4.4 BIOLOGICAL RESOURCES

This chapter describes existing biological resources within the 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 the *San Rafael General Plan 2040 & Downtown Precise Plan Biological and Wetland Resources Background Report* (Biological Background Report) prepared by Environmental Collaborative in January 2020. The Biological Background Report is attached to this Draft EIR as Appendix E, Biological Resources Data.

4.4.1 ENVIRONMENTAL SETTING

4.4.1.1 REGULATORY FRAMEWORK

Federal Regulations

Federal Endangered Species Act

The U.S. Fish and Wildlife Service (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 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 (U.S.). These waters, and their lateral limit, include streams that are tributaries to navigable waters and their adjacent wetlands.[1] The lateral limits of jurisdiction for a non-tidal stream are measured at the line of the ordinary high-water mark[2] or the limit of adjacent wetlands.[3] 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 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 waterbodies 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.[4] 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.

[1] Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).
[2] Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(e).
[3] Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(b).
[4] Code of Federal Regulations, Title 33, Navigation and Navigable Waters, Part 328.3(a).

All USACE permits require water quality certification under Section 401 of the Clean Water Act. In the San Francisco Bay Area, this regulatory program is administered by the San Francisco Bay 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 San Francisco Bay RWQCB. The San Francisco Bay 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. In December 2017, the Department of the Interior (DOI) issued a memorandum reversing the incidental take interpretation of the MBTA. Under the latest determination of the DOI, the take of a migratory bird or its active nest (i.e., with eggs or young) that is incidental to a lawful activity does not violate the MBTA. However, this opinion from the DOI is only the latest interpretation. This legal opinion is contrary to the long-standing interpretation for over 40 years that held the MBTA strictly prohibits the intentional or incidental killing of birds or destruction of their nests when in active use.

State Regulations

California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over State-listed endangered, threatened, and rare plant and animal species under CESA.[5] 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.

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.

[5] California Fish and Game Code Section 2050 *et seq.*

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) of the Fish and Game Code, 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 DOI 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,[6] 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

[6] California Water Code Sections 13000 through 14920.

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:[7]

- **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 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

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

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[8] 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.

Regional Regulations

McAteer-Petris Act

In 1969, the McAteer-Petris Act designated the San Francisco Bay Conservation and Development Commission (BCDC) as the agency responsible for the protection of the San Francisco Bay. The two primary goals of the BCDC are (1) to prevent the unnecessary filling of San Francisco Bay, and (2) to increase public access to and along the Bay shoreline. BCDC fulfills its mission through the implementation of the *San Francisco Bay Plan* (Bay Plan), an enforceable plan that guides the future protection and use of San Francisco Bay and its shoreline. The Bay Plan includes a range of policies on public access, water quality, fill, and project design, and designates shoreline areas that should be reserved for water-related purposes like ports, industry, and public recreation, airports, and wildlife areas.

As a permitting authority along the San Francisco Bay shoreline, BCDC is responsible for granting or denying permits for any proposed fill, extraction of materials, or change in use of any water, land, or structure within 100 feet of the Bay shoreline. Projects in BCDC jurisdiction that involve Bay fill must be consistent with the Bay Plan policies on the safety of fills and shoreline protection.

San Francisco Bay Basin Water Quality Control Plan

The San Francisco Bay RWQCB adopted a Water Quality Control Plan for the San Francisco Bay Basin (the Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Basin Plan, which includes wetlands in and near the EIR Study Area. It is the RWQCB's master water quality control planning document. The most recent amendments were incorporated into the Basin Plan as of May 2017.[9]

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

[9] San Francisco Bay Regional Water Quality Control Board, 2017, *San Francisco Bay Basin Water Quality Control Plan (Basin Plan),* https://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/planningtmdls/basinplan/web/docs/BP_all_chapters.pdf, accessed on March 31, 2020.

Local Regulations

San Rafael General Plan 2020

The City of San Rafael General Plan 2020 goals, policies, and programs that are relevant to biological resources are primarily in the Conservation Element and Air and Water Quality Element. As part of the proposed project, some existing General Plan policies would be amended, substantially changed, or new policies would be added. The Conservation Element and Air and Water Quality Element are being combined. A comprehensive list of policy changes is provided in Appendix B, Proposed General Plan Goals, Policies, and Programs, of this Draft EIR. Applicable goals, policies, and programs are identified and assessed for their effectiveness and potential to result in an adverse physical impact later in this chapter under Section 4.4.3, Impact Discussion.

San Rafael Municipal Code

The San Rafael Municipal Code (SRMC) includes various directives pertaining to biological resources. The SRMC is organized by title, chapter, and section. Most provisions related to biological impacts are included in Title 11, Public Works, Title 14, Zoning, and Title 17, Waters and Waterways, as follows:

- Chapter 11.12, Trees. This chapter places the authority to regulate trees along public streets, sidewalks, and walkways within the city, to the Public Works Department. Tree trimming, planting, and removal must be approved through a permit process by the Public Works Department. This chapter also provides regulations for protection of trees during construction activities.
- Chapter 11.30, Watercourses. This chapter ensures that watercourses within the city maintain a few and unobstructed flow of water, including the removal of debris, natural growth, and other materials. Any person wishing to construct or repair any structure within 15 feet of the bank of a watercourse must first obtain a permit from the Public Works Department, to ensure that the free flow of water is not disrupted.
- Chapter 14.13, Wetland Overlay District. The purpose of the Wetland Overlay District is to preserve and enhance the remaining wetlands within the city of San Rafael and encourage uses that are compatible with their natural functions. This chapter also encourages the restoration of wetland sites, prevent property loss from flooding events, and contribute to improved water quality. All development on or near wetlands must have the USACE make a jurisdictional determination delineating wetland boundary and obtain federal and State permits prior to approval of a use permit.
- Chapter 14.16, Site and Use Regulations. This chapter introduces development standards applicable to several districts, intended to ensure that new uses and development will contribute to and be harmonious with existing development, will reduce hazards to the public, and will be consistent with General Plan policies. Such sites include conservation areas, creeks, and other watercourses. Section 14.16.050, Conservation Areas- Development Potential, dictates that open space conservation areas identified in the General Plan are preserved through development review and that they have no development potential. Section 14.16.080, Creeks and Watercourses. This section establishes setbacks from creeks, drainageways, and the San Rafael Canal.
- Chapter 14.25, Environmental and Design Review Permits. This chapter outlines how the environmental and design review permits implement general plan policies which guide the location,

function, and appearance of development in such a way that protects the natural environment and assures the development is harmonious with existing development and the natural environment. Section 14.25.050, Review Criteria, outlines the criteria by which environmental and design review is conducted, including consistency with plans, building materials, site design, utilities, and landscaping.

- Chapter 17.10, Dumping, Dredging and Construction within Tidal Waterways. The purpose of this chapter is to minimize the disturbance and provide standards and procedures for the filling, excavation, and construction within the tidal waterways. This chapter applies to all portions of San Pablo Bay and San Rafael Bay, tidelands, shorelines, waterways, canals, beaches or salt marshes within the city, which are below an elevation of 7.5 feet mean lower low-water datum and to contiguous land between that elevation line and either a point 100 feet inland or the nearest publicly maintained road, whichever is closer. Fill, excavation, and construction activities must first receive a Tideland Permit through the Department of Public Works, prior to any activities.

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. A detailed description of these existing conditions, including maps, is provided in the Biological Background Report, included in this Draft EIR as Appendix E, Biological Resources Data.

Habitat Types

The EIR Study Area is largely developed, with urban uses occupying most of the valley floors and former marshlands that once bordered the San Francisco Bay. The valley floors are bordered by the remaining undeveloped woodlands, forests, grasslands, scrub and chaparral of the surrounding hillsides and ridges, traversed by bands of riparian woodland along the remaining unchannelized creeks and drainages. Marshlands remain along the shoreline of San Pablo Bay and the lower reaches of San Rafael, Gallinas, and Miller Creeks.

Vegetation cover types within the EIR Study Area based on the Classification and Assessment with Landsat of Visible Ecological Groupings (CALVEG) geographic information system (GIS) mapping data of the United States Department of Agriculture (USDA) Forest Service are listed in Table 4.4-1. A detailed description of each vegetation type is provided in the Biological Background Report and the extent of urbanization and various vegetative cover types in the EIR Study Area is shown on Figure 4.4-1.

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

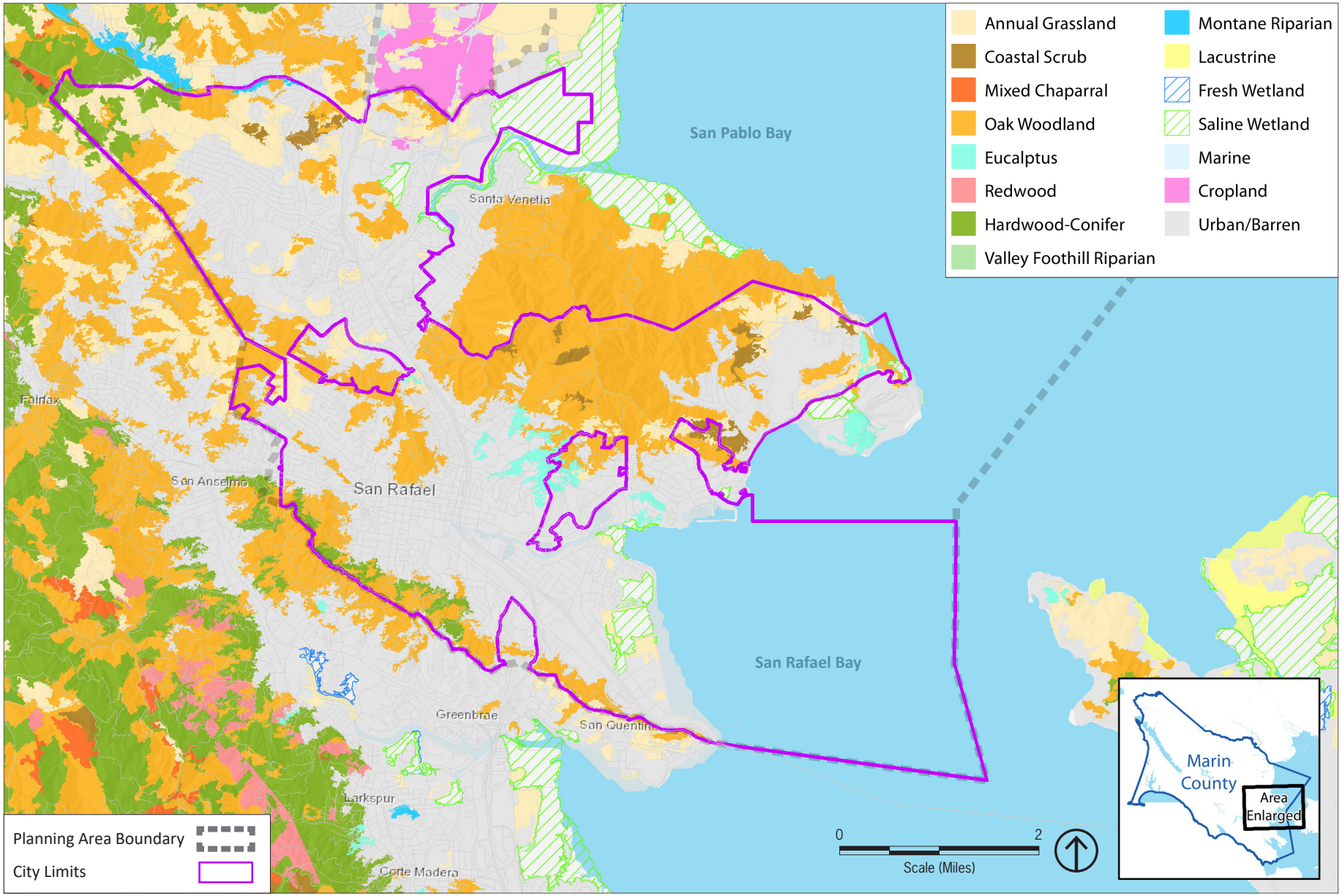
Vegetation Cover	EIR Study Area (Acres)	EIR Study Areas (Percent of Total)
Urban Development and Ornamental Landscaping	*9,779*	*49%*
Urban/Barren	7,548	38%
Eucalyptus	231	1%
Forest and Woodlands	*7,598*	*38%*
Oak woodland	5,302	27%
Hardwood-conifer forest	2,296	12%
Grasslands	*2,773*	*14%*
Annual grassland	2,773	14%
Riparian Woodland and Scrub	*202*	*1%*
Coastal scrub	196	1%
Riparian woodland	107	1%
Freshwater and Brackish Marsh	*5*	*0.2%*
Freshwater marsh	5	0.2%
Coastal Salt Marsh, Mudflats, and Open Water	*1,197.5*	*6%*
Saline marsh	1,197	6%
Lacustrine	0.5	0%
Other Land Types	*273*	*1%*
Mixed chaparral	233	1%
Cropland	40	0.2%
Total	19,928.5	

