4.4 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the Draft Environmental Impact Report (EIR) Study Area and evaluates the potential environmental consequences of future development that could occur by adopting and implementing the proposed project. A summary of the relevant regulatory framework and existing conditions is followed by an impact discussion of the proposed project and cumulative impacts.

This chapter is based on a review of available background information for the Santa Rosa vicinity, preparation of detailed mapping of known resources, and an assessment of potential impacts of the proposed project based on anticipated future development. Available background information included: the Santa Rosa General Plan 2035[1] and EIR;[2] the *Santa Rosa Citywide Creek Master Plan*;[3] the occurrence data of special-status species and sensitive natural communities maintained by the California Natural Diversity Data Base (CNDDB) of the California Department of Fish and Wildlife (CDFW); the 2005 *Santa Rosa Plain Conservation Strategy* (SRPCS) overseen by the United States Fish and Wildlife Service (USFWS);[4] wetlands mapped as part of the National Wetlands Inventory maintained by the USFWS; and mapping of critical habitat for federally-listed species maintained by the USFWS. No detailed field surveys were conducted as part of this assessment or are considered necessary given the nature of the proposed project as a broad, long-term planning-level document rather than a site-specific development proposal.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Endangered Species Act

The USFWS has jurisdiction over federally listed threatened and endangered plant and animal species. The federal Endangered Species Act (FESA) and its implementing regulations prohibit the take of any fish or wildlife species that is federally listed as threatened or endangered without prior approval pursuant to either Section 7 or Section 10 of the FESA. FESA defines "take" as "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." Title 50, *Wildlife and Fisheries*, Part 17, *Endangered and Threatened Wildlife and Plants*, Section 17.3, *Definitions,* of the Code of Federal Regulations, defines the term "harass" as an intentional or negligent act that creates the likelihood of injuring wildlife by annoying it to such an extent as to significantly disrupt normal behavior patterns such as breeding, feeding, or sheltering. Furthermore, Section 17.3 defines "harm" as an act that either kills or injures a listed species. By definition, "harm" includes habitat modification or degradation

[1] City of Santa Rosa, updated October 2020, *Santa Rosa General Plan 2035*.
[2] Environmental Science Associates, March 2009, *Draft Santa Rosa General Plan 2035 Environmental Impact Report*.
[3] City of Santa Rosa, May 2013, *Santa Rosa Citywide Creek Master Plan*.
[4] Santa Rosa Plain Conservation Strategy Team, December 1, 2005, *Santa Rosa Plain Conservation Strategy (Final)*.

that actually kills or injures a listed species by significantly impairing essential behavior patterns such as breeding, spawning, rearing, migrating, feeding, or sheltering.

Section 10(a) of the FESA establishes a process for obtaining an incidental take permit that authorizes nonfederal entities to incidentally take federally listed wildlife or fish. Incidental take is defined by FESA as take that is "incidental to, and not the purpose of, the carrying out of an otherwise lawful activity." Preparation of a habitat conservation plan (HCP) is required for all Section 10(a) permit applications. The USFWS and National Oceanic and Atmospheric Administration's National Marine Fisheries Service (NOAA Fisheries Service) have joint authority under the FESA for administering the incidental take program. NOAA Fisheries Service has jurisdiction over anadromous fish species and USFWS has jurisdiction over all other fish and wildlife species.

Section 7 of the FESA requires all federal agencies to ensure that any action they authorize, fund, or carry out is not likely to jeopardize the continued existence of any species listed under the FESA, or result in the destruction or adverse modification of its habitat. Federal agencies are also required to minimize impacts to all listed species resulting from their actions, including issuance of permits or funding. Section 7 requires consideration of the indirect effects of a project, effects on federally listed plants, and effects on critical habitat (FESA requires that the USFWS identify critical habitat to the maximum extent that it is prudent and determinable when a species is listed as threatened or endangered). This consultation results in a Biological Opinion prepared by the USFWS stating whether implementation of the HCP will result in jeopardy to any HCP Covered Species or will adversely modify critical habitat and the measures necessary to avoid or minimize effects to listed species.

Although federally listed animals are legally protected from harm no matter where they occur, Section 9 of the FESA provides protection for endangered plants by prohibiting the malicious destruction on federal land and other "take" that violates State law. Protection for plants not living on federal lands is provided by the California Endangered Species Act (CESA).

Clean Water Act

The United States Army Corps of Engineers (USACE) is responsible under Section 404 of the Clean Water Act to regulate the discharge of fill material into waters of the United States. These waters and their lateral limit include streams that are tributaries to navigable waters and their adjacent wetlands.[5] The lateral limits of jurisdiction for a nontidal stream are measured at the line of the ordinary high-water mark[6] or the limit of adjacent wetlands.[7] Any permanent extension of the limits of an existing water of the U.S., whether natural or human-made, results in a similar extension of USACE jurisdiction.

Waters of the U.S. fall into two broad categories: wetlands and other waters. Other waters include waterbodies and watercourses generally lacking plant cover, such as rivers, streams, lakes, springs, ponds, coastal waters, and estuaries. Wetlands are aquatic habitats that support hydrophytic wetland plants and include marshes, wet meadows, seeps, floodplains, basins, and other areas experiencing extended

[5] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).
[6] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(e).
[7] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(b).

seasonal soil saturation. Seasonally or intermittently inundated features, such as seasonal ponds, ephemeral streams, and tidal marshes, are categorized as wetlands if they have hydric soils and support wetland plant communities. Seasonally inundated water bodies or watercourses that do not exhibit wetland characteristics are classified as other waters of the U.S.

Waters and wetlands that cannot trace a continuous hydrologic connection to a navigable water of the U.S. are not tributary to waters of the U.S. These are termed "isolated wetlands." Isolated wetlands are jurisdictional when their destruction or degradation can affect interstate or foreign commerce.[8] The USACE may or may not take jurisdiction over isolated wetlands depending on the specific circumstances.

In general, a project proponent must obtain a Section 404 permit from the USACE before placing fill or grading in wetlands or other waters of the U.S. Prior to issuing the permit, the USACE is required to consult with the USFWS under Section 7 of the FESA if the project may affect federally listed species.

All USACE permits require water quality certification under Section 401 of the Clean Water Act. In the Santa Rosa area, this regulatory program is administered by the North Coast Regional Water Quality Control Board (RWQCB). Project proponents who propose to fill wetlands or other waters of the U.S. must apply for water quality certification from the North Coast RWQCB. The North Coast RWQCB has adopted a policy requiring mitigation for any loss of wetland, streambed, or other jurisdictional area.

Migratory Bird Treaty Act

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, purchasing, etc. of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term "take" is defined as "to pursue, hunt, shoot, capture, collect, kill, or attempt to pursue, hunt, shoot, capture, collect, or kill, unless the context otherwise requires." Most bird species native to North America are covered by this act. The MBTA prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

State Regulations

California Endangered Species Act

The CDFW has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under CESA.[9] CESA is similar to the FESA both in process and substance; it is intended to provide additional protection to threatened and endangered species in California. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws apply) or under only one act. A candidate species is one that the Fish and Game Commission has formally noticed as being under review by CDFW for addition to the State list. Candidate species are protected by the provisions of CESA.

[8] Code of Federal Regulations, Title 33, *Navigation and Navigable Waters*, Part 328.3(a).
[9] California Fish and Game Code Section 2050 *et seq.*

California Environmental Quality Act

The California Environmental Quality Act (CEQA) applies to "projects" proposed to be undertaken or requiring approval by State and local government agencies. Projects are defined as having the potential to have physical impact on the environment. Under Section 15380 of the CEQA Guidelines, a species not included on any formal list "shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria" for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a "de facto" rare or endangered species.

California Fish and Game Code

The CDFW is responsible for enforcing the California Fish and Game Code (CFGC), which contains several protections from "take" for a variety of species. The CDFW also protects streams, water bodies, and riparian corridors through the Streambed Alteration Agreement process under Section 1601 to 1606 of the CFGC. The CFGC stipulates that it is "unlawful to substantially divert or obstruct the natural flow or substantially change the bed, channel or bank of any river, stream or lake" without notifying the CDFW, incorporating necessary mitigation, and obtaining a Streambed Alteration Agreement. CDFW's jurisdiction extends to the top of banks and often includes the outer edge of riparian vegetation canopy cover.

The CFGC also lists animal species designated as Fully Protected or Protected, which may not be taken or possessed at any time. The CDFW does not issue licenses or permits for take of these species except for necessary scientific research, habitat restoration/species recovery actions, or live capture and relocation pursuant to a permit for the protection of livestock. Fully protected species are listed in CFGC Sections 3511 (birds), 4700 (mammals), 5050 (reptiles and amphibians), and 5515 (fish), while protected amphibians and reptiles are listed in Chapter 5, Sections 41 and 42, respectively.

Several provisions in the CFGC provide for the protection of birds and bird nests in active use. Unless the CFGC or its implementing regulations provide otherwise, under California law it is unlawful to:

- Take a bird, mammal, fish, reptile, or amphibian.
- Take, possess, or needlessly destroy the nest or eggs of any bird.
- Take, possess, or destroy any bird of prey in the orders Strigiformes (owls) and Falconiformes (such as falcons, hawks and eagles) or the nests or eggs of such bird.
- Take or possess any of the thirteen fully protected bird species listed in CFGC Section 3511.
- Take any non-game bird (i.e., bird that is naturally occurring in California that is not a gamebird, migratory game bird, or fully protected bird).
- Take or possess any migratory non-game bird as designated in the MBTA or any part of such bird, except as provided by rules or regulations adopted by the Department of the Interior under the MBTA.
- Take, import, export, possess, purchase, or sell any bird (or products of a bird), listed as an endangered or threatened species under the CESA unless the person or entity possesses an Incidental Take Permit or equivalent authorization from CDFW.

Non-native species, including European starling (*Sturnus vulgaris*), house sparrow (*Passer domesticus*), and rock pigeon (*Columba livia*), are not afforded any protection under the MBTA or CFGC.

Porter-Cologne Water Quality Control Act

Under the Porter-Cologne Water Quality Control Act,[10] the RWQCB is authorized to regulate the discharge of waste that could affect the quality of the State's waters. The RWQCB asserts jurisdiction over isolated waters and wetlands, as well as waters and wetlands that are regulated by the USACE. Therefore, even if a project does not require a federal permit, it still requires review and approval by the RWQCB. When reviewing applications, the RWQCB focuses on ensuring that projects do not adversely affect the "beneficial uses" associated with waters of the State. In most cases, the RWQCB seeks to protect these beneficial uses by requiring the integration of waste discharge requirements into projects that will require discharge into waters of the State. For most construction projects, the RWQCB requires the use of construction and post-construction best management practices.

California Native Plant Protection Act

The California Native Plant Protection Act of 1977 prohibits importation of rare and endangered plants into California, "take" of rare and endangered plants, and sale of rare and endangered plants. The CESA defers to the California Native Plant Protection Act, which ensures that State-listed plant species are protected when State agencies are involved in projects subject to CEQA. In this case, plants listed as rare under the California Native Plant Protection Act are not protected under the CESA but rather under CEQA.

The California Native Plant Society (CNPS) is a non-governmental conservation organization that has developed a list of plants of special concern in California. The following explains the designations for each plant species:[11]

- **Rank 1A.** Plants presumed extirpated in California and either rare or extinct elsewhere
- **Rank 1B.** Plants rare, threatened, or endangered in California and elsewhere
- **Rank 2A.** Plants presumed extirpated in California, but common elsewhere
- **Rank 2B.** Plants rare, threatened, or endangered in California, but more common elsewhere
- **Rank 3.** Plants about which more information is needed; a review list
- **Rank 4.** Plants of limited distribution; a watch list

California Natural Communities

Sensitive natural communities are natural community types considered to be rare or of a "high inventory priority" by the CDFW. Although sensitive natural communities have no legal protective status under FESA or CESA, they are provided some level of consideration under CEQA. Appendix G of the CEQA Guidelines identifies potential impacts on a sensitive natural community as one of six criteria to consider in determining the significance of a proposed project. While no thresholds are established as part of this

[10] California Water Code Sections 13000 through 14920.

[11] California Native Plant Society, 2020, CNPS Rare Plant Ranks, https://www.cnps.org/rare-plants/cnps-rare-plant-ranks, accessed November 25, 2020.

criterion, it serves as an acknowledgement that sensitive natural communities are an important resource and, depending on their rarity, should be recognized as part of the environmental review process. The level of significance of a project's impact on any particular sensitive natural community will depend on that natural community's relative abundance and rarity.

As an example, a discretionary project that has a substantial adverse effect on any riparian habitat, native grassland, valley oak woodland, and/or other sensitive natural community would normally be considered to have a significant effect on the environment. Further loss of a sensitive natural community could be interpreted as substantially diminishing habitat, depending on its relative abundance, quality and degree of past disturbance, and the anticipated impacts to the specific community type.

Oak Woodlands Conservation Act

The California Oak Woodlands Conservation Act[12] of 2001 acknowledges the importance of private land stewardship to the conservation of the state's valued oak woodlands. This act established the California Oak Woodlands Conservation Program, which aims to conserve oak woodlands existing in the state's working landscapes by providing education and incentives to private landowners. The program provides technical and financial incentives to private landowners to protect and promote biologically functional oak woodlands.

Local Regulations

Santa Rosa City Code

The Santa Rosa City Code (SRCC) includes various directives to minimize adverse impacts to biological resources in Santa Rosa. The SRCC is organized by title, chapter, and section, and in some cases, articles. Most provisions related to biological resources are in Title 17, *Environmental Protection*, and Title 20, *Zoning*, as follows:

- Chapter 17-24, *Trees*. Santa Rosa adopted a Tree Ordinance in 1990 to ensure proper tree removal and preservation. Article 2, *Definitions*, requires a permit to remove or alter "heritage trees", "protected trees," and "street trees" in all zoning districts. Each of these are defined in the Tree Ordinance as follows:
  - Heritage Tree. The City defines a "heritage tree" as, "a tree or grove of trees so designated by a resolution of the Planning Commission and after the holding of a noticed public hearing, having a specific historical or cultural association or value due to its age, species, character, location, height and/or the circumstances of its planting or origin." Heritage trees also include native species with trunk diameters that exceed those specified in the Tree Ordinance for: California bay (*Umbellularia californica*), big leaf maple (*Acer macrophyllum*), black oak (*Quercus kelloggii*), blue oak (*Quercus douglasii*), California buckeye (Aesculus californica), canyon oak (*Quercus chrysolepis*), douglas fir (*Pseudotsuga menziesii*), interior live oak (*Quercus wislizeni*), California live oak (*Quercus agrifolia*), madrone (*Arbutus menziesii*), Oregon white oak (*Quercus garryana*),

[12] California Fish and Game Code Section 1360 et seq.

red alder (*Alnus oregona*), redwood (*Sequoia sempervirens*), valley oak (*Quercus lobata*), and white alder (*Alnus rhombifolia*).

- Protected Tree. "Protected trees" are defined as, "any tree, including a heritage tree, designated to be preserved on an approved development plan or as a condition of a tentative map, a tentative parcel map, or other development approval issued by the City."
- Street Tree. The City defines a "street tree" as, "any tree having a single trunk circumference greater than six and one-quarter inches or a diameter greater than two inches, a height of more than six feet, and one half or more of its trunk is within a public right-of-way or within five feet of the paved portion of a City street or a public sidewalk."

- Section 20-30.040, *Creekside Development*. This section defines minimum setbacks from designated creeks to provide reasonable protection from bank failures and flooding. It provides creek setback criteria for any new structures, specifying the distance new development must be set back from creeks and defined banks. For example, new structures must be a minimum of 50 feet from the top of the highest natural bank. Limited exceptions are permitted for any defined channel that is owned by Sonoma Water, for developments in compliance with setback requirements prior to September 3, 2004, for new developments that are surrounded by existing structures that were developed in compliance with setback requirements prior to September 3, 2004, and for bridges and utilities.

Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan

The Santa Rosa Plan Vernal Pool Ecosystem Preservation Plan was prepared in 1995 and was intended to provide regional protection for the vernal pool ecosystem in the Santa Rosa Plain, while allowing for planned urban development and land use changes.[13] The Plan identifies vernal pool ecosystem habitat, targets potential preserves, and outlines a streamlined regulatory process to allow faster authorizations for development on low-quality vernal pool ecosystem wetlands. The Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan was superseded by the Santa Rosa Plain Conservation Strategy in 2005.

Santa Rosa Plain Conservation Strategy

The SRPCS seeks to create a long-term program to mitigate potential adverse effects on listed species due to future development on the Santa Rosa Plain, bordered on the south and west by the Laguna de Santa Rosa, on the east by the foothills, and on the north by the Russian River. The Plain and adjacent areas are characterized by vernal pools, seasonal wetlands, and associated grassland habitat, which supports several species of plants and animals that are listed by the FESA as threatened or endangered, including the federally threatened California tiger salamander (CTS) and four federally endangered plant species-Burke's goldfields, Sonoma sunshine, Sebastopol meadowfoam, and many-flowered navarretia.

