D. BIOLOGICAL RESOURCES

This section describes the existing biological resources on and in the vicinity of the project site. Sensitive habitats, including a riparian zone, and potentially occurring special-status species are identified. Potential impacts to biological resources associated with implementation of the proposed project are described, and mitigation measures are identified, where required.

1. Setting

This section discusses the biological setting of the project site. Included in this section are the methods used to analyze biological resources, applicable regulations, and the existing site conditions.

a. Methods. The methods used to evaluate the site and project are described below.

(1) Records Search and Literature Review. Available reports of biological resources on and in the vicinity of the project site and special-status species databases were reviewed to identify habitat types and species potentially occurring on the project site. In addition to the project plans submitted in November 2012, reports that were reviewed for this analysis include:

- Biological Resources Assessment: Apple Campus 2 Study Area;¹
- Arborist Report: Apple Campus 2 Consolidated Arborist Report;²
- A Review of the Consolidated Arborist Report for the Apple Campus 2 Project;³
- Adjustments to Response to the Review of the Consolidated Arborist Report per EIR Plan Revisions;⁴
- A Review of the Trees Recommended for Transplant at the Apple Campus 2 Project, Cupertino, California;⁵
- EIR Landscape Narrative;⁶
- Calabazas Creek Flood Protection Project: Final Initial Study and Mitigated Negative Declaration;⁷ and
- Santa Clara Valley Habitat Plan⁸

These reports provided the basic description of the habitat types present within the project site and were used to identify areas of interest for site visits.

The following inventories and databases were searched to identify special-status species that potentially occur on or in the vicinity of the site:

- *The California Natural Diversity Database (CNDDB).*° The CNDDB database search covered special-status species occurrences within approximately 5 miles of the project site.

- *The California Native Plant Society (CNPS) On-line Inventory of Rare and Endangered Plants.*°° The CNPS database search covered native plant occurrences within the Cupertino U.S. Geological Survey (USGS) 7.5-minute quadrangle, in which the site is located, as well as nine surrounding quadrangles.


**Field Surveys.** On June 23 and July 19, 2011, WRA, Inc. visited the project site to conduct an assessment of biological resources within the project site, including the segment of Calabazas Creek within the site and its associated vegetation. The purpose of site visit was to assess the study area for: (1) the potential to support special-status plant and animal species; and (2) the presence of other sensitive biological resources protected by local, State, and federal laws and regulations.°°°°°

In September 2008, April 2011, and June 2011, arborists David Babby, Deborah Ellis, and Walter Levinson, respectively, conducted various tree surveys at the project site. The purpose of the tree surveys was to map, identify, and/or evaluate the existing trees at the site. The three arborist reports were consolidated into one arborist report, which was then reviewed by Michael L. Bench, a consulting arborist to the City.°°°°°°

LSA wildlife biologist Dan Sidle and botanist/arborist Tim Milliken conducted a reconnaissance-level survey of the project site on October 19, 2011. The purpose of this visit was to confirm that habitats and habitat conditions described in the available biological resources and arborist reports were accurate and to assess the potential for on-site habitats to support special-status plant and animal species. No focused rare plant or special-status animal surveys, or formal jurisdictional delineation of

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° California Department of Fish and Wildlife, 2011. *California Natural Diversity Data Base Computer Printout for Species Occurrences within a 5-mile Radius of the Project Site.* Sacramento, CA.


°°°°° WRA, Inc. 2012, op. cit.

waters of the United States were conducted as part of this analysis (as none were deemed necessary because of the urbanized character of the project site).

b. Regulatory Framework. The federal, State, and local regulatory context for the project is described below.