Sources: CALVEG GIS data, USDA Forest Service, 2019. Environmental Collaborative, January 2020, *San Rafael General Plan 2040 & Downtown Precise Plan Biological and Wetland Resources Background Report.*

Although native vegetation within much of the EIR Study Area has been substantially altered, the presence of large areas of undeveloped lands to the west, the remaining marshlands and open water habitat along the shoreline of the San Pablo Bay and San Rafael Bay, and the freshwater marsh and riparian habitat along unchannelized creeks and drainages, contribute to a relatively diverse assemblage of resident and migrant wildlife species. Each habitat differs in its relative value to specific species and can be characterized by both vegetation and associated animal species that are dependent on that habitat, although some wildlife species may utilize more than one habitat type.

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.



SOURCES: EVEG from USFS showing CALVEG CWHR Type (aggregated); accessed on April 23, 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 8/19/2019.

Figure 4.4-1
Vegetative Cover

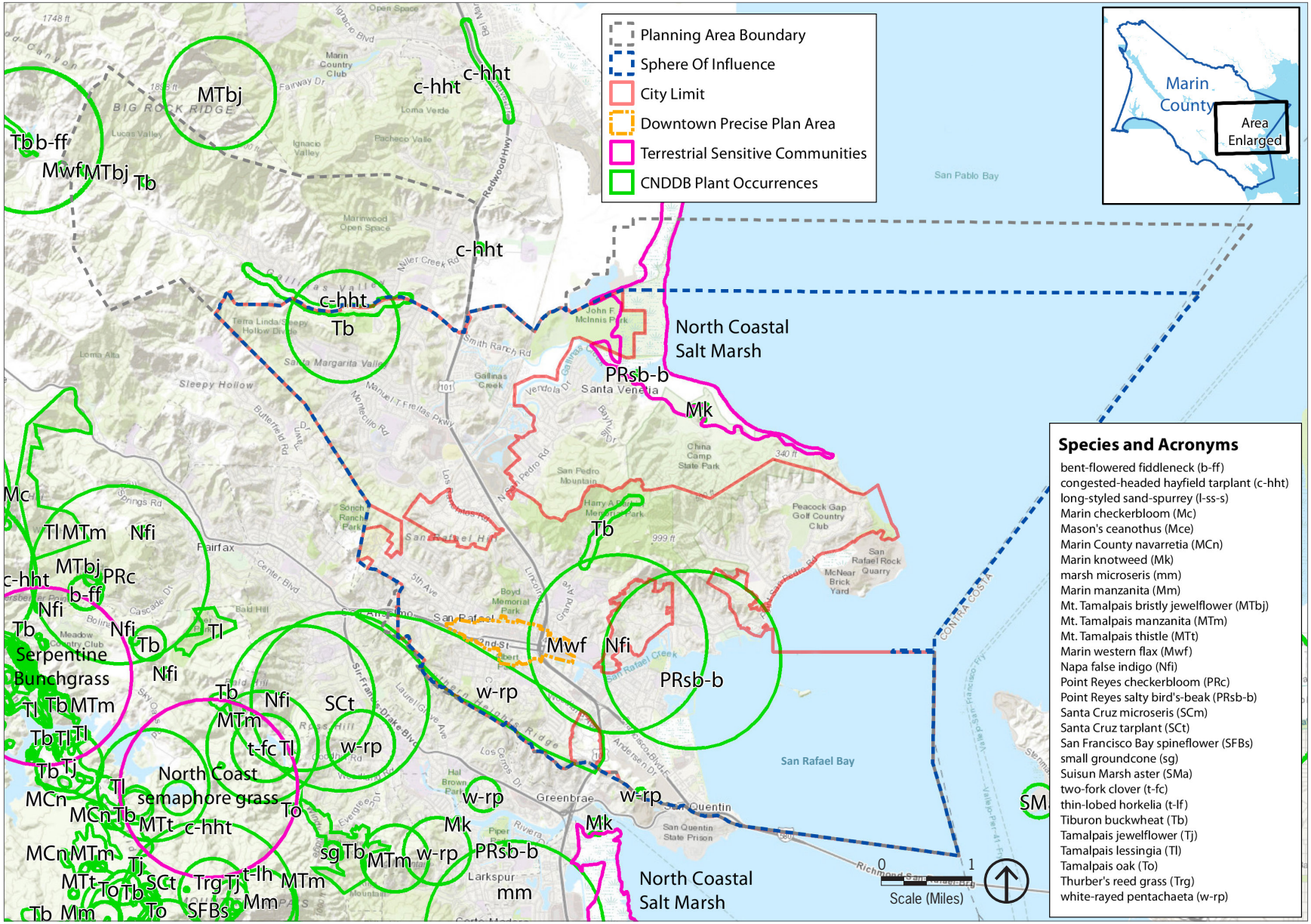
The California Natural Diversity Database (CNDDB) is California's primary inventory on the distribution of special-status species, which is maintained by the Biogeographic Data Branch of the CDFW. The CNDDB inventory provides the most comprehensive statewide information on the location and distribution 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 43 special-status plant species reported within or in the vicinity of the EIR Study Area. Table 4.4-2 includes the typical habitat characteristics, normal flowering season, and potential for occurrence in the EIR Study Area.

The CNDDB records show that nine of these special-status plant species have reported occurrences extend over portions of the EIR Study Area. These include the bent-flowered fiddleneck (*Amsinckia lunaris*), congested-headed hayfield tarplant (*Hemizonia congesta* ssp*. congesta*), Marin knotweed (*Polygonum marinense*), Mt. Tamalpais bristly jewelflower (*Streptanthus glandulosus* ssp*. pulchellus*), Marin western flax (*Hesperolinon congestum*), Napa false indigo (*Amorpha californica* var*. napensis*), Point Reyes salty bird's-beak (*Chloropyron maritimum* ssp*. palustre*), Tiburon buckwheat (*Eriogonum luteolum* var*. caninum*), and white-rayed pentachaeta (*Pentachaeta bellidiflora*). It is assumed that white-rayed pentachaeta is extirpated from the EIR Study Area as a result of development in areas of grassland and woodland habitats that once supported the species and displacement by non-native grasses and other invasive species. The occurrence of Marin knotweed from China Camp is from a much more specific location observed in 2006, and this species is still assumed to be present. Details on the location of most of the other special-status plant species are based on general occurrence records that are decades old, and their presence in the EIR Study Area today is uncertain. See Figure 4.4-2.

Existing development limits the likelihood of continued occurrences of any populations of special-status plant species on the valley floors of the EIR Study Area, with the exception of brackish and saltmarsh associated species that could occur along the shorelines of the San Francisco Bay, such as Point Reyes salty bird's-beak. Many of the special-status plant species occurrences in the protected open space areas and undeveloped lands at the fringe of the EIR Study Area most like remain today, but are vulnerable to changes such as fire, competition with invasive species, and other threats. There remains a possibility that additional populations of one or more species occurs on the remaining undeveloped lands and the remaining coastal marshlands in the EIR Study Area.



SOURCES: California Natural Diversity Database accessed August 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 8/29/2019.

