
14. BIOLOGICAL RESOURCES

This EIR chapter describes the existing biological resources in the Precise Plan area and vicinity, potential project impacts on those resources, and measures warranted to mitigate identified significant impacts. The habitat descriptions in this chapter are based in part on an earlier analysis conducted for the previously proposed Redwood City Downtown Area Plan and Housing Element. That analysis included a site reconnaissance on May 9, 2002.¹

14.1 SETTING

Urban landscape is the main type of habitat found in the Precise Plan area. In addition, three potential sensitive habitat areas were identified in the project area of the previously proposed Downtown Area Plan: salt marsh vegetation, watercourses, and mature tree groves. These habitat types are discussed below. For purposes of this analysis and following common practice, "special-status species" are defined as those plants and animals that are legally protected under the State and Federal Endangered Species Acts or other regulations, and species that are considered rare by the scientific community. Rare, endangered, or threatened species are protected by the Federal Endangered Species Act of 1973 (as updated in 50 CFR 17.11 and 17.12, January 1992), the California Native Plant Protection Act of 1997, and the California Endangered Species Act of 1970 (California Administrative Code Title 14, sections 670.2 and 670.51). The California Environmental Quality Act (CEQA) provides additional protection for unlisted species that meet the "rare" or "endangered" criteria defined in section 15380.

14.1.1 Urban Landscape Habitat

Urban landscape is the primary habitat found in the Precise Plan area. This "habitat unit" is dominated by the following introduced, opportunistic species adapted to high levels of disturbance:

(a) Vegetation. Existing urbanized areas within and surrounding the Precise Plan area have been landscaped with introduced exotics, including groundcover, trees, and shrubs to provide erosion control, screening, and ornamental value. Common weedy species or ruderal species are also prevalent.

(b) Wildlife. Wildlife abundance and diversity in the existing urban habitat within and surrounding the Precise Plan area depend on the amount of vegetation and degree of ongoing disturbance. Existing vegetation, including landscaping of urban development and parking lots, provides existing cover and food resources for animals that have adapted to this urban

¹City of Redwood City, Redwood City Downtown Area Plan and Housing Element Initial Study, pp. 23-26. Because the boundaries of the previously proposed "Downtown Area Plan" are not coterminous with the Downtown Precise Plan boundaries, the use of the lower-case word "downtown" in this EIR chapter refers to the general downtown and is not synonymous with the "Precise Plan area."

environment. Small mammals such as house mice (*Mus musculus*), Norway rats (*Rattus norvegicus*), California ground squirrels (*Spermophilus beecheyi*), raccoons (*Procyon lotor*), and striped skunks (*Mephitis mephitis*) may also be found in such urban locations. Reptiles and amphibians expected in such Peninsula urbanized areas include the western fence lizard (*Sceloporus occidentalis*) and Pacific treefrog (*Hyla regilla*).

(c) Birds. The urban landscape within and surrounding the Precise Plan area also provides suitable habitat for many birds, including mourning dove (*Zenaidura macroura*), rock dove (*Columba livia*), Anna's hummingbird (*Calypte anna*), black phoebe (*Sayornis nigricans*), western scrub-jay (*Aphelocoma californica*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), American robin (*Turdus migratorius*), European starling (*Sturnus vulgaris*), northern mockingbird (*Mimus polyglottos*), California towhee (*Pipilo crissalis*), yellow-rumped warbler (*Dendroica coronata*), song sparrow (*Melospiza melodia*), white-crowned sparrow (*Zonotrichia leucophrys*), golden-crowned sparrow (*Zonotrichia atricapilla*), savannah sparrow (*Passerculus sandwichensis*), western meadowlark (*Sturnella neglecta*), brown-headed cowbird (*Molothrus ater*), Brewer's blackbird (*Euphagus cyanocephalus*), house finch (*Carpodacus mexicanus*), American goldfinch (*Carduelis tristis*), house sparrow (*Passer domesticus*), and barn (*Hirundo rustica*) and cliff swallows (*Petrochelidon pyrrhonota*). Raptors observed in the general vicinity include red-tailed hawk (*Buteo jamaicensis*), white-tailed kite (*Elanus leucurus*), and American kestrel (*Falco sparverius*).