(1) U.S. Fish and Wildlife Service (USFWS). USFWS has jurisdiction over species that are formally listed as threatened or endangered under the federal Endangered Species Act. The Endangered Species Act protects listed wildlife species from harm or “take.” The term “take” is broadly defined as to “harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or attempt to engage in any such conduct.” An activity is defined as a “take” even if it is unintentional or accidental. An endangered plant or wildlife species is one that is considered in danger of becoming extinct throughout all, or a significant portion, of its range. A threatened species is one that is likely to become endangered within the foreseeable future. In addition to endangered and threatened species, which are legally protected under the federal Endangered Species Act, the USFWS has a list of proposed and candidate species. Proposed species are those for which a proposed rule to list them as endangered or threatened has been published in the Federal Register. A candidate species is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species but in most cases it has not been formally proposed for listing.14 These latter species are not afforded legal protection under the federal Endangered Species Act. However, project-related impacts to federally listed, proposed, and candidate species or their habitats are considered “significant” under the CEQA Guidelines (discussed below).15

If a listed species or critical habitat is present on a project site, the project sponsor would be required to comply with the federal Endangered Species Act in order to avoid take of the listed species and to avoid adverse modification of designated critical habitat that has been determined by the USFWS to be essential to the survival and recovery of listed species.

The federal Migratory Bird Treaty Act (MBTA) prohibits the taking, hunting, killing, selling, and purchasing of migratory birds, parts of migratory birds, or their eggs and nests. As used in the MBTA, the term “take” is defined by the USFWS 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 the United States are covered by this act.

(2) California Department of Fish and Wildlife (CDFW). CDFW has jurisdiction over threatened or endangered species that are formally listed by the State under the California Endangered Species Act. The California Endangered Species Act is similar to the federal Endangered Species Act both in process and substance; it is intended to provide protection to threatened and endangered species in California. The California Endangered Species Act prohibits the “take” of any plant or animal listed or proposed as threatened, endangered, or rare (the “rare” designation applies only to plants). The California Endangered Species Act does not supersede the federal Endangered Species

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14 Some candidate species have been proposed for listing but upon review listing was found to not be warranted or was warranted but precluded.

15 The exact wording in Appendix G of the CEQA Guidelines is: “Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service.”
Act, but operates in conjunction with it. Species may be listed as threatened or endangered under both acts (in which case the provisions of both State and federal laws would apply) or under only one act.

CDFW also maintains informal lists of “species of special concern.” These species are broadly defined as plants and wildlife that are of concern to CDFW because of population declines and restricted distributions, and/or they are associated with habitats that are declining in California. Project-related impacts to species on the State endangered or threatened lists and lists of species of special concern are considered “significant” under the CEQA Guidelines (discussed below).

CDFW also has jurisdiction over the beds and banks of watercourses according to the provisions of Section 1602 of the California Fish and Game Code (FGC). CDFW requires a Streambed Alteration Agreement for any disturbance to any watercourse or waterbody with a defined bed and bank (swales without a defined bed and bank are not typically jurisdictional under CDFW regulations, but if a swale is a wetland, it would be jurisdictional under U.S. Army Corps of Engineers (Corps) regulations). The jurisdiction of CDFW extends to the top of the bank and often includes the outer edge of riparian vegetation canopy cover.

Section 3503 of the FGC prohibits the take, possession, or needless destruction of the nest or eggs of any bird. Subsection 3503.5 specifically prohibits the take, possession, or destruction of any birds in the orders Falconiformes (hawks and eagles) or Strigiformes (owls) and their nests. These provisions, along with the federal MBTA, which serve to protect nesting native birds, have been interpreted by the resource agencies to prohibit take or killing of nesting native birds. Non-native species, including European starling, house sparrow, and rock pigeon, are not afforded any protection under the MBTA or FGC.

(3) U.S. Army Corps of Engineers. Under Section 404 of the Clean Water Act, the Corps is responsible for regulating the discharge of fill material into waters of the U.S. and their lateral limits. Their jurisdiction is defined in 33 Code of Federal Regulations (CFR) Part 328.3(a) and includes streams that are tributary to navigable waters and their adjacent wetlands. Wetlands that are not adjacent to waters of the U.S. are termed “isolated wetlands” and are not subject to Corps jurisdiction.