The SRPCS was developed to (1) provide a plan for local agencies, developers, and community groups that would preserve and enhance populations and habitat of the listed species; (2) support the issuance of a USFWS authorization for incidental take of CTS and listed plants that may occur in the course of carrying out a broad range of activities on the Plain; and (3) protect stakeholders' (public and private) interests.

[13] CH2M Hill, June 30, 1995, *Phase I, Final Report, Santa Rosa Plain Vernal Pool Ecosystem Preservation Plan.*

The SRPCS addresses various aspects of urban and rural growth and its effects on the above-listed species, mitigation for impacts to these listed species and wetlands, and the conservation and recovery of the listed species and their habitat. The SRPCS identified the Southwest Santa Rosa Preserve System (discussed below) and nine "Conservation Areas" through the Plain, where mitigation for project-related impacts to listed species and vernal pools should be directed. The designation of Conservation Areas was based on the following factors: (1) known distribution of CTS; (2) presence of suitable CTS habitat; (3) presence of large blocks of natural or restorable land; (4) adjacency to existing preserves; and (5) known location of the federally listed plants. A critical component of the Conservation Strategy is that 350 to 900 acres of actual preserved land ultimately will be established within each Conservation Area. The Southwest Santa Rosa Preserve System does not meet this Conservation Area size requirement, but nevertheless is critically important because of its proximity to near-term development in southwest Santa Rosa.

Southwest Santa Rosa Preserve System

The Southwest Santa Rosa Preserve System is part of the SRPCS, located in the southwest corner of Santa Rosa. This is an area that contains considerable existing development and is subject to future development under the City's General Plan. This area contains an abandoned military air center with some of the runways still present. There are currently 101 acres of preserves and 52 acres of pending preserves in this Preserve System, with numerous wetlands, CTS breeding sites, and federally listed plant occurrences. The focus of the SRPCS is to interconnect these preserves with each other and neighboring Conservation Areas (in particular, the Llano Conservation Area to the south), and ensure their viability as future development occurs in southwest Santa Rosa. Until there are adequate viable preserves throughout the Conservation Areas, the SRPCS's population of CTS is critical to the persistence of the species on the Santa Rosa Plain.

The *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects That May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California* (PBO) was originally issued by the USFWS in 2007.[14] The PBO was amended by the USFWS in 2009 and reissued in 2020.[15] The PBO provides a framework for the USACE to meet its FESA requirements for permitting projects that adversely affect CTS, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam.[16] The PBO provides guidance to the USACE on projects that may affect these listed species, by defining "Conservation Areas" and "preserves" in the Santa Rosa Plain, describing mitigation and minimization requirements and procedures as they apply to projects that impact the four target species, and providing a comprehensive status report for these species, which includes species descriptions, historical and current distribution, habitat and life history, threats to survival, and environmental baseline information. In 2016, the USFWS adopted a *Recovery Plan for the Santa Rosa Plain* (Recovery Plan) which was

[14] USFWS, 2007, *Programmatic Biological Opinion for U.S. Army Corps of Engineers Permitted Projects that May Affect California Tiger Salamander and Three Endangered Plant Species on the Santa Rosa Plain, California,* File Number 1-1-98-F-0053.

[15] USFWS, June 11, 2020, *Reinitiation of Formal Consultation on Issuance of Clean Water Act, Section 404 Permits by the U.S. Army Corps of Engineers (Corps) on the Santa Rosa Plain, Sonoma County, California*. File Number 81420-2008-F-0261-R002.

[16] The PBO does not include the many-flowered navarretia, which was part of the Santa Rosa Conservation Strategy, possibly because this species occurs mostly outside the Santa Rosa Plain and there is only one known site for this species in the Plain.

considered as part of the latest PBO. The Recovery Plan identified actions to reduce the threats to these four species and ensure their long-term viability.[17]

Although the SRPCS has not been formally adopted, the USFWS PBO can still be invoked for projects that have suitable habitat for CTS, Burke's goldfields, Sonoma sunshine, and Sebastopol meadowfoam, and that impact regulated wetlands in the Santa Rosa Plain requiring permit authorization by the USACE.

Santa Rosa Citywide Creek Master Plan

The City of Santa Rosa has specific goals related to waterways within its jurisdiction as defined in the *Santa Rosa Citywide Creek Master Plan*. The *Santa Rosa Citywide Creek Master Plan* includes the portions of the Laguna de Santa Rosa watershed that are within the urban growth boundary surrounding the city of Santa Rosa, which includes nearly 100 miles of creeks. One of the Plan's goals is to preserve, enhance, and restore habitat for fish, birds, mammals, and other wildlife in local creeks and riparian corridors. The following goals and objectives from the *Santa Rosa Citywide Creek Master Plan* are related to biological resources and apply to the off-site infrastructure improvements of the proposed project:

- Habitat (HA): Local creeks and riparian corridors are preserved, enhanced, and restored as habitat for fish, birds, mammals, and other wildlife.
- Objective HA-1: Preserve healthy and/or environmentally sensitive creek areas.
  - Policy HA-1-1: Avoid channelization of additional creeks to preserve remaining wildlife habitat.
  - Policy HA-1-2: Meet or exceed the required creek setback to provide ecological buffers recognize the 100 year floodplain and allow for stream corridor restoration. Development shall locate outside the creek setback, as defined within the Santa Rosa Zoning Code.
- Objective HA-5: Focus preservation, enhancement, and restoration efforts on habitat that supports one or more special-status species, including those species that are state or federally listed as threatened or endangered, or as a Species of Special Concern.
  - Policy HA-5-1: Protect habitat for endangered species, through preservation, enhancement, and restoration of riparian corridors (as discussed above) and prevention of storm water pollution.
  - Policy HA-5-2: Reestablish populations of special-status species as ecologically appropriate.
- Objective HA-6: Obtain and comply with all necessary regulatory agency permits.
  - Policy HA-6-1: Coordinate, as appropriate, with regulatory agencies on Master Plan projects.
  - Policy HA-6-2: Consistent with federal, state, and local regulations, impacts to existing habitat will be avoided if possible. Minimization and mitigation of any unavoidable impacts will be required.

[17] USFWS, 2016, Recovery Plan for the Santa Rosa Plain: *Blennosperma bakeri* (Sonoma sunshine); *Lasthenia burkei* (Burke's goldfields); *Limnanthes vinculans* (Sebastopol meadowfoam); California Tiger Salamander Sonoma County Distinct Population Segment (*Ambystoma californiense*). Pacific Southwest Region, Sacramento, California.

- Objective HA-7: Use the "best available science" when planning and implementing a creek project.
  - Policy HA-7-1: Consult with knowledgeable experts as appropriate, including natural resources agency staff and other jurisdictions or organizations that have successfully completed similar projects.

4.4.1.2 EXISTING CONDITIONS

This section provides a summary of the existing biological conditions in the EIR Study Area, which includes habitat types, special-status plant and animal species, sensitive habitats, and wildlife corridors.

Habitat Types

The EIR Study Area occupies the broad Santa Rosa Plain (also called Llano de Santa Rosa), bordered by the Laguna de Santa Rosa to the southwest and the foothills of the Mayacamas Mountains to the east. The Santa Rosa Plain is bisected by Santa Rosa Creek, which originates in the Mayacamas Mountains and runs from east to west through the city, draining into the Laguna de Santa Rosa and then the Russian River. Tributaries of Santa Rosa Creek that also run through or near the city limits include Piner Creek, Brush Creek, and Matanzas Creek, among others.

Most of the EIR Study Area has been extensively altered by past agricultural production and urbanization and now consists of a mixture of residential, commercial, industrial, and agricultural uses. Beginning in the mid-nineteenth century and continuing to today, activities such as livestock grazing, timber operations, clearing and disking for agricultural production, road building, and urban and suburban development have markedly altered the remaining natural communities in the EIR Study Area. Native vegetation has typically been converted to structures, pavement, ornamental landscaping, and ruderal (weedy) cover in urbanized areas, but the riparian corridors that bisect the EIR Study Area and scattered areas of natural habitat continue to support native plants and wildlife, including populations of special-status species in some locations. This includes the vernal pools and surrounding grasslands west and southwest of the city, which are particularly important to a number of special-status species such as CTS; the riparian corridors that traverse urbanized areas; and the eastern upland woodlands and forests in the foothills of the Sonoma Mountains, which also support a number of special-status species and have high habitat value to native wildlife.

Vegetative cover types in the vicinity of the EIR Study Area were mapped as part of the Sonoma County Vegetation Mapping & LIDAR Program, the results of which are shown on Figure 4.4-1, *Vegetation Cover*. Table 4.4-1, *Estimated Vegetation Cover in the EIR Study Area*, lists the various cover types, acreages, and their respective percentage of the 31,555 acres comprising the EIR Study Area. As indicated on Figure 4.4-1 and Table 4.4-1, development occupies an estimated 64.3 percent of the EIR Study Area. Grasslands and herbaceous cover occupy an estimated 15.41 percent, forests and woodlands occupy an estimated 13.51 percent, and agricultural crops an estimated 2.7 percent of the EIR Study Area. Sensitive habitat types such as wetlands, open water, and riparian cover occupy much smaller percentages of the total EIR Study Area, but are of high value because of the available surface water, protective cover, and other characteristics that make them critically important to native plants, fish, and wildlife. The following

paragraphs provide a summary of the various cover types in the EIR Study Area and the plant and animal species typically associated with them.

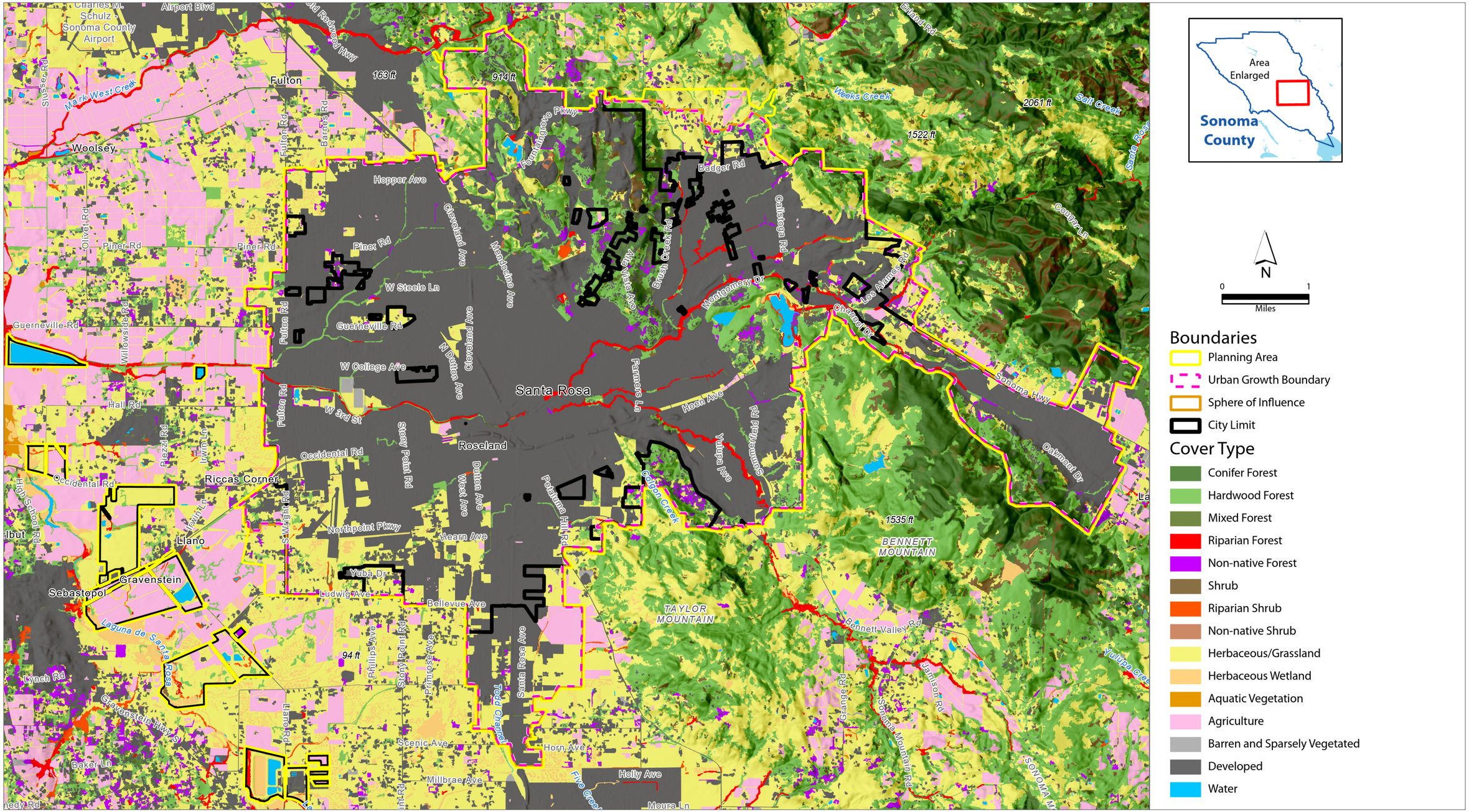
TABLE 4.4-1 ESTIMATED VEGETATION COVER IN THE EIR STUDY AREA

Vegetation Cover	EIR Study Area (Acres)	EIR Study Areas (Percent of Total)
Urban Development and Ornamental Landscaping	***20,286***	***64.30%***
Developed	19,810	62.79%
Urban/Barren	46	0.15%
Nonnative forest	394	1.25%
Nonnative scrub	36	0.11%
Agriculture	***853***	***2.70%***
Forest and Woodlands	***4,263***	***13.51%***
Hardwood forest and woodland	3,228	10.23%
Conifer forest	659	2.09%
Mixed forest	376	1.19%
Herbaceous/Grasslands	***4,865***	***15.41%***
Scrub	***146***	***0.46%***
Riparian Forest and Scrub	***557***	***1.77%***
Riparian scrub	95	0.30%
Riparian forest	462	1.47%
Aquatic Vegetation/Herbaceous Wetland	***307***	***0.97%***
Herbaceous wetland	304	0.96%
Aquatic vegetation	3	0.01%
Open Water	***278***	***0.88%***
Combined Total	**31,555**	

Source: Sonoma Vegetation Map, 2017.

Urban Development/Ornamental Landscaping

Urban development, ornamental landscaping, and barren areas occupy most of the valley floors and lower eastern foothills in the EIR Study Area. As indicated on Figure 4.4-1, an estimated 20,286 acres or roughly 64 percent of the land cover types in the EIR Study Area are mapped as urban development or barren, which includes impervious surfaces, structures, ornamental landscaping and areas of remnant native vegetation, and locations with no vegetative cover. Most plant species used in landscaping are nonnative ornamentals, consisting of a wide variety of tree, shrub, ground cover, and turf species. Native trees are scattered throughout the established residential neighborhoods and urbanized areas, including specimen coast live oaks (*Quercus agrifolia*), valley oaks (*Q. lobata*), California bay laurel (*Umbellularia californica*), California buckeye (*Aesculus californica*), coast redwood (*Sequoia sempervirens*), madrone (*Arbutus menziesii*), and black oak (*Quercus kelloggii*), among others. Larger ornamental and nonindigenous native species include: Monterey pine (*Pinus radiata*), Monterey cypress (*Cupressus macrocarpa*), incense cedar (*Calocedrus decurrens*), deodar cedar (*Cedrus deodara*), American elm (*Ulmus americana*), Mexican fan palm (*Washingtonia robusta*), and Tasmanian blue gum (*Eucalyptus globulus*), among many others.



Source: Sonoma Veg Map release date 9/21/2017 accessed on 4/5/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

Figure 4.4-1
Vegetation Cover

Some nonnative ornamental species are considered highly invasive because of their ability to spread and eventually dominate natural areas if unmanaged. Many of these are common in the EIR Study Area in urbanized areas, along riparian corridors, and in hillside open space and remaining undeveloped private lands. These include silver wattle (*Acacia dealbata*), blackwood acacia (*Acacia melanoxylon*), several species of broom (*Genista monspessulana*; *G. juncea*; and *Cytisus scoparius*), pampas grass (*Cortaderia selloana*), cotoneaster (*Cotoneaster* spp.), Bermuda grass (*Cynodon dactylon*), Germany ivy (*Delairea odorata*), English ivy (*Hedera helix*), Bermuda buttercup (*Oxalis pes-caprae*), Himalaya blackberry (*Rubus armeniacus*), periwinkle (*Vinca major*), and Tasmanian blue gum. The California Invasive Plant Council (Cal-IPC) has developed a comprehensive database, the *Invasive Plant Inventory*, which ranks invasive species based on the threat they pose to natural habitat. All of the above species and others known to exist in the vicinity of Santa Rosa are considered to have a high to moderate ranking by Cal-IPC because of their invasive properties and the threat they pose to natural areas.