Figure 4.4-2

Special-Status Plant Species 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
Amorpha californica var. *napensis*	Napa false indigo	None	None	1B.2	Openings in broadleafed upland forest, chaparral, cismontane woodland.	April-July	Moderate. CNDDB general occurrence from south San Rafael.
Amsinckia lunaris	Bent-flowered fiddleneck	None	None	1B.2	Coastal bluff scrub, cismontane woodland, valley and foothill grassland.	March-June	Moderate. CNDDB general occurrence west end of Lucas Valley.
Arctostaphylos montana ssp. *montana*	Mt. Tamalpais manzanita	None	None	1B.3	Chaparral, valley and foothill grassland/serpentinite, rocky.	February-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Arctostaphylos virgate	Marin manzanita	None	None	1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest on sandstone, or granitic substrates.	January-March	Low. No known occurrences reported by CNDDB in EIR Study Area.
Calochortus tiburonensis	Tiburon mariposa-lily	Threatened	Threatened	1B.1	Open, rocky slopes in serpentine grassland.	March-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Calamagrostis crassiglumis	Thurber's reed grass	None	None	2B.1	Coastal scrub (mesic); marshes and swamps (freshwater).	May-August	Low. No known occurrences reported by CNDDB in EIR Study Area.
Castilleja affinis ssp. *neglecta*	Tiburon paintbrush	Threatened	Threatened	1B.2	Rocky serpentine sites in grasslands.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Ceanothus masonii	Mason's ceanothus	None	None	1B.2	Chaparral with serpentine affinity.	March-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Chloropyron maritimum ssp. *Palustre*	Point Reyes salty bird's-beak	None	None	1B.2	Marshes and swamps (coastal salt), usually in coastal salt marsh with *Salicornia, Distichlis, Jaumea and Spartina*; 0-10 meters.	June-October	Moderate. CNDDB general occurrence from San Rafael and Santa Venetia shoreline of EIR Study Area.
Chorizanthe cuspidata var. *cuspidate*	San Francisco Bay spineflower	None	None	1B.2	Sandy soil on terraces and slopes in coastal bluff, coastal dunes, coastal scrub, and coastal prairie habitat.	April- July August rarely	Low. No known occurrences reported by CNDDB in EIR Study Area.
Cirsium hydrophilum var. *vaseyi*	Mt. Tamalpais thistle	None	None	1B.2	Serpentine seeps and streams in chaparral and woodland.	May-August	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
Dirca occidentalis	Western leatherwood	None	None	1B.2	Broadleafed upland forest; closed-cone coniferous forest; chaparral; cismontane woodland, North Coast coniferous forest; riparian forest; riparian woodland.	January-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Eriogonum luteolum var. *caninum*	Tiburon buckwheat	None	None	1B.2	Serpentine soils; sandy to gravelly sites.	May-September	Moderate. CNDDB general occurrence from Santa Margarita Valley.
Fissidens pauperculus	Minute pocket moss	None	None	1B.2	Moss growing on damp soil in coniferous forests along the coast; in dry streambeds and stream banks.		Low. No known occurrences reported by CNDDB in EIR Study Area
Fritillaria lanceolate var. *tristulis*	Marin checker lily	None	None	1B.1	Coastal scrub, valley and foothill grassland, and coastal prairie; often on serpentine; various soils reported though usually clay.	February-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Fritillaria liliacea	Fragrant fritillary	None	None	1B.2	Often serpentinite; cismontane woodland, coastal prairie, coastal scrub; valley and foothill grassland.	February-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Gilia millefoliata	Dark-eyed gilia	None	None	1B.2	Coastal dunes.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Helianthella castanea	Diablo helianthella	None	None	1B.2	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, valley and foothill grassland.	March-June	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	Moderate. CNDDB general occurrence from Santa Margarita Valley.
Hesperolinon congestum	Marin western flax	Threatened	Threatened	1B.1	Serpentine barrens and serpentine grassland and chaparral.	April-July	Moderate. CNDDB general occurrence from San Rafael and west end of Lucas Valley.
Holocarpha macradenia	Santa Cruz tarplant	Threatened	Endangered	1B.1	Light, sandy soil or sandy clay, often with non-natives in coastal prairie and grasslands.	June-October	Low. No known occurrences reported by CNDDB in EIR Study Area.
Horkelia tenuiloba	Thin-lobed horkelia	None	None	1B.2	Broadleafed upland forest, chaparral, valley and foothill grassland on sandy soils, mesic openings.	May-July	Low. No known occurrences reported by CNDDB in EIR Study Area.
Kopsiopsis hookeri	Small groundcone	None	None	2B.3	Open woods, shrubby places, generally on *Gaultheria shallon*.	April-August	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
Lessingia micradenia var. *micradenia*	Tamalpais lessingia	None	None	1B.2	Usually on serpentine, in serpentine grassland or chaparral, often on roadsides.	(June rarely) July-October	Low. No known occurrences reported by CNDDB in EIR Study Area.
Microseris paludosa	Marsh microseris	None	None	1B.2	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Navarretia rosulata	Marin County navarretia	None	None	1B.2	Closed-cone coniferous forest and chaparral on serpentinite.	May-July	Low. No known occurrences reported by CNDDB in EIR Study Area.
Pentachaeta bellidiflora	White-rayed pentachaeta	Endangered	Endangered	1B.1	Cismontane woodland, valley and foothill grassland on open, dry rocky slopes and grassy areas, often on serpentinite.	March-May	Moderate. CNDDB general occurrences from south San Rafael.
Plagiobothrys glaber	Hairless popcorn-flower	None	None	1A	Coastal salt marshes, alkaline meadows, and seeps.	March-May	Low. No known occurrences reported by CNDDB in EIR Study Area.
Pleuropogon hooverianus	North Coast semaphore grass	None	None	1B.1	Wet grassy, usually shady areas, sometimes in freshwater marsh, associated with forest environments.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Polypogon marinense	Marin knotweed	None	None	3.1	Coastal salt marshes, brackish water marsh, and riparian wetlands.	May-August	Moderate. CNDDB occurrence reported Santa Venetia shoreline.
Quercus parvula var. *tamalpaisensis*	Tamalpais oak	None	None	1B.3	Lower montane coniferous forest.	March-April	Low. No known occurrences reported by CNDDB in EIR Study Area.
Sidalcea calycosa ssp. *Rhizomata*	Point Reyes checkerbloom	None	None	1B.2	Freshwater marshes near the coast.	April-September	Low. No known occurrences reported by CNDDB in EIR Study Area.
Sidalcea hickmanii ssp. *Viridis*	Marin checkerbloom	None	None	1B.1	Chaparral, cismontane woodland; lower montane coniferous forest.	May-August	Low. No known occurrences reported by CNDDB in EIR Study Area.
Spergularia macrotheca var. *longistyla*	Long-styled sand-spurrey	None	None	1B.2	Meadows and seeps; marshes and swamps.	February-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Stebbinsoseris decipiens	Santa Cruz microseris	None	None	1B.2	Broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland in open areas, sometimes on serpentinite.	April-May	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
Streptanthus batrachopus	Tamalpais jewel-flower	None	None	1B.3	Closed-cone coniferous forest, chaparral, Talus serpentine outcrops.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Streptanthus glandulosus ssp. *Niger*	Tiburon jewel-flower	Endangered	Endangered	1B.1	Shallow, rocky serpentine slopes in grasslands.	May- June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Streptanthus glandulosus ssp. *Pulchellus*	Mount Tamalpais bristly jewel-flower	None	None	1B.2	Serpentine slopes.	May-July (August rarely)	Moderate. CNDDB general occurrence west end of Lucas Valley.
Symphyotrichum lentum	Suisun Marsh aster	None	None	1B.2	Marshes/swamps (brackish and freshwater); most often seen along sloughs with *Phragmites, Scirpus*, blackberry, *Typha, etc.*	May-November	Low. No known occurrences reported by CNDDB in 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 hydrophilum	Saline clover	None	None	1B.1	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools.	April-June	Low. No known occurrences reported by CNDDB in EIR Study Area.
Triquetrella californica	Coastal triquetrella	None	None	1B.2	Grows within 30 miles from the coast in coastal scrub, grasslands, and in open gravels on roadsides, hillsides, rocky slopes.		Low. No known occurrences reported by CNDDB in EIR Study Area.

Notes.
Agencies
USFWS = U.S. Fish and Wildlife Service
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.* California Natural Diversity Database, 2019.

Special-Status Animals

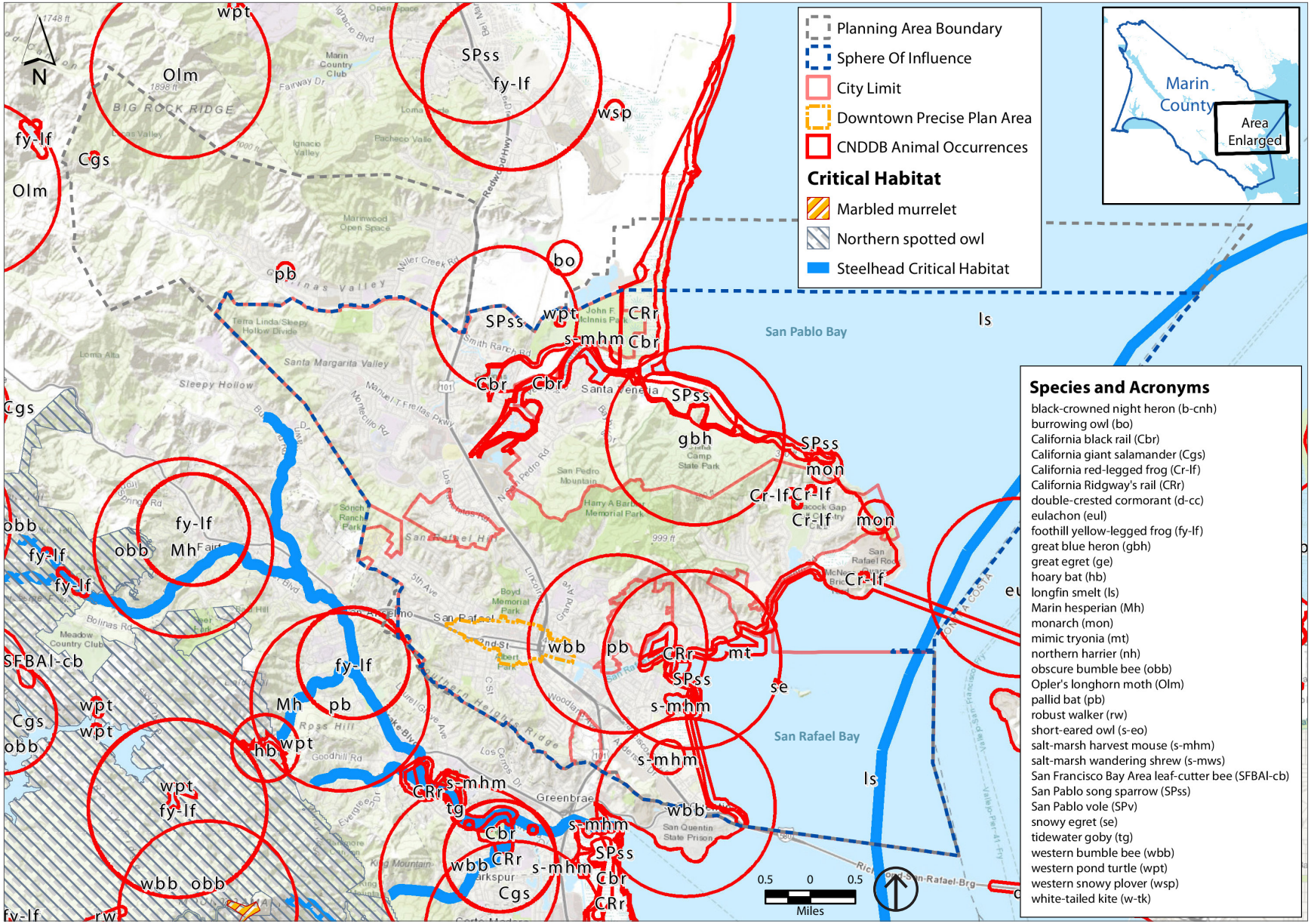
A total of 60 special-status animal species have been recorded, or are considered to potentially occur, in the vicinity of the EIR Study Area, as listed in Table 4.4-3, which includes animal species that may occur within or adjacent to the EIR Study Area, along with their listed status, general habitat characteristics, and their likelihood of occurrence in the EIR Study Area.