14.1.2 Other Habitats

(a) Salt Marsh Habitat. Salt marsh vegetation, a sensitive vegetation type and potential habitat for special-status species, occurs along the banks of Redwood Creek in the downtown area. The 2002 reconnaissance for the previously proposed Redwood City Downtown Area Plan found this habitat type and noted that ruderal vegetation was invading the salt marsh habitat. This location is in the northern portion of the Precise Plan area between Veterans Boulevard and Bradford Street.

The local salt marsh habitat typically consists of pickleweed (*Salticornia virginica*), gumplant (*Grindelia stricta* var. *angustifolia*), juamia (*Jaumia carnososa*), salt grass (*Distichlis spicata*), and a few small patches of cordgrass (*Spartina foliosa*). The reconnaissance concluded that such vegetation at the habitat found at the downstream edge of the downtown was considered too short, the patches too small and narrow (less than 20 feet wide with 10,000 square feet total size), and the vegetation too close to commercial areas and associated human activity to provide habitat for potentially occurring special-status species. The potentially occurring special-status species of concern include saltmarsh common yellow-throat (*Geothlypis trichas sinuosa*), California black rail (*Laterallus jamaicensis cortuniculus*), California clapper rail (*Railus longirostris obsoletus*), salt marsh harvest mouse (*Reithrodontomys raviventris*), and salt marsh wandering shrew (*Sorex vagrans halicoetes*). The 2002 reconnaissance concluded that the creekside habitat was not suitable for California sea-bite (*Suaeda californica*) because it generally occurs on mud flats.

The 2002 reconnaissance indicated that two special-status species that potentially do occur in the salt marsh of Redwood Creek are the Pt. Reyes bird's beak plant (*Cordylanthus maritimus* ssp. *palustris*) and the California brackish-water snail (*Tryonia imitator*). The reconnaissance concluded that the likelihood of their occurrence was low, however, because of the prior disturbance associated with urbanizing the Redwood City area.

(b) Redwood Creek. The 2002 reconnaissance indicated that most of Redwood Creek in the then-proposed plan area was within culverts, with the exception of a few sections that were aboveground. These sections were either cement-lined or had no vegetation or were less than 200 feet long.

The San Francisco garter snake (*Thamnophis sirtalis tetrataenia*) occurs in watercourses and water bodies that support special-status ranid (semi-aquatic) frogs and have dense vegetation. The reconnaissance found that ranid frogs appeared to be absent from watercourses in the then-proposed plan area, and that the short length of the vegetated reach and the absence of vegetation in the longer reaches precluded the presence of the San Francisco garter snake.

The reconnaissance noted that special-status steelhead (*Oncorhynchus mykiss*) do not enter watercourses that have large reaches encased in culverts, as is the case for Redwood Creek in the downtown area. Redwood Creek would not therefore serve as a migration route for steelhead.

(c) Tree Groves. The 2002 reconnaissance identified a grove of trees at the intersection of Woodside Road (Highway 84) and Veterans Boulevard (approximately one-half mile east of the eastern boundary of the currently proposed Precise Plan area), as well as other trees in the Downtown area.

The reconnaissance noted that special-status monarch butterflies (*Danaus plexippus*) aggregate in groves of trees that provide a suitable combination of humidity, sunlight, temperature, and protection from the cold. These groves of trees, which are used for winter aggregation areas, are sensitive resources because there are relatively few of them and they are subject to disturbance. The reconnaissance concluded that the tree grove at the Woodside Road/Veterans Boulevard intersection was too open to provide habitat for monarch butterflies, and that other trees in the downtown are individual street trees or other small, isolated, and sparse groves that also did not provide habitat for aggregating monarch butterflies.