In general, urbanized areas tend to have low to poor wildlife habitat values due to replacement of natural communities, fragmentation of remaining open space areas and parks, and intensive human disturbance. The diversity of urban wildlife depends on the extent and type of landscaping and remaining open space, as well as the proximity to natural habitat. Trees and shrubs used for landscaping provide nest sites and cover for wildlife adapted to developed areas. Typical native bird species include mourning dove, scrub jay, northern mockingbird, American robin, northern flicker, California towhee, and American kestrel. Introduced species include rock dove, European starling, house finch, and house sparrow. Urban areas also provide habitat for several species of native mammals such as black-tailed deer, California ground squirrel, raccoon, gray fox, striped skunk, and coyote, as well as the introduced eastern fox squirrel and eastern red fox. Introduced pest species such as Norway rat, house mouse, and Virginia opossum are also abundant in developed areas.

Agricultural Cover

Agricultural lands, including vineyards, orchards, hayfields, and croplands, are fairly abundant in the Santa Rosa Plain west of urban core as indicated on Figure 4.4-1, occupying about 853 acres of the EIR Study Area. Fields, vineyards and orchards tend to be managed to maximize crop production, typically forming monotypic cover bordered by ruderal (weedy) grasslands and scattered shrubs and trees in some locations. Weedy species often grow between rows and along field margins and irrigation ditches. These include field knotweed (*Polygonum aviculare*), bull mallow (*Malva nicaeensis*), cheeseweed (*M. parviflora*), field bindweed (*Convolvulus arvensis*), rabbitsfoot grass (*Polypogon monspelliensis*), and Farmer's foxtail (*Hordeum leporinum*). The drainage ditches that are physically part of the agricultural fields and orchards support hydrophytic (i.e., water loving) plants, such as cattail (*Typha* spp.), Baltic rush (*Juncus balticus*), alkali bulrush (*Bolboschoenus maritimus*), and tall umbrella plant (*Cyperus eragrostis*). The upper banks of these ditches tend to be covered with nonnative weedy species.

The value of agricultural crops to wildlife depends on a number of factors, including intensity and frequency of maintenance activities, available cover, and proximity to surface water. While intensive management tends to limit the diversity of wildlife species, agricultural areas may provide valuable habitat linkages for transient mammals, reptiles, and amphibians. Numerous species of small mammals and birds frequent many of the crop types, especially where field margins and drainage ditches provide retreat habitat. These include ring-necked pheasant, red-winged blackbird, American crow, European starling,

house finch, California ground squirrel, Botta pocket gopher, meadow voles, black-tailed jackrabbit, and racoon. The abundant insect populations attract several species of bat, including the California myotis, Mexican free-tailed bat, big brown bat, and western red bat. The abundant prey attracts predatory birds and mammals such as northern harrier, American kestrel, red-tailed hawk, red-shouldered hawk, foxes, feral cats, and coyote.

Forest and Woodlands

Forest and woodlands occupy an estimated 4,263 acres or roughly 14 percent of the land cover types in the EIR Study Area. As summarized in Table 4.4-1, this includes areas of oak woodland dominated by coast live oak and other oak species, coniferous forest dominated by conifers, and mixed forest dominated by a mixture of hardwoods and conifers. As indicated on Figure 4.4-1, oak woodlands form the dominant native cover on the undeveloped hillsides around Taylor Mountain, Bennett Mountain, and the Fountaingrove area, with forest cover extending over higher elevations with steep slopes and drainages. Dominant tree species vary and include: coast live oak, valley oak, canyon oak (*Quercus chrysolepis*), interior oak (*Q. wislizenii*) blue oak (*Q. douglasii*), Oregon white oak (*Q. garryana*), black oak, California bay laurel, and Douglas fir (*Pseudotsuga menziesii*). Other tree and shrub species found in the forest and woodland habitats include: madrone, California buckeye, toyon (*Heteromeles arbutifolia*), poison oak (*Toxicodendron diversilobum*), and hazelnut (*Corylus cornuta* ssp. *californica*), among others. Understory cover varies depending on the amount of available sunlight and other factors. Where dense canopy is present, understory species in areas of forest cover are generally sparse, but do include sword fern (*Polystichum munitum*), redwood sorrel (*Oxalis oregano*), and creeping snowberry (*Symphoricarpos mollis*). In areas with higher light levels, the understory consists of nonnative grassland species, miner's lettuce (*Claytonia perfoliata*), bedstraw (*Galium aparine*) and other herbaceous species. Highly invasive broom has spread through much of the understory of the forest and woodlands in the EIR Study Area, inhibiting foraging opportunities for wildlife and displacing native shrub and groundcover plant species. Much of the areas mapped as forest and woodland in the EIR Study Area have been developed with residential uses, preserving a broken canopy of mature trees interspersed with structures and ornamental landscaping, much of which was severely affected during the Tubbs Fire in the fall of 2017.

The existing mature forests and woodlands provide important habitat for wildlife, even where affected by past fires, invasive species, and other factors. They provide nesting and foraging opportunities for numerous species of birds, including raptors. They also provide essential food resources for eastern fox squirrels, native grey squirrels, acorn woodpeckers, scrub jay, and other birds. Wildlife commonly associated with well-developed forest and woodland habitats include: dusky-footed woodrat, deer mouse, western flycatcher, chestnut-backed chickadee, plain titmouse, Hutton vireo, orange-crowned kinglet, rufous-sided towhee, fox sparrow, bushtit, ringneck snake, California newt, California slender salamander, and several species of native bats. Predatory species such as gray fox, coyote, bobcat, and mountain lion utilize these habitats, together with adjacent areas of remaining grassland, scrub, and even developed yards where prey is available and access is possible. Wildlife in the understory of the remaining forest and woodland varies depending on cover type and extent of development. In areas of mature woodland and coniferous forests the northern spotted owl (*Strix occidentalis caurina*), a federally threatened species, has been reported from some locations at the eastern edges of the EIR Study Area.

While most forests and woodlands are not considered to have a high priority for mapping and protection as a sensitive natural community type by the CNDDB, they should be recognized as an important habitat type due to their relatively high wildlife habitat value, continued threats due to further tree removal associated with development, and their vulnerability to the effects of fire and Sudden Oak Death (SOD). Tanoaks (*Notholithocarpus densiflorus*) and coast live oaks are dying in large numbers in Sonoma County, and other species are suspected hosts or potential carriers of the fungus suspected to cause oak mortality. This fungus, a species of *Phytophthora*, and several beetle species are consistently associated with the dying oaks. SOD is contributing to significant changes in vegetative cover over large parts of Sonoma County, altering habitat for woodland-dependent species and exacerbating hazardous fire conditions where wildlands interface with developed areas.

Grasslands

Grasslands occupy an estimated 4,865 acres or about 15 percent of the cover in the EIR Study Area, primarily on the lower slopes of Taylor Mountain and in the open fields in the southwest along the fringe of the Laguna de Santa Rosa. The grasslands are generally composed of introduced grasses and broadleaf species, although some remnant stands of native grasslands remain in the EIR Study Area and are considered a sensitive natural community type by the CNDDB. Intensive grazing and other disturbance factors have eliminated most of the native grasslands throughout California over the past 150 years, including the historic rangelands of the Santa Rosa vicinity. Common species in the grasslands today include: wild oat (*Avena fatua*), ripgut brome (*Bromus diandrus*), soft chess (*Bromus mollis*), and foxtail barley (*Hordeum leporinum*), In locations where the ground surface has been disturbed, ruderal species, which quickly recolonize disturbed areas, tend to dominate, including field mustard (*Brassica campestris*), wild radish (*Rhaphanus sativus*), bindweed (*Convolvulus arvensis*), cheeseweed (*Malva parviflora*), bur clover (*Medicago polymorpha*), and yellow-star thistle (*Centaurea solstitialis*). The remaining native species are common perennials, such as California poppy (*Eschscholzia californica*), Douglas' lupine (*Lupinus nanus*), and soap plant (*Chlorogalum pomeridianum*).

Remnant native grasslands have been reported by the CNDDB from Taylor Mountain and may occur in other locations mapped as annual grassland, forming stands of needlegrass grasslands. This natural community is characterized by several species of native grasses such as purple needlegrass (*Stipa pulchra*), California melic (*Melica californica*), blue wildrye (*Elymus glaucus*), and beardless wildrye (*Elymus triticoides*), together with common wildflowers such as California poppy, lupines, soap plant, wild hyacinth (*Dichelostemma pulchellum*), and other native forbs. Most of the native grasslands throughout the state have been eliminated, which has led the CNDDB to now recognize native grasslands as a sensitive resource with a high inventory priority. The CNDDB typically considers grasslands containing 10 percent or greater cover by native grass species to represent a natural grassland community. This 10 percent threshold is a loosely applied standard that has been used by the state for many years. As most of the remaining native grassland communities have been highly modified by past and ongoing disturbance, the remaining native grassland communities generally form a mosaic of different cover classes, sometimes interspersed with areas dominated by nonnative species.

Nonnative and native grasslands support a variety of mammals, birds, and reptiles and provide foraging habitat for raptors. Many species use the grassland for only part of their habitat requirements, foraging in the grassland and seeking cover in the limited tree and scrub cover. Grassland cover provides foraging,

nesting, and denning opportunities for resident species such as western fence lizard, northern alligator lizard, gopher snake, western meadowlark, goldfinch, ring-necked pheasant, red-winged blackbird, California ground squirrel, California vole, Botta pocket gopher, black-tailed jackrabbit, and black-tailed deer. The rodent, bird, and reptile populations offer foraging opportunities for avian predators such as black-shouldered kite, northern harrier, American kestrel, red-tailed hawk, golden eagle, barn owl, and great horned owl, as well as mammalian predators such as striped skunk, grey fox, and coyote.

Riparian Woodland and Scrub

Riparian vegetation occurs along Santa Rosa Creek and tributary drainages that pass through the EIR Study Area, with trees and shrubs often forming stands characteristic of riparian forest and willow scrub natural communities, occupying an estimated 557 acres, as indicated in Table 4.4-1. Santa Rosa Creek drains approximately 78.6 square miles and is a 22-mile-long tributary to the Laguna de Santa Rosa. Major tributaries to Santa Rosa Creek include Brush Creek, Matanzas Creek, and Piner Creek, and smaller tributaries include Paulin Creek, Spring Creek, Ducker Creek and Austin Creek. Dominant cover in locations with well-developed riparian cover includes willows (*Salix* spp.), valley oak, coast live oak, California bay laurel, and California buckeye, together with shrub and vine species such as California blackberry (*Rubus ursinus*), wild grape (*Vitis californica*), and wild rose (*Rosa californica*). Stands of highly invasive nonnative species such as Himalaya blackberry, ivy, arundo (*Arundo donax*), periwinkle, and broom have become particularly problematic in some reaches of the riparian corridors in the EIR Study Area, outcompeting and replacing native shrub and groundcover species, and severely limiting wildlife habitat values.

Surface water along riparian corridors is available for aquatic-dependent organisms and as a source of drinking water for terrestrial mammals and birds. The creek channels serve as movement corridors for aquatic and terrestrial species which use the protective cover found along the creeks. Animal species associated with stream habitat include river otter, great blue heron, snowy egret, belted kingfisher, dark-eyed junco, and black phoebe. Channelized reaches of streams that lack shade canopy, habitat diversity, and water depth encourage warm water species such as California roach, Sacramento sucker, bluegill, green sunfish, mosquitofish, flathead minnow, common carp, and three-spined stickleback.

More natural creek reaches typically have increased shade canopies, pool habitat, cover, water velocity, channel slope, and cooler temperatures. These conditions make the creeks more hospitable for special-status aquatic species such as steelhead trout (*Oncoryhynchus mykiss*), Chinook salmon (*O. tshawytscha*), coho salmon (*O. kisutch*), Russian River tule perch (*Hysterocarpus traskii*), foothill yellow-legged frog (*Rana boylii*), California freshwater shrimp (*Syncaris pacifica*), and northwestern pond turtle (*Actinemys marmorata marmorata*). Steelhead are known from Santa Rosa Creek, Rincon Creek, and the south fork of Santa Rosa Creek. Chinook salmon have been observed in Santa Rosa Creek. Several streams in the EIR Study Area could support salmonids if fish passage impediments are removed, including Matanzas, Austin, Rincon, Brush, Ducker, Piner, Paulin, and the upper reaches of Santa Rosa Creek. Wildlife dependent on the cover provided by the riparian woodland and scrub include black-tailed deer, black-tailed jackrabbit, brush rabbit, red and grey fox, rufous-sided towhee, scrub jay, flycatchers, and warblers. Mammals and birds typically found in the remaining adjacent grasslands most likely use areas of dense riparian growth as protective cover and refuge from summer heat and drought.

Freshwater Marsh and Seasonal Wetlands

Freshwater marsh habitat is also associated with the creeks and drainage channels, ponds and other waterbodies, and in grasslands on the valley floor where seasonal wetlands and vernal pools remain, collectively occupying an estimated 307 acres of the EIR Study Area. Perennial marshlands occur around the margins of ponds, reservoirs, and in some locations along perennial drainages, and are typically dominated by emergent monocots such as narrow-leaf cattail (*Typha angustifolia*). Seasonal wetlands occur along small drainages, localized depressions, and the lower banks and in sediments that accumulate within creek channels. Where soils do not absorb water readily or are underlain by bedrock or hardpan soils, winter and spring rainfall ponds in shallow depressions known as vernal pools or swales. Much of this seasonal wetland habitat in the EIR Study Area has been converted to agricultural cover and urban uses, and intact vernal pools are considered sensitive habitat by the CDFW because of their rarity. Vegetation in relatively undisturbed vernal pools and swales is typically characterized by native annual species that are capable of completing their life cycles and producing viable seed in an extremely variable habitat that is ponded at times and dry at others. Common vernal pool and swale plant species in the Santa Rosa Plain include fringed downingia (*Downingia concolor*), spiny coyote thistle (*Eryngium armatum*), sedge species (*Eleocharis* spp.), toad rush (*Juncus bufonius*), California goldfields (*Lasthenia californica*), and Douglas' meadowfoam (*Limnanthes douglasii* ssp*. douglasii*). Special-status plant species found in vernal pools in the Santa Rosa Plain include Sonoma sunshine (*Blennosperma bakeri*), Burke's goldfields (*Lasthenia burkei*), many-flowered navarretia (*Navarretia leucocephala* ssp. *plieantha*), and Sebastopol meadowfoam (*Limnanthes vinculans*), among others.

Freshwater aquatic habitats and the associated marsh vegetation are of high value to wildlife, providing a source of drinking water, protective cover, and nesting substrate. Species found in freshwater marsh habitats include: Wilson's snipe, marsh wren, Samuel's song sparrow, and red-winged blackbird, Pacific chorus frog, western toad, western pond turtle, western mosquito fish, green sunfish, bluegill, and largemouth bass. Vernal pools and swales provide seasonal aquatic habitat for invertebrates and tree frogs and are temporary water sources for birds and terrestrial wildlife. They serve as breeding habitat for the threatened California tiger salamander (*Ambystoma californiense*), which is known from southwestern and western portions of the EIR Study Area. Northern Hardpan Vernal Pools and Northern Vernal Pools are two vernal pool habitats found in the vicinity of the EIR Study Area, both which are considered sensitive communities by the CDFW.

Scrub Cover Types

A number of native and nonnative vegetative cover types occur along the margins or just outside the Planning Area, such as mixed chaparral and coastal scrub. Areas of chaparral and scrub are dominated by woody shrubs such as coyote brush (*Baccharis pilularis*), yerba santa (*Eriodictyon californicum*), toyon, chamise (*Adonostoma fasciculatum*), poison oak, manzanita (*Arctostaphylos* spp.), ceanothus (*Ceanothus* sp.), interior live oak (*Quercus wislizenii*), and California sagebrush (*Artemisia californica*). Coyote brush and other indicator species of scrub cover occupy an estimated 146 acres within the EIR Study Area, as indicated in Table 4.4-1.

Chaparral and scrub cover provides habitat for a wide variety of wildlife adapted to shrub-dominated communities. Numerous rodent species inhabit chaparral, and deer and other herbivores make extensive use of it for browse and protective cover. Some small herbivores use chaparral species in fall and winter when grass is not abundant. Brush rabbits eat twigs, evergreen leaves, and bark from chaparral plants. Shrubs are important to many other mammals such as bobcat and gray fox as shade during hot weather. Reptiles frequently observed in chaparral include western rattlesnake, western fence lizard, alligator lizard, and gopher snake. Representative bird species include: California quail, common poorwill, Anna's hummingbird, western scrub-jay, bushtit, Bewick's wren, California thrasher, rufous-crowned sparrow, and sage sparrow.

Wildlife Movement Corridors

Wildlife movement corridors link together areas of suitable wildlife habitat that are otherwise separated by rugged terrain, changes in vegetation, or by areas of human disturbance or urban development. Topography and other natural factors in combination with urbanization can fragment or separate large open-space areas. The fragmentation of natural habitat creates isolated "islands" that may not provide sufficient area to accommodate sustainable populations of animals or plants and can adversely impact genetic and species diversity. Movement corridors mitigate the effects of this fragmentation by allowing animals to move between remaining habitats, which in turn allows depleted populations to be replenished and promotes genetic exchange between separate populations.

