefoot within 10 miles but none within Folsom. Vernal pools and other seasonal wetlands within Folsom provide potential western spadefoot breeding habitat and annual grasslands and oak woodlands adjacent to vernal pools and seasonal wetlands provide suitable aestivation habitat.

Steelhead-Central Valley Distinct Population Segment – The Central Valley Distinct Population Segment (DPS) of steelhead are listed as threatened under FESA. Critical habitat was designated in 2005; it includes the American River up to Nimbus Dam (see Figure 9-3). Steelhead are an anadromous form of rainbow trout. The Central Valley DPS of steelhead spawn mainly from January through March, but spawning can begin as early as the latter part of December and can extend through April. Juvenile steelhead rear in their natal streams for one to two years prior to emigration, which occurs primarily from January through April (Hallock *et al.* 1961). CDFW operates a fish hatchery just below Nimbus Dam, which grows steelhead, among other species.

The CNDDDB (2017) reports 2 occurrences of the Central Valley Distinct Population Segment (DPS) of steelhead within 10 miles but none within Folsom. Nimbus Dam on the American River prevents passage of the species into Lake Natoma and streams within the 2035 Plan Evaluation Area.

Western Pond Turtle - The western pond turtle is a California species of special concern. The western pond turtle is the only abundant turtle native to California (Morey, Papenfuss, and Duke 2000). It was historically found in most Pacific slope drainages between the Oregon and Mexican borders and is still found in suitable habitats west of the Sierra-Cascade crest (Jennings and Hayes 1994).

Western pond turtles require some slow-water aquatic habitat and are uncommon in high-gradient streams (Jennings and Hayes 1994). The banks of inhabited waters usually have thick vegetation, but basking sites such as logs, rocks, or open banks must also be present (Morey, Papenfuss, and Duke 2000). Depending on the latitude, elevation, and habitat type, the western pond turtle may become inactive over winter or remain active year round. Nest sites are typically found on slopes that are unshaded and have a high clay or silt composition (Jennings and Hayes 1994). Eggs are laid from March to August, depending on local conditions, and incubation lasts from 73 to 80 days. Western pond turtles are omnivorous and feed on aquatic plant material, aquatic invertebrates, fishes, frogs, and even carrion (Morey, Papenfuss, and Duke 2000).

CNDDDB (2018) reports 13 occurrences of western pond turtle within 10 miles of Folsom including three occurrences within Folsom (see Figure 9-2). Creeks, streams, ponds, and other water bodies that occur within Folsom provide suitable aquatic habitat and annual grasslands and oak woodlands occurring adjacent to these water bodies provide suitable upland nesting habitat.

Golden Eagle - Golden eagles (*Aquila chrysaetos*) are a fully protected species under California Fish and Game Code Section 3511, and are protected federally by both the Migratory Bird Treaty Act (MBTA) and Bald Eagle and Golden Eagle Protection Act. Golden eagles typically inhabit open grassland areas in foothills surrounding the Central Valley. Golden eagle nests are commonly built on cliff ledges, as well as in large trees in open areas. They typically forage in open grasslands, where they prey on California ground squirrels and black-tailed jackrabbits (Kochert et al. 2002).

CNDDDB (2018) reports two occurrences of golden eagle within 10 miles of Folsom, but none within Folsom, though biologists have observed golden eagles soaring within Folsom on past project surveys. Golden eagles could nest in cliffs and large trees in the hilly area in the eastern portion of Folsom.

Grasshopper Sparrow - The grasshopper sparrow (*Ammodramus savannarum*) is a California species of special concern, and its nests are protected under the MBTA. It is widespread across much of temperate North America, though it is generally locally distributed and may be uncommon or rare in portions of its range (Vickery 1996). In California, the species' nesting range includes the Coast Range in eastern Santa Clara County and western Merced County (Shuford and Gardali 2008). Grasshopper sparrow occurs in dry grasslands, especially those with a variety of grasses and forbs, and this species prefers moderately open grasslands with patchy bare ground and shrubs. Nests are built of grasses and forbs in a slight depression in the ground and often are concealed with overhanging grasses (Shuford and Gardali 2008). Grasshopper sparrows feed primarily on the ground, where a large proportion of its diet includes grasshoppers, although its diet also includes seeds.

CNDDDB (2018) reports one occurrence of grasshopper sparrow within 10 miles of Folsom, but none within the city. Annual grasslands that occur within Folsom provide suitable nesting habitat.

Purple Martin - The purple martin (*Progne subis*) is a California species of special concern, and its nests are protected under the MBTA. Purple martins occur in California during migration and breeding season from mid-March to late September. The breeding season is from May to mid-August. Purple martins nest on the east side of the Coast Range in central California. Almost all tree nest sites are located in the upper slopes of hilly or mountainous terrain. Martins use a variety of substrates for nesting (tree cavities, bridges, utility poles, and lava tubes), although the abundance of nesting cavities is common to all nesting areas (Shuford and Gardali 2008).

CNDDDB (2018) reports one occurrence of purple martin records within 10 miles of Folsom, but none within Folsom. Purple martins may nest in vertical drainage holes located on the underside of bridges located within Folsom.

Swainson's Hawk - Swainson's hawk is state-listed as threatened and their nests are protected under the MBTA. Swainson's hawks inhabit grasslands, sage-steppe plains, and agricultural regions of western North America during the breeding season, and winter in grassland and agricultural regions from central Mexico to southern South America (England et al. 1997). In California, the nesting distribution includes the Sacramento and San Joaquin Valleys, the Great Basin sage-steppe communities and associated agricultural valleys in extreme northeastern California, isolated valleys in the Sierra Nevada in Mono and Inyo Counties, and limited areas of the Mojave Desert region (CDFG 2005).

In California, Swainson's hawk habitat generally consists of large, flat, open, undeveloped landscapes that include suitable grassland or agricultural foraging habitat and sparsely distributed trees for nesting (England et al. 1997). Foraging habitat includes open fields and pastures. Preferred foraging habitats for Swainson's hawk include alfalfa fields, fallow fields, low-growing row or field crops, rice fields when they are not flooded, and cereal grain crops (CDFG 2005). Prey species include ground squirrels, California voles, pocket gophers, deer mice, reptiles, and insects (CDFG 2005; England et al. 1997).

Swainson's hawks usually nest in large native trees such as valley oak, Fremont cottonwood, and willows, although nonnative trees such as eucalyptus (*Eucalyptus spp.*) are occasionally used. Nests occur in riparian woodlands, roadside trees, trees along field borders, isolated trees and small groves, trees in windbreaks, and edges of remnant oak woodlands. In some locales, urban nest sites have been recorded. The breeding season is typically March to August (England et al. 1997).

CNDDDB (2018) reports eight occurrences of Swainson's hawk within 10 miles of Folsom, including two occurrences within Folsom (see Figure 9-2). Large trees in Folsom provide suitable nesting habitat, and annual grassland fields provide suitable foraging habitat.

Tricolored Blackbird - The tricolored blackbird (*Agelaius tricolor*) is a California species of special concern and their nests are protected under the MBTA. Tricolored blackbirds are largely endemic to California, with more than 99 percent of the global population occurring in the state. In any given year, most of the largest colonies of can be found in the Central Valley. Tricolored blackbird colonies require open accessible water; a suitable nesting substrate; and open-range foraging habitat of natural grassland, woodland, or agricultural cropland (Beedy and Hamilton 1999).

Tricolored blackbirds often nest in dense cattails or tules and in willow thickets, blackberry, California wild rose, and tall herbs. Nests usually are located a few feet above the water. Generally, nesting habitat is large enough to support a minimum of about 50 breeding pairs (Shuford and Gardali 2008).

CNDDDB (2018) reports 19 occurrences of tricolored blackbird within 10 miles of Folsom, including four occurrences within Folsom (see Figure 9-2). Wetlands that contain large clusters of cattails and large patches of blackberry briars provide suitable nesting habitat.

Western Burrowing Owl - The western burrowing owl is a California species of special concern, and their nests are protected under the MBTA. Western burrowing owls were formerly a common permanent resident throughout much of California, but population declines were noticeable by the 1940s and have continued to the present. Farming has taken a major toll on western burrowing owl populations and their habitat by destroying nesting burrows and exposing breeders and their young to the toxic effects of pesticides (Haug et al. 1993).

Western burrowing owls prefer open, dry, short grassland habitats with few trees. They occupy burrows, typically abandoned by ground squirrels or other burrowing mammals, but may also use artificial burrows such as abandoned pipes, culverts, and debris piles (CDFG 1995; Haug et al. 1993). Prey includes arthropods, amphibians, small reptiles, small mammals, and birds, particularly horned larks (Haug et al. 1993).

The breeding season usually extends from late February through August. Western burrowing owls often nest in roadside embankments, on levees, and along irrigation canals. This species is more diurnal than most owls and can often be observed during the day standing outside the entrance to its burrow (Haug et al. 1993).

CNDDDB (2018) reports 7 western burrowing owl occurrences within 10 miles of Folsom, including two occurrences within Folsom (see Figure 9-2). Suitable western burrowing owl nesting and foraging habitat in Folsom occurs in annual grasslands and ruderal areas where ground squirrel burrows are present.

Bald Eagle (*Haliaeetus leucocephalus*) – The bald eagle is protected under the MBTA and the Bald and Golden Eagle Protection Act, is listed as endangered under CESA, and is a fully protected species under the California Fish and Game Code, Section 3511. California bald eagles nest primarily along the shorelines of lakes and reservoirs in interior northern California. Mature live trees are preferred, especially ponderosa pine, foothill pine, and California sycamore. Optimal nest sites are near open water, which provides foraging habitat for nesting eagles. Bald eagles typically build their large stick nests in the upper canopy of the tallest trees in the area. In most of California, the breeding season lasts from about January through July or August. One or two eggs (occasionally three) are laid in late winter or early spring, and incubation lasts about 35 days. Chicks fledge when they are 11 or 12 weeks old.

Hundreds of migratory bald eagles from nesting areas in the northwestern states and western Canadian provinces overwinter in California, arriving during the fall and early winter. Wintering birds may remain until February or March, or even into April, depending upon weather conditions. Bald eagles prey on a variety of small animals, usually fish or waterfowl, and they eat carrion, including salmon, deer, and cattle.

CNDDDB (2018) reports four occurrences within 10 miles of Folsom, but no occurrences within Folsom (see Figure 9-2). Bald eagles have been recorded at Folsom Lake in both the winter and during the nesting season, but nesting in Folsom is considered unlikely.

Double-crested Cormorant (*Phalacrocorax auritus*) - Double-crested cormorants are not listed under either FESA or CESA, but they are protected under the MBTA. Double-crested cormorants are long-lived, colonial-nesting waterbirds native to North America. They are common throughout California in appropriate habitats, nesting and wintering in coastal habitats and along large interior lakes. They breed in colonies ranging from several pairs to a few thousand individuals. They build their nests from twigs and branches beginning in April, usually in trees, on the ground, or on islands favored also by other colonial nesting birds, like great blue herons, great egrets, black-crowned night-herons, cattle egrets, gulls, and terns.

Typically, at age three or four, adults are ready to breed. Eggs are laid in mid-to-late April, and hatching occurs approximately 25 days later. A typical nest has two or three chicks. Chicks can fly at 5 to 6 weeks and will accompany adults to feed at 7 weeks. They are independent of the adult birds at 10 weeks.

CNDDDB (2018) reports one double-crested cormorant occurrence within 10 miles of Folsom, but none within Folsom (see Figure 9-2). The cormorant may occasionally occur in Folsom, but is unlikely to nest there.

Great Blue Heron (*Ardea herodias*) - The great blue heron is not listed under either FESA or CESA, but is considered a “special animal” by the CDFW because of the close association it has with habitat that is continuing to decline in California. Information on rookeries is collected by the CNDDDB. All fish-eating birds, including the great blue heron are protected by the MBTA.