In general, a Corps permit must be obtained before placing fill in wetlands or other waters of the U.S. The type of permit required depends on the amount of acreage and the purpose of the proposed fill, and is subject to discretion by the Corps. There are two categories of Corps permits: nationwide (general) permits and individual permits. To qualify for a nationwide permit, a project must demonstrate that it has no more than a minimal adverse effect on an aquatic ecosystem. The Corps typically interprets this condition to mean that there will be no net loss of either habitat acreage or habitat value.

An individual permit is required where a nationwide permit is not applicable. The consideration of an individual permit includes, but is not limited to, factors such as fill of a significant acreage of wetlands or waters of the U.S., areas of high biological or unique value, or length of the watercourse. Individual permits require review of the project by the public, evidence that wetland impacts have been avoided or minimized to the extent practicable, and provision of appropriate compensatory mitigation for unavoidable impacts.

(4) CEQA Guidelines Section 15380. Although threatened and endangered species are protected by specific federal and State statutes, CEQA Guidelines Section 15380(b) provides that a
species not listed on the federal or State list of protected species may be considered rare or endan-
gerger if the species can be shown to meet certain specified criteria. These criteria have been modeled
after the definition in the federal Endangered Species Act and the section of the FGC dealing with
rare or endangered species. Section 15380(b) was included in the CEQA Guidelines primarily to
address situations in which a public agency is reviewing a project that may have a significant effect
on a species that has not yet been listed by either the USFWS or CDFW. Therefore, CEQA provides a
lead agency with the ability to protect a species from a project’s potential impacts until the respective
governmental agencies have an opportunity to formally protect the species.

(5) Regional Water Quality Control Board (RWQCB). Pursuant to Section 401 of the
Clean Water Act, projects that require a Corps permit for discharge of dredged or fill material into
wetlands or other waters of the U.S. and the State of California must also obtain a water quality cer-
tification from the RWQCB. This certification ensures that the project will uphold State water quality
standards. Alternatively, the RWQCB may elect to notify a project sponsor that the State may issue
Waste Discharge Requirements in lieu of a Section 401 certification for a project. Wetlands and
waters determined to be isolated and not subject to Corps jurisdiction may be regulated by the
RWQCB under the Porter-Cologne Water Quality Control Act as waters of the State. Fill of waters of
the State requires issuance of waste discharge requirements. It is the policy of the State to have no net
loss of wetlands.

(6) California Native Plant Society (CNPS). Although not a regulatory agency, CNPS, a
non-governmental conservation organization, has developed lists of plants of special concern in
California. This information is utilized by the CDFW, in collaboration with CNPS and input from
botanical experts from government, academia, non-governmental organizations, and the private sector
to develop the California Rare Plant Rank (CRPR). The CRPR represents a name change from the
CNPS listed special-status plants to signify a greater consensus in determining rarity for California’s
special-status plants. A List 1A plant is a species, subspecies, or variety that is considered to be
extinct. A List 1B plant is considered rare, threatened, or endangered in California and elsewhere. A
List 2 plant is considered rare, threatened, or endangered in California but is more common else-
where. A List 3 plant is a species for which there is a lack of necessary information to determine if it
should be assigned to a list or not. A List 4 plant has a limited distribution in California.

The CEQA Guidelines provide guidance on how special-status species should be evaluated for
significant impacts. All of the plant species on List 1 and List 2 meet the requirements of Section
1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered
Species Act) of the FGC, and are eligible for State listing. Therefore, plants appearing on Lists 1 or 2
are considered to meet the CEQA Guidelines Section 15380 criteria and potentially significant
impacts to these species are analyzed in this EIR.