As described above, much of the EIR Study Area has been developed with agricultural crops and urban uses, which disrupt opportunities for wildlife movement. However, natural linkages remain along riparian corridors; in the largely undeveloped lands of the forest and woodland habitats of the Mayacamas Mountains to the east; and the remaining riparian, marshland, and grasslands along the Laguna de Santa Rosa to the southwest.

Special-Status Species

Special-status species are defined as plants and animals legally protected under the State and/or federal Endangered Species Acts (FESA and CESA) or other regulations, as discussed in Section 4.4.1.1, *Regulatory Framework*. Special-status species also include species that are considered rare enough by the scientific community and trustee agencies to warrant special consideration, particularly with regard to protection of isolated populations, nesting or den locations, communal roosts, and other essential habitat. Species with legal protection under FESA and CESA often represent major constraints to development, particularly when they are wide-ranging or highly sensitive to habitat disturbance and where proposed development would result in a "take" of these species. For the purposes of this EIR, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal FESA.
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under CESA.
- Plant species with a Rank of 1A, 1B and 2 in the CNPS Inventory of Rare and Endangered Plants.
- Animal species designated as "Species of Special Concern" or "Fully Protected" by the CDFW.

- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines.
- Species considered to be a taxon of special concern by the relevant local agencies.

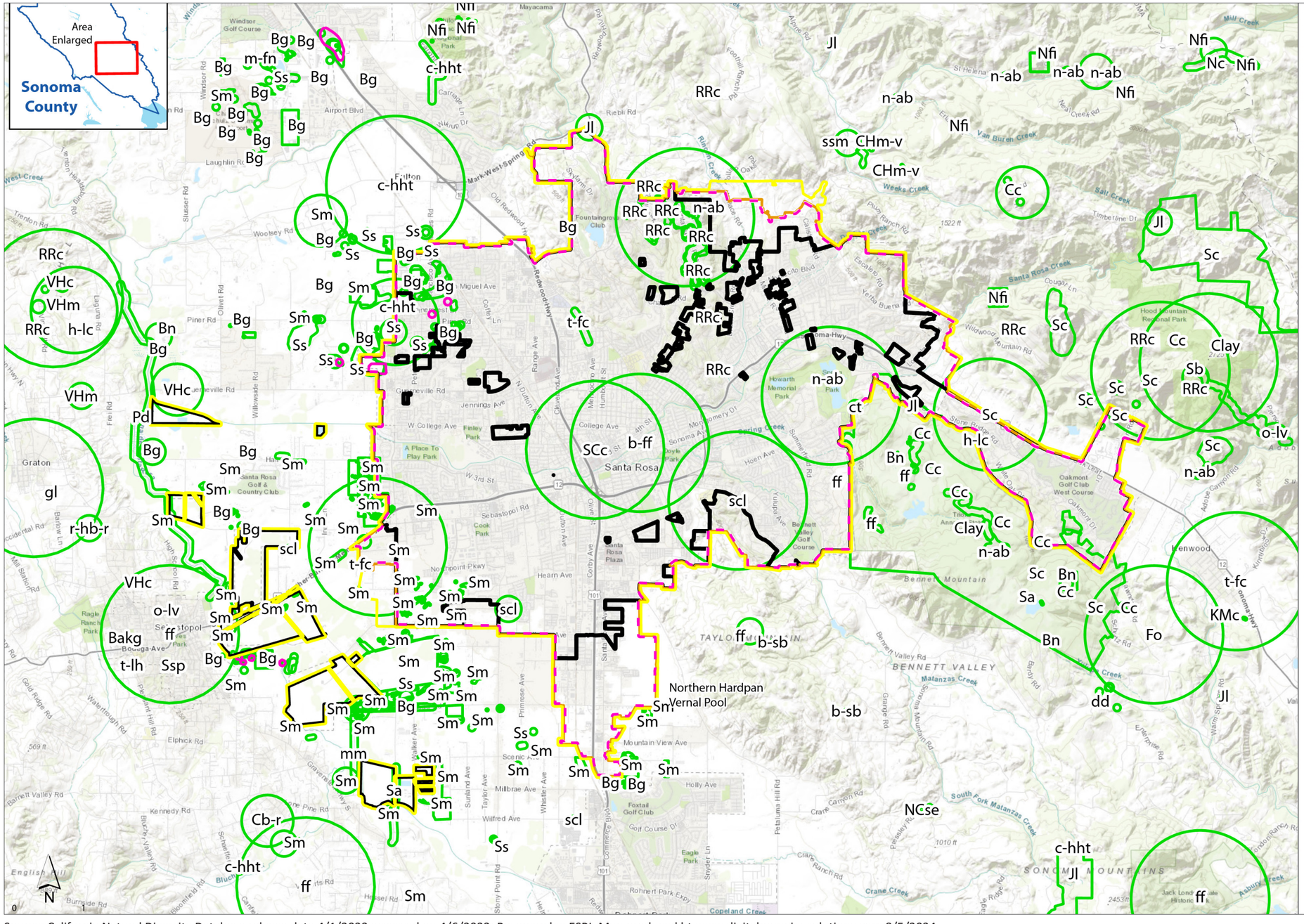
The CNDDB is California's primary inventory on the distribution of special-status species and is maintained by the Biogeographic Data Branch of the CDFW. The CNDDB inventory provides the most comprehensive statewide information on the location and distribution of special-status species and sensitive natural communities. Occurrence data is obtained from a variety of scientific, academic, and professional organizations and private consulting firms and is entered into the inventory as expeditiously as possible. The occurrence of a species of concern in a particular region is an indication that an additional population may occur at another location if habitat conditions are suitable. However, the absence of an occurrence in a particular location does not necessarily mean that special-status species are absent from the area in question, it only indicates that no data has been entered into the CNDDB inventory. Detailed field surveys are generally required to provide a conclusive determination on presence or absence of sensitive resources from a particular location, where there is evidence of potential occurrence.

Special-Status Plants

Review of the CNDDB and CNPS occurrence records indicates a total of 69 special-status plant species reported within or in the vicinity of the EIR Study Area. Of these, occurrence records of 19 special-status plant species actually extend over the EIR Study Area, as indicated on Figure 4.4-2, *Special-Status Plants and Sensitive Natural Communities*. Table 4.4-2, *Special-Status Plant Species in the EIR Study Area*, lists each of these 69 special-status plant species and summarizes their typical habitat characteristics, normal flowering season, and potential for occurrence in the EIR Study Area.

Of the special-status plant species known from the EIR Study Area, most are associated with the vernal pools and seasonal wetland habitat of the Santa Rosa Plain. Four of them—Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam, and many-flowered navarretia—are federally and state-listed as endangered with occurrences throughout the western portion of the EIR Study Area, as indicated on Figure 4.4-2. Sonoma alopecurus (*Alopecurus aequalis*) and two-fork or showy Indian clover (*Trifolium amoenum*) are both federally listed endangered. Several others are believed to have been extirpated from the Santa Rosa Plain or have no legal protective status under the ESAs but have a CNPS Rank of 1B (rare and endangered in California and elsewhere) or 2 (plants rare and endangered in California but more common elsewhere). These include dwarf downingia (*Downingia pusilla*), Baker's navarretia (*Navarretia leucocephala* ssp. *bakeri*), saline clover (*Trifolium hydrophilum*), and the state-listed rare North Coast semaphore grass.

Many of the other occurrences of special-status plant species known from the EIR Study Area are populations of ceanothus, a perennial shrub which occurs in scrub, chaparral, and forest habitat to the north and southeast. These include: Rincon Ridge ceanothus (*Ceanothus confusius*), Sonoma ceanothus (*Ceanothus sonomensis*), and Calistoga ceanothus (*Ceanothus divergens*). None of these species has any legal protective status under the ESAs, but all have a CNPS Rank of 1B, which warrants consideration as part of any environmental review when a proposed project may impact their populations.



Source: California Natural Diversity Database release date 4/1/2023 accessed on 4/6/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

PLACEWORKS

Figure 4.4-2
Special-Status Plants and Sensitive Natural Communities

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Allium peninsulare var. *franciscanum*	Franciscan onion	None	None	1B.2	Dry valley grasslands and foothill woodlands	May - June	Low. Historic occurrence from Kenwood area outside EIR Study Area.
Alopecurus aequalis	Sonoma alopecurus	Endangered	None	1B.1	Marshes and swamps (freshwater), riparian scrub	May - July	Moderate. Known occurrences from vicinity of EIR Study Area.
Amorpha californica var. *napensis*	Napa false indigo	None	None	1B.2	Openings in broadleafed upland forest, chaparral, cismontane woodland	April - July	Moderate. Known occurrences from forests and woodlands in eastern vicinity of EIR Study Area.
Amsinckia lunaris	Bent-flowered fiddleneck	None	None	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland	March - June	Low. Historic occurrence from Oakmont vicinity of EIR Study Area.
Anomobryum julaceum	Slender silver moss	None	None	4.2	Damp rock and soil on outcrops in broad-leafed upland and coniferous forest	Year round	Low. Occurrence record from vicinity of Porter Creek outside EIR Study Area.
Arctostaphylos canescens ssp. *sonomensis*	Sonoma canescent manzanita	None	None	None	Chaparral, lower montane coniferous forest (sometimes serpentinite)	January - June	High. Known from Rincon Ridge in EIR Study Area.
Arctostaphylos densiflora	Vine hill manzanita	None	Endangered	1B.1	Chaparral (acid marine sand)	February - April	Moderate. Historic occurrences from vicinity of EIR Study Area.
Arctostaphylos stanfordiana ssp. decumbens	Rincon Ridge manzanita	None	None	1B.1	Chaparral, cismontane woodland	February - March	High. Known from Rincon Ridge in EIR Study Area.
Astragalus claranus	Clara Hunt's milk vetch	Endangered	Endangered	1B.1	Chaparral (openings), cismontane woodland, valley and foothill grassland	March - May	Moderate. Known from recent and historic occurrences in vicinity of EIR Study Area.
Balsamorhiza macrolepis	Big-scale balsamroot	None	None	1B.2	Foothill woodland and valley grassland	March - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Blennosperma bakeri	Sonoma sunshine	Endangered	Endangered	1B.1	Valley and foothill grassland (mesic), vernal pools	March - May	High. Known from vernal pools and seasonal wetlands in western portion of EIR Study Area
Brodiaea californica var. *leptandra*	Narrow-anthered California brodiaea	None	None	1B.2	Openings in broad-leafed forest, chaparral, lower montane coniferous forest, valley and foothill grassland	May - July	High. Recent records from foothills in eastern part of EIR Study Area.
Calamagrostis crassiglumis	Thurber's reed grass	None	None	2B.1	Coastal scrub (mesic); marshes and swamps (freshwater)	May - August	Low. Historic occurrence from Pitkin Marsh but no other records reported by CNDDB in vicinity of EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Calystegia collina ssp. Oxyphylla	Mt. Saint Helena morning-glory	None	None	4.2	Chaparral on serpentinite	April - June	Moderate. Known from occurrences to north of EIR Study Area.
Carex albida	Sonoma white sedge	Endangered	Endangered	1B	Freshwater marsh, bogs and fens, meadows and seeps	March - July	Moderate. Known from Pitkin Marsh and suitable habitat present in EIR Study Area.
Campanula californica	Swamp harebell	None	None	1B.2	Bogs and marshes in a variety of habitats, including coastal prairie, meadows, and coniferous forests.	June - October	Moderate. Known from Pitkin Marsh and suitable habitat present in EIR Study Area.
Castilleja uliginosa	Pitkin Marsh Indian paintbrush	None	Endangered	1A	Freshwater Wetlands, wetland-riparian	June - July	Low. Presumed extinct but previously known from Pitkin Marsh.
Ceanothus confusius	Rincon Ridge ceanothus	None	None	1B.1	Chaparral, woodland, closed-cone pine forest	February - June	High. Numerous occurrences reported by CNDDB in EIR Study Area.
Ceanothus divergens	Calistoga ceanothus	None	None	1B.2	Chaparral (serpentinite or volcanic, rocky)	February - April	High. Occurrences reported by CNDDB from Annadel State Park and elsewhere in EIR Study Area.
Ceanothus foliosus var. vineatus	Vine Hill ceanothus	None	None	1B.1	Chaparral, endemic to Sonoma and Mendocino counties	March - May	Moderate. Known from occurrences at Vine Hill to west of EIR Study Area.
Ceanothus purpureus	Holly-leaved ceanothus	None	None	1B.2	Chaparral, cismontane woodland/volcanic, rocky	March - May	Moderate. Numerous historic occurrences reported by CNDDB from vicinity of EIR Study Area.
Ceanothus sonomensis	Sonoma ceanothus	None	None	1B.2	Chaparral, in serpentine, sandy or volcanic soils	February - April	Moderate. Numerous historic occurrences reported by CNDDB from vicinity of EIR Study Area.
Centromadia parryi ssp. *parryi*	Pappose tarplant	None	None	1B.2	Chaparral, coastal prairie, meadows and seeps, marshes and swamps, valley and foothill grassland (often alkaline)	April - November	Low. Known from scattered historic occurrences reported by CNDDB in Sonoma County.
Chorizanthe valida	Sonoma spineflower	Endangered	Endangered	1B.1	Coastal prairie (sandy)	June - August	Low. Historic occurrences from Sebastopol vicinity.
Clarkia imbricata	Vine Hill clarkia	Endangered	Endangered	1B.1	Chaparral, valley and foothill grassland	June - August	Moderate. Known from occurrences at Vine Hill to west of EIR Study Area.
Cuscuta obtusiflora var. *glandulosa*	Peruvian dodder	None	None	2B.2	Marshes and swamps (freshwater)	July - October	Low. Historic occurrence from Sebastopol vicinity.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Delphinium luteum	Golden larkspur	Endangered	Rare	1B.1	Chaparral, Coastal prairie, Coastal scrub	March - May	Low. Historic occurrences from Sebastopol vicinity.
Downingia pusilla	Dwarf downingia	None	None	2B.2	Mesic grasslands, vernal pools	March - May	High. Known occurrences reported by CNDDB in EIR Study Area.
Erigeron biolettii	Streamside daisy	None	None	3	Broadleafed upland forest, cismontane woodland, North Coast coniferous forest	June - October	Moderate. Numerous occurrences reported by CNDDB from Mount Hood and Sugarloaf Ridge southeast of EIR Study Area.
Erigeron serpentinus	Serpentine daisy	None	None	1B.3	Chaparral (serpentinite, seeps)	May - August	Low. No occurrences reported by CNDDB in vicinity of EIR Study Area.
Eryngium constancei	Loch Lomond button-celery	Endangered	Endangered	1B.1	Vernal pools	April - June	Low. Known from Calistoga vicinity.
Eryngium pinnatisectum	Tuolumne button-celery	None	None	1B.2	vernal-pools in forest and woodlands, wetland-riparian	May - August	Low. Historic occurrence from Calistoga vicinity.
Fritillaria liliacea	Fragrant fritillary	None	None	1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub; valley and foothill grassland	February - April	High. Numerous occurrences reported by CNDDB from Annadel State Park and elsewhere in vicinity of EIR Study Area.
Gilia capitata ssp. *tomentosa*	Wooly-headed gilia	None	None	1B.1	Coastal bluff scrub and valley grasslands (rocky outcrops and serpentine)	May - July	Low. No known occurrences reported by CNDDB in EIR Study Area.
Hemizonia congesta ssp. *congesta*	Congested-headed hayfield tarplant	None	None	1B.2	Valley and foothill grassland, sometimes roadsides	April - November	High. Numerous historic and recent occurrences reported by CNDDB in EIR Study Area.
Horkelia tenuiloba	Thin-lobed horkelia	None	None	1B.2	Broadleafed upland forest, chaparral, grasslands on sandy soils, mesic openings	May - July	Moderate. Numerous historic occurrences reported by CNDDB in EIR Study Area.
Lasthenia californica ssp. bakeri	Baker's goldfields	None	None	1B.2	Closed-cone coniferous forest (openings), coastal scrub, meadows and seeps, marshes and swamps	April - October	Moderate. Historic occurrence reported from the Sebastopol vicinity.
Lasthenia burkei	Burke's goldfields	Endangered	Endangered	1B.1	Vernal pools and swales	April - June	High. Known from vernal pools and seasonal wetlands in western portion of EIR Study Area.
Lasthenia conjugens	Contra Costa goldfield	Endangered	None	1B.1	Freshwater wetlands, valley grassland, wetland-riparian	March - June	Low. Reported from Petaluma vicinity.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Layia septentrionalis	Colusa layia	None	None	1B.2	Chaparral, cismontane woodland, valley and foothill grassland/sandy serpentinite	April - May	High. Recent occurrence reported by CNDDB from EIR Study Area in Fountaingrove area.
Legenere limosa	Legenere	None	None	1B.1	Vernal pools in valley grassland, wetland-riparian	April - June	Moderate. Historic occurrences reported from Santa Rosa vicinity in EIR Study Area.
Leptosiphon jepsonii= Linanthus jepsonii	Jepson's leptosiphon = Jepson's linanthus	None	None	1B.2	Openings in chaparral, cismontane woodland (usually volcanic or periphery of serpentinite)	March - May	High. Historic and recent occurrences reported from Santa Rosa vicinity in EIR Study Area.
Lessingia hololeuca	Wooly-headed lessingia	None	None	3	Broad-leafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland	June - October	Moderate. Historic occurrences reported by CNDDB in EIR Study Area.
Lilium pardalinum ssp. pitkinense	Pitkin Marsh lily	Endangered	Endangered	1B.1	Freshwater wetlands, ffoothill woodland, wetland-riparian	June - July	Low. Known from Pitkin Marsh to west of EIR Study Area.
Limnanthes vinculans	Sebastopol meadowfoam	Endangered	Endangered	1B.1	Meadows and seeps, valley and foothill grassland, vernal pools	April - May	High. Known from vernal pools in EIR Study Area.
Lupinus sericatus	Cobb Mountain lupine	None	None	1B.2	Openings in forest, woodland, and chaparral	March - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Micropus amphibolus	Mt. Diablo cottonweed	None	None	3.2	Broad-leafed upland forest, chaparral, cismontane woodland, and valley and foothill grassland	March - May	High. Numerous recent occurrences reported by CNDDB in EIR Study Area from Fountaingrove and Annadel State Park.
Microseris paludosa	Marsh microseris	None	None	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland	April - June	Moderate. Numerous historic occurrences reported by CNDDB in EIR Study Area.
Navarretia leucocephala ssp. *bakeri*	Baker's navarretia	None	None	1B.1	Vernal pools and swales in grassland, woodland, wetland-riparian	April - July	High. Numerous historic and recent occurrences reported by CNDDB in EIR Study Area.
Navarretia leucocephala ssp. plieantha	Many-flowered navarretia	Endangered	Endangered	1B.2	Freshwater wetlands, yellow pine forest, wetland-riparian	April - June	Moderate. Known from vernal pools along Laguna de Santa Rosa just west of EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Penstemon newberryi var. *sonomensis*	Sonoma beardtongue	None	None	1B.3	Chaparral	April - August	Low. Several occurrences reported by CNDDB from Hood Mountain area to the southwest of EIR Study Area.
Perideridia gairdneri ssp. gairdneri	Gairdner's yampah	None	None	4.2	Moist places in grasslands and woodlands	June - October	Moderate. Historic and recent occurrences from Annadel State Park and wetlands to the west of the EIR Study Area.
Plagiobothrys strictus	Calistoga popcorn-flower	Endangered	Threatened	1B.1	Meadows and seeps, valley and foothill grasslands, and vernal pools/alkaline areas near thermal springs	March - June	Low. Known from Calistoga vicinity.
Pleuropogon hooverianus	North Coast semaphore grass	None	Threatened	1B.1	Wet grassy, usually shady areas, sometimes in freshwater marsh, associated with forest environments	April - June	Moderate. Reported by CNDDB from vernal pools along Laguna de Santa Rosa and Sonoma Mountain.
Poa napensis	Napa blue grass	Endangered	Endangered	1B.1	Occurs in wetlands in valley grassland, wetland-riparian	May - August	Low. Known from Calistoga vicinity.
Potentilla uliginosa	Cunningham Marsh cinquefoil	None	None	1A	Marshes and swamps (freshwater)	May - August	Low. Presumed extinct. Type locality from Cunningham Marsh.
Ranunculus lobbii	Lobb's aquatic buttercup	None	None	4.2	Shallow vernal ponds at low elevations in grasslands, woodlands and forests	February - May	High. Numerous occurrences reported by CNDDB in EIR Study Area.
Rhynchospora alba	White beaked-rush	None	None	2B.2	Bogs and fens, meadows and seeps, marshes and swamps	July - August	Moderate. Known from Pitkin Marsh to west of EIR Study Area.
Rhynchospora californica	California beaked-rush	None	None	1B.1	Bogs, ferns, marshes, swamps, meadows and seeps, lower montane conifer forest	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Rhynchospora capitellata	Brownish beaked-rush	None	None	2.2	Lower montane coniferous forest, meadows and seeps, marshes and swamps, and upper montane coniferous forest	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Rhynchospora globularis	Round-headed beaked-rush	None	None	2.B1	Marshes and swamps	July - August	Low. Historic occurrences reported by CNDDB to west of EIR Study Area.
Sidalcea hickmanii ssp. *napensis*	Napa checkerbloom	None	None	1B.1	Chaparral on rocky rhyolitic volcanic soil	April - June	Low. No known occurrences reported by CNDDB in EIR Study Area.