Great blue herons are common in northern California where they forage for small fish and invertebrates in irrigation ditches, flooded fields, and along river margins. They use shallow estuary systems and fresh and saline emergent wetlands year round. Herons nest colonially in secluded groves of tall trees near shallow-water feeding areas and often in riparian habitats. Mature trees are required for perching and roosting sites. Great blue herons usually hunt solitarily feeding mostly on fish, but they also eat small rodents, amphibians, snakes, lizards, insects, crustaceans, and occasionally small birds. The breeding season lasts from February to June or July, with clutch sizes averaging three to four eggs. The adults typically feed their young until 11 weeks of age and breeding typically begins at 2 years of age. Great blue herons are sensitive to human disturbance near their nests.

CNDDDB (2018) reports 6 great blue heron occurrences within 10 miles of Folsom, including three occurrences within Folsom (see Figure 9-2). The heron may occasionally occur in Folsom, but is unlikely to nest there.

White-Tailed Kite - The white-tailed kite is a fully protected species under the California Fish and Game Code, Section 3511, and their nests are protected under the MBTA. White-tailed kites were threatened with extinction in North America during the early twentieth century. Populations recovered throughout its range in the United States from small populations that survived in California, Texas, and Florida. However, since the 1980s, many white-tailed kite populations have

been declining, apparently because of loss of habitat and increased disturbance of nests (Dunk 1995).

The breeding season generally extends from early February through early August. White-tailed kites usually nest in large native trees, although nonnative trees also are occasionally used. Nest trees are generally at the edge of wooded habitat next to open fields. Large trees in areas that have been developed may also be used, although the trees need to be close to open fields for foraging (Dunk 1995). White-tailed kites feed primarily on small mammals including voles (*Microtus sp.*), pocket mice (*Perognathus sp.*), and harvest mice (*Reithrodontomys sp.*) (Dunk 1995).

CNDDDB (2018) reports 13 occurrences of white-tailed kite within 10 miles of Folsom, including two occurrences within Folsom (see Figure 9-2). Large trees in Folsom provide suitable nesting habitat and annual grasslands in Folsom provide suitable foraging habitat.

American Badger - The American badger (*Taxidea taxus*) is a California species of special concern. The species is found throughout the state except in the north coast region. Badgers are most abundant in drier areas with friable soils and sparse vegetation. Other fossorial (burrowing) animals often use burrows made by badgers. Badgers are carnivorous and prey upon fossorial rodents, especially ground squirrels and pocket gophers, as well as reptiles, insects, earthworms, eggs, and carrion (Ahlborn 2005).

CNDDDB (2018) reports two American badger occurrences within 10 miles of Folsom, and one occurrence within Folsom. Larger areas of annual grasslands in Folsom provide suitable habitat for American badgers.

Migratory Birds and Raptors - Trees, shrubs, and grasslands located throughout Folsom provide suitable nesting habitat for a variety of non-special-status birds and raptors. Riparian woodlands located along the American River provide suitable rookery sites for great blue heron and great egrets. Bridges and buildings provide suitable structures where cliff swallows (*Petrochelidon pyrrhonota*) could build nests and weep holes located on the underside of bridges provide suitable nesting habitat for white-throated swifts (*Aeronautes saxatalis*). Although these species are not considered special-status wildlife species, their occupied nests and eggs are protected by California Fish and Game Code, Section 3503 and 3503.5, and the MBTA.

Pallid Bat – The pallid bat is a California species of special concern. The pallid bat is a common species of low elevations in California. It occurs throughout California except for the high Sierra Nevada from Shasta to Kern counties, and the northwestern corner of the state from Del Norte and western Siskiyou counties to northern Mendocino County. It occupies a wide variety of habitats, including grasslands, shrublands, woodlands, and forests from sea level up through mixed conifer forests. The species is most common in open, dry habitats with rocky areas for roosting.

Pallid bats eat a wide variety of insects and arachnids. They roost during the day in caves, crevices, mines, and occasionally in hollow trees and buildings. Roost must protect bats from high temperatures. Bats move deeper into cover if temperatures rise.

CNDDDB (2018) reports one pallid bat occurrence within 10 miles of Folsom, and one occurrence within Folsom. Buildings and the undersides of bridges in Folsom may provide suitable roosting habitat.

Sensitive Natural Communities

Valley Needlegrass Grassland - Valley needlegrass grassland is a sensitive natural community tracked by CDFW. It is characterized by purple needlegrass (*Nassella pulchra*), a native perennial bunchgrass. Associate species are primarily native and nonnative annual forbs including blowwives (*Achyrochaena mollis*), purple clarkia (*Clarkia purpurea ssp. quadrivulnera*), California poppy, hayfield tarweed, valley tassels (*Castilleja attenuata*), and other species characteristic of the annual grassland community.

CNDDDB reports one mapped occurrence of valley needlegrass grassland within 10 miles of Folsom, which was within Folsom. If it occurs within Folsom its extent is likely limited to very small patches. Small inclusions of valley needlegrass grassland may be present in the FPASP area, interspersed within the annual grassland community described above.

Blue Oak Woodlands - As defined by the California Oak Woodlands Conservation Act of 2001, oak woodlands are stands of oak trees with greater than 10 percent canopy cover. Approximately 642 acres of blue oak woodland containing 249.8 acres of tree canopy (39 percent canopy cover) is present in the FPASP area, primarily in the northwestern third of the site. Other areas of blue oak woodland occur north of the American River and east of East Bidwell Street. Blue oak woodland is a broadleaved deciduous woodland plant community with a grassy understory. The tree layer is dominated by blue oak while the understory is dominated by dogtail grass (*Cynosurus echinatus*), soft chess, and other herbaceous species similar to those found in the annual grassland community. Several types of oak woodlands occur within Folsom. Species commonly encountered include blue oaks, valley oaks, and interior live oaks. Foothill pines are often also encountered, especially near the American River corridor. A well developed shrub understory is common in these habitats with elderberry, toyon, coyote brush (*Baccharis pilularis*), and poison oak commonly observed. The herbaceous layer in woodlands is similar to the grassland described above, however native diversity is often higher in oak woodlands.

Wetlands and Waters of the United States - Rivers, creeks, and areas of open water that qualify as “waters of the United States” under the Clean Water Act are regulated by federal and state agencies. Although they are not listed as sensitive natural communities by CDFW, they are often considered as sensitive because of their importance for wildlife habitat (especially for special status species), and for the other ecological functions and values that they provide.

Various types of wetlands are common in the 2035 Plan Evaluation Area. North of Highway 50, freshwater emergent marsh (permanent wetland) is the most common type of wetland, although one northern hardpan vernal pool wetland was reported from CNDDDB (CDFW 2018). Within the FPASP area, seasonal wetlands and vernal pools are common.

Freshwater emergent marsh is commonly dominated by cattail and tule although other perennial hydrophytic (aquatic) plant species are also common. Seasonal wetlands are often dominated by Italian ryegrass, pennyroyal (*Mentha pulegium*) and tall flatsedge, and other annual or perennial species adapted to seasonal drying during the summer months. Fresh emergent wetlands are among the most productive wildlife habitats. They provide food, cover, and water for many species of amphibians, reptiles, birds, and mammals. Sierran treefrog, and western toad use emergent marshes for breeding habitat; and common garter snake, beaver, and raccoon use emergent wetlands for foraging, rearing, or cover. A variety of migratory birds such as mallard (*Anas platyrhynchos*), wood duck, and red-winged blackbird use these habitats. Seasonal wetlands and vernal pools provide

suitable breeding habitat for several species of amphibians, including Sierran tree frog, western toad, and western spadefoot. Birds, such as great egrets, great blue herons, and mallards use seasonal wetlands and vernal pools as foraging habitat when they are inundated.

Vernal pools are depressions in the landscape that pond water intermittently during the rainy season and are completely dry during late spring and summer. Vernal pools pond because they contain an impervious soil layer that prevents water from infiltrating into the lower soil layers. Because of their unique hydrologic regime, they support a highly specialized flora and fauna adapted to prolonged inundation and subsequent dry periods. Vernal pools were historically widespread throughout the region, but their extent is now limited due to development and agricultural conversion over the last 150 years.

Aquatic habitats are present in Folsom in the form of open water (primarily Lake Natoma and Folsom Lake), the American River, and seasonal and perennial creeks. Five named creeks flow through Folsom: Alder, Gold, Hinkle, Humbug, and Willow creeks. Numerous other small “blue-line streams” also appear on USGS topographic maps, although most are likely seasonal or intermittent. Seasonal and perennial creeks provide habitat for aquatic insects and breeding habitat for amphibians, depending on the duration of water flow. Creeks and rivers and open waters are used for foraging by species such as the great egret (*Ardea alba*), great blue heron (*Ardea herodias*), belted kingfisher (*Megasceryle alcyon*), raccoon, and striped skunk. The American River provides habitat for a variety of species including fish species, though adjacent to Folsom, the river backs behind Nimbus Dam to form Lake Natoma, and many anadromous or migratory fish species are blocked from entering Lake Natoma and the upper American River by the dam.

The CNDDDB includes several mapped occurrences of northern hardpan vernal pool, a sensitive natural community tracked by CDFW, near Folsom. The extent of this community type within Folsom has not been mapped, however its extent is likely limited to the area within the FPASP area.

Riparian Habitat - The perennial rivers and creeks within Folsom often have well developed riparian corridors. Riparian trees, when present, include valley oaks, Fremont cottonwoods, black walnut, interior live oak, and western sycamore. Commonly encountered shrubs include elderberry, willows, California buckeye, and blackberry. Although they are not listed as sensitive natural communities by CDFW, riparian habitats are often considered sensitive because of their importance as wildlife habitat (especially special-status species), and the other ecological functions and values that they provide.

Vegetation within riparian areas is diverse and well developed, so these communities provide high-value habitat for many wildlife species, including special-status species. Invertebrates, amphibians, and aquatic reptiles (e.g., turtles and garter snakes) live in riparian and adjacent upland habitats. Raptors, herons and egrets, and other birds nest in the upper canopy. A variety of songbirds use the shrub canopy for foraging and nesting, and cavity-nesting birds occupy dying trees and snags. Raccoons and striped skunks are common in riparian communities, as are many species of small mammals.

Wildlife Movement Corridors - Tracts of open space located throughout Folsom provide wildlife movement corridors for fish, amphibians, reptiles, birds, and mammals. Riparian creek corridors associated with American River, Humbug Creek, Willow Creek, and Alder Creek allow a wide

variety of wildlife species to forage, disperse, and migrate and the waterways provide movement corridors for fish species and aquatic invertebrates.

Invasive Plants - Plant species identified by the California Invasive Plant Council and California Department of Food and Agriculture as invasive are well represented in Folsom. In particular, large areas of yellow star-thistle and Himalayan blackberry are commonly found in annual grassland and wetland habitats. Other invasive species commonly observed in the study area include Italian thistle (*Carduus pycnocephalus*), milk thistle (*Silybum marianum*), ripgut brome, Italian ryegrass, stinkweed (*Dittrichia graveolens*), and perennial pepperweed (*Lepidium latifolium*).

9.1.2 REGULATORY SETTING

The following regulations of federal, state, and local agencies govern various aspects of biological resources. These regulations are summarized below and discussed in detail in Appendix C.