(7) Santa Clara Valley Water District (SCVWD). The SCVWD owns property along, and
including, Calabazas Creek where it crosses through the project site, as well as certain access ease-
ments or licenses. The SCVWD requires that a Water District Protection Ordinance encroachment
permit be obtained for any construction work proposed within the SCVWD fee title right of way.16
The Santa Clara Valley Water Resources Protection Collaborative, whose members included the
SCVWD and City of Cupertino, developed Guidelines & Standards for Land Use Near Streams: A

16 Santa Clara Valley Water District, 2011. Water Resources Protection Ordinance. As Amended by Ordinance 08-1.
San Jose, California.
Manual of Tools, Standards and Procedures to Protect Streams and Streamside Resources in Santa Clara County. Among other items, these guidelines address issues associated with development near streams, strategies for the permitting process, and recommended project design and construction guidelines. For a more detailed discussion of the guidelines, please refer to Chapter IV, Planning Policy.

(8) Santa Clara County. The County of Santa Clara has prepared the Santa Clara Valley Habitat Plan (Habitat Plan or Plan) that is intended to provide an effective framework to protect, enhance, and restore natural resources in specific areas of Santa Clara County, while improving and streamlining the environmental permitting process for impacts on threatened and endangered species. The entities listed below have prepared the Plan:

- County of Santa Clara (County)
- City of San José
- City of Morgan Hill
- City of Gilroy
- Santa Clara Valley Water District (SCVWD)
- Santa Clara Valley Transportation Authority (VTA)

These entities are collectively referred to as the Local Partners and are also known as the Permittees. The Local Partners intend the Plan to allow for reasonable development, growth, and needed infrastructure construction and maintenance while accommodating the Plan’s conservation goals and complying with State and federal regulatory requirements.

The Local Partners have defined a study area and permit area for the Habitat Plan within portions of Santa Clara County (see Figure 1-2 in Chapter 1 of the Habitat Plan). The northern edge of the study area is defined by the boundary of Alameda and Santa Clara Counties, excluding the Milpitas City Limits. As of March 2013, although located adjacent to the Plan study area, the Apple Campus 2 project site is not within the Habitat Plan study area, permit area, or plan area, and therefore, the proposed project is not covered by the Plan and is not required to pay Plan development fees.

(9) City of Cupertino. The City of Cupertino has several policies and/or ordinances within the General Plan and Municipal Code that are related to biological resources.

General Plan Policies. The following discussion lists relevant policies of the City of Cupertino General Plan that relate to biological resources:

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**Environmental Resources/Sustainability**

**Policy 5-9: Development near Sensitive Areas**

Encourage the clustering of new development away from sensitive areas such as riparian corridors, wildlife habitat and corridors, public open space preserves, and ridgelines. New developments in these areas must have a harmonious landscaping plan approved prior to development.

*Strategy: Development Plans.* Review development plans for opportunities for use of native plants and drought tolerant, non-invasive, non-native plants.

**Policy 5-10: Landscaping Near Natural Vegetation**

Emphasize drought tolerant and pest resistant native and non-invasive, nonnative, drought tolerant plants and ground covers when landscaping properties near natural vegetation, particularly for control of erosion from disturbance to the natural terrain.

*Strategy: Riparian Corridor Protection.* Require riparian corridor protection through a riparian corridor ordinance and through the development approval process.

**Policy 5-11: Natural Area Protection**

Preserve and enhance the existing natural vegetation, landscape features and open space when new development is proposed.

*Strategy: Native Plants.* Encourage drought tolerant native and drought tolerant, noninvasive, non-native plants and trees, and minimize lawn area in the hillsides.

**Policy 5-14: Recreation and Wildlife Trails**

Provide open space linkages within and between properties for both recreational and wildlife activities, most specifically for the benefit of wildlife that is threatened, endangered, or designated as species of special concern.

*Strategy: Identification of Creeks and Water Courses.* Require identification of creeks and water courses on site plans and require that they be protected from adjacent development. State that trail easements for trail linkages may be required if analysis determines that they are needed.