14.2 PERTINENT PLANS AND POLICIES

14.2.1 Redwood City Strategic General Plan

The stated goal of the Redwood City Strategic General Plan (adopted 1990) *Conservation Element* is to “promote lead roles in environmental preservation, air and water quality, wildlife protection, resource recovery, and cultural enrichment in concert with economic development.” The *Conservation Element* contains the following specific policy pertinent to consideration of the proposed Precise Plan and its potential biological resource implications:

- *Environmentally unique open spaces such as San Francisco Bay, its tributaries, sloughs, and marshlands should be protected and enhanced for conservation and recreation purposes.* (Policy C-3, page 10-4)

The General Plan *Open Space Element* contains the following specific policy pertinent to consideration of the proposed Precise Plan and its potential biological resource implications:

- *The City should preserve and enhance small parcels of open space in developed areas, wherever practical, especially in those neighborhoods with the greatest park deficiency. (Policy O-4, page 9-3)*

14.2.2 Redwood City Tree Preservation Ordinance

The City of Redwood City's Tree Preservation Ordinance (Municipal Code chapter 35) specifies that, before **any** tree in Redwood City is cut, moved, or removed, an applicant must obtain a permit from the Parks and Recreation Director. The Parks and Recreation Commission may declare a tree a "heritage tree" if the tree is healthy and has adapted well to the climatic conditions of the area, is visible from a public right-of-way, and either (a) has historic significance, (b) is indigenous to the area, or (c) is one of a group that is dependent on the others for survival.

An application for a tree removal permit must contain the number, location, and species of the trees to be removed, a brief statement of the reason for removal, a plot plan, and other pertinent information the Parks and Recreation Director deems necessary in an investigation. In determining the merits of the application, the Parks and Recreation Director must base a decision on the following factors:

- (1) The condition of the trees with respect to disease, danger of falling, proximity to existing or proposed structures, and interference with utility services;
- (2) The necessity to remove trees in order to construct proposed improvements to allow reasonable economic enjoyment of the property upon which trees are located;
- (3) The topography of the land and the effect of tree removal on erosion, soil retention, and the diversion or increased flow of surface waters;
- (4) The number of trees existing in the neighborhood on improved property and the effect of the tree removal on the neighborhood; and
- (5) Good forestry practices, including, but not necessarily limited to, the number of healthy trees that a given parcel of land will support.

The Parks and Recreation Director or the director's representative must make an investigation of the site where a tree(s) is proposed to be removed, within ten (10) days after submittal of the application by an applicant. In making investigations and in determining the merits of an application, the Parks and Recreation Director must give priority to those applications that are based on trees that are hazardous or diseased. The director may refer any application to another department, board, commission, committee of the City or to the City Council for its recommendation.

14.2.3 Federal and State Legislation and Policies

Those sections of the Federal and State Endangered Species Acts, the Federal Migratory Bird Treaty Act, the California Fish and Game Code, and CEQA that are most pertinent to consideration of the biological resource implications of the proposed Precise Plan are summarized below.

(a) Federal Endangered Species Act. The U.S. Fish and Wildlife Service (USFWS) is responsible for implementing the Federal Endangered Species Act (ESA). The purpose of the ESA is “to provide a means whereby the ecosystems upon which endangered species and threatened species depend may be conserved” (16 USC 1531). The ESA establishes an official listing process for plants and animals considered to be in danger of extinction, requires development of specific plans of action for the recovery of listed species, and restricts activities perceived to harm or kill listed species or affect critical habitat (16 USC 1532, 1536).

The ESA is invoked when the property contains a federally listed threatened or endangered species that may be affected by a permit decision. In the event that listed species are involved and a Corps permit is required for impacts on “jurisdictional waters,” the Corps must initiate consultation with the USFWS (or the National Marine Fisheries Service, NMFS) pursuant to Section 7 of the ESA (16 USC 1536; 40 CFR Sec. 402).

(b) California Endangered Species Act. In 1984 the State legislated the California Endangered Species Act (CESA) (Fish and Game Code section 2050). The basic policy of CESA is to conserve and enhance endangered species and their habitats. State agencies will not approve private or public projects under their jurisdiction that would jeopardize threatened or endangered species if reasonable and prudent alternatives are available.