TABLE 4.4-2 SPECIAL-STATUS PLANT SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CNPS Rank	General Habitat	Blooming Period	Potential for Occurrence in EIR Study Area
Sidalcea hickmanii ssp. *Viridis*	Marin checkerbloom	None	None	1B.1	Chaparral, cismontane woodland; lower montane coniferous forest	May - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Sidalcea oregana ssp. *valida*	Kenwood marsh checkerbloom	Endangered	Endangered	1B.1	Freshwater wetlands, wetland-riparian	June - September	Moderate. Known from Kenwood Marsh just southeast of EIR Study Area.
Trifolium amoenum	Two-fork clover	Endangered	None	1B.1	Coastal bluff scrub, valley and foothill grassland, sometimes on serpentinite	April - June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Trifolium buckwestiorum	Santa Cruz clover	None	None	1B.1	Broadleafed upland forest, cismontane woodland. coastal prairie	April - October	Low. Vague occurrence reported by CNDDB from Santa Rosa area, but no known occurrences in EIR Study Area.
Trifolium hydrophilum	Saline clover	None	None	1B.2	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools	April - June	High. Known occurrences reported by CNDDB in the southern portion of EIR Study Area.
Triquetrella californica	Coastal triquetrella	None	None	1B.2	Coastal bluff scrub, coastal scrub	Year round	High. Known occurrences reported by CNDDB in the southeastern portion of EIR Study Area at Howarth Park.
Viburnum ellipticum	Oval-leaved viburnum	None	None	2B.3	Openings in chaparral, cismontane woodland, lower montane coniferous forest	May - June	Low. Several occurrences reported by CNDDB from Hood Mountain area to the southwest of EIR Study Area.

Notes:
Agencies
USFWS = U.S. Fish and Wildlife Service
CDFW = California Department of Fish and Wildlife
CNPS = California Native Plant Society

CNPS California Rare Plant Rank
1A: Plants presumed extinct in California.
1B: Plants rare, threatened, or endangered in California and elsewhere.
2: Plants rare and endangered in California but more common elsewhere.
3: Plants about which additional data are needed – a review list.
4: Plants of limited distribution – a watch list

Sources: California Native Plant Society, *Inventory of Rare and Endangered Plants,* https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants; Calflora, on-line inventory at https://www.calflora.org; and California Natural Diversity Database Inventory, accessed June 13, 2023.

Existing development limits the likelihood of continued occurrences of populations of special-status plant species in urbanized parts of the EIR Study Area. Many of the special-status plant species occurrences in the protected preserves, open space areas and undeveloped lands at the fringe of the EIR Study Area shown on Figure 4.4-2 most like remain today but are vulnerable to changes such as competition with invasive species, vegetation management, fires and other threats. There remains a possibility that additional populations of one or more species occurs on the remaining undeveloped lands in the EIR Study Area, and detailed systematic surveys would be necessary to confirm presence or absence as part of the environmental review of proposed development applications where suitable habitat is present.

Special-Status Animals

A total of 55 special-status animal species have been recorded or are considered to potentially occur in the vicinity of the EIR Study Area, as listed in Table 4.4-3, *Special-Status Animal Species in the EIR Study Area*, which includes animal species that may occur within or adjacent to the EIR Study Area, along with their listed status, general habitat characteristics, and their likelihood of occurrence in the EIR Study Area. A total of 15 of these occurrences of special-status animal species have actually been reported by the CNDDB within the EIR Study Area. These include: CTS, California red-legged frog (*Rana draytonii*), California giant salamander (*Dicampton ensatus*),western pond turtle (*Actinemys marmorata*), northern spotted owl (*Strix occidentalis caurina*), white-tailed kite (*Elanus leucurus*), Cooper's hawk (*Accipiter cooperii*), tricolored blackbird (*Agelaius tricolor*), yellow rail (*Coturnicops noveboracensis*), steelhead, coho salmon, Chinook salmon, obscure bumble bee (*Bombus caliginosus*), Blemnosperma vernal pool andrenid bee (*Andrena blennospermatis*), and American badger (*Taxidea taxus*). Most of the species listed in Table 4.4-3 that are not State and/or federally listed species are not closely monitored by the CNDDB and therefore occurrence records are not generally included in the database. These include species identified as "Species of Special Concern" by the CDFW.

Federally designated critical habitat for five special-status animal species occurs within or near the EIR Study Area, as shown on Figure 4.4-3, *Special-Status Animals and Critical Habitats*. This consists of designated critical habitat for CTS, California red-legged frog, northern spotted owl, steelhead, and coho salmon. Critical habitat is a specific term and designation under FESA. It serves to identify habitat considered essential to the conservation of a listed species, though the area need not actually be occupied by the species at the time it is designated. Designating an area as critical habitat does not preclude that area from possible future development. It affects federal agency actions such as federally funded programs or applications requiring a federal permit such as permit authorization from the USACE under the Clean Water Act.

For many of the special-status animal species known from Sonoma County, habitat suitability is severely limited by the direct and indirect effects of development. These include the direct loss of habitat as a result of conversion to urban uses, effects of ongoing habitat modifications due to vegetation management and agricultural practices, and indirect effects such as non-point discharge into aquatic habitat and recreational activities on open space lands. Habitat fragmentation is an important consideration in evaluating the recovery of listed species and the viability of natural communities as a whole. Identification and protection of essential habitat for special-status species must be recognized during the environmental review of proposed development applications and in planning future open

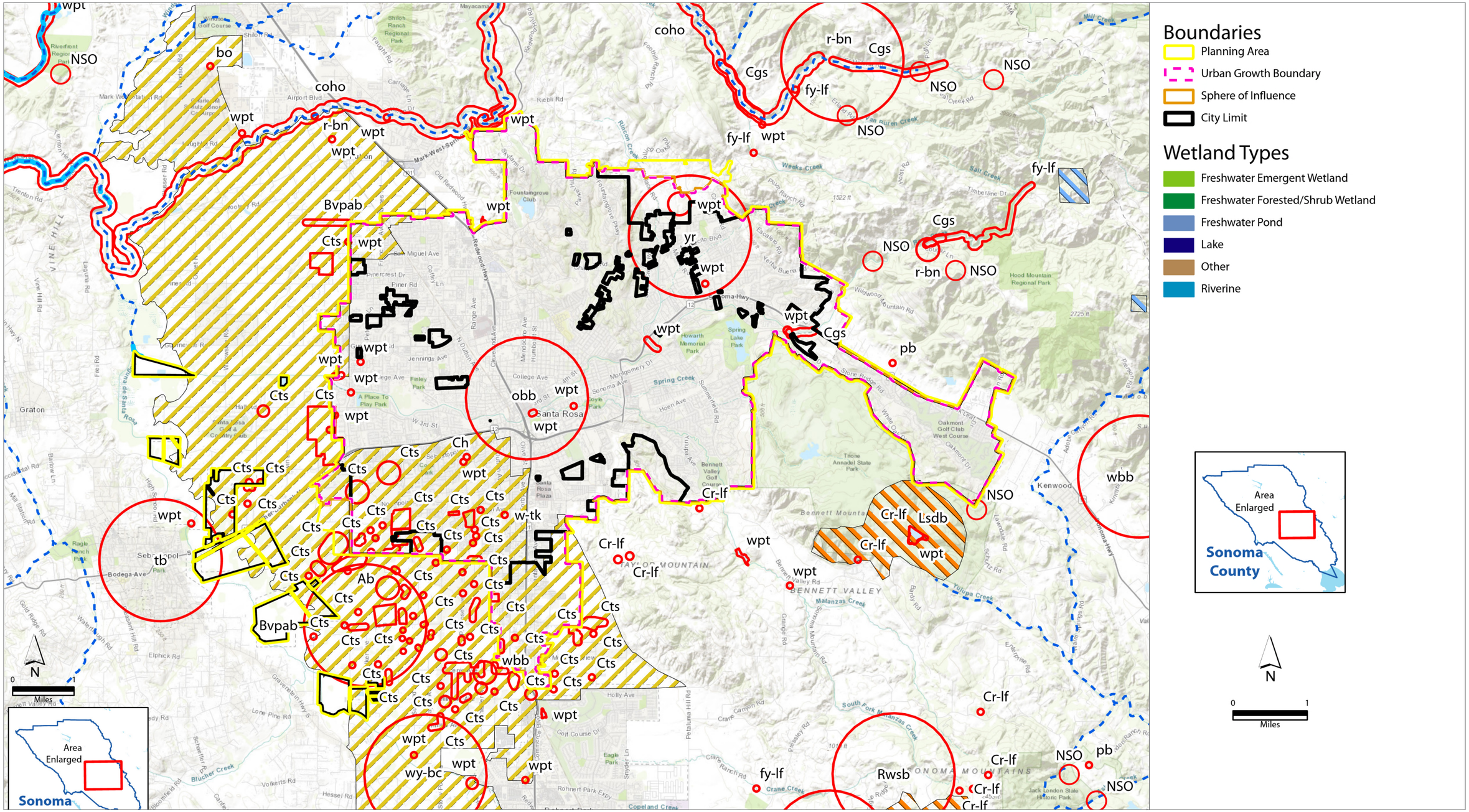
space acquisitions. Detailed surveys should be conducted for sites where there is a potential for occurrence of special-status animal species.

A number of special-status species known from Sonoma County and the Santa Rosa vicinity are wide ranging and are the focus of management efforts by trustee agencies. Listed species of particular concern include: CTS, California red-legged frog, coho salmon, steelhead trout, Chinook salmon, and northern spotted owl. Western pond turtle has no legal protective status under the ESAs, but has been reported throughout the EIR Study Area, as indicated on Figure 4.4-3. The following provides a summary of relevant management issues for each of these species.

Coho Salmon, Steelhead Trout, and Chinook Salmon

Coho salmon, steelhead trout, and Chinook salmon are all listed as threatened under the federal ESA, and all are anadromous, spawning in coastal streams and rivers and then migrating to and maturing in the ocean. Timber harvest activities, overgrazing, gravel mining operations, channel modifications and removal of riparian vegetation, flood control facilities, hydroelectric facilities, and secondary water quality degradation have all contributed to a decline of these species. Coho and steelhead are native species of the county, which is part of the Central California Coast Evolutionarily Significant Unit (ESU) defined as part of species listings. The Russian River and some tributary drainages such as the lower reach of Mark West Creek are part of the California Coastal ESU for Chinook salmon. As indicated on Figure 4.4-3, a number of creeks in or near the EIR Study Area have been designated critical habitat for steelhead and Chinook salmon. Where a record of Chinook or steelhead has been reported from a stream, the entire drainage has been indicated by the CNDDB as supporting the species, although habitat conditions have sometimes not been confirmed in the field.

Sonoma County participated in the FishNet 4C program, which is a county-based, regional salmonid protection and restoration program created under a Memorandum of Agreement between six central California coastal counties: Marin, Mendocino, Monterey, San Mateo, Santa Cruz, and Sonoma. FishNet 4C recognizes the need for these counties to meet the requirements of the ESA in protecting anadromous salmonids and their habitats. Given these requirements, a prime objective of the FishNet 4C program was to evaluate the land management practices of each county and any written policies related to protecting salmonid populations, and to make recommendations for improving these practices and policies. Subsequent programs for salmonid restoration included the work of Russian River Coho Water Resources Partnership (Coho Partnership). The Coho Partnership prioritized water management planning and water storage projects with the goal of allowing people to meet water needs in ways that improve stream conditions for coho salmon. Key conservation strategies also included augmenting, monitoring, and evaluating coho populations, some of which continues today as part of the work Sonoma Water is undertaking as restoration on Dry Creek and monitoring at Mirabel Dam on the Russian River.