**Policy 5-19: Natural Water Bodies and Drainage Systems**

Require that site design respects the natural topography and drainages to the extent practicable to reduce the amount of grading necessary and limit disturbance to natural water bodies and natural drainage systems caused by development including roads, highways, and bridges.

**Policy 5-22: Compact Development Away from Sensitive Areas**

Where such measures do not conflict with other municipal purposes or goals, encourage, via zoning ordinances, compact development located away from creeks, wetlands, and other sensitive areas.

**Policy 5-27: Natural Water Courses**

Retain and restore creek beds, riparian corridors, watercourses and associated vegetation in their natural state to protect wildlife habitat and recreation potential and assist groundwater percolation. Encourage land acquisition dedication of such areas.
Strategy: Santa Clara Valley Water District. Work with the Santa Clara Valley Water District and other relevant regional agencies to enhance riparian corridors and provide adequate flood control by use of flow increase mitigation measures.

City of Cupertino Protected Tree Ordinance. The City of Cupertino’s Protected Tree Ordinance includes regulations for the protection, preservation, and maintenance of trees of certain species and sizes (referred to as “Specimen” trees in the project plans), as described in Chapter 14.12 of the Cupertino Municipal Code. Removal of a protected tree requires a permit from the City. Pursuant to Section 14.18.050 of the Municipal Code, “Protected” trees include trees of a certain species and size in all zoning districts; heritage trees in all zoning districts; any tree required to be planted or retained as part of an approved development application, building permit, tree removal permit, or code enforcement action in all zoning districts; and approved privacy protection planting in R-1 zoning districts.

Protected trees include trees of the following species that have a minimum single trunk diameter of 10 inches (31-inch circumference) or minimum multi-trunk diameter of 20 inches (63-inch circumference) measured 4.5 feet from the natural grade: native oak tree species (Quercus), including coast live oak (Q. agrifolia), valley oak (Q. lobata), black oak (Q. kelloggii), blue oak (Q. douglasii), and interior live oak (Q. wislizeni); California buckeye (Aesculus californica); big leaf maple (Acer macrophyllum); deodar cedar (Cedrus deodara); blue atlas cedar (Cedrus atlantica ‘Glauca’); bay laurel or California bay (Umbellularia californica); and western sycamore (Platanus racemosa).

c. Site Conditions. The project site comprises approximately 176 acres in an urban part of the City of Cupertino. The project site is occupied by office and research and development land uses with extensive parking lots and landscaping. Calabazas Creek, which originates in the Santa Cruz Mountains and flows north to Guadalupe Slough and the San Francisco Bay, is located in the southeast corner of the project site. Calabazas Creek has been extensively altered for flood control purposes and segments of the creek have been reconstructed and lined with concrete. The creek corridor within the site supports immature riparian vegetation, most of which was planted within the last 5 years as part of a flood control project undertaken by the SCVWD.

The existing conditions on the project site are described below for the following biological resources: 1) vegetation and wildlife habitats; 2) sensitive plant communities, and 3) special-status species.

(1) Vegetation and Wildlife Habitats. The project site supports developed, riparian vegetation and creek habitats (see Figure V.D-1 for representative photographs of biological resources on the site). Botanical nomenclature conforms to The Jepson Manual, Higher Plants of California. Nomenclature for special-status plant and animal species conforms to the CNDDB. The plant communities and habitats present on the project site are described below.

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23 California Department of Fish and Wildlife, 2011. *California Natural Diversity Data Base Computer Printout for Species Occurrences Within a 5-mile Radius of the Project Site*. Sacramento, CA.
Developed. Developed habitats of the project site include commercial and industrial buildings; roads; and associated landscaping consisting of lawns, ornamental trees, and ornamental shrubs. Some ruderal vegetation with non-native grasses and forbs is also located within the developed portion of the project site. Many of the buildings within the site have extensive manicured lawns and ornamental landscaping (see Figure V.D-1, photographs 3, 5, and 6).