CESA requires that all State lead agencies (as defined under CEQA) conduct an endangered species consultation with CDFG if their actions could affect a State-listed species. The State lead agency and/or project applicants must provide information to CDFG on the project and its likely impacts. CDFG must then prepare written findings on whether the proposed action would jeopardize a listed species or would result in the direct take of a listed species. Because CESA does not have a provision for “harm,” CDFG considerations pursuant to CESA are limited to those actions that would result in the direct take of a listed species.

(c) Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) implements international treaties between the United States and other nations devised to protect migratory birds, any of their parts, eggs, and nests from activities such as hunting, pursuing, capturing, killing, selling, and shipping, unless expressly authorized in the regulations or by permit. Migratory birds include geese, ducks, shorebirds, raptors, songbirds, wading birds, seabirds, and passerine birds (such as warblers, flycatchers, swallows, etc.).

(d) California Fish and Game Code Sections 3503, 3503.5, and 3800. These sections of the Fish and Game Code prohibit the “take, possession, or destruction of birds, their nests or eggs.” Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a “take.” Such a take would violate the Migratory Bird Treaty Act. The act is implemented as part of the review process for any required State agency authorization, agreement, or permit.

14.2.4 Regulatory Requirements Pertaining to "Waters of the United States"

The criteria used by the U.S. Army Corps of Engineers, the California Regional Water Quality Control Board, the State Water Resources Control Board, and the CDFG to determine those areas within a project site that would be subject to their regulations are presented below.

(a) U.S. Army Corps of Engineers Jurisdiction and General Permitting Definition of “Waters of the United States.” Pursuant to Section 404 of the Clean Water Act, the U.S. Army Corps of

Engineers (Corps) regulates the disposal of dredged or fill material into “waters of the United States.” This requires project applicants to obtain authorization from the Corps prior to discharging dredged or fill materials into any “water of the United States.” In the Federal Register “waters of the United States” are defined as “...all interstate waters including interstate wetlands...interstate lakes, river, streams (including intermittent streams), wetlands, [and] natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce...”.

(b) California Regional Water Quality Control Board Jurisdiction. Section 401 of the Clean Water Act requires that an applicant for a federal license or permit provide a certification that any discharges from the facility will comply with the Act, including water quality standard requirements.

Section 402 of the Clean Water Act requires that all applicants planning to discharge at point sources obtain a permit that specifies the type and amount of pollutants they may discharge, managed under the National Pollutant Discharge Elimination System (NPDES). NPDES permits should incorporate the applicable effluent controls, i.e., dischargers must control pollution using technology that is able to guarantee a certain level of pollution removal, depending on the type of discharge involved. In November 1990, the EPA published final regulations that establish stormwater permit application requirements for specified categories of industries; in June 2002, the Redwood City City Council adopted new model policies and associated implementing measures approved as part of the San Mateo Countywide Stormwater Pollution Prevention Program (STOPPP). The regulations provide that discharges of stormwater from construction projects that encompass 10,000 or more square feet of soil disturbance are effectively prohibited unless the discharge is in compliance with an NPDES permit. The California State Water Quality Control Board has developed a general construction stormwater permit to implement this requirement. The permit requires submittal of a Notice of Intent to comply, fees, and the implementation of a Storm Water Pollution Prevention Plan (SWPPP).

Projects that would involve such stormwater discharges and would involve *10,000 or more square feet of impervious surface* would require a Notice of Intent and associated SWPPP. Required RWQCB certification would be under the jurisdiction of the San Francisco Bay Regional Water Quality Control Board in Oakland, California, and would include consultation with the California Department of Fish and Game (CDFG) under the provisions of the State Fish and Game Code section 5650F, which gives CDFG jurisdiction over the input of any deleterious substances, such as silt, into the waters of the State, resulting from construction activities.

(c) California Department of Fish and Game. Pursuant to Fish and Game Code sections 1601-1603, the CDFG regulates activities that use materials from any streambed or divert, obstruct, or change the natural flow or bed of any river, stream, or lake. For such activities, Sections 1601-1603 allow CDFG to review any proposed construction and to propose reasonable modifications for the protection and construction of a fish or game resource that might be substantially adversely affected by such construction. For such activities, CDFG enters into a Streambed Alteration Agreement with a project applicant and can impose conditions on the agreement to prevent adverse impacts on fish and wildlife resources and ensure no net loss of wetlands. If mutual agreement between the CDFG and the affected agency is not reached, agreement will be reached through an arbitration procedure to be completed prior to construction of the proposed project.