A total of 22 of these occurrences of special-status animal species have been reported by the CNDDB within the EIR Study Area. These include bald eagle (*Haliaeetus leucocephalus*), California black rail (*Laterallus jamaicensis*), California giant salamander (*Dicamptodon ensatus*), California red-legged frog (*Rana draytonii*), California Ridgway's rail (*Rallus longirostris obsoletus*), golden eagle (*Aquila chrysaetos),* monarch butterfly (*Danaus plexippus*), mimic tryonia (*Tryonia imitator*), northern harrier (*Circus cyaneus*), northern spotted owl (*Strix occidentalis caurina*), Opler's longhorn moth (*Adela oplerella*), pallid bat (*Antrozous pallidus*), salt marsh harvest mouse (*Reithrodontomys raviventris*), San Pablo song sparrow (*Melospiza melodia samuelis*), western bumble bee (*Bombus occidentalis*), western pond turtle (*Actinemys marmorata*), and white-tailed kite (*Elanus leucurus*).

In addition, roosting colonies of more common black-crowned night heron (*Nycticorax*), double-crested cormorant (*Palacrocorax auritus*), great egret (*Ardea alba*), great blue heron (*Ardea herodias*), and snowy egret (*Egretta thula*), monitored by the CNDDB as sensitive habitat areas, are also reported in the EIR Study Area, as shown on Figure 4.4-3.

Most of the special-status animal species in the EIR Study Area are bird species known or suspected to use suitable habitat in marsh and open waters, together with fish species that utilize the Miller Creek corridor and San Francisco Bay. 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.

No areas designated as Critical Habitat by the USFWS are located within the EIR Study Area. The special-status animal species with a moderate to high potential for occurrence in the EIR Study Area as indicated in Table 4.4-3 are reviewed in more detail in the Biological Background Report and shown on Figure 4.4-3. This includes information on steelhead, California red-legged frog, western pond turtle, northern spotted owl, white-tailed kite, northern harrier, California black rail, California Ridgway's rail, San Pablo song sparrow, and salt marsh harvest mouse.



SOURCES: California Natural Diversity Database and USFWS Critical Habitat database accessed on April 16, 2019; USGS base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 8/29/2019.

Figure 4.4-3
Special-Status Animal Species and Critical Habitat

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						
Oncorhynchus kisutch	Coho salmon (Central California Coast ESUb)	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.	Moderate. Species historically occurred in larger drainages of east Marin County.[10] Species last recorded from San Francisco Bay tributary during early-to-mid 1980s.[11] Corte Madera Creek designated as critical habitat and essential fish habitat for this species.
Oncorhynchus tshawytscha	Chinook salmon (Central Valley Spring-run ESU)	Threatened	Threatened	None	Requires clear, cool streams with pools and riffles, with coarse gravel beds for spawning. Sacramento River and its tributaries.	Moderate. Known to occasionally occur in Corte Madera Creek and other drainages of east Marin County, but fish may be of hatchery origin.[12]
Oncorhynchus mykiss	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.	Moderate. Species historically occurred in larger drainages of east Marin County.[13] Corte Madera Creek and major tributaries are designated as critical habitat.
Acipenser medirostris	Green sturgeon	Threatened	None	Species of Special Concern	Oceanic waters, bays, and estuaries; spawns in deep pools in large, turbulent freshwater river mainstems; known to forage in estuaries and bays from San Francisco Bay to British Columbia.	Moderate. Known from San Pablo Bay and may occur in lower reaches of major drainages.
Eucyclogobius newberryi	Tidewater goby	Endangered	None	Species of Special Concern	Brackish shallow lagoons and lower stream reaches where water is fairly still but not stagnant.	Low. CNDDB record is of an extirpated population recorded in 1961 near the mouth of Corte Madera Creek. Species generally considered extirpated in the region.
Hypomesus transpacificus	Delta smelt	Threatened	None	None	Found in the Sacramento-San Joaquin estuary in saltwater, brackish and freshwater habitats.	Moderate. Known from San Pablo Bay.
Lavinia symmetricus	Tomales roach	None	None	Species of Special Concern	Known only from Walker Creek and Lagunitas Creek watersheds, in a variety of habitat conditions.	Low. No known occurrences reported by CNDDB in EIR Study Area.

[10] Robert A. Leidy, Gordan Becker, Brett N. Harvey. 2007. *Historical Status of Coho Salmon in Streams of the Urbanized San Francisco Estuary*, California. http://www.cemar.org/pdf/coho.pdf.

[11] Robert A. Leidy, Gordan Becker, Brett N. Harvey. 2007. *Historical Status of Coho Salmon in Streams of the Urbanized San Francisco Estuary*, California

[12] Robert A. Leidy, Gordan Becker, Brett N. Harvey. 2005. *Historical distribution and current status of steelhead/rainbow trout (*Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California*. Center for Ecosystem and Restoration, Oakland, California.

[13] Robert A Leidy, Gordan Becker, Brett N. Harvey. 2005. *Historical distribution and current status of steelhead/rainbow trout* (Oncorhynchus mykiss*) in streams of the San Francisco Estuary, California*. Center for Ecosystem and Restoration, Oakland, California.

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
Spirinchus thaleichthys	Longfin smelt	Candidate	Threatened	Species of Special Concern	Open water estuaries and bays, both in saltwater and freshwater areas.	Moderate. Known from San Pablo Bay.
Thaleichthys pacificus	Eulachon (southern DPSb)	Threatened	None	None	Open water estuaries and bays, both in saltwater and freshwater areas.	Moderate. Known from San Pablo Bay.
Amphibians and Reptiles						
Rana boylii	Foothill yellow-legged frog	None	None	Species of Special Concern	Perennial streams and drainages with cobble substrate.	Moderate. CNDDB occurrences to the west and north of Lucas Valley.
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.	High. CNDDB occurrences from China Camp State Park vicinity in 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.	High. CNDDB occurrence from Lucas Valley in 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. CNDDB occurrence from John F McInnis Park in EIR Study Area.
Invertebrates						
Adela oplerella	Opler's longhorn moth	None	None	None	Typically found on serperntine grasslands where larval host plant, *Platystemon californicus*, is present.	Moderate. CNDDB occurrence from Big Rock Ridge vicinity.
Bombus caliginosus	Obscure bumble bee	None	None	None	Coastal areas from Santa Barbara County to Washington.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Bombus occidentalis	Western bumble bee	None	None	None	Found in a variety of habitats. Once common and widespread. Species has declined precipitously, perhaps from disease.	High. CNDDB occurrences from San Rafael vicinity, and likely remains in a variety of habitats.
Callophyrys mossil bayensis	San Bruno elfin butterfly	Endangered	None	None	Colonies are located on steep, north-facing slopes where larval host plant, *Sedum spathulifolium*, is present.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Danaus plexippus	Monarch butterfly	None	None	None	Relatively common species in decline throughout its range. Overwintering colonies found in eucalyptus groves and conifer forests along coastal California. Overwintering colonies are of concern to CDFW.	High. CNDDB occurrences from China Camp State Park vicinity.

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
Plebujus icarioides missionensis	Mission blue butterfly	Endangered	None	None	Found in coastal chaparral, scrub and grassland habitat where larval host plant, *Lupinus spp.,* are present.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Pomatiopsis binneyi	Robust walker	None	None	None	Amphibious snail living in humid habitat along the Coast Range, on marshy ground and periodically flooded soil. Typically associated with perennial seeps and rivulets.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Speyeria zerene myrtleae	Myrtle's silverspot butterfly	Endangered	None	None	Found in coastal prairie, coastal scrub and sand dunes where larval host plant, *Viola adunca*, is present.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Trachusa gummifera	San Francisco Bay Area leaf-cutter bee	None	None	None	A pollen-collecting bee known from grassland habitat and areas with suitable nectaring plants.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Tryonia imitator	Mimic tryonia (California brackishwater snail)	None	None	None	Inhabits coastal lagoons, estuaries and salt marshes from Sonoma County to San Diego County, typically found in permanently submerged areas.	High. CNDDB occurrence from shoreline north of San Rafael Creek in EIR Study Area.
Vespericola marinensis	Marin Hesperian	None	None	None	Found in moist areas in coastal brushfields and chaparral, in riparian and mixed forest habitats.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Birds						
Aythya americana	Redhead	None	None	Species of Special Concern	Large, deep bodies of water; nests in freshwater emergent wetlands.	Moderate. May winter in small numbers on open water habitats along major drainages and San Pablo Bay.
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 in San Pablo Bay from late summer through spring but does not breed in San Francisco Bay Area.
Pelecanus occidentalis californicus	California brown pelican	Endangered	Endangered	Fully Protected Species	Coastal shorelines and bays; rarely found on fresh water.	Moderate. May forage and roost in the open water habitat in San Pablo Bay from late summer through spring but does not breed in San Francisco Bay Area.
Sterna antillarum browni	California least tern (nesting colony)	Endangered	Endangered	Fully Protected Species	Found along the Pacific coast, foraging in shallow estuaries and lagoons, and nesting on open beaches.	Low. Not reported from eastern Marin County by CNDDB.
Charadrius alexandrines nivosus	Western snowy plover	Threatened	None	Species of Special Concern	Found along the Pacific coast and nests in barren to sparsely vegetated beaches and other shoreline areas.	Low. 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
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 Marin 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 Marin 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 Marin County where suitable habitat is present.
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 Marin County where suitable habitat is present.
Brachyramphus marmoratus	Marbled murrelet	Threatened	Endangered	None	Forages at sea and utilizes mature conifer forest for nesting.	Low. Suitable nesting and foraging habitat is absent from EIR Study Area.
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 Marin County where suitable habitat is present.
Haliaeetus leucocephalus	Bald eagle	None	Endangered	None	Ocean shorelines, lake margins, and rivers for both nesting and wintering; nests in large trees with open branches.	High. Known to occasionally forage along lower reaches of major drainages and shoreline of San Pablo Bay during winter, but not likely to remain for long periods or breed in EIR Study Area.
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 Marin 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.	High. Known to forage and nest in EIR Study Area.
Falco peregrinus	American peregrine falcon	None	Endangered	Fully Protected Species	A variety of open habitats including coastlines, mountains, marshes, bay shorelines, and urban areas. Nest on cliffs, bridges, and tall buildings.	Low. May occasionally forage in EIR Study Area, but not likely to breed due to the lack of suitable nesting habitat.
Laterallus jamaicensis coturniculus	California black rail	Threatened	None	Fully Protected Species	Salt marshes bordering larger bays, also found in brackish and freshwater marshes.	High. Reported by CNDDB from John F. McInnis Park in 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
Rallus longirostris obsoletus	Ridgway's rail/California clapper rail	Endangered	Endangered	Fully Protected Species	Tidal salt marshes with sloughs and substantial cordgrass (*Spartina* sp.) cover.	High. Reported by CNDDB from shoreline of San Rafael and John F. McInnis Park in 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 Marin County where suitable habitat is present.
Asio flammeus	Short-eared owl	None	None	Species of Special Concern	Found in open country and grasslands.	Moderate. Observed in Marin 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 Marin 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.	High. CNDDB occurrences from China Camp State Park, Harry A Barber Memorial Park and Southern Heights Ridge in EIR Study Area.
Contopus cooperi	Olive-sided flycatcher	None	None	Species of Special Concern	Coniferous forests with open canopies.	Moderate. Observed in Marin County where suitable habitat is present.
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 Marin 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 Marin 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 of San Pablo Bay. Colonial roosting areas are of concern to CDFW.	High. Observed in Marin County where suitable habitat is present.
Geothlypis trichas sinuosa	San Francisco (salt marsh) common Yellowthroat	None	None	Species of Special Concern	Salt, brackish, and freshwater marshes; and riparian woodlands; nests on or near ground in low vegetation.	Moderate. Observed in Marin County where suitable habitat is present.
Passerculus sandwichensis alaudinus	Bryant's savannah sparrow	None	None	Species of Special Concern	Tidal marshes and adjacent ruderal habitat, moist grasslands in the coastal fog belt, and infrequently, drier grasslands further inland; in South Bay, nests primarily on levee tops overgrown with annual grasses and levee banks dominated by pickleweed.	Moderate. Observed in Marin 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
Ammodramus savannarum	Grasshopper sparrow	None	None	Species of Special Concern	Grasslands with scattered shrubs.	Moderate. Observed in Marin County where suitable habitat is present.
Melospiza melodia samuelis	San Pablo (Samuels) song sparrow	None	None	Species of Special Concern	Tidal salt marshes dominated by pickleweed; nests primarily in pickleweed and marsh gumplant.	High. CNDDB occurrences from shoreline of San Rafael, China Camp State Park, and John F. McInnis Park in EIR Study Area.
Agelaius tricolor	Tricolored blackbird	None	None	Species of Special Concern	Nests in dense vegetation near open water; forages in grasslands and agricultural fields.	Low. No known occurrences reported by CNDDB from EIR Study Area.
Mammals						
Reithrodontomys raviventris	Salt marsh harvest mouse	Endangered	Endangered	Fully Protected Species	Tidal salt marshes of San Francisco Bay and its tributaries. Requires tall, dense pickleweed for cover.	High. CNDDB occurrences from shoreline of San Rafael and John F. McInnis Park in EIR Study Area.
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.	High. Suitable habitat present and general occurrence reported by CNDDB from San Rafael in EIR Study Area.
Corynorhinus townsendii	Townsend's big-eared bat	None	Candidate	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.	Low. 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.	Low. 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.	Low. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.
Taxidea taxus	American badger	None	None	Species of Special Concern	Open habitats with friable soils.	Moderate. Suitable habitat present but no known occurrences reported by CNDDB from EIR Study Area.