A total of 4,506 ornamental trees consisting of 47 different species are located within the developed portions of the project site and were identified in the project arborist report. This report was reviewed by the City’s consulting arborist. Most of these trees are non-native, but some native species are present. The most abundant species of trees on-site include: ash (Fraxinus spp.), coast redwood (Sequoia sempervirens), American sweetgum (Liquidambar styraciflua), silver-dollar gum (Eucalyptus polyanthemos), and Chinese elm (Ulmus parvifolia).

Non-native trees and shrubs observed in the developed portions of the site include: London plane tree (Platanus acerifolia), Chinese elm (Ulmus parvifolia), fern pine (Podocarpus gracilior), flowering pear (Pyrus calleryana), evergreen pear (Pyrus kawakamii), black locust (Robinia pseudoacacia), Japanese flowering cherry (Prunus serrulata), raywood ash (Fraxinus oxycarpa “Raywood”), European white birch (Betula pendula), strawberry tree (Arbutus unedo), swamp myrtle (Tristaniopsis laurina), crape myrtle (Lagerstroemia indica), flowering plum (Prunus cerasifera), Italian alder (Alnus cordata), Canary Island pine (Pinus canariensis), American sweet gum (Liquidambar styraciflua), carob tree (Ceratonia siliqua), yew pine (Podocarpus macrophyllus), camphor tree (Cinnamomum camphora), olive tree (Olea europaea), Australian willow (Geijera parviflora), shamal ash (Fraxinus uhdei), Italian cypress (Cupressus sempervirens), Chinese pistache (Pistacia chinensis), maidenhair tree (Ginkgo biloba), red oak (Quercus rubra), tulip tree (Liriodendron tulipifera), olive tree (Olea europaea), Japanese maple (Acer palmatum), privet (Ligustrum japonicum), mimosa (Albizia julibrissin), southern magnolia (Magnolia grandiflora), red ironbark (Eucalyptus sideroxylon), persimmon (Diospyros kaki), myoporum (Myoporum laetum), deodar cedar (Cedrus deodara), bottlebrush (Callistemon sp.) and mayten (Maytenus boaria), among others.

Native but non-local trees in developed areas of the project site include coast redwood, Monterey pine (Pinus radiata), and black walnut (Juglans nigra). Coast live oak and valley oak are local native species that were observed in developed areas of the project site. Understory vegetation includes ornamental shrubs and forbs, such as English ivy (Hedera helix), pittosporum (Pittosporum eugenioides), pyracantha (Pyracantha sp.), oleander (Nerium oleander), star jasmine (Trachelospermum jasminoides), bristly Matilija poppy (Romneya trichocalyx), and deergrass (Muhlenbergia rigens).

A gravel lot in the north-central portion of the site supports sparse vegetation, including California poppy (Eschscholzia californica), coyote brush (Baccharis pilularis), sweet william flower (Dianthus barbatus), yarrow (Achillea millefolium), African daisy (Osteospermum sp.), Bermuda grass (Cynodon dactylon), and passion flower (Passiflora sp.). The gravel lot has a large mound that is covered with a ground cover membrane (Figure V.D-1, photograph 4).

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24 Muffly, Dave, 2011, op. cit.
The Glendenning Barn is currently unused but maintained by Apple; however, in the more recent past, it has been used to store equipment and appears to have been maintained by Hewlett Packard maintenance staff. Although holes large enough for swallows and bats were observed below the eaves of the barn’s roof, all of the holes appear to have been covered with wire mesh. No bird droppings or bat guano were observed near the holes. Active bat roosts often emit a foul odor, which was also not present at the barn. The barn was also frequented on a regular basis by Hewlett Packard staff, which would likely discourage nesting of birds and roosting of bats.