Source: California Natural Diversity Database release date 4/1/2023 accessed on 4/6/2023; USFWS critical hatitat data release dare 3/23/2023 accessed on 4/6/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

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Scale (Miles)

PLACEWORKS

Figure 4.4-3
Special-Status Animals and Critical Habitats

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Fish						
Hysterocarpus traskii pomo	Russian River tule perch	None	None	Species of Special Concern	Subspecies confined to Russian River drainage. Requires clear, flowing water and abundant cover	Low. Known from Russian River and tributary drainages, possibly including Santa Rosa Creek and possibly lower reach of Mark West Creek.
Lampetra ayresi	River lamprey	None	None	None	Clean gravelly riffle necessary for spawning; ammocoetes require sandy stream edges or backwaters	Low. Presumably occupies lower reach of Russian River.
Hesperoleucus venustus navarroensis [a]	Northern Coastal roach	None	None	Species of Special Concern	Slow, warm reaches of streams, in Russian River and Navarro River drainages	Low. Prefers estuarian conditions near mouth of Russian River.
Oncorhynchus kisutch	Coho salmon (Central California Coast ESU)	Endangered	Endangered	None	Coastal streams from Punta Gorda in northern California down to and including the San Lorenzo River in central California, as well as some tributaries to San Francisco Bay	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Oncorhynchus tshawytscha pop. 17	Chinook salmon (California Coastal ESU)	Threatened	None	None	Requires clear, cool streams with pools and riffles, with coarse gravel beds for spawning. Sacramento River and its tributaries	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Oncorhynchus mykiss irideus pop. 8	Steelhead (Central California Coast ESU)	Threatened	None	None	Coastal streams from Russian River south to Aptos Creek (Santa Cruz Co.), including streams tributary to San Francisco and San Pablo Bays	High. Known to occur in Mark West Creek and tributary drainages at northern edge of EIR Study Area.
Amphibians and Reptiles						
Ambystoma californiense pop. 3	California tiger salamander - Sonoma County DPS	Endangered	Threatened	None	Breed in stock ponds, vernal pools, and slow-moving streams Retreats to aestivations habitat in summer and winter, occupying mammal burrows and other refugia	Moderate. Known throughout the western and southern portions of EIR Study Area where breeding and aestivation habitat remains and designated critical habitat is present.
Rana boylii pop. 1	Foothill yellow-legged frog - north coast DPS	None	None	Species of Special Concern	Perennial streams and drainages with cobble substrate	Moderate. CNDDB occurrences to the north and south of EIR Study Area.
Rana draytonii	California red-legged frog	Threatened	None	Species of Special Concern	Ponds, streams, drainages and associated uplands; requires areas of deep, still, and/or slow-moving water for breeding	Moderate. CNDDB occurrences from Annadel State Park, Taylor Mountain and other locations just outside EIR Study Area with designated critical habitat extending over a portion of Annadel State Park and Sonoma Mountains to the south.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Taricha rivularis	Red-bellied newt	None	None	Species of Special Concern	Found along coast from Bodega in Sonoma County, inland to Lower Lake, and north to Honeydew, Humboldt County in coastal woodlands, especially in redwood forests	Moderate. Observed in Sonoma County where suitable habitat is present. CNDDB occurrences from drainages in Mayacamas Mountains to east of EIR Study Area.
Dicampton ensatus	California giant salamander	None	None	Species of Special Concern	Ponds, streams, drainages and associated uplands; prefers fast moving water in coastal forests and valley-foothill riparian habitats with cover	Moderate. CNDDB occurrence from drainages along Hood Mountain and upper Mark West Creek watershed to east and north of EIR Study Area.
Actinemys marmorata	Western pond turtle	None	None	Species of Special Concern	Ponds, streams with deep pools, drainages and associated uplands for egg laying	High. Numerous CNDDB occurrences throughout EIR Study Area.
Invertebrates						
Andrena blennospermatis	Vernal pool andrenid bee	None	None	None	Upland areas near vernal pools	High. CNDDB occurrences from vernal pools at western edge of EIR Study Area.
Bombus caliginosus	Obscure bumble bee	None	None	None	Coastal areas from Santa Barbara County to Washington	Low. Historic occurrence reported by CNDDB from EIR Study Area but most occurrences now reported from coastal areas.
Bombus crotchii	Crotch bumble bee	None	Candidate	None	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease	Low. Substantial decline in the northern part of its range and is now believed to be possibly extirpated from Santa Rosa vicinity.
Bombus occidentalis	Western bumble bee	None	Candidate	None	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease	Low. Considerable range contraction and now considered confined to higher elevations of Sierra Nevada and portions of North Coast of California.
Caecidotea tomalensis	Tomales isopod	None	None	None	Prefers practically still to slow-moving, vegetated water, such as from springfed ponds	Low. Known from scattered occurrences in Sonoma County, including along the coast and south of Santa Rosa vicinity.
Hydrochara rickseckeri	Ricksecker's water scavenger beetle	None	None	None	Found in freshwater ponds, shallow water of streams marshes and lakes	Moderate. General occurrence reported by CNDDB from Sonoma Mountain and may occur where suitable habitat is present.
Hydroporus leechi	Leech's skyline diving beetle	None	None	None	Shallow water in vernal pools and ponds	Moderate. Known occurrence reported by CNDDB from Annadel State Park and may occur where suitable habitat is present.
Linderiella occidentalis	California linderiella	None	None	None	Vernal pools, seasonal wetlands	Moderate. No occurrences reported by CNDDB in Santa Rosa vicinity, but suitable habitat is present in Santa Rosa Plain.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Syncaris pacifica	California freshwater shrimp	Endangered	Endangered	None	Found in low-elevation, low gradient perennial freshwater streams where banks are structurally diverse with undercut banks, exposed roots, or overhanging woody debris or vegetation	Low. No known occurrences reported by the CNDDB in EIR Study Area but reported from Laguna de Santa Rosa, Blucher Creek and Sonoma Creek.
Birds						
Pelecanus erythrorhynchos	American white pelican	None	None	Species of Special Concern	Forages over shallow inland waters and coastal marine habitats, nests on isolated islands or peninsulas	Moderate. May forage and roost in the open water habitat of larger water bodies but does not breed in San Francisco Bay Area.
Ardea alba	Great egret (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Ardea herodias	Great blue heron (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Egretta thula	Snowy egret (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Nycticorax nycticorax	Black-crowned night heron (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including shorelines of lakes, ponds, and drainages. Colonial nesting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Accipiter cooperii	Cooper's hawk	None	None	None	Found in range of wooded habitats, including openings in woodlands, forests, parklands and riparian areas	High. Observed in Sonoma County where suitable habitat is present.
Accipiter striatus	Sharp-shinned hawk	None	None	None	Heavily wooded areas along streams or near springs; forages in seasonal wetlands	High. Observed in Sonoma County where suitable habitat is present.
Elanus leucurus	White-tailed kite	None	None	Fully Protected Species	Open grasslands, meadows, or marshes; require dense- topped trees or shrubs for nesting and perching	High. Observed in Sonoma County where suitable habitat is present.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Haliaeetus leucocephalus	Bald eagle	Delisted	Endangered	Fully Protected Species	Ocean shorelines, lake margins, and rivers for both nesting and wintering; nests in large trees with open branches	Moderate. Known to occasionally forage along lower reaches of major drainages and shoreline of larger water bodies, but not likely to remain for long periods or breed in EIR Study Area.
Pandion haliaetus	Osprey	None	None	Species of Special Concern	Rivers, lakes, where fish can be obtained from food	Moderate. Observed in Sonoma County where suitable habitat is present.
Circus cyaneus	Northern harrier	None	None	Species of Special Concern	Nests in wet meadows and marshes, forages over open grasslands and agricultural fields	High. Observed in Sonoma County where suitable habitat is present.
Aquila chrysaetos	Golden eagle	None	None	Fully Protected Species	Rolling foothills and mountain areas. Nests in cliff- walled canyons or large trees in open areas	Moderate. Observed in Sonoma County where suitable habitat is present.
Falco peregrinus	American peregrine falcon	Delisted	Delisted	Fully Protected Species	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings	Moderate. May occasionally forage in EIR Study Area, but not likely to breed due to the lack of suitable nesting habitat.
Coturnicops noveboracensis	Yellow rail	None	None	Species of Special Concern	Shallow marshes with fairly short vegetation	Moderate. Historic occurrence reported by CNDDB from EIR Study Area.
Athene cunicularia	Burrowing owl	None	None	Species of Special Concern	Open, dry grasslands that contain abundant ground squirrel burrows	Moderate. Observed in Sonoma County where suitable habitat is present, with CNDDB records to the south of EIR Study Area.
Asio flammeus	Short-eared owl	None	None	Species of Special Concern	Found in open country and grasslands	Moderate. Observed in Sonoma County where suitable habitat is present.
Asio otus	Long-eared owl	None	None	Species of Special Concern	Conifer, oak, riparian, pinyon-juniper, and desert woodlands adjacent to grasslands, meadows, or shrublands	Moderate. Observed in Sonoma County where suitable habitat is present.
Strix occidentalis caurina	Northern spotted owl	Threatened	Candidate	Species of Special Concern	Dense forest and woodland, with suitable prey	Moderate. CNDDB occurrences from Bennett Mountain and western slopes of Mayacamas Mountains, with designated critical habitat at edge of EIR Study Area.
Contopus cooperi	Olive-sided flycatcher	None	None	Species of Special Concern	Coniferous forests with open canopies	Moderate. Observed in Sonoma County where suitable habitat is present.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Lanius ludovicianus	Loggerhead shrike	None	None	Species of Special Concern	Open grasslands and woodlands with scattered shrubs, fence posts, utility lines, or other perches; nests in dense shrubs and lower branches of trees	Moderate. Observed in Sonoma County where suitable habitat is present.
Progne subis	Purple martin	None	None	Species of Special Concern	Woodlands; nests in tree snags and abandoned woodpecker cavities and human-made structures	Moderate. Observed in Sonoma County where suitable habitat is present.
Phalacrocorax auritus	Double-crested cormorant (nesting colony)	None	None	None	Relatively common species, found foraging in a variety of aquatic habitats including open water and shorelines, including lakes and reservoirs. Colonial roosting areas are of concern to CDFW	High. Observed in Sonoma County where suitable habitat is present.
Ammodramus savannarum	Grasshopper sparrow	None	None	Species of Special Concern	Grasslands with scattered shrubs	Moderate. Observed in Sonoma County where suitable habitat is present.
Agelaius tricolor	Tricolored blackbird	None	None	Species of Special Concern	Nests in dense vegetation near open water; forages in grasslands and agricultural fields	Moderate. Historic occurrence reported by CNDDB from the Sebastopol vicinity west of the EIR Study Area.
Mammals						
Antrozous pallidus	Pallid bat	None	None	Species of Special Concern	A variety of open arid habitats (e.g., chaparral, open woodland, deserts); primary roost sites include bridges, old buildings, and in tree hollows and/or bark; sometimes roost in caves and rock crevices	Moderate. Suitable habitat present and occurrences reported by CNDDB from Kenwood vicinity southeast of EIR Study Area.
Corynorhinus townsendii	Townsend's big-eared bat	None	None	Species of Special Concern	Roots in the open in a variety of habitats, including tree cavities, caves and old buildings. Extremely sensitive to human disturbance	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Lasiurus blossevillii	Western red bat	None	None	Species of Special Concern	Forested canyons and riparian woodlands for roosting, a variety of open habitats for foraging; typically roosts in snags and trees with moderately dense canopies	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Lasiurus cinereus	Hoary bat	None	None	None	Prefers open habitats with access to trees for cover, roosting in dense foliage	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.

TABLE 4.4-3 SPECIAL-STATUS ANIMAL SPECIES IN THE EIR STUDY AREA

Scientific Name	Common Name	Federal List	California List	CDFW	General Habitat	Potential for Occurrence in EIR Study Area
Myotis evotis	Long-eared myotis	None	None	None	Occurs in semiarid shrublands, sage, chaparral, agricultural areas, and most frequently in coniferous forests. Roost under exfoliating tree bark, hollow trees, caves, mines, cliff crevices, sink holes, rocky outcrops	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis thysanodes	Fringed myotis	None	None	None	Inhabits a variety of habitats including pinyon-juniper woodland, valley foothill hardwood, hardwood-conifer forests, and desert scrub	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis volans	Long-legged myotis	None	None	None	Inhabits forests and woodland habitats, primarily oak and juniper woodlands	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Myotis yumanensis	Yuma myotis	None	None	None	Occurs in riparian, arid scrublands and deserts, and forests. Roosts in bridges, buildings, cliff crevices, caves, mines, and trees. Forages over open water	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Puma concolor	Mountain lion	None	None	None	Found in nearly all habitats, except croplands in the Central Valley. Most abundant in riparian areas, chaparral and scrub, and brushy stages of most habitats	High. Known from EIR Study Area where suitable habitat and movement corridors are present.
Taxidea taxus	American badger	None	None	Species of Special Concern	Open habitats with friable soils and small mammal prey base.	Moderate. Suitable habitat present and CNDDB occurrence reported just southwester of EIR Study Area.

Notes:
a. As of 2021, CDFW classifies roach in the Russian River watershed as "Northern Coastal", *Hesperoleucus venustus navarroensis.* Prior to 2021, the roach in the Russian River was known as *Lavinia symmetricus navarroensis.*
Agencies
USFWS = U.S. Fish and Wildlife Service
CDFW = California Department of Fish and Wildlife
ESU = Evolutionary Significant Unit
DPS = Distinct Population Segment
Sources: California Native Plant Society, *Inventory of Rare and Endangered Plants,* https://www.cnps.org/rare-plants/cnps-inventory-of-rare-plants; California Department of Fish and Wildlife, 2019; and California Natural Diversity Database, accessed June 13, 2023.

California Tiger Salamander

The Sonoma County population of CTS is listed as endangered by the USFWS and threatened by the CDFW. This species occurs in grassland and savanna habitat, breeding in vernal pools and swales, seasonal drainages, and man-made ponds, and spending most of the year in subterranean refugia such as rodent burrows, cracks, and under rocks and logs. Adults migrate to suitable breeding locations with the onset of sustained rainfall, and have been reported to move considerable distances. Most of the occurrences of CTS in Sonoma County are from the complex of vernal pools and drainages of the Santa Rosa Plain along the Laguna de Santa Rosa watershed, generally between Sebastopol, Santa Rosa, and Cotati. Extensive habitat conversion and fragmentation of breeding habitat has eliminated this species from much of its former range and is considered a serious threat to the Sonoma County population. As indicated on Figure 4.4-3, numerous occurrences of this species have been reported by the CNDDB in western and southwestern Santa Rosa, and designated critical habitat extends over or borders the western edge of the EIR Study Area.

California Red-Legged Frog

This species is listed as threatened by the USFWS and is recognized as a CSC by the CDFW. It typically occurs in aquatic habitat of streams and ponds but can disperse considerable distances in search of breeding and aestivation sites. Scattered occurrences of California red-legged frog are known from the Taylor Mountain and Bennett Mountain vicinities. As indicated on Figure 4.4-3, designated critical habitat extends over part of Trione-Annadel State Park and the Sonoma Mountains further south. Continued loss of upland dispersal habitat, fragmentation of remaining breeding locations, competition and predation by bullfrog, and degradation of aquatic habitat are primary concerns regarding protection and recovery of this species.

Western Pond Turtle

This species has no State or federal listing but is recognized as a CSC by the CDFW. Western pond turtles occur in a wide variety of aquatic habitats, including ponds, lakes, marshes, rivers, streams, and canals that typically have a rocky or muddy bottom and contain stands of aquatic vegetation. The presence or absence of pond turtles at a given aquatic site is largely dependent on the availability of suitable basking sites and adjacent upland habitat for egg-laying (e.g., sandy banks or grassy open fields) and over-wintering. Nests are typically dug in dry substrate with a high clay or silt fraction since the female moistens the site where she will excavate the nest prior to egg-laying. Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage. Western pond turtles have been reported from scattered locations throughout the EIR Study Area where suitable habitat is present, as indicated on Figure 4.4-3. Other freshwater bodies and drainages with deep pools may provide suitable habitat for this species.

Northern Spotted Owl

The USFWS listed the northern spotted owl as a threatened species in 1990. The southern limit of their range extends across the coastal and inland forests and woodlands of Sonoma County southward into Marin County. Occurrences of this species extend along the entire coast of the county, the Mayacamas Mountains, and Sonoma Mountain. Ongoing studies have been conducted to monitor population health and further define essential habitat. The southern population of spotted owl is subject to several threats, including: habitat loss and disturbance due to timber harvest, agricultural conversion, and development at the fringe of existing forest and woodland habitat; severe fires and hazardous fuel management; potential for catastrophic wildfire along the urban/wildland interface; and continued range expansion of the barred owl. Of particular concern is the continuing die-off of tanbark and coast live oaks throughout spotted owl habitat due to SOD, and the long-term impacts this may have on prey populations and owl nesting and foraging habitat.

Sensitive Habitats

Sensitive Natural Communities

The CDFW tracks the occurrences of "special" plant communities that are either known or believed to be of high priority for inventory in the CNDDB. These plant communities are listed in the CDFW *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database* publication, which is updated periodically and available online on CDFW's website.[18] These communities are sometimes addressed by lead or trustee agencies, but generally are not afforded the same protection as CNPS Rank 1B and 2 plant species. Many sensitive natural community types support special-status plants and animals and are addressed under CEQA as essential habitat for those species.

Sensitive natural community types in the EIR Study Area vicinity include vernal pools and swales, native riparian woodland and scrub, freshwater marsh, and remnant native grasslands, among other community types. Figure 4.4-2 shows the location of a number of larger vernal pools in the western portion of the EIR Study Area, and most of the features identified as riparian and aquatic wetlands on Figure 4.4-1 likely qualify as sensitive natural communities where they haven't been compromised by past disturbance. However, most of these sensitive natural community types have not been mapped and are not monitored by the CNDDB.