Notes:
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;* CDFW, 2019, California Natural Diversity Database (CNDDB).

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,[14] which has been updated periodically since and available online on CDFW's website.

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.

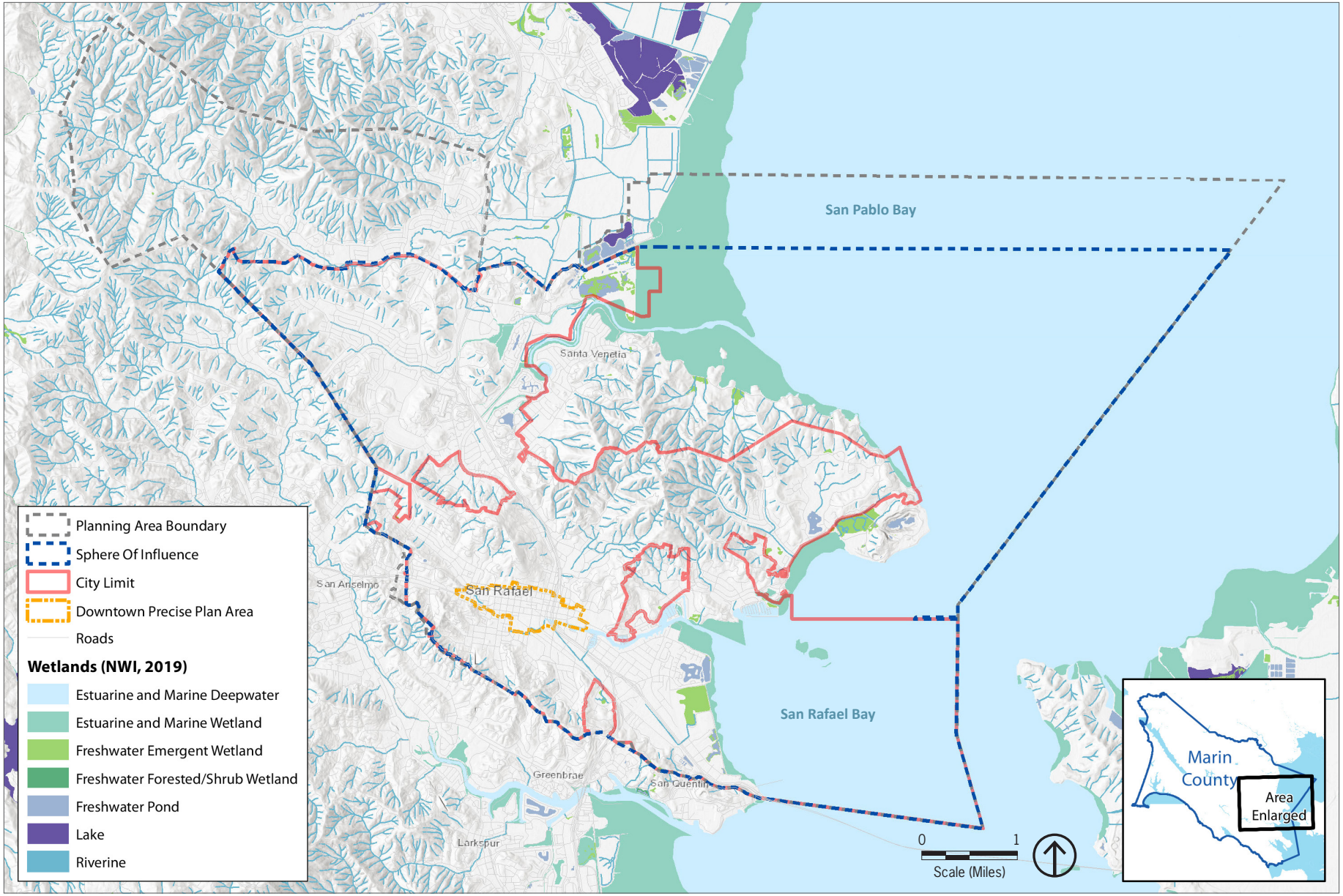
The CNDDB records indicate a large expanse of northern coastal salt marsh, a sensitive natural community type, along the fringe of San Pablo Bay through the northeastern portion of the EIR Study Area. This sensitive natural community type occurs in other locations within the EIR Study Area along the fringe of the San Pablo Bay and San Rafael Bay, including marshlands, such as Tiscornia Marsh near the mouth of San Rafael Creek shown on Figure 4.4-2.

Other sensitive natural community types are known in the EIR Study Area vicinity but have not been mapped in the CNDDB inventory. Based on the *Manual of California Vegetation*[15] 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.

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 CALVEG or CNDDB mapping programs. 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.

[14] 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.

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



SOURCES: U.S. Fish & Wildlife Service National Wetlands Inventory accessed on April 28, 2019; Base map by ESRI and NGS. Map produced by www.digitalmappingsolutions.com on 1/15/2020.

Figure 4.4-4
National Wetland Inventory Map

Wetlands and Jurisdictional Waters

As described in the General Plan and according to 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.[16] 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, numerous features can be assumed to fall under jurisdiction of the USACE and the San Francisco Bay RWQCB pursuant to Sections 401 and 404 of the federal Clean Water Act and as State waters regulated by the San Francisco Bay RWQCB under the Porter-Cologne Water Quality Control Act. Creeks and lakes are also regulated by the CDFW, pursuant to Section 1600 of the CFGC, with jurisdiction extending to the top of bank or the outer dripline of riparian vegetation along these features, whichever is greater.

As shown on Figure 4.4-4, features within the EIR Study Area likely to be considered wetlands or other waters of the U.S. by the USACE include the marshlands along the fringe of the San Pablo Bay and San Rafael Bay, estuarine and marine wetlands, freshwater wetlands, scattered waterbodies (ponds or lakes), riverine habitats along Miller Creek, Gallinas Creek, San Rafael Creek, and the extensive network of tributary drainages in the upper watersheds. Additional jurisdictional waters of the U.S. and wetlands 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. As discussed in Section 4.4.1.1, Regulatory Framework, the USACE, San Francisco Bay RWQCB, and CDFW have authority over these various wetland habitat types.

A detailed wetland delineation and verification by the USACE would be required to determine the extent of jurisdictional wetlands on sites where modifications are proposed. More dense urbanized areas such as the Downtown Precise Plan Area do not contain wetlands identified by the National Wetlands Inventory. Federally regulated waters along the numerous tributary 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 dense willow riparian scrub and forest extend a considerable distance from the channel bank. However, the limits of State waters regulated by CDFW and San Francisco 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.

[16] 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 on December 16, 2020.

4.4.2 STANDARDS OF SIGNIFICANCE

Pursuant to Appendix G, Environmental Checklist Form, of the CEQA Guidelines, implementation of the proposed project would result in significant biological resources impacts 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

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.**

General Plan 2040

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 General Plan 2040 must be evaluated for their potential impact on special-status species and other sensitive biological resources.

As indicated in Table 4.4-2, 43 special-status plant species occur within or in the vicinity of the EIR Study Area, while a total of nine special-status plant species have reported occurrences monitored by the CNDDB that occur within the EIR Study Area. These consist of bent-flowered fiddleneck, congested-headed hayfield tarplant, Marin knotweed, Mt. Tamalpais bristly jewelflower, Marin western flax, Napa false indigo, Point Reyes salty bird's-beak, Tiburon buckwheat, and white-rayed pentachaeta. As shown in Table 4.4-2, Marin western flax and white-rayed pentachaeta are listed as threatened and endangered, respectively, under both the FESA and CESA.

As indicated in Table 4.4-3, a total of 60 special-status animal species have a moderate to high potential to occur within or frequent the EIR Study Area. Of these, a total of 22 have been reported from or are considered to have a high potential to occur in or frequent the EIR Study Area. These consist of bald eagle, California black rail, California giant salamander, California red-legged frog, California Ridgway's rail, golden eagle,-monarch butterfly, mimic tryonia, northern harrier, northern spotted owl, Opler's longhorn moth, pallid bat, salt marsh harvest mouse, San Pablo song sparrow, western bumble bee, western pond turtle, and white-tailed kite, together with nesting colonies of the more common black-crowned night heron, double-crested cormorant, great egret, great blue heron, and the snowy egret considered sensitive resources by CDFW. 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.