FEDERAL LAWS AND REGULATIONS

- **Federal Endangered Species Act** – Provides protections for species listed by the USFWS or National Marine Fisheries as either “threatened” or “endangered”; prohibits “take” of these species without a permit. USFWS and NMFS are responsible for defining “critical habitat” for listed species.
- **Section 404 of the Clean Water Act** - Establishes requirement to obtain a permit before conducting activities that involve any discharge of dredged or fill material into waters of the United States, including wetlands; permits issued by the United States Army Corps of Engineers (ACOE).
- **Section 401 of the Clean Water Act** – Requires persons applying for a federal permit or license that may result in the discharge of pollutants into waters of the U.S. to obtain state certification that activity complies with applicable water quality standards; certification administered by RWQCBs.
- **Migratory Bird Treaty Act** - Prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations of U.S. Secretary of the Interior; covers most native birds.
- **Bald and Golden Eagle Protection Act** - Prohibits the “taking” of bald or golden eagles, including their parts, nests, or eggs, without a permit issued by U.S. Secretary of the Interior.

CALIFORNIA LAWS AND REGULATIONS

- **California Endangered Species Act** – Prohibits state agencies from approving projects that jeopardize continued existence of endangered or threatened species; exception if no reasonable and prudent alternatives available that would avoid jeopardy; take authorizations issued by CDFW.
- **Native Plant Protection Act** - Requires state agencies to establish criteria to determine whether native plant species are endangered or rare; prohibits taking of listed plants from the wild.
- **California Fish and Game Code Section 1602** – Requires CDFW to issue streambed alteration agreements for projects that would divert or obstruct natural flow of, substantially change, or use any material from the bed, channel, or bank of, any river, stream, or lake; also requires permits for depositing certain materials in such a water body.

- **California Fish and Game Code Section 3503** – Makes it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird; also unlawful to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs.
- **California Fish and Game Code Section 3511** – Makes it unlawful to take or possess 13 species of fully protected birds or parts thereof.
- **Porter-Cologne Water Quality Control Act** - Overseen by the State Water Resources Control Board (SWRCB) and the Regional Water Quality Control Boards (RWQCB); requires development of regional water quality control plans; authorizes programs and plans that may be triggered by urban development; implemented in coordination with Clean Water Act programs.

LOCAL LAWS AND REGULATIONS

The City of Folsom has adopted ordinances and standard conditions to protect biological resources during the construction and operation of urban development. These requirements are found in the Folsom Municipal Code (FMC) and in the City’s Standard Construction Specifications, and are discussed below.

City Ordinances

Tree Preservation (FMC Chapter 12.16)

Protects native oak trees (i.e., *Quercus lobata*, *Q. douglasii*, *Q. wislizenii*, and hybrids thereof) with a diameter at breast height (DBH) of 6 inches or greater for single trunk trees or an aggregate DBH of 20 inches or greater for multiple trunk trees; landmark trees, heritage trees, and street trees.

Folsom Standard Construction Specifications

Section 9: Grading, Trees and Shrubbery

On underground construction of all sewer and water facilities and on construction of underground and open channel drainage facilities when construction is to be performed in the vicinity of trees, shrubbery, and lawns, the work shall be carried out in such a manner, which will cause minimum damage to public and private property.

General Provisions Article 12: Protections of Existing Trees. Section 12.01. Protection of Trees

Protection of existing trees not authorized for removal shall be given special attention. The Contractor shall comply with the provisions of the City’s Tree Preservation Ordinance. Every reasonable effort shall be made to avoid creating conditions adverse to the tree’s health. The natural ground within the dripline of saved and protected trees shall remain as undisturbed as possible.

Folsom Plan Area Specific Plan/Russell Ranch Adopted Mitigation Measures

Folsom Plan Area Specific Plan EIR

Mitigation measures adopted by the City during its approval of the Folsom Plan Area Specific Plan and the Russell Ranch projects related to biological resources include:

- 3A.3-1a: Design Stormwater Drainage Plans and Erosion and Sediment Control Plans to Avoid and Minimize Erosion and Runoff to All Wetlands and Other Waters That Are to Remain on the FPASP and Use Low Impact Development Features

- 3A.3-1b: Secure Clean Water Act Section 404 Permit and Implement All Permit Conditions; Ensure No Net Loss of Functions and Values of Wetlands, Other Waters of the U.S., and Waters of the State
- 3A.3-2a: Avoid Direct Loss of Swainson’s Hawk and Other Raptor Nests
- 3A.3-2b: Prepare and Implement a Swainson’s Hawk Mitigation Plan
- 3A.3-2c: Avoid and Minimize Impacts to Tricolored Blackbird Nesting Colonies
- 3A.3-2d: Avoid and Minimize Impacts to Special-Status Bat Roosts
- 3A.3-2e: Obtain an Incidental Take Permit under Section 10(a) of FESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of Vernal Pool Habitat
- 3A.3-2f: Obtain an Incidental Take Permit under Section 10(a) of FESA; Develop and Implement a Habitat Conservation Plan to Compensate for the Loss of VELB Habitat
- 3A.3-2g: Secure Take Authorization for Federally Listed Vernal Pool Invertebrates and Implement All Permit Conditions
- 3A.3-2h: Obtain Incidental Take Permit for Impacts on Valley Elderberry Longhorn Beetle and Implement All Permit Conditions
- 3A.3-3: Conduct Special-Status Plant Surveys; Implement Avoidance and Mitigation Measures or Compensatory Mitigation
- 3A.3-4a: Secure and Implement Section 1602 Streambed Alteration Agreement
- 3A.3-4b: Conduct Surveys to Identify and Map Valley Needlegrass Grassland; Implement Avoidance and Minimization Measures or Compensatory Mitigation
- 3A.3-5: Conduct Tree Survey, Prepare and Implement an Oak Woodland Mitigation Plan, Replace Native Oak Trees Removed, and Implement Measures to Avoid and Minimize Indirect Impacts on Oak Trees Retained On Site

Russell Ranch Project EIR

- 4.3-1: Consult with the Appropriate Regulatory Agencies (CDFW and USFWS) regarding need for additional plant surveys
- 4.3-3(a): Conduct Environmental Awareness Training for Construction Employees
- 4.3-3(b): Conduct Preconstruction Western Spadefoot Toad Survey
- 4.3-4: Conduct Preconstruction Survey for Western pond turtle
- 4.3-5(a): Swainson’s Hawk Nesting Habitat
- 4.3-5(b): Swainson’s Hawk Foraging Habitat
- 4.3-6(a): Conduct Preconstruction Survey for Burrowing Owls
- 4.3-6(b): Prepare Burrowing Owl Mitigation Plan
- 4.3-7: Prepare Preconstruction Survey for Tricolored Blackbirds
- 4.3-8(a): Nesting Raptors
- 4.3-8(b): Other Nesting Special-Status and Migratory Birds
- 4.3-10: Conduct Preconstruction Survey for American Badger
- 4.3-11(a): Clean Water Act Sections 401 and 404 Permits
- 4.3-11(b): Master Streambed Alteration Agreement
- 4.3-11(c): Valley Needlegrass

9.1.3 PROPOSED 2035 GENERAL PLAN GOALS AND POLICIES

The following goals and policies from the proposed 2035 General Plan address biological resources, as well as guide the location, design, and quality of development to protect important wildlife, plants, and natural processes.

NATURAL AND CULTURAL RESOURCES ELEMENT

NCR 1.1.1: Habitat Preservation. Support State and Federal policies for preservation and enhancement of riparian and wetland habitats by incorporating, as deemed appropriate, standards published by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service into site-specific development proposals.

NCR 1.1.2 Preserve Natural Resources. Require that a qualified biologist conduct a vegetative/wildlife field survey and analysis prior to consideration of development applications for projects located in sensitive habitat areas and potential habitats for sensitive wildlife and floral species.

NCR 1.1.3 Wetland Preservation. Require developers to prepare a wetland mitigation and monitoring plan that describes the habitats present within the proposed project site and establishes a plan for the long-term monitoring and mitigation of sensitive habitats.

NCR 1.1.4 Native and Drought Tolerant Vegetation. Encourage new developments to plant native vegetation, including those species important to Native American lifeways and values, and drought tolerant species and prohibit the use of invasive plants.

NCR 1.1.5 New Open Space. Continue to acquire strategically-located open space areas for passive and active recreational uses when such parcels of open space value become available and feasible funding sources are identified to sustain the ongoing maintenance expenses.

NCR 1.1.6 Consolidate Parcels. Encourage landowners to consolidate identified habitats, open space, and park lands between separately-owned development projects and individually-owned properties, when feasible.

NCR 1.1.8 Planting in New Development. Require the planting of street trees, parking lot canopy trees, screening trees, and other amenity trees and landscaping in all new development, consistent with City landscaping development guidelines, to minimize the heat island effect. Planting strips must be large enough to accommodate a large tree canopy and allow for healthy root growth.

NCR 1.1.9 Public Awareness. Encourage and support development projects and programs that enhance public appreciation and awareness of the natural environment.

NCR 4.1.2: Community Education. Consistent with requirements of stormwater quality permits, educate community members on the importance of water quality and the role streams and watersheds play in ensuring water quality.

NCR 4.1.3: Protection. Ensure the protection of riparian corridors, buffer zones, wetlands, and undeveloped open space areas to help protect water quality.

NCR 4.1.4: Creek Clean-Up. Sponsor a citywide volunteer creek clean-up day during “Creek Week.”

NCR 4.1.5: New Development. Require new development to protect natural drainage systems through site design, runoff reduction measures, and on-site water treatment (e.g., bioswales).

NCR 4.1.6: Low-Impact Development. Require new development to protect the quality of water resources and natural drainage systems through site design, source controls, runoff reduction measures, best management practices (BMP), and Low-Impact Development (LID).

PARKS AND RECREATION ELEMENT

PR 1.1.14: Parkways. Encourage the development of parkways and greenbelts to connect the citywide parks system.

PR 4.1.1: Coordination with State and Federal Parks. Coordinate with State and County park officials to provide education in programs that inform the community on topics such as local natural resources, conservation efforts, and fire safety.

PR 4.1.5: Waterway Recreation and Access. Coordinate with Federal agencies, State agencies, Sacramento County Regional Parks, private landowners, and developers to manage, preserve, and enhance the American River Parkway, urban waterways, and riparian corridors to increase public access for active and passive recreation.

9.2 ENVIRONMENTAL EFFECTS

9.2.1 SIGNIFICANCE CRITERIA

As set forth in Appendix G, Question IV of the State CEQA Guidelines, the following criteria have been established to quantify the level of significance of an adverse effect on biological resources evaluated pursuant to CEQA. An impact would exceed an impact threshold under these circumstances:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service? *(IV.a)*
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, and regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service? *(IV.b)*
- Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? *(IV.c)*
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites? *(IV.d)*
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? *(IV.e)*
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan? *(IV.f)*

9.2.2 ANALYSIS METHODOLOGY

The biological resources evaluation includes a review of biological resources potentially affected by the implementation of the 2035 General Plan project, including the buildout envisioned under the Plan. The impact assessment was based on information available from various existing documents and database searches, as well as on the standards of significance described above.

Queries of the CNDDDB (CDFW 2018), the Information for Planning and Consultation (IPaC) database (USFWS 2018), the Inventory of Rare and Endangered Plants (CNPS 2018), and the USFWS National Wetlands Inventory (USFWS 2018) were used to develop a list of the species and sensitive habitats with the potential to occur within the 2035 General Plan study area (see Appendix F, Tables F-1 and F-2), and to map the locations of special-status species and their critical habitat, and sensitive habitats identified in these databases (see Figures 9-1, 9-2, and 9-3). Information regarding species habitat requirements and knowledge of local conditions in Folsom were used to determine the likelihood of each species to occur in the study area. Based on that evaluation, the potential for each species to occur was assessed using the following categories:

- **None** indicates that suitable habitat for the species is absent in the 2035 Plan Evaluation Area, the local range for the species is restricted to areas outside of the 2035 Plan Evaluation Area, and/or the species is extirpated in the region.
- **Not Expected** indicates that suitable habitat or key habitat elements may be present within the 2035 Plan Evaluation Area, but may be of poor quality or isolated from the nearest extant occurrences. Habitat suitability refers to factors such as elevation, soil chemistry and type, vegetation communities, microhabitats, and the quality of habitats present with regard to the needs of species.
- **Possible** indicates the presence within the 2035 Plan Evaluation Area of suitable habitat or key habitat elements that potentially support the species.
- **Present** indicates the target species was either observed directly or its presence was confirmed by diagnostic signs (i.e. tracks, scat, burrows, carcasses, castings, prey remains, etc.) during field investigations.