In addition, other sensitive natural community types are known from the EIR Study Area. Based on the *Manual of California Vegetation* classification system and latest list of terrestrial natural communities prepared by CDFW, these sensitive natural communities include Black Oak Forests and Woodlands, Coastal and Montane Redwood Forests, Douglas Fir Forests, California Bay Forests and Woodlands, California Buckeye Woodlands, Coyote Brush Scrub, freshwater marsh, freshwater seeps and springs, and native grasslands.[19] Occurrences of these sensitive natural community types are most likely present within

[18] California Department of Fish and Game, 2003, *List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database,* Wildlife and Habitat Data Analysis Branch, Vegetation Classification and Mapping Program, California Department of Fish and Game, Sacramento.

[19] John Sawyer and Todd Keeler-Wolf, 1995, *A Manual of California Vegetation*, California Native Plant Society, Sacramento.

the remaining undeveloped woodland, forest, and grasslands in the EIR Study Area, but they have not been mapped as part of the CNDDB mapping program. Detailed surveys would be required to provide confirmation of presence or absence from undeveloped portions of the EIR Study Area where thorough studies have not been conducted.

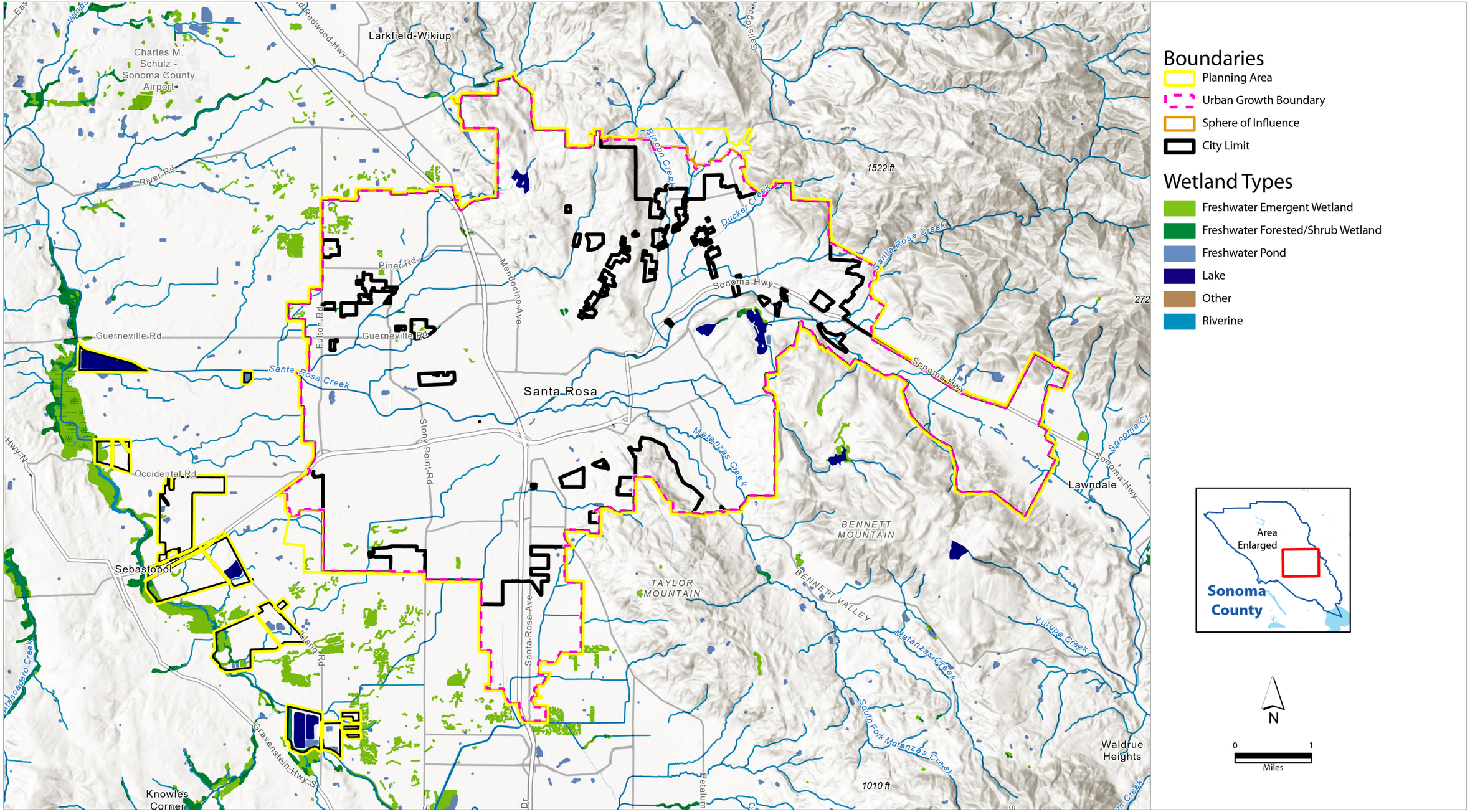
Wetlands and Jurisdictional Waters

As defined by the USACE, wetlands are areas that are periodically or permanently inundated by surface or ground water and support vegetation adapted for life in saturated soil. Wetlands include swamps, marshes, bogs and similar areas. As a significant natural resource, wetlands serve important functions relating to fish and wildlife. Such functions include food chain production, habitat, nesting spawning, rearing and resting sites for aquatic and land species. They also provide protection of other areas from wave action and erosion; storage areas for storm and flood waters; natural recharge areas where ground and surface water are interconnected; and natural water filtration and purification functions.[20]

A formal jurisdictional delineation of wetlands and other waters of the U.S. and State was not conducted for the EIR Study Area. However, based on information available from the National Wetlands Inventory shown on Figure 4.4-4, *Wetlands*, numerous features within the EIR Study Area can be assumed to fall under jurisdiction of the USACE, RWQCB and CDFW, as discussed in Section 4.4.1.1, R*egulatory Framework*. Features within the EIR Study Area likely to be regulated waters include Santa Rosa Creek and the extensive network of tributary drainages mapped as riverine habitat on Figure 4.4-4, smaller tributaries to the Laguna de Santa Rosa in the southwestern part of the EIR Study Area such as Roseland Creek and Colgan Creek, scattered freshwater waterbodies (i.e. pond or lakes), and areas of freshwater marsh and seasonal wetlands present throughout the western undeveloped lands and periphery of the Laguna de Santa Rosa. Additional jurisdictional wetlands and other waters of the U.S. may be present elsewhere in the EIR Study Area, but detailed site-specific assessments would be required to confirm presence or absence from undeveloped lands.

Federally regulated waters along the numerous drainages in the EIR Study Area are defined by the "ordinary high-water mark" rather than the band of adjacent riparian vegetation, limiting USACE jurisdiction where riparian scrub and forest extend a considerable distance from the channel bank. However, the limits of State waters regulated by CDFW and North Coast RWQCB encompass both the bed and bank of drainageways, as well as the limits of the associated riparian vegetation where it extends beyond the top of bank. Both agencies typically request that an adequate setback be provided to avoid both direct and indirect impacts on riparian corridors as part of environmental review for specific development plans.

[20] US Army Corps of Engineers, Headquarters Website, Regulatory Program and Permits, https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Frequently-Asked-Questions, accessed August 18, 2023.



Source: US Fish and Wildlife Service (https://www.fws.gov/node/264847). Downloaded on 4/27/2023; Basemap by: ESRI. Map produced bt www.digitalmappingsolutions.com 8/5/2024.

Figure 4.4-4
Wetlands

4.4.2 STANDARDS OF SIGNIFICANCE

Implementation of the proposed project would result in significant impact to biological resources if it would:

1. 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 plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
2. Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.
3. Have a substantial adverse effect on State or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.
4. 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.
5. Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.
6. Conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan.
7. Result in significant cumulative impact related to biological resources.

4.4.3 IMPACT DISCUSSION

As described in Chapter 4.0, *Environmental Analysis*, of this Draft EIR, some proposed General Plan 2050 policies and actions are required as means to mitigate environmental impacts under CEQA. These policies and actions are fully enforceable at the discretion of the decision-maker through permit conditions, agreements, or other legally binding instruments. These mitigating policies and actions use the imperative "shall," include performance criteria, and are marked with an asterisk (*). Note that all actions are required to be implemented by the City and therefore the imperative "shall," if not explicitly stated, is implied.

BIO-1 Implementation of the proposed project could 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 plan, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Local, regional, State, and federal regulations provide varying levels of protection for special-status species, depending on a number of factors, including legal protective status, rarity and distribution, the magnitude of the potential impact on essential habitat, specific occurrence and overall population levels, and take of individual plants or animals. Activities requiring discretionary approvals by local, regional, State, and federal agencies provide for the greatest oversight because each potential future development that could occur from implementation of the proposed project must be evaluated for their potential impact on special-status species and other sensitive biological resources.

As indicated in Table 4.4-2, 69 special-status plant species are considered to have some potential for occurrence within or in the vicinity of the EIR Study Area, with a total of 19 of these special-status plant species having been reported by the CNDDB that occur within the EIR Study Area. Most of the special-status plant species occurrences in the EIR Study Area are associated with the vernal pools and seasonal wetland habitat of the Santa Rosa Plain, including Sonoma sunshine, Burke's goldfields, Sebastopol meadowfoam, many-flowered navarretia, Sonoma Alopecurus, dwarf downingia, Baker's navarretia, and saline clover. Other special-status plant species reported by the CNDDB from the EIR Study Area include several species of ceanothus found in scrub and chaparral habitats, and forb species found in grassland habitats such as big-scale balsamroot (*Balsamorhiza macrolepis*), narrow-anthered California brodiaea (*Brodiaea californica* var. *leptandra*), and fragrant fritillary (*Fritillaria liliacea*). Further detailed investigation is typically necessary to determine whether any occurrences of special-status plant species are present on undeveloped sites with natural habitat and appropriate habitat conditions.

As indicated in Table 4.4-3, 55 special-status animal species have some potential to occur in or frequent the EIR Study Area. Of these, a total of 15 have been reported from or are considered to have a high potential to occur in or frequent the EIR Study Area. Many of these are also associated with the vernal pool, seasonal wetlands, and riparian corridors that provide essential habitat for these species, including: CTS, California red-legged frog, western pond turtle, steelhead, coho salmon, Chinook salmon, yellow rail, and California giant salamander, among others. As shown in Table 4.4-3, these have varied legal status or are considered Species of Special Concern by the CDFW. A few have no special status but are monitored by the CDFW because of recent declines and abundance such as Cooper's hawk and other birds. Further detailed investigation is typically necessary to determine whether any occurrences of special-status animal species are present on undeveloped sites with natural habitat and appropriate habitat conditions.

As discussed in Chapter 3, *Project Description,* of this Draft EIR, potential future development from implementation of the proposed project is expected to occur in the proposed General Plan 2050 Areas of Change and would be concentrated in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development, where special-status species have a lower likelihood to be present. The potential for occurrence of special-status species in developed areas is typically remote in comparison to undeveloped lands with natural habitat that contain essential habitat

characteristics for the range of species known in the EIR Study Area vicinity. While the potential for adverse impacts on special-status species is relatively low, there remains a varying potential for loss or disruption due to conversion of areas of natural habitat, removal of trees and other vegetation, increases in light and noise, and other modifications and disturbance. Grading and other construction disturbance to existing natural habitat could eliminate occurrences of special-status plants and individuals or occurrences of special-status animal species, or further isolate them from other occurrences where urbanization creates barriers between the remaining areas of natural habitat. This includes possible loss or disturbance to bird nests in active use, conflicting with both the MBTA and CFGC. Of particular concern is the possible impact on CTS as a result of anticipated future development in the western and southern parts of the EIR Study Area given the importance of the Santa Rosa Plain to the Sonoma County population, where further fragmentation could isolate individuals from suitable aestivation and breeding habitat or increase the potential for take from intensified human activity.

As part of the permitting project with the USACE, projects affecting federally regulated waters must demonstrate that they would not have an adverse effect on federally listed species or would be required to provide adequate compensatory mitigation where avoidance is infeasible. For those projects within the boundaries of the SRPCS, including western and southern Santa Rosa, they must comply with the rigorous conditions of the Biological Opinion issued by the USFWS in addressing potential effects on CTS, Burke's goldfields, Sebastopol meadowfoam, and Sonoma sunshine.

Furthermore, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including special-status species, on a project-by-project basis. The following goal, policies, and actions would serve to minimize impacts related to sensitive habitats and species in the EIR Study Area:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
    - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
        - Action 3-5.5: Explore options that help to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special- status species, such as:
            - Avoidance of sensitive habitat.
            - Clustered development.
            - Transfer of development rights.
            - Compensatory mitigation, such as habitat restoration or creation.
        - *Action 3-5.7: Continue to consult with the California Department of Fish and Wildlife to identify significant environments and priorities for acquisition or maintenance of open space areas based on biological and environmental concerns and develop a strategy for maintaining areas that will preserve the populations of plants and animals currently found in the UGB.
        - Action 3-5.9: Explore using mitigation fees to protect environmentally sensitive resource lands and/or endangered species habitat areas that are subject to development.

- *Action 3-5.10: Continue to implement existing regulations and procedures, including subdivision guidelines, zoning, design review, and environmental law, to conserve wetlands and rare plants, riparian habitat and other sensitive natural communities, and essential habitat for special-status species.

- Policy 3-5.4: Use existing (and/or restore historical) natural features and ecosystem processes for conservation, preservation, or sustainable management of open space, including, but not limited to, aquatic or terrestrial vegetated open space, systems that provide clean water, conserve ecosystem values and functions, and provide a wide array of benefits to people and wildlife.
  - *Action 3-5.11: Require a qualified biologist to prepare a biological resource assessment as part of project approval for proposed development on sites that may support special-status species, sensitive natural communities, important wildlife corridors, or regulated wetlands and waters to identify potential impacts and measures for protecting the resource and surrounding habitat.
  - *Action 3-5.12: Require that construction or other ground-disturbing activities avoid nests of native birds when in active use by implementing protection measures to ensure compliance with the California Fish and Game Code and federal Migratory Bird Treaty Act. Compliance guidelines are detailed in the General Plan Environmental Impact Report.
  - *Action 3-5.13: Develop and adopt a bird-safe design ordinance to provide specific criteria and refined guidelines as part of design review of new buildings and taller structures to protect birds from injury and mortality from collisions with buildings, towers, and other human-made structures.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is habitat for special-status species and sensitive natural communities, including wetlands and nesting areas, impacts from the proposed project are potentially *significant*.

Impact BIO-1: Impacts to special-status species or the inadvertent loss of bird nests in active use, which would conflict with the federal Migratory Bird Treaty Act (MBTA) and California Fish and Game Code (CFGC), could occur as a result of implementation of the proposed project.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including special-status species and active bird nests, on a project-by-project basis. Proposed General Plan 2050 *Action 3-5.7 requires the City to consult with CDFW to identify significant environments and develop a strategy for maintaining areas that will preserve special-status species; *Action 3-5.10 requires the City to continue to implement existing regulations to conserve habitat for special-status species; and *Action 3-5.11 requires the City to have biological resource assessments prepared that identify potential impacts and mitigation measures for protecting the resources for proposed development on sites that may support special-status species. In addition, proposed *Action 3-5.12 and *Action 3-5.13 require the protection of bird habitat, including the possible loss or disturbance to bird nests in active use, which conflicts with both the MBTA and CFGC. Implementation of the proposed General Plan 2050 goal, policies, and actions listed above, in

conjunction with adherence to State and federal regulations related to the protection of special-status species, including the *Santa Rosa Plain Conservation Strategy* where applicable, would address potential impacts of anticipated future development under the proposed project. Future development would continue to be reviewed through the City's entitlement process and CEQA, when applicable, to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources. Ultimately, potential future development in Santa Rosa over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 goal, policies, and actions discussed above, which would ensure that potential impacts on special-status species would be *less than significant*.

BIO-2 Implementation of the proposed project could have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.

Without adequate avoidance and thorough construction controls, potential impacts on riparian habitats and other sensitive natural communities may occur as both direct and indirect impacts associated with implementation of the proposed project. Direct impacts occur as a result of converting areas of a sensitive natural community to new development. Direct impacts may also be temporary in nature if they disturb a habitat that is subsequently restored after construction. Indirect impacts could be caused by changes in hydrology and water quality or through increases in sedimentation as a result of grading, and the introduction of urban pollutants could also have indirect impacts on aquatic habitat and contribute to a reduction in the value of downgradient waters.

As discussed in Section 4.4.1.2, *Existing Conditions*, sensitive natural communities in the EIR Study Area include riparian habitat along the numerous creeks, areas of freshwater marsh, vernal pools and swales, and remnant stands of native grasslands. Figure 4.4-1 shows the known location of well-developed riparian habitat, freshwater marsh, and vernal pools. Most of these features are also identified as wetlands under the National Wetlands Inventory, as shown on Figure 4.4-4 and discussed further under impact discussion BIO-3. Other sensitive natural community types in the EIR Study Area, not mapped in the CNDDB inventory and as part of the National Wetland Inventory, include Black Oak Forests and Woodlands, Coastal and Montane Redwood Forests, Douglas Fir Forests, California Bay Forests and Woodlands, California Buckeye Woodlands, Coyote Brush Scrub, smaller locations of freshwater marsh, freshwater seeps and springs, and native grasslands. Additional occurrences of these sensitive natural community types are most likely present within the remaining woodland, forest, and grasslands in the EIR Study Area, but they have not been mapped as part of the CNDDB or other mapping programs. Further detailed investigation is typically necessary to determine whether any sensitive natural communities are present on undeveloped sites with natural habitat and appropriate setbacks to ensure their protection.