As discussed in Chapter 3, Project Description, of this Draft EIR, potential future development would occur on a limited number of vacant parcels and 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 are generally not expected to occur. The potential for occurrence of special-status species in developed areas is generally very 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. Development in locations abutting or in the vicinity of open space lands or water resources, where special-status species are more likely to occur, could potentially cause a significant impact to, or cause the inadvertent loss, of bird nests in active use, conflicting with both the MBTA and CFGC.

The proposed Conservation and Climate Change (C) Element contains goals, policies, and programs that require local planning and development decisions to consider impacts to biological resources, including special-status species, on a project-by-project basis. These updated goals, policies, and programs related to preserving mature trees and other native vegetation, further control and eradicate non-native invasive species, participation in regional habitat restoration efforts, and further conformance with State and federal regulations related to special-status species, wetlands, and other jurisdictional waters. These General Plan goals, policies, and programs are listed below in their respective Impact Discussions. One goal, several policies, and several programs would work to reduce general impacts to sensitive habitats and species in the EIR Study Area, including:

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.10: Hillside Preservation. Encourage preservation of hillsides, ridgelines, and other open areas that serve as habitat and erosion protection as well as visual backdrops to urban areas.
- Policy C-1.12: Native or Sensitive Habitats. Protect habitats that are sensitive, rare, declining, unique, or represent a valuable biological resource. Potential impacts to such habitats should be minimized through compliance with applicable laws and regulations, including biological resource surveys, reduction of noise and light impacts, restricted use of toxic pesticides, pollution and trash control, and similar measures.
  - Program C-1.12A: Non-Native Predators. Support efforts by non-profit conservation groups, state and federal agencies, the Marin Humane Society and other organizations to reduce conflicts between human settlement and native wildlife. This includes protecting the habitat of birds and small mammals from non-native predators and restricting the use of pesticides.
  - Program C-1.12B: Oak Savanna and Oak Woodland Habitat Protection. Require proposed developments with the potential to impact oak savanna/woodland habitat to either avoid, minimize, or compensate for the loss of such habitat. Avoidance is the preferred measure where feasible. If habitat loss is deemed unavoidable, require that direct and indirect impacts be mitigated through habitat restoration, creation, or enhancement. Mitigation requirements should be based on vegetation mass rather than the number of impacted trees.
- Policy C-1.13: Special Status Species. Conserve and protect special status plants and animals, including those listed by State or federal agencies as threatened and/or endangered, those considered to be candidate species for listing by state and federal agencies, and other species that have been assigned special status by the California Native Plant Society and the California Fish and Game Code.
  - Program C-1.13A: List of Species. Maintain current California Natural Diversity Database digital (GIS) maps and data tables listing threatened, endangered, and special status species in the San Rafael Planning Area.
  - Program C-1.13B: Surveys. Require that sites be surveyed for the presence or absence of special status species prior to development approval. Such surveys must occur prior to development-related vegetation removal.
  - Program C-1.13C: Mitigating Impacts on Special Status Species. Require that potential unavoidable impacts to special status species are minimized through design, construction, and project operations. If such measures cannot adequately mitigate impacts, require measures such as on-site set asides, off-site acquisitions (conservation easements, deed restrictions, etc.), and specific restoration efforts that benefit the listed species being impacted.

These proposed goals, policies, and programs would help protect special-status species, and minimize impacts on any species identified as an endangered, threatened, candidate, sensitive, or special-status species and their habitat. However, these provisions don't address the possible presence of bird nests in active use, which are protected under the federal MBTA and CFGC. The Draft programs in the Conservation and Climate Change Element of the San Rafael General Plan 2040 should be revised to better clarify the need to conduct confirmation surveys for special-status species. While Program C-1.13B, Surveys, does call for surveying sites for the presence or absence of special-status species prior to development approval, it doesn't acknowledge that for some locations there may be no potential for presence of special-status species and does not address the potential for active bird nests, which are protected under State and federal laws. Without additional consideration through project-specific

assessments, loss of bird nests in active use may occur, which would conflict with State and federal regulations and be considered 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 and California Fish and Game Code, could occur as a result of potential new development.

Mitigation Measure BIO-1: To ensure sensitive species of any kind are not adversely impacted by implementation of the proposed project, the City shall adopt revisions to General Plan Program C-1.13B and shall adopt a new program or modify an existing program to clarify the need for special-status species surveys and to ensure avoidance of nests of native birds in active use to support Policy C-1.13 (Special Status Species). Revisions to Program C-1.13B are shown in double-underlined text while the new Program is in standard text:

- Modified Program C-1.13B: Surveys for Special-Status Species. Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of special status species prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.
- New or Modified Program: Avoidance of Nesting Birds. Nests of native bird nests in active use should be avoided in compliance with State and federal regulations. For new development sites where nesting birds may be present, vegetation clearing and construction should be initiated outside the bird nesting season (March 1 through August 31) or preconstruction surveys should be conducted by a qualified biologist in advance of any disturbance. If active nests are encountered, appropriate buffer zones should be established based on recommendations by the qualified biologist and remain in place until any young birds have successfully left the nest.

Significance with Mitigation: Less than significant.

Downtown Precise Plan

The Downtown Precise Plan Area is an urbanized area and potential future development in the Downtown Precise Plan Area would occur on a limited number of vacant parcels and 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 are generally not expected to occur. However, there remains a potential for steelhead and other special-status aquatic species to disperse along San Rafael Creek and tributary drainages through the Downtown Precise Plan Area, including San Rafael/Mahon Creek and Irwin Creek in the southeast portion of the Downtown Precise Plan Area. There remains a possibility that bird species may nest along these drainages or in locations with mature trees and other established vegetation, and new development could result in the inadvertent loss or abandonment of nests when in active use, which would be a violation of the MBTA and CFGC.

The proposed Downtown Precise Plan has no specific policies, and the Downtown Code has no specific regulations to reduce impacts to biological resources; therefore, the impacts and mitigation described for the proposed General Plan 2040 would also apply in the Downtown Precise Plan Area. Potential future

development in the Downtown Precise Plan Area are subject to the goals, policies, and programs that would be adopted under the proposed General Plan 2040, as listed above. These proposed goals, policies, and programs would help protect special-status species, and minimize impacts on any species identified as an endangered, threatened, candidate, sensitive, or special-status species that occur in the Downtown Precise Plan Area. Accordingly, like the proposed General Plan 2040, implementation of the Downtown Precise Plan could result in significant impacts related to special-status species and the revised General Plan programs resulting from implementation of Mitigation Measure BIO-1 would reduce impacts to a *less-than-significant* level.

Significance with Mitigation: 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.**

General Plan 2040

Impacts to riparian habitats and other sensitive natural communities may occur from both direct and indirect sources from implementation of the proposed General Plan 2040. Direct impacts occur as a result of converting natural habitat to development, including construction of new structures, creating impervious surfaces for roadways and parking, and culverting of natural drainages. Direct impacts may also be temporary in nature if they disturb a habitat that is subsequently restored after construction. An indirect impact is a physical change in the environment, which is not immediately related to, but could be caused by, implementation of the proposed General Plan 2040. For example, if future development under the proposed General Plan 2040 results in a collective reduction in habitat, the values and functions of that remaining habitat would be reduced. Changes in hydrology and water quality, 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 areas of northern coastal salt marsh along the fringe of the San Pablo Bay through the northeastern portion of the EIR Study Area. These marshlands are identified as wetlands under the National Wetlands Inventory, which is discussed further under Impact Discussion BIO-3. Other sensitive natural community types in the EIR Study Area, not mapped in the CNDDB 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, freshwater marsh, freshwater seeps and springs, and native grasslands. 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 CALVEG or CNDDB mapping programs.

As discussed in Chapter 3, Project Description, of this Draft EIR, potential future development that results from implementation of the proposed project would occur on a limited number of vacant parcels and in the form of infill/intensification on sites either already developed and/or underutilized, and/or in close proximity to existing development. Although these areas generally do not appear to contain large amounts of sensitive habitat, there remains a potential for presence of sensitive natural communities in some locations. Additionally, potential future development that occurs adjacent to open space areas or along drainages and shoreline areas could have a significant impact on sensitive natural communities if present on a particular site. Further detailed investigation is typically necessary to determine whether any sensitive natural communities are present on undeveloped sites with natural habitat.

As discussed in Impact Discussion BIO-1, the Conservation and Climate Change (C) Element contains goals, policies, and programs 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. These General Plan goals, policies, and programs serve to minimize impacts on riparian and other sensitive natural communities in the EIR Study Area:

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.6: Creek Protection. Protect and improve creeks as an important part of San Rafael's identity, natural environment, and green infrastructure. Except for specific access points approved per Policy C-1.7, development free setbacks shall be required along perennial and intermittent creeks to help maintain their function and habitat value. Appropriate erosion control and habitat restoration measures are encouraged within the setbacks, and roadway crossings are permitted.
  - Program C-1.6A: Creek and Drainageway Setbacks. Maintain the following setback requirements in the Municipal Code:

    A minimum 25-foot development-free setback shall be maintained from the top of creek banks for all new development (including but not limited to paving and structures), except for Miller Creek and its tributaries, where a minimum 50-foot setback shall be maintained. Setbacks up to 100 feet may be required on lots in development projects that are more than two acres in size where development review determines that a wider setback is needed to maintain habitat values, and in areas where high-quality riparian habitat exists. The City may waive the setback requirement for minor encroachments if it can be demonstrated that the proposed setback adequately protects the functions of the creek to the maximum extent feasible and the results are acceptable to appropriate regulatory agencies. Drainageway Setbacks: Drainageway setbacks shall be established through individual development review, taking into account existing habitat function and values.

  - Program C-1.6B: Municipal Code Compliance. Ensure that the San Rafael Municipal Code is consistent with local, state, and federal regulatory agency requirements for erosion control and natural resource management and is amended as needed when these regulations change. Local public works activities shall comply with the Municipal Code.

- Policy C-1.9: Enhancement of Creeks and Drainageways. Conserve or improve the habitat value and hydrologic function of creeks and drainageways so they may serve as wildlife corridors and green infrastructure to improve stormwater management, reduce flooding, and sequester carbon. Require

creek enhancement and associated riparian habitat restoration/ creation for projects adjacent to creeks to reduce erosion, maintain storm flows, improve water quality, and improve habitat value where feasible.

  - Program C-1.9A: Watercourse Protection Regulations. Maintain watercourse protection regulations in the San Rafael Municipal Code. These regulations should be periodically revisited to ensure that they adequately protect creeks and drainageways. Consider specific measures or guidelines to mitigate the destruction or damage of riparian habitat from roads, development, and other encroachments.