Impacts associated with buildout of the area north of Highway 50 were evaluated by overlaying GIS data regarding the location of lands north of Highway 50 available for development (Mintier Harnish 2017) with information on location of special-status species and habitats from the database queries. The impacts of the buildout of lands within the FPASP area on special-status species and sensitive habitats was obtained from the FPASP EIR/EIS (City of Folsom 2011).

9.2.3 LESS-THAN-SIGNIFICANT IMPACTS

Based on the evaluations set forth below, potential impacts for the following specific topics with respect to biological resources were found to be less than significant. Therefore, they will not be evaluated further in this chapter.

IV. BIOLOGICAL RESOURCES		
Would the Project:	Less than Significant Impact	No Impact
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	X	
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	X	

EVALUATION OF LESS-THAN-SIGNIFICANT IMPACTS

Question (e) Local Policies or Ordinances: Less-than-significant Impact. The 2035 General Plan includes policies to protect blue oak woodlands and individual oak trees, which are consistent with the Folsom Tree Preservation Ordinance (FMC Chapter 12.16) and the tree preservation regulations of the Folsom Standard Construction Specifications (Section 9: Grading, Subsection 9.1, Provision 9, Trees and Shrubbery; and General Provisions Article 12, Section 12.01, Protection of Trees).

Question (f) Adopted Habitat Conservation Plan (HCP): Less-than-significant Impact. A number of public entities have developed a Habitat Conservation Plan for much of south Sacramento County. The South Sacramento Habitat Conservation Plan (SSHCP) is led by a multi-jurisdiction collaborative that includes Sacramento County; the cities of Rancho Cordova and Galt; the Sacramento County Water Agency; the Sacramento Regional County Sanitation District; and the Capital SouthEast Connector Joint Powers Authority. The HCP and a joint EIS/EIR have been released in draft form for public and agency review and comment. Public hearings of the proposed adoption of the SSHCP, EIS/EIR, Aquatic Resources Program, and Implementing Agreement are anticipated to take place in winter 2018, with permit issuance expected in spring 2018. (SSHCP 2017)

The City of Folsom is not a participating party in the SSHCP, and all areas of the city are outside of the SSHCP coverage boundaries. Except for Planning Areas 1 (Easton/Glenborough) and 2 (south of White Rock Road)¹, which both remain in Sacramento County and would be subject to the SSHCP, no other Habitat Conservation Plans or Natural Community Conservation Plans have been adopted or are in process within the area covered by the 2035 General Plan. Therefore, the 2035 General Plan would not conflict with any such plans.

9.2.4 POTENTIALLY SIGNIFICANT ENVIRONMENTAL IMPACTS

The following discussion examines the potential impacts of the proposed project based on the impact threshold criteria described above.

¹ For a discussion of Planning Areas 1 and 2, refer to Section 3.2 in Chapter 3, *Project Description*, of this Draft PEIR. The two Planning Areas are illustrated on Figure 3-2.

Impact BIO-1 Have a substantial adverse effect on special-status species	
Applicable Regulations	Federal Endangered Species Act, Clean Water Act Section 404, Clean Water Act Section 401, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, California Endangered Species Act, Native Plant Protection Act, Oak Woodlands Conservation Act, California Fish and Game Code Sections 1602, 3503 and 3511, Porter-Cologne Water Quality Control Act, CEQA Section 15380, Folsom Municipal Code Chapter 12.16, Folsom Standard Construction Specifications Sections 9 and 12.01.
Adopted Mitigation Measures	FPASP EIR/EIS Mitigation Measures: 3A.3-1a, 3A.3-1b, 3A.3-2a, 3A.3-2b, 3A.3-2c, 3A.3-2d, eA.3-2e, 3A.3-2f, 3A.3-2g, 3A.3-2h, 3A.3-3; Russell Ranch EIR Mitigation Measures: 4.3-1, 4.3-3(a), 4.3-3(b), 4.3-4, 4.3-5(a), 4.3-5(b), 4.3-6(a), 4.3-6(b), 4.3-7, 4.3-8(a), 4.3-8(b), 4.3-10, 4.3-11(a), 4.3-11(b), 4.3-11(c).
Proposed GP Policies that Reduce Impacts	Policies NCR 1.1.1, - NCR 1.1.6, NCR 1.1.8 - 1.1.9, NCR 4.1.3, - NCR 4.1.6, PR 1.1.14, PR 4.1.1.
Significance after Implementation of GP Policies	Significant.
Mitigation Measures	Mitigation Measure BIO-1: Modify proposed 2035 General Plan Policy NCR 1.1.1.
Significance after Mitigation	Significant and unavoidable.

Implementation of the 2035 General Plan could adversely affect special-status species of plants and animals within the 2035 Plan Evaluation Area. The effects of the development pursuant to the 2035 General Plan on special-status species would encompass the impacts of developing the FPASP area, south of Highway 50, and the development of 441 acres encompassing 453 isolated parcels north of Highway 50.

Urban development and infrastructure identified in the 2035 General Plan has the potential to adversely affect special-status species through a variety of mechanisms, including:

- Direct loss of individuals during land clearing for development
- Direct loss of individuals due to urban uses (such as impacts with cars)
- Loss of aquatic habitat due to filling of wetlands
- Loss of terrestrial habitat during land clearing for development
- Degradation of habitat quality due to fragmentation
- Degradation of aquatic habitat quality due to addition of pollutants in urban runoff
- Loss of reproductive capacity (e.g. impacts on nesting birds due to removal of trees, noise and disruption during construction)

All special-status plant and wildlife species with the potential to occur within a 10-mile radius of the City of Folsom are listed in Table F-1 and Table F-2, in Appendix F.

Development of the FPASP area, south of Highway 50 would result in potential impacts to 27 special-status species, including four invertebrates, two reptiles and amphibians, sixteen birds, and five mammals. The species include:

- Vernal pool fairy shrimp
- Vernal pool tadpole shrimp
- Western pond turtle
- Conservancy fairy shrimp
- Valley elderberry longhorn beetle
- Western spadefoot toad

- Swainson’s hawk
- Northern harrier
- Golden eagle
- American kestrel
- Red-shouldered hawk
- Great horned owl
- Loggerhead shrike
- Modesto song sparrow
- Pallid bat
- Western mastiff bat
- American badger
- Western burrowing owl
- White-tailed kite
- Coopers hawk
- Red-tailed hawk
- Western screech-owl
- Barn owl
- Grasshopper sparrow
- Tricolored blackbird
- Townsend’s big-eared bat
- Western red bat

There would be no potential effects of implementing the FPASP on special-status plant species. Although the EIR/EIS prepared for the FPASP determined that eleven special-status plant species have the potential to occur in the FPASP area in vernal pool, seasonal wetland, freshwater marsh, pond, oak woodland, and grassland habitats, surveys conducted as part of the EIR/EIS did not identify any special-status plants within the project area.

In addition to the species identified above, the 2018 federal and state database queries yielded additional species beyond those identified in previous analyses of the FPASP that were categorized either as Present or Possible within the 2035 General Plan Planning Area in Tables F-1 and F-2 (see Appendix F of this Draft PEIR) and have the potential to be impacted by anticipated development throughout the 2035 Plan Evaluation Area. The plant species include:

- Brandegee’s clarkia
- Stinkbells
- Legenere
- Slender Orcutt grass
- Sanford’s arrowhead
- Dwarf downingia
- Bogg’s Lake hedge-hyssop
- Pincushion navarretia
- Sacramento Orcutt grass

The wildlife species include:

- Valley elderberry longhorn beetle
- Vernal pool tadpole shrimp
- California tiger salamander
- Steelhead
- Golden eagle
- Purple martin
- Tricolored blackbird
- Bald eagle
- Great blue heron
- American badger
- Vernal pool fairy shrimp
- California red-legged frog
- Western spadefoot
- Western pond turtle
- Grasshopper sparrow
- Swainson’s hawk
- Western burrowing owl
- Double-crested cormorant
- White-tailed kite
- Pallid bat

The development of the parcels north of Highway 50 also has the potential to impact these species. According to CNDDDB (CDFW 2018), one occurrence each of Brandegee’s clarkia and Sacramento

Orcutt grass were recorded on parcels that would be developed with implementation of the 2035 General Plan. In addition, one occurrence each of the following wildlife species were recorded on parcels north of Highway 50 that would be developed pursuant to the 2035 General Plan: American badger; silver-haired bat, Swainson’s hawk, tricolored blackbird, VELB, and white-tailed kite. However, of the 453 parcels that could be developed north of Highway 50, 377 are lots within existing single-family subdivisions totaling 163 acres where preliminary development of streets, infrastructure, and rough grading of lots has already occurred. The 76 parcels designated for commercial or multi-family uses were evaluated for ground cover and disturbance using Google Earth (Google Earth 2017). This review indicates that the overwhelming majority of the 76 parcels are portions of bigger subdivisions or larger development projects and that most of the parcels have already been disturbed by prior rough grading and the installation of infrastructure. Thus, the potential for impacts to special-status species in the north of Highway 50 area is substantially lower than in the FPASP area.

Table 9-1 includes existing federal, state, and City regulations, in addition to policies from the 2035 General Plan and mitigation measures for development of the FPASP area that protect biological resources. The table also sets forth how each cited regulation acts to protect sensitive resources.

Table 9-1 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Special-Status Species	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
FEDERAL REGULATIONS	
<i>Endangered Species Act (FESA)</i>	Prohibits “take” of species listed as threatened or endangered (including their habitat) without a permit from USFWS or NMFS. Permits include measures to ensure that impacts on listed species are avoided, minimized, or compensated for.
<i>Clean Water Act Section 404</i>	Protects waters of the U.S., including wetlands that provide habitat for many listed species. Requires obtaining a permit for placement of fill in protected habitats that include measures to avoid, minimize, or compensate for the loss of habitat.
<i>Clean Water Act Section 401</i>	Requires that projects that must obtain a Section 404 permit also obtain certification from a RWQCB that the project will not violate State water quality standards. Certifications include best management practices to minimize impacts on water quality, thus protecting the quality of habitat for aquatic species.
<i>Migratory Bird Treaty Act</i>	Prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations of U.S. Secretary of the Interior. Protects nests for most native birds from impacts associated with construction near nesting trees or removal of trees with nests.
<i>Bald and Golden Eagle Protection Act</i>	Protects bald eagles and golden eagles by prohibiting the “taking” of their parts, nests, or eggs, without a permit issued by U.S. Secretary of the Interior.
STATE REGULATIONS	
<i>California Endangered Species Act (CESA)</i>	Prohibits State agencies from approving projects that jeopardize continued existence of endangered or threatened species (with some exceptions). Requires that take authorizations be issued by CDFW for take of protected species, which includes measures to avoid, minimize, or compensate for impacts.