Potential future development that occurs from implementation of the proposed project would be required to comply with SRCC Section 20-30.040 related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*. Furthermore, Chapter 3, *Circulation,*

Open Space, Conservation, and Greenhouse Gas Reduction, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including riparian habitats and other sensitive natural community types, on a project-by-project basis. In addition to the goal, policies, and actions identified under impact discussion BIO-1, the following General Plan goal, policies, and actions would serve to minimize impacts on riparian, wetlands and other sensitive natural communities in the EIR Study Area:

- Goal 3-5: Protect, expand, maintain, and restore natural resources, open space, and the limited remaining agricultural land.
  - Policy 3-5.3: Conserve and protect creeks, wetlands, vernal pools, wildlife ecosystems, rare plant habitats, and waterways from development.
    - Action 3-5.6: Protect high-quality wetlands and vernal pools from development and other activities.
    - Action 3-5.8: Inventory wetlands, floodplains, marshlands, and adjacent lands that could potentially support climate adaptation (e.g., through flood management, filtration, or other beneficial ecosystem services) and mitigation (e.g., carbon sequestration).
  - Policy 3-5.5: Maintain, restore, and protect the city's waterways.
    - Action 3-5.14: Implement the Citywide Creek Master Plan and promote a "one water" approach that teaches preservation and stewardship of local creeks and water resources.
    - Action 3-5.15: Periodically review the status of local creeks and plan for ongoing restoration, planning, and stewardship, as identified in the Citywide Creek Master Plan.
    - Action 3-5.16: Seek funding to maintain and restore citywide creeks, including for recreational opportunities linked to creeks as well as for flood control.
    - Action 3-5.17: Implement stormwater pollution prevention outreach to increase community awareness of pollution impacts to creeks and preserve waterways.
  - Policy 3-5.6: Restore channelized waterways and avoid creating additional channelized waterways unless no other alternative is available to protect human health, safety, and welfare.
    - Action 3-5.18: Restore and enhance the ecological function of channelized waterways, consistent with the Citywide Creek Master Plan, and avoid channelizing additional segments of the waterways system.
  - Policy 3-5.7: Ensure that construction adjacent to creek channels is sensitive to the natural environment, preserves topography and vegetation along the creek, does not disrupt or pollute the waterway, and provides an adequate setback buffer.
    - *Action 3-5.19: Require new development along channelized waterways to establish an ecological buffer zone between the waterway and development that also provides opportunities for shared use paths and recreation.

- *Action 3-5.20: Require new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the Zoning Code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals.

- Policy 3-5.8: Encourage multiple use of waterways, including:
  - Flood mitigation and storage;
  - Groundwater recharge;
  - Opportunities for restoration and stewardship;
  - Climate adaptation;
  - Wildlife habitats;
  - Passive recreational open space uses;
  - Nature study;
  - Pedestrian and bicycle circulation; and
  - Other compatible outdoor uses.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is riparian habitat or other sensitive natural communities identified in local or regional plans, policies, regulations, or by the CDFW or USFWS, impacts from the proposed project are potentially *significant*.

Impact BIO-2: Impacts to riparian areas, drainages, and sensitive natural communities could occur from potential future development under the proposed General Plan 2050 where natural habitat remains.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including riparian areas, drainages, and sensitive natural communities, on a project-by-project basis. Proposed *Action 3-5.19 requires that new development along channelized waterways establish an ecological buffer zone between the waterway and development and *Action 3-5.20 requires new development to maintain an adequate setback from channelized waterways to recognize the 100-year flood elevation, with setbacks in the zoning code as minimums and larger setbacks encouraged in accordance with Restoration Concept Plans to meet restoration and enhancement goals. Also, as described under impact discussion BIO-1, proposed *Action 3-5.7, *Action 3-5.10, and *Action 3-5.11 require agency consultation, implementation of existing regulations, and preparation of technical reports that identify and mitigate project-specific impacts. Implementation of the proposed General Plan 2050 goals, policies, and actions listed above would serve to ensure that occurrences of sensitive natural communities are identified, avoided, or adequately mitigated. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including sensitive natural communities. Potential future development over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 policies and actions discussed above, which would ensure that potential impacts on sensitive natural communities would be *less than significant*.

BIO-3 Implementation of the proposed project could have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means.

Development and land use activities associated with implementation of the proposed project could result in direct loss or modification to existing wetlands and unvegetated other waters, as well as indirect impacts due to water quality degradation. Affected wetlands could include both the wetland-related sensitive natural community types described under impact discussion BIO-2, as well as areas of open water, degraded and modified streams and channels, unvegetated waters, and isolated seasonal wetlands or freshwater seeps. Indirect impacts to wetlands and other jurisdictional waters include an increase in the potential for sedimentation due to construction grading and ground disturbance, an increase in the potential for erosion due to increased runoff volumes generated by impervious surfaces, and an increase in the potential for water quality degradation due to increased levels in nonpoint pollutants.

Water quality degradation may occur even when wetlands and unvegetated channels are avoided by proposed development if setbacks are inadequate to provide critical vegetation filtration functions. Indirect water quality-related issues are discussed further in Chapter 4.10, *Hydrology and Water Quality*, of this Draft EIR; as discussed under impact discussion HYD-1, water quality impacts were determined to be less than significant. Refer to Chapter 4.10 of this Draft EIR for a list of proposed General Plan 2050 goals, policies, and actions that would serve to preserve water quality of all water resources in the EIR Study Area, including wetlands.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there are state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal) through direct removal, filling, hydrological interruption, or other means, impacts from the proposed project are potentially *significant*.

Impact BIO-3: Potential future development from implementation of the proposed General Plan 2050 could result in direct and indirect impacts to wetland habitat.

Significance with Mitigation: Less than significant. Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wetlands, on a project-by-project basis. The same proposed General Plan 2050 goals, policies, and actions listed under impact discussions BIO-1 and BIO-2 would serve to mitigate potential adverse impacts on wetlands in the EIR Study Area. Many of these proposed General Plan 2050 actions call for identifying and protecting creeks, wetlands and other regulated waters. Site-specific assessments would be required as called for in proposed *Action 3-5.11 for developments proposed on or near sensitive habitats, such as wetlands. This project-specific assessment would serve to identify the presence or absence of any jurisdictional waters and would ensure adequate protection or appropriate compensatory mitigation is provided as part of new development. Proposed Action 3-5.5 and proposed *Action 3-5.10 call for avoidance of wetlands and other sensitive resources during the environmental review process, compliance with applicable regulations and standards, and adequate compensatory mitigation where potential impacts are unavoidable. Where regulated waters

are present, federal and State authorizations and adequate compensatory mitigation would be required where regulated waters would be affected. Potential future development that occurs from implementation of the proposed project would also be required to comply with Santa Rosa City Code Section 20-30.040 related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including wetlands. Potential future development over the buildout horizon of the proposed project would be performed in accordance with the proposed General Plan 2050 policies and actions discussed above, which would ensure that potential impacts on wetlands would be *less than significant*.

BIO-4 Implementation of the proposed project could 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.

Development and land use activities associated with implementation of the proposed project would generally be in urbanized areas with few wildlife corridors or locations where wildlife is already acclimated to human activity. However, the EIR Study Area does contain some habitat areas that could be adversely affected by new development, particularly along creeks and other drainages, or adjacent to open space and undeveloped lands.

Additionally, new buildings associated with the future development under the proposed project would alter existing physical characteristics of the EIR Study Area and could contribute to an increased risk of bird collisions and mortalities. Avian injury and mortality resulting from collisions with buildings, towers, and other human-made structures is a common occurrence in city and suburban settings. Some birds are unable to detect and avoid glass and have difficulty distinguishing between actual objects and their reflected images, particularly when the glass is transparent and views through the structure are possible. Night-time lighting can interfere with movement patterns of some night-migrating birds, causing disorientation or attracting them to the light source. The frequency of bird collisions in any particular area is dependent on numerous factors, including characteristics of building height, fenestration, and exterior treatments of windows and their relationship to other buildings and vegetation in the area; local and migratory avian populations, their movement patterns, and proximity of water, food and other attractants; time of year; prevailing winds; weather conditions; and other variables. The application of bird-safe design standards would reduce the potential for avian injury and mortality from collisions with buildings, towers, and other human-made structures. Common bird-safe design standards include the following design considerations and management strategies: (1) avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds, (2) limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments, (3) use low-reflectivity glass or other glazing treatments for the entirety of the building's glass surface, not just the lower levels, (4) for commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system, (5) exterior lighting should be directed downward and screened to minimize illuminating

the exterior of the building at night, except as needed for safety and security, (6) glass skyways or walkways, freestanding glass walls, and transparent building corners should not be allowed, (7) transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs, and (8) all roof mechanical equipment should be covered by low-profile angled roofing so that obstacles to bird flight are minimized. Implementation of bird-safe design standards would minimize impacts from bird strike.

As discussed under impact discussions BIO-1 and BIO-2, Chapter 3, *Circulation, Open Space, Conservation, and Greenhouse Gas Reduction*, of the proposed General Plan 2050 contains goals, policies, and actions that require local planning and development decisions to consider impacts to biological resources, including wildlife movement and nursery sites. The same proposed General Plan 2050 goals, policies, and actions identified under impact discussions BIO-1 and BIO-2 would serve to minimize impacts wildlife movement and nursery sites in the EIR Study Area.

Because potential future development under the proposed General Plan 2050 has the potential to occur where there is habitat for wildlife movement, impacts from the proposed project are potentially *significant*.

Impact BIO-4: Potential future development in the EIR Study Area could result in impacts on the movement of wildlife and potential for increased risk of bird collisions.

Significance with Mitigation: Less than significant. As described under impact discussions BIO-1, BIO-2, and BIO-3, the proposed General Plan 2050 includes goals, policies, and actions that would mitigate impacts to important wildlife habitats, such as essential habitat for special-status species, occurrences of sensitive natural communities, and regulated wetlands and waters are preserved and protected. Specifically, proposed General Plan 2050 *Action 3-5.7, *Action 3-5.10, *Action 3-5.11, *Action 3-5.19, and *Action 3-5.20 would all mitigate impacts to areas where there is the potential for migratory wildlife to use. These require agency consultation, implementation of existing regulations, the preparation of technical reports that identify and mitigate project-specific impacts, provide ecological buffer zones between waterways and development, and that new development maintain adequate setbacks from channelized waterways. The site-specific biological resource assessments on sites with natural habitat would also be required under proposed *Action 3-5.11, which would determine whether any important wildlife movement corridors are present on undeveloped lands where potential future development is proposed. This project-specific assessment would serve to identify the presence of any sensitive wildlife movement corridors and would ensure sensitive resources are adequately protected or appropriate compensatory mitigation is provided as part of new development. Furthermore, proposed *Action 3-5.13 regarding a bird-safe design ordinance would reduce the risk of bird collisions and ensure that opportunities for wildlife movement are adequately identified and protected. In addition to these proposed General Plan 2050 goals, policies, and actions, potential future development would continue to be reviewed through the City's entitlement process and CEQA, when applicable, to ensure consistency with local, State, and federal regulations and all General Plan policies and actions intended to protect sensitive biological resources, including wildlife corridors and nursery sites. Potential future development over the buildout horizon of the proposed General Plan 2050 would be performed in accordance with the proposed General Plan 2050 policies

and actions discussed above, which would ensure that potential impacts on sensitive natural communities would be *less than significant*.

BIO-5 Implementation of the proposed project would not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.

The City of Santa Rosa General Plan is the primary planning document for the City of Santa Rosa. The proposed revisions to the General Plan goals, policies, and actions are intended to ensure consistency between the General Plan and Zoning Ordinance and provide for an update to the relevant provisions in the current General Plan. Because the General Plan is the overriding planning document for Santa Rosa and because the proposed project involves updating the General Plan and Zoning Ordinance for internal consistency, implementation of the proposed project would not conflict with local policies and ordinances protecting biological resources. As described under impact discussion BIO-2, potential future development that occurs from implementation of the proposed project would be required to comply with Section 20-30.040 of the SRCC related to creek setbacks standards as well as the policies and objectives of the *Santa Rosa Citywide Creek Master Plan*, which contain provisions to protect wetlands, marshlands, and tidal areas within the EIR Study Area. Future development would also be required to comply with the City's Tree Ordinance, related to the protection of regulated trees.

Potential future development within the EIR Study Area would be required to comply with applicable SRCC regulations and the proposed General Plan 2050 goals, policies, and actions would reduce potential impacts on sensitive biological resources as a result of implementation of the proposed project. With adherence to these regulations, no conflicts with local plans and policies are anticipated, and impacts would be considered *less than significant*.

Significance without Mitigation: Less than significant.

BIO-6 Implementation of the proposed project would not conflict with the provisions of an adopted Habitat Conservation Plan; Natural Community Conservation Plan; or other approved local, regional, or State habitat conservation plan.

The EIR Study Area is not in any local, regional, or State HCP areas. Therefore, the proposed General Plan 2050 would not conflict with the conservation strategy in any HCP or Natural Community Conservation Plan. Furthermore, several goals, policies, and actions in the proposed General Plan 2050, listed under impact discussions BIO-1, BIO-2, and BIO-4 along with SRCC regulations, would serve to protect and enhance the sensitive natural communities and special-status species within the EIR Study Area. Implementation of the proposed General Plan 2050 goals, policies, and actions, in conjunction with adherence to State and federal regulations related to the protection of special-status species and sensitive natural communities, including the SRPCS where applicable, would address potential impacts of anticipated future development under the proposed Project. Future development would continue to be reviewed through the City's entitlement process and CEQA to ensure consistency with local, State, and

federal regulations and all General Plan policies and actions intended to protect sensitive biological resources. As part of the permitting project with the USACE, projects affecting federally regulated waters must demonstrate that they would not have an adverse effect on federally listed species or would be required to provide adequate compensatory mitigation where avoidance is infeasible. Projects within the boundaries of the SRPCS, including western and southern Santa Rosa, must comply with the rigorous conditions of the Biological Opinion issued by the USFWS in addressing potential effects on CTS, Burke's goldfields, Sebastopol meadowfoam, and Sonoma sunshine. Therefore, *no impact* would occur.

Significance without Mitigation: No impact.

BIO-7 Implementation of the proposed project in combination with past, present, and reasonably foreseeable projects, would not result in significant cumulative impacts with respect to biological resources.

The impacts of potential future development on biological resources tend to be site-specific, and the overall cumulative effects would be dependent on the degree to which significant vegetation and wildlife resources are protected on a particular site. This includes preservation of well-developed native vegetation (e.g., native grasslands, oak woodlands, and riparian woodland, among others), populations of special-status plant or animal species, and wetland features (e.g., freshwater marsh and seeps, vernal pools and seasonal wetlands, riparian corridors, and drainages). Further, biological resource assessments would be required for future projects proposed on or near sensitive habitats to mitigate project-specific impacts (proposed *Action 3-5.11). These biological resource assessments would serve to ensure that important biological resources are identified, protected, and properly managed and to prevent any significant adverse development-related impacts, including development for the remaining undeveloped lands in the EIR Study Area and surrounding incorporated and unincorporated lands.

To some degree, cumulative development contributes to an incremental reduction in the amount of existing natural wildlife habitat, particularly for birds and larger mammals. Habitat for species intolerant of human disturbance can be lost as development encroaches into previously undeveloped areas, disrupting or eliminating movement corridors and fragmenting the remaining suitable habitat retained within parks, public and private open space, and undeveloped properties. New cumulative development in the region could result in further conversion of existing natural habitats to urban and suburban conditions, limiting the existing habitat values of the surrounding area. This could include further loss of wetlands and sensitive natural communities, reduction in essential habitat for special-status species, removal of mature native trees and other important wildlife habitat features, and obstruction of important wildlife movement corridors. Additional development may also contribute to degradation of the aquatic habitat in the creeks throughout the region, including the EIR Study Area. Grading associated with construction activities generally increases erosion and sedimentation, and urban pollutants from new development would reduce water quality.

However, increased development potential in the EIR Study Area is anticipated to occur primarily in existing urbanized areas. Potential future development that could occur elsewhere in the region, outside of the EIR Study Area, is also anticipated to occur largely in urbanized areas. In the event that potential future development in the region is proposed in an undeveloped area, the project would likely undergo

independent environmental review as required by the jurisdiction in which the project is proposed. Further, the goals, policies, and actions of the proposed General Plan 2050 described under impact discussions BIO-1 through BIO-6 would serve to address any contributions to cumulative impacts on sensitive biological and wetland resources, as discussed above. Therefore, the proposed project would result in a *less-than-significant* cumulative impact to biological resources with implementation of the proposed General Plan 2050 goals, policies and actions and other controls related to sensitive biological resources.

Significance without Mitigation: Less than significant.