- Policy C-1.12: Native or Sensitive Habitats. Protect habitats that are sensitive, rare, declining, unique, or represent a valuable biological resource. Potential impacts to such habitats should be minimized through compliance with applicable laws and regulations, including biological resource surveys, reduction of noise and light impacts, restricted use of toxic pesticides, pollution and trash control, and similar measures.
  - Program C-1.12B: Oak Savanna and Oak Woodland Habitat Protection. Require proposed developments with the potential to impact oak savanna/woodland habitat to either avoid, minimize, or compensate for the loss of oak trees. Avoidance is the preferred measure where feasible. If the loss of oak trees is deemed unavoidable, require that direct and indirect impacts be mitigated through habitat restoration, creation, or enhancement.
- Policy C-1.13: Special Status Species. Conserve and protect special status plants and animals, including those listed by State or federal agencies as threatened and/or endangered, those considered to be candidate species for listing by state and federal agencies, and other species that have been assigned special status by the California Native Plant Society and the California Fish and Game Code.
  - Program C-1.13D: Steelhead Habitat. Support efforts to restore, preserve or enhance Central California Coast Steelhead habitat in Miller Creek and other creeks.

In addition to these policies, potential future development that occurs from implementation of the proposed General Plan 2040 would be required to comply with SRMC Chapter 11.30, Watercourses, which requires permits from the Public Works Department for development within 15 feet of a bank of a watercourse, regardless if the watercourse is designated as significant or not.

Although potential future development is anticipated to generally occur in already urbanized areas of the EIR Study Area, there is a possibility that development could be proposed in locations that may contain riparian habitat or other sensitive natural community. However, future development proposals requiring discretionary review in locations that may contain sensitive habitat would typically undergo a project-level environmental review to determine presence or absence. As discussed under Impact Discussion BIO-1, site-specific assessments would be required for areas that may support special-status species under Program C-1.13B: Surveys, but does not address confirmation on presence or absence of riparian habitat or other sensitive natural community. Policy C-1.12: Native or Sensitive Habitats calls for protection of sensitive habitats but does specifically require surveys to confirm presence or absence on a particular site proposed for development. A site-specific biological resource assessment would determine whether any sensitive natural communities are present on undeveloped sites and would ensure sensitive resources are adequately protected or appropriate compensatory mitigation is provided as part of new development. Without the preparation of biological resource assessments to determine whether sensitive habitats are

present, impacts could possibly occur in locations where riparian habitat and other sensitive natural community types occur in the EIR Study Area, which is considered *potentially significant*.

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

Mitigation Measure BIO-2: To ensure sensitive riparian areas, drainages, and sensitive natural communities are not impacted through implementation of the proposed project, the City shall adopt the following General Plan Program or amend other programs to support Policy C-1.12 (Native or Sensitive Habitats) to ensure that sensitive natural communities are identified and addressed as part of future development review:

- New or Modified Program: Surveys for Sensitive Natural Communities. Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of sensitive natural communities prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.

Significance with Mitigation: Less than significant.

Downtown Precise Plan

Approximately half of the growth anticipated through 2040 would occur in the Downtown Precise Plan Area. The Downtown Precise Plan Area is largely urbanized with remaining natural areas limited to riparian and marshland vegetation occurring along the San Rafael Canal, San Rafael/Mahon Creek, and Irwin Creek. Proposed development adjacent to these drainages could adversely affect remaining areas of riparian and marshland unless identified and adequately protected.

The proposed Downtown Precise Plan has no specific policies, and the Downtown Code has no specific regulations to reduce impacts to biological resources; therefore, the impacts and mitigation described for the proposed General Plan 2040 would also apply in the Downtown Precise Plan Area. Potential future development in the Downtown Precise Plan Area is subject to the goals, policies, and programs that would be adopted under the proposed General Plan 2040, as listed above. Furthermore, the proposed General Plan 2040 includes a program (C-1.9D) to "Pursue opportunities for creek restoration and beautification along San Rafael, Mahon, and Irwin Creeks, building on past efforts supporting biological and ecological restoration, education, and water quality improvements along these waterways." These proposed goals, policies, and programs would help protect riparian areas, drainages, and sensitive natural communities, and minimize impacts to these areas in the Downtown Precise Plan Area. Accordingly, like the proposed General Plan 2040, implementation of the Downtown Precise Plan could result in significant impacts related to riparian areas, drainages, and sensitive natural communities and implementation of Mitigation Measure BIO-2 would be required to reduce impacts to a *less-than-significant* level.

Significance with Mitigation: 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.**

General Plan 2040

Development and land use activities associated with implementation of the proposed General Plan 2040 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 jurisdictional other 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 non-point 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. However, potential future development would be required to comply with SRMC Chapter 17.10, Dumping, Dredging, and Construction within Tidal Waterways, which requires a Tideland Permit through the Department of Public Works, prior to any construction activities. Indirect water quality-related issues are discussed further in Chapter 4.10, Hydrology and Water Quality, of this Draft EIR, and as discussed in Impact Discussion HYDRO-1, water quality impacts were determined to be *less than significant*. Refer to Chapter 4.10, Hydrology and Water Quality, for a list of goals, policies, and programs that would preserve water quality of all water resources in the EIR Study Area, including wetlands.

As described in Impact Discussion BIO-1, the Conservation and Climate Change (C) Element contains goals, policies, and programs that require local planning and development decisions to consider impacts to biological resources, including wetlands, on a project-by-project basis. These General Plan goals, policies, and programs serve to minimize impacts on wetlands in the EIR Study Area:

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.1: Wetlands Preservation. Require appropriate public and private wetlands preservation, restoration and/or rehabilitation through the regulatory process. Support and promote acquisition of fee title and/or easements from willing property owners.
  - Program C-1.1A: Wetlands Overlay District. Continue to implement wetlands policy through a Wetlands Overlay Zoning District that is based on wetland delineations consistent with US Army Corps of Engineers criteria.
- Policy C-1.3: Wetland Protection and Mitigation. In order to protect and preserve valued wetlands, loss of wetlands due to filling shall be avoided, unless it is not possible or practical. Compensatory

mitigation for the loss of wetlands shall be required in the event that preservation is not possible or practical due to conditions such as the location, configuration, and size of the wetland.

- Program C-1.3A: Compensatory Mitigation Requirements. For permanently impacted wetlands, lost wetland area shall be replaced on-site and in-kind at a minimum ratio of 2:1 (e.g., 2 acres for each acre lost). If on-site mitigation is not possible or practical, off-site mitigation shall be required, preferably in the same drainage basin or a nearby Marin watershed if the same basin is not available, at a minimum replacement ratio of 3:1. Temporarily impacted wetlands may be restored and revegetated to pre-project conditions.
- Program C-1.3B: Conditions for Mitigation Waivers. The City may waive the compensatory mitigation requirement on a case by case basis for wetlands restoration projects and for fill of wetlands that are less than 0.1-acre in size, provided that all of the following conditions are met: (1) the wetland is isolated (e.g., it is not within, part of, or directly connected or hydrologically linked by natural flow to a creek, drainageway, wetland, or submerged tidelands); (2) it is demonstrated by an independent wetland expert that preservation would not result in a functioning, biological resource; (3) the City has determined that filling would result in a more appropriate and desirable site plan for the project; and (4) the City verifies that applicants have received all required permits and complied with all other mitigation requirements from resource agencies with wetland oversight.
- Program C-1.3C: Revision of Mitigation and Waiver Requirements. Consider revisions to mitigation requirements and waiver conditions that reflect best practices, sea level rise adaptation needs, and consistency with the requirements used by state and federal agencies and other Bay Area jurisdictions.

- Policy C-1.5: Wetland Setbacks. Maintain a minimum 50-foot development-free setback from wetlands, including, but not limited to, paving or structures. Setbacks of greater than 50 feet may be required on lots of two or more acres as determined through development review. The City may waive this requirement for minor encroachments if it can be demonstrated that the proposed setback adequately protects the functions of the wetland to the maximum extent feasible and will not cause cumulative impacts on functioning wetlands.

As described in Impact Discussions BIO-1 and BIO-2, site-specific assessments would be required for developments proposed on or near sensitive habitats, such as wetlands. The assessment would be necessary to determine the extent of any jurisdictional waters on undeveloped lands with potentially sensitive habitat where development is proposed. In addition to the stated goals, policies, and programs listed in Impact Discussion BIO-3, potential future development must comply with SRMC Chapter 14.13, Wetland Overlay District, which requires a USACE wetland delineation and federal and State permits prior to approval of a use permit where regulated waters would be affected. This project-specific assessment would serve to identify the presence or absence of any jurisdictional waters and would ensure sensitive resources are adequately protected or appropriate compensatory mitigation is provided as part of new development. However, there may be regulated waters on undeveloped properties outside of mapped Wetland Overlay District parcels that could be affected by future development, including wetlands and riparian habitat along streams and channels. Without the preparation of project-specific assessments for future projects on or near potential wetlands outside the Wetland Overlay District parcels, impacts in the EIR Study Area are considered *potentially significant* and mitigation is required.

Impact BIO-3: Potential future development could result in direct and indirect impacts to wetland habitat.

Mitigation Measure BIO-3: To ensure that sensitive wetland habitats are not impacted directly or indirectly through implementation of the proposed project, the City shall adopt the following General Plan Program or amend other programs to support Policy C-1.1 (Wetlands Protection) to ensure that jurisdictional waters are identified and addressed as part of future development review:

- New Program: Surveys for Regulated Waters. Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the presence or absence of regulated waters prior to development approval. Such surveys should be conducted by a qualified wetland specialist and occur prior to development-related vegetation removal or other habitat modifications.

Significance with Mitigation: Less than significant.

Downtown Precise Plan

Wetlands and regulated waters within the Downtown Precise Plan Area include the San Rafael Canal, San Rafael/Mahon Creek, and Irwin Creek. Potential future development activities in the Downtown Precise Plan Area could result in direct loss or modification to these features, as well as indirect impacts due to water quality degradation unless adequate avoidance and controls are implemented.

The proposed Downtown Precise Plan has no specific policies, but does describe the potential for an urban wetland in the Transit Village sub-area. An urban wetland would help alleviate local flooding during the rainy season and to combat sea-level rise in the future, as well as restore natural habitat near the junction of Irwin and Mahon Creeks. An urban wetland project would require parcel acquisition along San Rafael Creek. An urban wetland could be designed to widen the connection of Irwin Creek and San Rafael Creek and create a natural downtown amenity. The Downtown Code has no specific regulations to reduce impacts to biological resources; therefore, the impacts and mitigation described for the proposed General Plan 2040 would also apply in the Downtown Precise Plan Area. Potential future development in the Downtown Precise Plan Area are subject to the goals, policies, and programs that would be adopted under the proposed General Plan 2040, as listed above. These proposed goals, policies, and programs would help protect wetlands, and minimize impacts these areas in the Downtown Precise Plan Area. Accordingly, like the proposed General Plan 2040, implementation of the Downtown Precise Plan could result in significant impacts related to wetlands and implementation of Mitigation Measure BIO-3 would be required to reduce impacts to a *less-than-significant* level.

Significance with Mitigation: 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.