Table 9-1 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Special-Status Species

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>California Fish and Game Code Section 1602</i>	Requires that projects that alter the bed or banks of a stream or lake obtain a Lake or Streambed Alteration Agreement (LSAA) from CDFW; LSAA's typically include measures to minimize impacts to stream and riparian habitats and the species that live in them, and BMPs to protect water quality during construction.
<i>California Fish and Game Code Section 3503</i>	Protects native bird species by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird; or to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs.
<i>California Fish and Game Code Section 3511</i>	Protects 13 species of fully protected birds or parts thereof by prohibiting take or possession.
<i>Native Plant Protection Act</i>	Allows the Fish and Game Commission to designate plants as rare or endangered, and prohibits take of endangered or rare native plants.
<i>Oak Woodlands Conservation Act</i>	Provides for preservation and protection of oak woodlands and trees, and provides funding for the conservation and restoration of oak woodlands.
<i>Porter-Cologne Water Quality Control Act</i>	Protects the quality of water in aquatic habitats that are inhabited by special-status species.
<i>CEQA Section 15380</i>	Requires that impacts of a project on threatened, rare, or endangered species (including certain classes of rare plants) be evaluated in all CEQA documents, and that mitigation measures be included to reduce or eliminate significant impacts. Provides protections for some species not covered by other federal or state laws.
CITY REQUIREMENTS	
<i>Folsom Municipal Code Chapter 12.16</i>	Protects native oak trees; landmark trees, heritage trees, and street trees, and the special-status species that may occupy them. Requires that applicants obtain a tree permit prior to activities that would result in the removal or damage to protected trees. Permits contain terms to protect or mitigate for any losses of trees.
<i>Standard Construction Specifications, Sections 9 and 12.01</i>	Protect native trees and the special-status species that may occupy them by specifying construction practices to avoid or minimize damage to trees.
FOLSOM PLAN AREA SPECIFIC PLAN EIR/EIS	
<i>Mitigation Measure 3A.3-1a</i>	Requires that stormwater drainage plans and erosion and sediment control plans be designed to avoid and minimize erosion and runoff to all wetlands and other waters that are to remain on the FPASP and use low impact development features.
<i>Mitigation Measure 3A.3-1b</i>	Requires that a Clean Water Act Section 404 Permit be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
<i>Mitigation Measure 3A.3-2a</i>	Requires avoidance of direct loss of Swainson's hawk and other raptor nests.
<i>Mitigation Measure 3A.3-2b</i>	Requires preparation and implementation of a Swainson's hawk mitigation plan.
<i>Mitigation Measure 3A.3-2c</i>	Requires avoidance and minimization of impacts to Tricolored blackbird nesting colonies.
<i>Mitigation Measure 3A.3-2d</i>	Requires avoidance and minimization of impacts to special-status bat roosts.
<i>Mitigation Measure 3A.3-2e</i>	Requires the acquisition of an Incidental Take Permit under Section 10(a) of FESA; and the development and implementation of a Habitat Conservation Plan to compensate for the loss of vernal pool habitat.

Table 9-1 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Special-Status Species

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Mitigation Measure 3A.3-2f</i>	Requires the acquisition of an Incidental Take Permit under Section 10(a) of FESA; and the development and implementation of a Habitat Conservation Plan to compensate for the loss of VELB habitat.
<i>Mitigation Measure 3A.3-2g</i>	Requires that take authorization for federally listed vernal pool invertebrates be obtained, and that all permit conditions be implemented.
<i>Mitigation Measure 3A.3-2h</i>	Requires that an Incidental Take Permit be obtained for VELB, and that all permit conditions be implemented.
<i>Mitigation Measure 3A.3-3</i>	Requires that special-status plant species surveys be completed, and the avoidance and mitigation measures or compensatory mitigation be implemented.
RUSSELL RANCH PROJECT EIR	
<i>Mitigation Measure 4.3-1</i>	Requires consultation with the appropriate regulatory agencies (CDFW and USFWS) regarding need for additional plant surveys.
<i>Mitigation Measure 4.3-3(a)</i>	Requires environmental awareness training for construction employees.
<i>Mitigation Measure 4.3-3(b)</i>	Requires preconstruction western spadefoot toad surveys.
<i>Mitigation Measure 4.3-4</i>	Requires preconstruction survey for western pond turtle.
<i>Mitigation Measure 4.3-5(a)</i>	Requires mitigation for Swainson's hawk nesting habitat.
<i>Mitigation Measure 4.3-5(b)</i>	Requires mitigation for Swainson's hawk foraging habitat.
<i>Mitigation Measure 4.3-6(a)</i>	Requires preconstruction surveys for burrowing owls.
<i>Mitigation Measure 4.3-6(b)</i>	Requires preparation and implementation of a burrowing owl mitigation plan.
<i>Mitigation Measure 4.3-7</i>	Requires preconstruction surveys for tricolored blackbirds.
<i>Mitigation Measure 4.3-8(a)</i>	Requires preconstruction surveys for nesting raptors, and protection of nests if present.
<i>Mitigation Measure 4.3-8(b)</i>	Requires preconstruction surveys for nesting special-status and migratory birds, and protection of nests if present.
<i>Mitigation Measure 4.3-10</i>	Requires preconstruction surveys for American badger.
<i>Mitigation Measure 4.3-11(a)</i>	Requires that a Clean Water Act Section 404 and 401 Permits be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
<i>Mitigation Measure 4.3-11(b)</i>	Requires that a Master Streambed Alteration Agreement permit be obtained and that all permit conditions be implemented.
<i>Mitigation Measure 4.3-11(c)</i>	Requires the implementation of protective measures for Valley needlegrass grassland during construction, and the preparation and implementation of a mitigation plan for plants removed by proposed development.
2035 GENERAL PLAN GOALS AND POLICIES	
<i>Policy NCR 1.1.1: Habitat Preservation</i>	Partially protects special-status species by incorporating CDFW and USFWS standards into development proposals where deemed appropriate by the City.
<i>Policy NCR 1.1.2: Preserve Natural Resources</i>	Protects special-status species by requiring that surveys for such species and their habitats be conducted by a qualified biologist prior to the City's consideration of development applications
<i>Policy NCR 1.1.3: Wetland Preservation</i>	Protects special-status species that occupy wetlands by requiring developers to prepare a plan that establishes long-term monitoring and mitigation for impacts to sensitive habitats.

Table 9-1 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Special-Status Species	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Policy NCR 1.1.4: Native and Drought Tolerant Vegetation</i>	Provides habitat for native species, potentially including special-status species by requiring developers to plant native vegetation and prohibiting the planting of invasive plants.
<i>Policy NCR 1.1.5: New Open Space</i>	Potentially preserves habitat for special-status species by continuing to acquire strategically-located open space areas.
<i>Policy NCR 1.1.6: Consolidate Parcels</i>	Potentially preserves habitat for special-status species by encouraging landowners to consolidate identified habitats on separately-owned properties.
<i>Policy NCR 1.1.8: Planting in new Development</i>	Provides potentially new habitat for special-status bird species by requiring the planting of trees in all new developments.
<i>Policy NCR 1.1.9: Public Awareness</i>	Contribute to the preservation of habitats for special-status species by supporting programs to educate the public to be aware of and appreciate the natural environment.
<i>Policy NCR 4.1.2: Community Education</i>	Contribute to the preservation of the quality of aquatic habitats and the special-status species that occupy them by educating community members on the importance of water quality and the role of streams and watersheds in ensuring water quality.
<i>Policy NCR 4.1.3: Protection</i>	Contribute to preserving the quantity and quality of habitats that support special-status species by protecting riparian corridors, buffer zones, wetlands, and undeveloped open space areas.
<i>Policy NCR 4.1.4: Creek Clean-Up</i>	Contribute to the preservation of creek habitats and the special-status species that may occupy them by sponsoring an annual citywide creek clean-up day.
<i>Policy NCR 4.1.5: New Development</i>	Protects aquatic and riparian habitats and the special-status species that may occupy them by requiring developers to protect natural drainage systems.
<i>Policy NCR 4.1.5: Low-Impact Development</i>	Protects aquatic habitats and the special-status species that may occupy them by requiring new development to incorporate features to protect water quality, through site design, source controls, runoff reduction measures, BMPs, and Low-Impact-Development features.
<i>Policy PR 1.1.14: Parkways</i>	Preserve natural habitats that may be occupied by special-status species, and preserving wildlife migration corridors, by encouraging the development of parkways and greenbelts that connect parks.
<i>Policy PR 4.1.1: Coordination with State and Federal Parks</i>	Contribute to the preservation of natural habitats and the special-status species that may occupy them by coordinating with State and County park officials to educate the public regarding local natural resources, conservation efforts, and fire safety.
<i>Policy PR 4.1.5: Waterway Recreation and Access</i>	Contribute to the preservation of the American River Parkway and the special-status species that occupy habitats in the parkway by coordinating preservation efforts with the federal, state, and county agencies that manage the parkway.

Source: Planning Partners 2018.

As set forth in Table 9-1, a number of federal and state laws offer protection for special-status species. The FESA, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, CESA, and the California Fish and Game Code require that impacts to special-status species be avoided or minimized, or when that is not possible, that compensatory mitigation be provided to offset any impacts. In addition, the Clean Water Act (Sections 401 and 404), the Native Plant Protection Act, California Fish and Game Code Sections 1602, 3503 and 3511, and the Porter-Cologne Water

Quality Control Act all provide protections to habitats often associated with special-status species, and thus also protect those species. These regulations would apply to both the FPASP area and the area north of Highway 50.

The City of Folsom provides limited protection for special-status species through its Municipal Code and existing Standard Construction Specifications as shown in Table 9-1.

In approving the FPASP and the Russell Ranch projects south of Highway 50, the City adopted a series of mitigation measures (shown in Table 9-1) to avoid or reduce effects to a number of special status species, including the protection of water quality and wetlands, Swainson's hawk, tricolored blackbird, burrowing owl, American badger, protected bat species, western spadefoot toad, western pond turtle, vernal pool invertebrates, and protected plant species. The adopted mitigation measures require that habitats be protected or that mitigation offset any loss of sensitive habitats including habitats that support the Valley Elderberry Longhorn beetle, and vernal pools and valley needlegrass grasslands.

A number of 2035 General Plan policies are directed towards the protection of stream channels, wetlands, riparian corridors, open space, and native trees, which also provide habitat for special-status species. 2035 General Plan policy NCR 1.1.1: Habitat Preservation partially protects special-status species by incorporating CDFW and USFWS standards into development proposals where "deemed appropriate" by the City. Implementation of Mitigation Measure BIO-1 would resolve the ambiguity in the policy and increase protection for special status species within the city.

The FPASP EIR/EIS and Russell Ranch EIR both identified significant impacts to special status species within their respective project areas that would be caused by the implementation of either project. Both environmental documents identified a suite of mitigation measures as shown in Table 9-2 and discussed above to avoid or reduce impacts to affected special-status plant and animal species and sensitive habitats. However the FPASP EIR/EIS (Impact 3A.3-1) concluded that even with the implementation of the mitigation measures described above, the impact of urban development and associated infrastructure would result in a significant and unavoidable impact.

Despite the protections provided by the laws, regulations, local ordinances, adopted mitigation measures, and proposed 2035 General Plan policies listed in Table 9-1, the adoption of Mitigation Measure BIO-1, and the fact that the vast majority of lots to the north of Highway 50 have already been disturbed, and because the impacts of the 2035 General Plan on special-status species within the FPASP area has been determined by the City of Folsom in the FPASP EIR/EIS to be significant and unavoidable, the impact of implementing the 2035 General Plan would be considered significant.

Significance of Impact: Significant.

Mitigation Measure BIO-1:

Modify Policy NCR 1.1.1: Habitat Preservation.

Support State and Federal policies for preservation and enhancement of riparian and wetland habitats by incorporating, as applicable as deemed appropriate, standards published by the California Department of Fish and Wildlife and the U.S. Fish and Wildlife Service into site-specific development proposals.

Environmental Effects of Measure: Implementation of Mitigation Measure BIO-1 would result in a revised policy that would apply applicable federal and state policies to future urban development projects, and thereby provide protection for sensitive habitats. Implementation of the Measure could result in increased avoidance and mitigation requirements for future urban and infrastructure development projects. From the standpoint of special status species, this would be a beneficial effect. Implementation of the measure would not result in an expansion of the area within the 2035 General Plan Planning Area devoted to urbanized land uses, and would not act to increase the intensity of existing or planned land uses. No environmental effects would occur beyond those identified in this PEIR.