As described above, under authority of the Fish and Wildlife Coordination Act, CDFG may also review applications for permits issued under Section 404 and provide comments to the Corps regarding environmental impacts. Fish and Game Code Section 5650F gives CDFG jurisdiction over the input of any deleterious substances, such as silt, into the waters of the State of California, resulting from construction activities.

14.3 IMPACTS AND MITIGATION MEASURES

14.3.1 Significance Criteria

Significance criteria for impacts on biological resources were developed based on section 15065 and appendices G and I of the CEQA Guidelines, and section 21083 of the Public Resources Code. Direct and indirect adverse impacts are classified in this analysis as either *significant*, *potentially significant*, or *less-than-significant*. An impact is considered *potentially significant* when the presence of a special-status species or resource is uncertain and project construction could result in its loss. Impacts would generally be considered *less-than-significant* if habitat and species effects are common and widespread in the region and state.

The CEQA Guidelines state that a project will normally have a *significant* effect on the environment if it will “*substantially affect a rare or endangered species of animal or plant or the habitat of the species.*” According to these guidelines, a project would have a potentially significant or significant impact on biological resources if it would:¹

- (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 Game 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 Game or U.S. Fish and Wildlife Service;
- (3) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- (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) Cause a fish or wildlife population to drop below self-sustaining levels; or

¹CEQA Guidelines, Appendix G, item IV(a-f); and CEQA Guidelines, section 15065(a).

- (7) Conflict with the any applicable land use plan, policy, or regulation adopted by the City of Redwood City for the purpose of avoiding or mitigating an adverse effect on vegetation and wildlife.

14.3.2 Draft Precise Plan Policies Related to Biological Resources

The Draft Downtown Precise Plan does not contain policies specifically addressing special-status vegetation and wildlife. However, relevant to Redwood Creek between Veterans Boulevard and Bradford Street, the Plan includes the following regulation and landscaping standards:

- *Private frontage regulations along the creek shall be determined from the creek bank/flood limit line. The developer shall identify and map the creek bank/flood limit line location. (Draft Precise Plan, Book II--Development Regulations, subsection 2.2.11.6--Redwood Creek)*
- *Front setback areas along Redwood Creek shall consist of the following elements:*
 - (1) *A minimum 8-foot-wide concrete or decomposed granite walkway;*
 - (2) *Supplemental native vegetation appropriate to the creek bank environment that creates an attractive pedestrian experience;*
 - (3) *Large, open-habitat deciduous trees...provided at a maximum spacing of 40 feet off-center; and*
 - (4) *Pedestrian-scale, decorative street lighting located approximately 40 feet on-center. Light sources shall be located 10-14 feet above finished grade unless otherwise directed by the Planning Manager/Designee. (Draft Precise Plan, Book II--Development Regulations, subsection 2.3.2--Landscaping and Public Space Standards)*

14.3.3 Impacts and Mitigation Measures

The following impact and mitigation findings apply to both the Maximum Intensity project scenario and the Moderate Intensity project scenario.

General Impacts on Vegetation and Wildlife. Under either the Maximum or Moderate Intensity Precise Plan alternatives, future development in accordance with the Redwood City Downtown Precise Plan would replace remaining existing vegetative wildlife habitats with new structures and landscaping. Most of the area is already developed with commercial uses, and anticipated new development and intensification would not have a significant impact on the general vegetation and wildlife habitat value of the project area. The remaining undeveloped land has been disturbed by past commercial activities, limiting its habitat value. More street trees would be provided as landscaping along streets and margins of proposed uses would be introduced to improve the aesthetic character of the Precise Plan area, thereby improving the habitat available to common wildlife. Use of native trees and shrubs, as provided by the Precise Plan, would contribute to the habitat value of landscape plantings.