General Plan 2040

Development and land use activities associated with implementation of the proposed General Plan 2040 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.

As discussed in Impact Discussion BIO-1, the proposed General Plan 2040 includes a goal, policy, and program that would ensure that existing wildlife corridors are preserved and protected. These include:

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.11: Wildlife Corridors. Preserve and protect areas that function as wildlife corridors, particularly those areas that provide natural connections permitting wildlife movement between larger natural areas.
  - Program C-1.11A: Mapping of Wildlife Corridors. Support mapping of wildlife corridors in the Planning Area. Use this data to determine where conservation easements may be appropriate in the event properties within these corridors are subdivided, or when other opportunities arise for securing such easements.

Creeks and shorelines serve as important movement corridors through the EIR Study Area, and the numerous goals, policies and programs in General Plan 2040 would serve to protect and enhance these features. Site-specific biological resource assessments on sites with remaining natural habitat would also be required under Mitigation Measure BIO-1, 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 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. Without the preparation of project-specific assessments for future projects on or near sensitive habitats, impacts in the EIR Study Area are considered *potentially significant* and mitigation is required.

Potential future development could result in the potential for bird collisions as a result of new buildings and other structures. 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.

New buildings associated with the future development under General Plan 2040 would alter existing physical characteristics of the EIR Study Area and could contribute to an increased risk of bird collisions and mortalities. For taller buildings and structures that extend above the existing urban fabric and height of vegetative cover, this could be a significant impact unless appropriate bird-safe design measures were incorporated into the building design. Bird-safe design measures can include the following design considerations and best management practice strategies:

- Avoid the use of highly reflective glass as an exterior treatment, which appears to reproduce natural habitat and can be attractive to some birds,
- Limit reflectivity and prevent exterior glass from attracting birds in building plans by utilizing low-reflectivity glass and providing other non-attractive surface treatments,
- Use low-reflectivity glass or other glazing treatments for the entirety of the building's glass surface, not just the lower levels,
- For commercial buildings, interior light "pollution" should be reduced during evening hours through the use of a lighting control system,
- 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,
- Glass skyways or walkways, freestanding glass walls, and transparent building corners should not be allowed,
- Transparent glass should not be allowed at the rooflines of buildings, including in conjunction with green roofs, and
- All roof mechanical equipment should be covered by low-profile angled roofing so that obstacles to bird flight are minimized.

Mitigation Measure BIO-4 has been recommended to ensure bird-safe design is considered for new buildings/structures and to reduce the risk of bird collisions. Implementation of the practices developed as part of General Plan 2040 and Mitigation Measure BIO-4 regarding the risk of bird collisions would ensure that opportunities for wildlife movement are adequately identified and protected, and potential impacts would be reduced to *less-than-significant* levels.

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.

> Mitigation Measure BIO-4: To ensure that potential future development under implementation of the proposed project does not result in impacts on the movement of wildlife, the City shall adopt the following General Plan programs or amend other programs to support Policy C-1.11 (Wildlife Corridors) so that important movement corridors and the potential for increased risk of bird collisions are identified and addressed as part of future development review:
>
> - New or Modified Program: Surveys for Wildlife Movement Corridors. Require that sites with suitable natural habitat, including creek corridors through urbanized areas, be surveyed for the

presence or absence of important wildlife corridors prior to development approval. Such surveys should be conducted by a qualified biologist and occur prior to development-related vegetation removal or other habitat modifications.

- New or Modified Program: Consider Risk of Bird Collision. Require that taller structures be designed to minimize the potential risk of bird collisions using input from the latest bird-safe design guidelines and best management practice strategies to reduce bird strikes.
- New Program: Bird Safe Design Ordinance. 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.

Significance with Mitigation: Less than significant.

Downtown Precise Plan

As determined in Impact Discussions BIO-1 through BIO-3, the Downtown Precise Plan would absorb roughly half of the growth anticipated in the EIR Study Area by 2040. However, the Downtown Precise Plan is considered largely built out with little opportunities for terrestrial wildlife movement and dispersal. There remains a potential for fish, birds, and some wildlife to move along the San Rafael Canal, San Rafael Creek, and other drainages through the Downtown Precise Plan Area. The proposed Downtown Precise Plan has no specific policies, and the Downtown Code has no specific regulations to reduce impacts to biological resources, the potential future development in the Downtown Precise Plan Area is subject to the goals, policies, and programs that would be adopted under the proposed General Plan 2040, as listed above, that are aimed at protecting biological resources. Controls implemented under Mitigation Measure BIO-4 to reduce the risk of bird collisions for any larger new buildings in the Downtown Precise Plan area, would address the potential adverse impacts otherwise posed by new structures. As such, implementation of the Downtown Precise Plan would not interfere substantially with the movement of native resident or migratory fish or wildlife species and the impact is *less than significant.*

Significance without Mitigation: Less than significant.

BIO-5	**Implementation of the proposed project could conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance.**

General Plan 2040

The City of San Rafael General Plan is the primary planning document for the City of San Rafael. The proposed revisions to policies and programs under the Conservation and Climate Change (C) Element are intended to ensure consistency between the General Plan and Zoning Ordinance. Because the General Plan is the overriding planning document for San Rafael 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 in Impact Discussion BIO-3, potential future development under implementation of the proposed project

would be required to comply with Chapter 11.30, Watercourses, to protect the flow of water in watercourses within the EIR Study Area. Additionally, potential future development would be required to comply with Chapter 14.13, Wetland Overlay District, and Chapter 17.10, Dumping, Dredging and Construction within Tidal Waterways, which contain provisions to protect wetlands, marshlands, and tidal areas within the EIR Study Area. Furthermore, SRMC Chapter 11.12, Trees, has additional requirements that provide for the protection and preservation of trees along public streets, sidewalks, and walkways within the city. This chapter requires a permit be approved by the Public Works Department for the trimming, planting, and removal of street trees, in addition to regulation for the protection of trees during construction activities.

The proposed Conservation and Climate Change (C) Element and the Community Design and Preservation (CDP) Element contains goals, policies, and programs that require local planning and development decisions to consider impacts to various biological resources, including trees. The following General Plan goal, policies, and programs would serve to minimize potential adverse impacts to biological resources such as trees in the EIR Study Area:

Goal C-1: Supporting Our Natural Communities. Protect, restore, and enhance San Rafael's environment and natural communities.

- Policy C-1.16: Urban Forestry. Protect, maintain, and expand San Rafael's tree canopy. Trees create shade, reduce energy costs, absorb runoff, support wildlife, create natural beauty, and absorb carbon, making them an essential and valued part of the city's landscape and strategy to address global climate change. Tree planting and preservation should be coordinated with programs to reduce fire hazards and ensure public safety, resulting in a community that is both green and fire-safe.
  - Program C-1.16A: Increasing the Tree Canopy. Implement measures to increase the tree canopy, as outlined in the City's Climate Change Action Plan. These measures include:
    - Tree planting on city-owned land
    - Reviewing parking lot landscaping standards to maximize tree cover
    - Minimizing tree removal
    - Controlling invasive species that threaten the health of the urban forest
    - Integrating trees and natural features into the design of development projects
    - Encouraging trees on private property
    - Increasing the diversity of trees to increase habitat value and resilience.
  - Program C-1.16B: Tree City USA. Maintain San Rafael's status as a "Tree City USA" community by following best practices in urban forestry management and regularly applying for recertification.
  - Program C-1.16C: Tree Preservation. Consider ordinances and standards that limit the removal of trees of a certain size and require replacement when trees must be removed.
- Policy C-1.17: Tree Management. Encourage the preservation of healthy, mature trees when development and/or construction is proposed. Site plans should indicate the location of trees and include measures to protect them where feasible.

Goal CDP-3: Attractive Streets and Public Spaces. Create streets, public spaces, and civic buildings that add value to private property, promote environmental sustainability, and contribute to San Rafael's visual quality and identity.

- Policy CDP-3.5: Street Trees. Encourage the planting and maintenance of street trees to reduce urban heat island effects, sequester carbon, improve air quality, absorb runoff and wind, define neighborhoods, and improve the appearance and character of City streets.
  - Program CDP-3.5A: Street Tree Master Plan. Develop a comprehensive citywide Street Tree Master Plan. The Plan should address street tree planting, species selection, maintenance, replacement, diversification, wood utilization, and tree waste recycling and should ensure that trees are appropriate for the planting areas where they are located.
  - Program CDP-3.5C: Street Trees for New Development. Require street trees in new developments and major property upgrades.
  - Program CDP-3.5D: Street Tree Maintenance. Support the long-term health of San Rafael's urban forest through timely, quality street tree maintenance. Seek diversified funding sources for maintenance and replacement.
- Policy CDP-3.6: Tree Replacement. Discourage the removal of healthy trees. Support replacement when trees are removed due to health, safety, or maintenance cost reasons.
  - Program CDP-3.6A: Mitigation for Tree Removal. Continue to implement mitigation requirements for tree removal in new development. When necessary, this could include planting of trees in locations other than the project site. Tree replacement value should be based on mass rather than a numeric ratio score.

Potential future development within the EIR Study Area would be required to comply with applicable SRMC regulations and the proposed General Plan 2040 goals, policies, and programs listed above, which would reduce potential impacts on sensitive biological resources as a result of implementing the proposed General Plan 2040. With adherence to these regulations, and refinements called for in Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4, no conflicts with local plans and policies are anticipated, and impacts would be considered *less than significant*.

Significance without Mitigation: Less than significant.

Downtown Precise Plan

Like potential future development in the remainder of the city, potential future development in the Downtown Precise Plan Area would be required to comply with the proposed General Plan 2040 policies and programs, and the listed SRMC regulations. With adherence to these regulations, no conflicts with local plans and policies are anticipated, and impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

BIO-6	**Implementation of the proposed project could 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 habitat conservation plan areas. Therefore, the proposed project would not conflict with any such plan. Furthermore, several goals, policies, and

programs in the proposed General Plan 2040, listed under Impact Discussions BIO-1 and BIO-5, along with the stated SRMC regulations, would serve to protect and enhance the sensitive natural communities and special-status species within the EIR Study Area. Therefore, *no impact* would occur.

Significance without Mitigation: No impact.

BIO-7 Implementation of the proposed project could result in a cumulatively considerable impact 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, riparian woodland, and chaparral, among others), populations of special-status plant or animal species, and wetland features (e.g., coastal salt marsh, freshwater marsh and seeps, riparian corridors, and drainages). Further, biological resource assessments would be required for future projects proposed on or near sensitive habitats, as outlined under Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4. 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 in existing urbanized areas. Potential future development that could occur elsewhere in the region, outside of the EIR Study Area, is 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 programs applicable to the proposed project, together with implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, and BIO-4, would serve to address these contributions to cumulative impacts on sensitive biological and wetland resources, as discussed above.

Therefore, the proposed project would not result in a cumulatively considerable impact to biological resources and cumulative impacts would be *less than significant*.

Significance without Mitigation: Less than significant.

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