Level of Significance After Mitigation: Significant and unavoidable.

Both the FPASP DEIR/DEIS and the Russell Ranch DEIR proposed mitigation measures to reduce the impacts of the development on special-status species, but concluded that the mitigation measures were insufficient to reduce the impacts to less than significant, and no other mitigation measures were available. Although Mitigation Measure BIO-1 would add some additional protection for special-status species, it would not be sufficient to completely mitigate all potential effects. As such, this impact would remain significant and unavoidable.

Impact BIO-2 Have a substantial adverse effect on riparian habitat or other sensitive natural communities	
Applicable Regulations	Federal Endangered Species Act, Clean Water Act Section 404, Clean Water Act Section 401, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, California Endangered Species Act, Native Plant Protection Act, California Fish and Game Code Sections 1602, 3503 and 3511, Porter-Cologne Water Quality Control Act, Folsom Municipal Code Chapter 12.16, Folsom Standard Construction Specifications, Sections 9 and 12.01.
Adopted Mitigation Measures	FPASP EIR/EIS Mitigation Measures: 3A.3-1a, 3A.3-1b, 3A.3-4a, 3A.3-4b; Russell Ranch EIR Mitigation Measures: 4.3-1, 4.3-3(a), 4.3-3(b), 4.3-4, 4.3-5(a), 4.3-7, 4.3-8(a), 4.3-8(b), 4.3-11(a), 4.3-11(b), 4.3-11(c).
Proposed GP Policies that Reduce Impacts	Policies NCR 1.1.1 - 1.1.2, NCR 1.1.4 - NCR 1.1.6, NCR 1.1.9, NCR 4.1.2 - NCR 4.1.6, PR 1.1.14, PR 4.1.1.
Significance after Implementation of GP Policies	Less than significant; no mitigation required.

Implementation of the 2035 General Plan could adversely affect riparian habitat and other sensitive natural communities² within the city limits of the City of Folsom. The effects of the development envisioned by the 2035 General Plan on riparian habitat and other sensitive communities would encompass the impacts of developing the FPASP area, south of Highway 50, and the development of 441 acres encompassing 453 isolated parcels north of Highway 50.

Urban development and infrastructure identified in the 2035 General Plan has the potential to adversely affect riparian habitat and other sensitive communities, such as valley needlegrass grassland, through a variety of mechanisms, including:

² Note that two sensitive habitats, wetlands and oak trees are addressed separately in this Draft PEIR. Oaks and oak woodlands are discussed above in Section 9.2.3, *Less Than Significant Impacts*, of this chapter and wetlands are discussed below in Impact BIO-3.

- Loss of terrestrial habitat during land clearing for development
- Degradation of habitat quality due to fragmentation
- Degradation of habitat quality due to proximity to urban uses.

As identified in the FPASP EIR/EIS, development of the FPASP area, south of Highway 50, would result in the loss or degradation of approximately 50 acres of wetland, vernal pool, stream, other water features, and riparian habitats, and an unknown amount of valley needlegrass grasslands. Approximately 1,118 acres of preserved open space³ within the FPASP area would conserve sensitive habitats similar to those lost. (Mintier Harnish 2017)

Development of the 441 acres of isolated parcels north of Highway 50 has the potential to result in the loss of sensitive habitats, including riparian habitats and native grasslands. However, of the 453 parcels that could be developed north of Highway 50, 377 are lots within existing single-family subdivisions totaling 163 acres where preliminary development of streets, infrastructure, and rough grading of lots has already occurred. The 76 parcels designated for commercial or multi-family uses were evaluated for ground cover and disturbance using Google Earth (Google Earth 2017). This review indicates that the overwhelming majority of the 76 parcels are portions of bigger subdivisions or larger development projects and that most of the parcels have already been disturbed by prior rough grading and the installation of infrastructure. Thus, the potential for impacts to sensitive habitats in the north of Highway 50 area is substantially lower than in the FPASP area area.

Table 9-2 sets forth existing federal, state, and City regulations, in addition to policies from the 2035 General Plan and mitigation measures for development of the FPASP area that protect sensitive habitats. The table also sets forth how each cited regulation acts to protect sensitive resources.

Table 9-2 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Riparian Habitat and Other Sensitive Natural Communities	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
FEDERAL REGULATIONS	
<i>Endangered Species Act (FESA)</i>	Prohibits “take” of species listed as threatened or endangered (including their habitat) without a permit from USFWS or NMFS, including species occupying riparian habitat and other sensitive natural communities. Permits include measures to ensure that impacts on listed species and their habitats are avoided, minimized, or compensated for.
<i>Clean Water Act Section 404</i>	Protects waters of the U.S., including wetlands that provide habitat for many listed species. Requires obtaining a permit for placement of fill in protected habitats, that include measures to avoid, minimize, or compensate for the loss of habitat, including riparian habitat adjoining waters of the U.S.
<i>Clean Water Act Section 401</i>	Requires that projects which must obtain a Section 404 permit also obtain certification from a RWQCB that the project will not violate state water quality standards. Certifications include best management practices to minimize impacts on water quality, thus protecting the quality of riparian habitat.

³ Of the 1,118 acres of open space, 1,054 acres would be qualified or Measure W open space. For further information regarding the different types of open space, see Chapter 3, *Project Description*, of this Draft PEIR.

Table 9-2 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Riparian Habitat and Other Sensitive Natural Communities

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Migratory Bird Treaty Act</i>	Prohibits the killing, possessing, or trading of migratory birds except in accordance with regulations of U.S. Secretary of the Interior. Protects nests for most native birds from impacts associated with construction near nesting trees or removal of trees with nests, including those within riparian habitats.
<i>Bald and Golden Eagle Protection Act</i>	Protects bald eagles and golden eagles by prohibiting the “taking” of their parts, nests, or eggs, without a permit issued by U.S. Secretary of the Interior. Protection of eagles will include protection of their nests within riparian habitats.
STATE REGULATIONS	
<i>Native Plant Protection Act</i>	Allows the Fish and Game Commission to designate plants as rare or endangered, and prohibits take of endangered or rare native plants, including plants within riparian areas and sensitive natural communities.
<i>California Fish and Game Code Section 1602</i>	Requires that projects that alter the bed or banks of a stream or lake obtain a Lake or Streambed Alteration Agreement (LSAA) from CDFW; LSAA's typically include measures to minimize impacts to stream and riparian habitats and the species that live in them, and BMPs to protect water quality during construction.
<i>California Fish and Game Code Section 3503</i>	Protects native bird species by making it unlawful to take, possess, or needlessly destroy the nest or eggs of any bird; or to take, possess, or destroy any raptors (i.e., hawks, owls, eagles, and falcons), including their nests or eggs. These nests are often in trees within riparian areas.
<i>California Fish and Game Code Section 3511</i>	Protects 13 species of fully protected birds or parts thereof by prohibiting take or possession.
<i>Porter-Cologne Water Quality Control Act</i>	Protects the quality of water in aquatic habitats, as well as adjacent riparian habitats.
CITY REQUIREMENTS	
<i>Folsom Municipal Code Chapter 12.16</i>	Protects native oak trees, landmark trees, heritage trees, and street trees, including such trees that may be within riparian areas. Requires that applicants obtain a tree permit prior to activities that would result in the removal or damage to protected trees. Permits contain terms to protect or mitigate for any losses of trees.
<i>Standard Construction Requirements, Sections 9 and 12.01</i>	Protect native trees, including trees within riparian areas, by specifying construction practices to avoid or minimize damage to trees.
FOLSOM PLAN AREA SPECIFIC PLAN EIR/EIS	
<i>Mitigation Measure 3A.3-1a</i>	Requires that stormwater drainage plans and erosion and sediment control plans be designed to avoid and minimize erosion and runoff to all wetlands and other waters that are to remain on the FPASP and use low impact development features.
<i>Mitigation Measure 3A.3-1b</i>	Requires that a Clean Water Act Section 404 Permit be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
<i>Mitigation Measure 3A.3-4a</i>	Requires that a 1602 Streambed Alteration Agreement permit be obtained and that all permit conditions be implemented to ensure no adverse effects to riparian habitat. The measure also requires the preparation and implementation of a Riparian Habitat Mitigation Plan.

Table 9-2 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Riparian Habitat and Other Sensitive Natural Communities

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Mitigation Measure 3A.3-4b</i>	Requires the implementation of protective measures for valley needlegrass grassland during construction, and the preparation and implementation of a mitigation plan for plants removed by proposed development.
RUSSELL RANCH PROJECT EIR	
<i>Mitigation Measure 4.3-1</i>	Requires consultation with the appropriate regulatory agencies (CDFW and USFWS) regarding need for additional plant surveys.
<i>Mitigation Measure 4.3-3(a)</i>	Requires environmental awareness training for construction employees.
<i>Mitigation Measure 4.3-3(b)</i>	Requires preconstruction western spadefoot toad surveys.
<i>Mitigation Measure 4.3-4</i>	Requires preconstruction survey for western pond turtle.
<i>Mitigation Measure 4.3-5(a)</i>	Requires mitigation for Swainson's hawk nesting habitat.
<i>Mitigation Measure 4.3-7</i>	Requires preconstruction surveys for tricolored blackbirds.
<i>Mitigation Measure 4.3-8(a)</i>	Requires preconstruction surveys for nesting raptors, and protection of nests if present.
<i>Mitigation Measure 4.3-8(b)</i>	Requires preconstruction surveys for nesting special-status and migratory birds, and protection of nests if present.
<i>Mitigation Measure 4.3-11(a)</i>	Requires that a Clean Water Act Section 404 and 401 Permits be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
<i>Mitigation Measure 4.3-11(b)</i>	Requires that a Master Streambed Alteration Agreement permit be obtained and that all permit conditions be implemented.
<i>Mitigation Measure 4.3-11(c)</i>	Requires the implementation of protective measures for valley needlegrass grassland during construction, and the preparation and implementation of a mitigation plan for plants removed by proposed development.
2035 GENERAL PLAN GOALS AND POLICIES	
<i>Policy NDR 1.1.1: Habitat Preservation</i>	Partially protects special-status species, including the sensitive habitats they inhabit by incorporating CDFW and USFWS standards into development proposals, where deemed appropriate by the City.
<i>Policy NCR 1.1.2: Preserve Natural Resources</i>	Protects special-status species, including those with habitats within riparian areas, by requiring that surveys for such species and their habitats be conducted by a qualified biologist prior to the City's consideration of development applications
<i>Policy NCR 1.1.4: Native and Drought Tolerant Vegetation</i>	Provides habitat for native species, potentially including special-status species by requiring developers to plant native vegetation and prohibiting the planting of invasive plants.
<i>Policy NCR 1.1.5: New Open Space</i>	Potentially preserves habitat for special-status species by continuing to acquire strategically-located open space areas, which may include riparian areas or other sensitive natural communities.
<i>Policy NCR 1.1.6: Consolidate Parcels</i>	Potentially preserves riparian habitat and other sensitive natural communities by encouraging landowners to consolidate identified habitats on separately-owned properties.
<i>Policy NCR 1.1.9: Public Awareness</i>	Contribute to the preservation of habitats, including riparian habitat and other sensitive natural communities by supporting programs to educate the public to be aware of and appreciate the natural environment.