Due to the generally low wildlife habitat value and the limited extent of sensitive natural communities, the general impact of the Precise Plan-facilitated development on vegetation and wildlife values in the Plan area is considered to be ***less-than-significant***.

Mitigation. No significant vegetation or wildlife impact has been identified; no mitigation is required.

Impact 14-1: Potential Loss of Heritage Trees. Under either the Maximum or Moderate Intensity Precise Plan alternative, future development in accordance with the Draft Precise Plan may result in the removal of heritage trees as defined by the City's Tree Preservation Ordinance (Municipal Code chapter 35). This possibility represents a ***potentially significant impact*** (see criteria 5 and 7 in subsection 14.3.1, "Significance Criteria," above).

Redwood City's Tree Preservation Ordinance protects heritage trees and requires that a permit be obtained if removal is necessary.

Mitigation 14-1. Prior to, or as a condition of, finalization of plans for future individual development projects in the Precise Plan area, require that any proposed tree removal be subject to the application and review process specified in the City's Tree Preservation Ordinance (Municipal Code chapter 35). Implementation of this measure would ensure protection of heritage trees, thereby mitigating potential impacts to a ***less-than-significant level***.

Impact 14-2: Potential Loss of Special-Status Species. Under either the Maximum or Moderate Intensity Precise Plan alternative, future Precise Plan-facilitated development in the vicinity of Redwood Creek may result in the loss of special-status species. This possibility is considered to be a ***potentially significant impact*** (see criteria 1, 2, and 6 in subsection 14.3.1, "Significance Criteria," above).

As described in the "Setting" section above, special-status species are not likely to occur within the Precise Plan area because habitat in the area does not appear suitable for the various potential species, either because of small size or prior disturbance of the potential habitat, or the level of human activity in the habitat vicinity. A remote possibility remains, however, that special-status plant or animal species may exist in salt marsh habitat along Redwood Creek in the Precise Plan area. It is possible that future individual Precise Plan-facilitated development projects, including application of the Redwood Creek landscaping standards listed in the Plan (see subsection 14.3.2 above), would affect these small areas of existing habitat. Due to the general nature of the Precise Plan landscaping standards and conceptual future development potential near the creek, this possibility would need to be evaluated on a project-by-project basis.

Mitigation 14-2. If disturbance of suitable habitat is proposed as part of future individual development projects in the vicinity of Redwood Creek, require surveys prior to finalization of such projects in order to determine definitively whether any special-status species occur in the affected area. Such surveys shall be conducted by a qualified botanist following applicable guidelines of the California Department of Fish and Game and/or U.S. Fish and Wildlife Service to provide a conclusive determination on presence or absence. If any populations with legal protective status are encountered, an appropriate mitigation plan shall be developed in consultation with, and meeting the mitigation criteria of, the jurisdictional agencies to provide for their protection (e.g., specific setbacks from the creek, activity restrictions). Implementation of this measure would ensure protection of possible populations of special-status species in the Precise Plan area, mitigating potential impacts to a ***less-than-significant level***.

Impact 14-3: Jurisdictional Wetland Impacts. Under either the Maximum or Moderate Intensity Precise Plan alternative, future Precise Plan-facilitated development in the vicinity of Redwood Creek may affect potential jurisdictional wetland habitat. This possibility represents a ***potentially significant impact*** (see criteria 3 and 4 in subsection 14.3.1, "Significance Criteria," above).

Although most of the Precise Plan area is already developed with urban uses, the potential for loss or disturbance of jurisdictional wetland habitat remains. This disturbance could be associated with individual development projects in the vicinity of Redwood Creek.

Mitigation 14-3. For any future individual development projects in the vicinity of Redwood Creek that involve modifications to potential wetlands and other waters, coordinate with representatives of the California Department of Fish and Game and the U.S. Army Corps of Engineers, as required by federal and state law, to ensure that any required mitigation protocols and associated individual project design modifications (e.g., specific setbacks from the creek, activity restrictions) are incorporated into proposed improvement plans during the initial stages of project review. Implementation of this measure would ensure that potential impacts on wetland resources are minimized and adequate replacement is provided, mitigating this potential impact to a ***less-than-significant level***.