Table 9-2 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Riparian Habitat and Other Sensitive Natural Communities

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Policy NCR 4.1.2: Community Education</i>	Contribute to the preservation of the quality of riparian habitats by educating community members on the importance of water quality and the role of streams and watersheds in ensuring water quality.
<i>Policy NCR 4.1.3: Protection</i>	Protects riparian corridors, buffer zones, wetlands, and undeveloped open space areas.
<i>Policy NCR 4.1.4: Creek Clean-Up</i>	Contribute to the preservation of creek habitats, including riparian habitat by sponsoring an annual citywide creek clean-up day.
<i>Policy NCR 4.1.5: New Development</i>	Protects aquatic and riparian habitats by requiring developers to protect natural drainage systems.
<i>Policy NCR 4.1.6: Low-Impact Development</i>	Protects riparian habitats by requiring new development to incorporate features to protect water quality, through site design, source controls, runoff reduction measures, BMPs, and Low-Impact-Development features.
<i>Policy PR 1.1.14: Parkways</i>	Potentially preserve riparian corridors by encouraging the development of parkways and greenbelts that connect parks.
<i>Policy PR 4.1.1: Coordination with State and Federal Parks</i>	Contribute to the preservation of riparian habitat and other sensitive natural communities by coordinating with State and County park officials to educate the public regarding local natural resources, conservation efforts, and fire safety.
<i>Policy PR 4.1.5: Waterway Recreation and Access</i>	Contribute to the preservation of the riparian habitat along the American River Parkway and the special-status species that occupy habitats in the parkway by coordinating preservation efforts with the federal, state, and county agencies that manage the parkway.

Source: Planning Partners 2018.

As shown in Table 9-2, a number of federal and state laws such as the Endangered Species Act, Clean Water Act, Migratory Bird Treaty Act, Bald and Golden Eagle Protection Act, California Endangered Species Act, Native Plant Protection Act, California Fish and Game Code Sections 1602, 3503, and 3511, and the Porter-Cologne Water Quality Control Act serve to preserve sensitive habitats by providing protections for the special-status species that inhabit these habitats. These regulations would apply to both the FPASP area and the area north of Highway 50.

The City of Folsom provides protection for sensitive habitats through its Municipal Code and existing Standard Construction Specifications as shown in Table 9-2. The City of Folsom also has protected the riparian corridors associated with the four main streams draining the area north of Highway 50 as permanent open space, and the American River corridor within the American River Parkway is protected as permanent open space by several federal, state, and local agencies.

In approving the FPASP and the Russell Ranch projects south of Highway 50, the City adopted a series of mitigation measures (shown in Table 9-2) to avoid or reduce effects to sensitive habitats, including the protection of water quality, various types of wetlands, streams, and riparian habitats. The adopted mitigation measures also require that habitats be protected or that mitigation offset any loss of sensitive habitats including those that support the Valley Elderberry Longhorn Beetle, and vernal pools and valley needlegrass grasslands.

Proposed 2035 General Plan policies (see Table 9-2) provide additional protections for sensitive habitats. In particular, Policy NCR 4.1.3: Protection requires the City to “Ensure the protection of riparian corridors, buffer zones, wetlands, and undeveloped open space areas to help protect water quality.” Therefore, it is unlikely that the remaining development north of Highway 50 would result in the loss or degradation of any riparian habitat. 2035 General Plan Policy NCR 1.1.1 supports CDFW and USFWS policies for the protection of riparian habitat under certain circumstances, and Policy NCR 1.1.2 requires that surveys be conducted by a qualified biologist for development applications in sensitive habitat areas. These two policies act to ensure that any riparian areas and valley needlegrass areas are identified and mitigation adopted to either protect or compensate for any lost habitat.

The FPASP EIR/EIS (Impact 3A.3-4) concluded that with the implementation of mitigation measures, the impact of development of that large area would result in less than significant impacts on riparian habitat and other sensitive natural communities. This conclusion was based on the fact that a mitigation and monitoring plan ensuring adequate compensation for the loss of riparian habitat would have to be developed and implemented as a condition of the streambed alteration permit required by Mitigation Measure 3A.3-4a, and because under Mitigation Measure 3A.3-4b, valley needlegrass grassland would be identified and mapped in the FPASP area and any potential loss of this community would be compensated through establishment elsewhere or through preservation and enhancement of existing acreage.

For both the FPASP area, and isolated parcels north of Highway 50, with the protections provided by federal and state laws, local ordinances, standard construction specifications, proposed 2035 General Plan policies, and mitigation adopted as part of the FPASP EIR/EIS, as listed in Table 9-2, this impact would be less than significant.

Significance of Impact: Less than significant.

Mitigation Measures: None required.

Impact BIO-3 Have a substantial adverse effect on federally protected wetlands	
Applicable Regulations	Endangered Species Act, Clean Water Act Section 404, Clean Water Act Section 401, California Endangered Species Act, Native Plant Protection Act, California Fish and Game Code Section 1602, Porter-Cologne Water Quality Control Act.
Adopted Mitigation Measures	FPASP EIR/EIS Mitigation Measures: 3A.3-1a, 3A.3-1b; Russell Ranch EIR Mitigation Measure: 4.3-11(a).
Proposed GP Policies that Reduce Impacts	Policies NCR 1.1.1 - NCR 1.1.3, NCR 1.1.5, NCR 1.1.9, NCR 4.1.3 - 4.1.4, NCR 4.1.6, PR 4.1.1.
Significance after Implementation of GP Policies	Significant.
Mitigation Measures	Mitigation Measure BIO-2: Implement Mitigation Measure BIO-1.
Significance after Mitigation	Significant and unavoidable.

Implementation of the 2035 General Plan could have an adverse effect on federally protected wetlands. The effects of the urban development envisioned in the 2035 General Plan on waters of the U.S., including wetlands, would encompass the impacts of the development within the FPASP area, and the development of 453 parcels comprising 441 acres north of Highway 50.

Future urban and infrastructure development pursuant in the 2035 General Plan has the potential to impact wetlands and waters of the U.S., as well as waters of the State through the following mechanisms:

- Direct loss due to filling during land clearing for development
- Degradation of habitat quality due to alteration of hydrology surrounding a wetland
- Degradation of habitat quality due to the addition of pollutants in urban runoff.

The FPASP EIR/EIS (Impact 3A.3-1) concluded that development of the FPASP area would result in direct impacts from the loss of waters of the U.S. due to the placement of fill material into approximately 39.50 acres of waters of the U.S., including wetlands. This would include 2.92 acres of vernal pools, 3.87 acres of seasonal wetland, 17.63 acres of seasonal wetland swale, 0.07 acre of freshwater marsh, 4.48 acres of freshwater seep, 1.17 acres of pond, 3.38 acres of stream channel, 4.47 acres of intermittent drainage channel, 1.43 acres of ditches, and 0.11 acre of willow scrub. In addition, 1.25 out of 1.30 acres of waters that ACOE determined to be non-jurisdictional, but considered waters of the state subject to the jurisdiction of the Central Valley RWQCB under the Porter-Cologne Act, would also be filled.

In addition to direct impacts resulting from the placement of fill material into waters of the U.S., development of the FPASP area would result in indirect impacts to 0.29 acres of waters of the U.S.

Development of the 441 acres of isolated parcels north of Highway 50 has the potential to result in the loss of wetlands and waters of the U.S. However, of the 453 parcels that could be developed north of Highway 50, 377 are lots within existing single-family subdivisions totaling 163 acres where preliminary development of streets, infrastructure, and rough grading of lots has already occurred. The 76 parcels designated for commercial or multi-family uses were evaluated for ground cover and disturbance using Google Earth (Google Earth 2017). This review indicates that the overwhelming majority of the 76 parcels are portions of bigger subdivisions or larger development projects and that most of the parcels have already been disturbed by prior rough grading and the installation of infrastructure. Thus, the potential for impacts to federally protected wetlands and waters in the north of Highway 50 area is substantially lower than in the within the FPASP area.

Table 9-3 sets forth existing federal, state, and City regulations, in addition to policies from the 2035 General Plan and mitigation measures for development of the FPASP area that protect sensitive habitats. The table also sets forth how each cited regulation acts to protect sensitive resources.

Table 9-3 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Federally Protected Wetlands	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
FEDERAL REGULATIONS	
<i>Clean Water Act Section 404</i>	Protects waters of the U.S., including wetlands that provide habitat for many listed species. Requires obtaining a permit for placement of fill in protected habitats, that include measures to avoid, minimize, or compensate for the loss of habitat, including riparian habitat adjoining waters of the U.S.

Table 9-3 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Federally Protected Wetlands

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Clean Water Act Section 401</i>	Requires that projects which must obtain a Section 404 permit also obtain certification from a RWQCB that the project will not violate state water quality standards. Certifications include best management practices to minimize impacts on water quality, thus protecting the quality of riparian habitat.
STATE REGULATIONS	
<i>California Fish and Game Code Section 1602</i>	Requires that projects that alter the bed or banks of a stream or lake obtain a Lake or Streambed Alteration Agreement (LSAA) from CDFW; LSAA's typically include measures to minimize impacts to stream habitat and the species that live in them, and BMPs to protect water quality during construction.
<i>Porter-Cologne Water Quality Control Act</i>	Protects the quality of water in aquatic habitats; allows the SWRCB to assert jurisdiction over and protect waters of the State.
CITY REQUIREMENTS	
<i>None</i>	
FOLSOM PLAN AREA SPECIFIC PLAN EIR/EIS	
<i>Mitigation Measure 3A.3-1a</i>	Requires that stormwater drainage plans and erosion and sediment control plans be designed to avoid and minimize erosion and runoff to all wetlands and other waters that are to remain on the FPASP and use low impact development features.
<i>Mitigation Measure 3A.3-1b</i>	Requires that a Clean Water Act Section 404 Permit be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
RUSSELL RANCH PROJECT EIR	
<i>Mitigation Measure 4.3-11(a)</i>	Requires that a Clean Water Act Section 404 and 401 Permits be obtained and that all permit conditions be implemented to ensure no net loss of functions and values of wetlands, other waters of the U.S., and waters of the State.
2035 GENERAL PLAN GOALS AND POLICIES	
<i>Policy NDR 1.1.1: Habitat Preservation</i>	Protects wetland habitats by incorporating CDFW and USFWS standards into development proposals.
<i>Policy NCR 1.1.2: Preserve Natural Resources</i>	Protects wetlands and aquatic habitats by requiring that surveys for special-status species and their habitats (including aquatic habitats) be conducted by a qualified biologist prior to the City's consideration of development applications
<i>Policy NCR 1.1.3: Wetland Preservation</i>	Protects wetlands by requiring developers to prepare a wetland mitigation and monitoring plan that describes the habitats present within the proposed project site and establishes a plan for the long-term monitoring and mitigation of sensitive habitats.
<i>Policy NCR 1.1.5: New Open Space</i>	Potentially preserves wetland areas by continuing to acquire strategically-located open space areas, which may include wetlands and other waters of the U.S.
<i>Policy NCR 1.1.9: Public Awareness</i>	Contribute to the preservation of wetlands and other waters of the U.S. by supporting programs to educate the public to be aware of and appreciate the natural environment.
<i>Policy NCR 4.1.3: Protection</i>	Ensures the protection of wetlands and other natural habitat types.
<i>Policy NCR 4.1.4: Creek Clean-Up</i>	Contribute to the preservation of creek habitats, by sponsoring an annual citywide creek clean-up day.

Table 9-3 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Federally Protected Wetlands	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Policy NCR 4.1.6: Low-Impact Development</i>	Protects wetlands and other waters of the U.S. by requiring new development to incorporate features to protect water quality, through site design, source controls, runoff reduction measures, BMPs, and Low-Impact-Development features.
<i>Policy PR 4.1.1: Coordination with State and Federal Parks</i>	Contribute to the preservation of wetlands and other waters of the U.S. by coordinating with State and County park officials to educate the public regarding local natural resources, conservation efforts, and fire safety.
<i>Policy PR 4.1.5: Waterway Recreation and Access</i>	Contribute to the preservation of wetland habitat along the American River Parkway by coordinating preservation efforts with the federal, state, and county agencies that manage the parkway.

Source: Planning Partners 2018.

As shown in Table 9-3, a number of federal and state laws such as the Endangered Species Act, Clean Water Act (Sections 404 and 401), California Endangered Species Act, Native Plant Protection Act, California Fish and Game Code Section 1602, and Porter-Cologne Water Quality Control Act directly protect wetlands and waters of the U.S. and provide indirect protection by providing protections for the special-status species that inhabit these habitats.

The City of Folsom has protected waters of the U.S. by protecting the riparian corridors associated with the four main streams draining the area north of Highway 50, and the American River is protected by numerous federal, state, and local agencies. In approving the FPASP and the Russell Ranch projects south of Highway 50, the City adopted a series of mitigation measures (shown in Table 9-3) to avoid or reduce effects to federally protected wetlands and waters of the United States. A number of proposed 2035 General Plan policies, particularly NCR 1.1.1: Habitat Preservation, NCR 1.1.2: Preserve Natural Resources, and NCR 1.1.3: Wetland Preservation provide additional protection for wetlands and waters of the U.S.

The FPASP EIR/EIS concluded that the direct impacts of the proposed development on federally protected wetlands and waters would be significant and unavoidable, because the availability of sufficient credits in approved mitigation banks to offset the impacts of future development in the FPASP area could not be guaranteed. Further, the EIR/EIS found that the indirect impacts of the development are likely to diminish the water quality, hydrologic, and habitat functions of all wetlands, both those remaining on site and those downstream in the project vicinity because:

- The amount of aquatic habitat loss and degradation is extensive and contributes to the loss of aquatic habitat in Sacramento County and the larger Central Valley and foothill region,
- Micro watersheds (i.e., the total land area that drains into an individual wetland or other water feature) of aquatic resources retained on the site would, for the most part, not be preserved, alteration of a micro watershed can substantially alter the hydrologic function of an individual wetland,
- Wetland buffers from construction impacts would only be 25 feet in some cases and not more than 75 feet in many others,
- Nearly 50 percent of the aquatic resources in the FPASP Area would be filled,
- The magnitude of topographic modification that would occur across the site with project implementation is considerable.

The EIR/EIS concluded that due to these factors, the direct and indirect impacts of development on wetlands and waters of the U.S. would be significant and unavoidable.

In conclusion, protections of federally-protected wetlands are provided by laws, regulations, local ordinances, mitigation adopted as part of the FPASP EIR/EIS, and the proposed 2035 General Plan policies listed in Table 9-3. Additionally, the vast majority of lots in the north of Highway 50 previously have been disturbed and wetland resources on such sites would generally exist in a degraded condition. Within the FPASP area, the EIR/EIS found that there would be significant direct effects to federally protected wetlands that could not be mitigated due to the lack of sufficient wetland mitigation acreage within the region. Since certification of the EIR/EIS, additional regional wetland mitigation resources have become available. It is not known whether recent additions to mitigation banks would be sufficient to provide all needed mitigation for the direct effects to federally protected wetlands that would occur with implementation of the FPASP. The EIR/EIS additionally identified significant and unavoidable indirect effects to remaining federally-protected wetland resources within the FPASP area. Because of the magnitude of these indirect effects, the impacts of implementing the 2035 General Plan on wetlands and waters of the U.S. would be significant.

Significance of Impact: Significant.

Mitigation Measure BIO-3:

Implement Mitigation Measure BIO-1.

Environmental Effects of Measure: Implementation of Mitigation Measure BIO-1 would result in a revised policy that would increase the protection for federally protected wetlands and waters of the U.S. Implementation of the Measure could result in increased avoidance and mitigation requirements for future urban and infrastructure development projects. From the standpoint of special status species, this would be a beneficial effect. Implementation of the measure would not result in an expansion of the area within the 2035 Plan Evaluation Area devoted to urbanized land uses, and would not act to increase the intensity of existing or planned land uses. No environmental effects would occur beyond those identified in this PEIR.

Level of Significance After Mitigation: Significant and unavoidable.

Both the FPASP DEIR/DEIS and the Russell Ranch DEIR proposed mitigation measures to reduce the impacts of the development on wetlands and waters of the U.S., but concluded that the mitigation measures were insufficient to reduce the impacts to less than significant, and no other mitigation measures were available. Although Mitigation Measure BIO-1 would add some additional protection, it would not be sufficient to completely mitigate all potential effects. As such, this impact would remain significant and unavoidable.

Impact BIO-4 Interfere with the movement of migratory fish or wildlife species	
Applicable Regulations	Federal Endangered Species Act, Migratory Bird Treaty Act, California Fish and Game Code Section 1602.
Adopted Mitigation Measures	FPASP EIR/EIS Mitigation Measures: 3A.3-1a; Russell Ranch EIR Mitigation Measure: 3A.3-1a .
Proposed GP Policies that Reduce Impacts	Policies NCR 1.1.1, NCR 1.1.2, NCR 1.1.5, NCR 4.1.3, NCR 4.1.5, PR 1.1.14, PR 4.1.5.
Significance after Implementation of GP Policies	Less than significant; none required.

Implementation of the 2035 General Plan could have an adverse effect on the movement of migratory fish or wildlife species. The effects of the development envisioned in the 2035 General Plan on wildlife movement would encompass the impacts of the development of the FPASP area, and the development of 453 isolated parcels comprising 441 acres north of Highway 50.

Future urban and infrastructure development pursuant to the 2035 General Plan has the potential to impact the movement of fish and wildlife species through a variety of mechanisms, including:

- Elimination of wildlife movement corridors by converting them to urban uses
- Degradation of the quality of wildlife movement corridors through fragmentation or diminution due to urban development
- Degradation of the quality of wildlife movement corridors through development of urban uses adjacent to corridors.

The FPASP EIR/EIS (Impact 3A.3-6) concluded that the proposed project would “include preservation of most of the Alder Creek corridor as open space”, and that other drainage features in the area do not support riparian vegetation cover, and therefore do not provide valuable wildlife movement corridors.

Development of the 441 acres of isolated parcels north of Highway 50 has the potential to result in the loss or degradation of wildlife corridors. However, of the 453 parcels that could be developed north of Highway 50, 377 are lots within existing single-family subdivisions totaling 163 acres where preliminary development of streets, infrastructure, and rough grading of lots has already occurred. The 76 parcels designated for commercial or multi-family uses were evaluated for ground cover and disturbance using Google Earth (Google Earth 2017). This review indicates that the overwhelming majority of the 76 parcels are portions of bigger subdivisions or larger development projects and that most of the parcels have already been disturbed by prior rough grading and the installation of infrastructure. Thus, the potential for impacts to the movement of migratory fish or wildlife species in the north of Highway 50 area is very low.

Although the American River provides habitat for a variety of fish species, adjacent to Folsom the river is blocked by Nimbus Dam, thereby obstructing anadromous or migratory fish species from entering Lake Natoma and the upper American River.

The Central Valley DPS of steelhead are listed as threatened under FESA. Critical habitat was designated in 2005; it includes the American River up to Nimbus Dam (see Figure 9-3). Because the critical habitat below Nimbus Dam is outside of the area that would be directly affected by

implementation of the 2035 General Plan, no direct impacts to the migration of this species or other anadromous or migratory fish would occur.

Table 9-4 sets forth existing federal, state, and City regulations, in addition to policies from the 2035 General Plan and mitigation measures for development of the FPASP area that protect sensitive habitats. The table also sets forth how each cited regulation acts to protect sensitive resources.

Table 9-4 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Wildlife Movement Corridors	
Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
FEDERAL REGULATIONS	
<i>Federal Endangered Species Act</i>	Protects habitat for many listed species, which may include movement corridors for migratory fish and wildlife species.
<i>Migratory Bird Treaty Act</i>	By prohibiting the killing, possessing, or trading of migratory birds except in accordance with regulations of U.S. Secretary of the Interior, the Act protects nests for most native birds from impacts associated with construction near nesting trees or removal of trees with nests.
STATE REGULATIONS	
<i>California Fish and Game Code Section 1602</i>	Requires that projects that alter the bed or banks of a stream or lake obtain a Lake or Streambed Alteration Agreement (LSAA) from CDFW; LSAA's typically include measures to minimize impacts to riparian habitat which often serves as wildlife movement corridors.
CITY REQUIREMENTS	
<i>None applicable</i>	--
FOLSOM PLAN AREA SPECIFIC PLAN EIR/EIS	
<i>Mitigation Measure 3A.3-1a</i>	Requires that stormwater drainage plans and erosion and sediment control plans be designed to avoid and minimize erosion and runoff to all wetlands and other waters that are to remain on the FPASP area and use low impact development features.
RUSSELL RANCH PROJECT EIR	
<i>Mitigation Measure 3A.3-1a</i>	Requires that stormwater drainage plans and erosion and sediment control plans be designed to avoid and minimize erosion and runoff to all wetlands and other waters that are to remain on the FPASP area and use low impact development features.
2035 GENERAL PLAN GOALS AND POLICIES	
<i>Policy NDR 1.1.1: Habitat Preservation</i>	May protect wildlife movement corridors by incorporating CDFW and USFWS standards into development proposals.
<i>Policy NCR 1.1.2: Preserve Natural Resources</i>	May protect wildlife movement corridors by requiring that surveys for special-status species and their habitats (including movement corridors) be conducted by a qualified biologist prior to the City's consideration of development applications
<i>Policy NCR 1.1.5: New Open Space</i>	Potentially preserves wildlife movement corridors by continuing to acquire strategically-located open space areas, which may include such corridors
<i>Policy NCR 4.1.3: Protection</i>	By protecting wetlands and other natural habitat types, may also protect wildlife movement corridors.
<i>Policy NCR 4.1.5: New Development</i>	Protects aquatic and riparian habitats, which may serve as wildlife movement corridors, by requiring developers to protect natural drainage systems.

Table 9-4 Regulatory Requirements and Proposed 2035 General Plan Goals/Policies Related to Wildlife Movement Corridors

Measure Identification	How the Regulation or Policy Avoids or Reduces Impact
<i>Policy PR 1.1.14: Parkways</i>	Encourages the development of parkways and greenbelts, which may serve as wildlife movement corridors.
<i>Policy PR 4.1.5: Waterway Recreation and Access</i>	Contribute to the preservation of habitat along the American River Parkway, which serves as an important movement corridor for both fish and wildlife species.

Source: Planning Partners 2018.

As shown in Table 9-4, protections of migratory corridors are provided by Federal Endangered Species Act, Migratory Bird Treaty Act, and California Fish and Game Code Section 1602. The City of Folsom has protected important migratory corridors within the city by protecting the riparian zones associated with the four main streams draining the area north of Highway 50, and Alder Creek within the FPASP area. Additionally, the American River is protected by numerous federal, state, and local agencies. In approving the FPASP and the Russell Ranch projects south of Highway 50, the City adopted several mitigation measures (shown in Table 9-4) to avoid or reduce effects to migratory corridors.

Protections of migratory corridors would be provided by several proposed 2035 General Plan policies, including NCR 1.1.1: Habitat Preservation, NCR 1.1.2 Preserve Natural Resources, NCR 1.1.5: New Open Space, NCR 4.1.3: Protection, NCR 4.1.5: New Development, PR 1.1.14: Parkways, and PR 4.1.5: Waterway Recreation and Access.

For both the FPASP area, and isolated parcels north of Highway 50, with the protections provided by federal and state law, the actions taken by the City to protect wildlife corridors north of Highway 50, and the mitigation measures contained in the FPASP EIR/EIS to protect most of the Alder Creek corridor, wildlife corridors both north and south of Highway 50 would be preserved, and this impact would be less than significant.

Significance of Impact: Less than significant.

Mitigation Measures: None required.