Most wildlife species that use developed habitats are generalists that have adapted to human-modified environments, although the species present vary depending on the type and diversity of vegetation in an area. Species that inhabit industrial and commercial areas are able to use ornamental landscaping as foraging habitat and/or escape cover, and some are able to exploit building crevices, rooftops, and/or ledges on buildings for nesting and/or roosting. Bird species observed during LSA’s reconnaissance-level survey within this developed portion of the project site consist of red-tailed hawk (*Buteo jamaicensis*), black phoebe (*Sayornis nigra*), lesser goldfinch (*Carduelis psaltria*), chestnut-backed chickadee (*Poecile rufescens*), yellow-rumped warbler (*Dendroica coronata*), Anna’s hummingbird (*Calypte anna*), and American crow (*Corvus brachyrhynchos*). Other bird species expected to occur include rock pigeon (*Columba livia*), European starling (*Sturnus vulgaris*), house finch (*Carpodacus mexicanus*), and house sparrow (*Passer domesticus*).

Mammal species expected to occur in developed habitats include Virginia opossum (*Didelphis virginiana*), eastern gray squirrel (*Sciurus carolinensis*), Botta’s pocket gopher (*Thomomys bottae*), house mouse (*Mus musculus*), Norway rat (*Rattus norvegicus*), house rat (*Rattus rattus*), northern raccoon (*Procyon lotor*), and striped skunk (*Mephitis mephitis*). The eastern gray squirrel was the only mammal observed in the developed areas of the project site during LSA’s reconnaissance-level survey.

**Riparian Vegetation.** Riparian vegetation is dominated by species that are adapted to wet stream banks, floodplains, and creek terraces that are seasonally flooded or permanently saturated by freshwater. As part of the SCVWD Calabazas Creek Capacity Improvement Project (Phase 4), the reach of Calabazas Creek within the project site was reconstructed with rock-filled gabions and wide box culverts, partially lined with concrete (approximately 50-80 feet upstream and 180-250 feet downstream of the culverts), and planted with native riparian plantings (Figure V.D-1, photographs 1 and 2). Trees observed along Calabazas Creek during LSA’s reconnaissance-level survey include coast live oak, valley oak, California buckeye (*Aesculus californica*), and willow (*Salix sp.*). Observed shrubs include coyote brush, California wild rose (*Rosa californica*), California blackberry (*Rubus ursinus*), snowberry (*Symphoricarpos albus*), and blue elderberry (*Sambucus mexicana*). Most of these plants are relatively small in size and were planted as part of the creek improvement project, which was completed in 2007. Several mature trees and shrubs are present near the chain-link fence along the southern end of the creek segment. Understory vegetation includes annual non-native grass species and native and non-native shrubs and forbs, such as sweet fennel (*Foeniculum vulgare*) and smilo grass (*Piptatherum miliaceum*).

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26 Ibid.
1. View of Calabazas Creek taken from eastern boundary of project site.

2. View of Calabazas Creek taken from southern boundary of project site.

3. Typical view of the developed portion of project site and associated landscaping.

4. View of gravel lot in north-central portion of project site.

5. View of landscaping near the Glendenning Barn.

6. View of planted coast redwood trees.
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Many of the same wildlife species that occur in the developed habitats of the site likely also use riparian vegetation, since the Calabazas Creek riparian vegetation consists of a relatively narrow corridor within an otherwise urbanized landscape. Nevertheless, the somewhat higher structural diversity of the riparian vegetation along portions of Calabazas Creek provides habitat for additional understory species.

Bird species that may inhabit the riparian vegetation include Cooper’s hawk (*Accipiter cooperii*), mourning dove (*Zenaida macroura*), Anna’s hummingbird, downy woodpecker (*Picoides pubescens*), black phoebe, western scrub-jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), chestnut-backed chickadee, bushtit (*Psaltriparus minimus*), California towhee (*Melospiza crissalis*), and American goldfinch (*Carduelis tristas*). During the winter, the resident bird community may be supplemented by species that breed farther north or at higher elevations, such as cedar waxwing (*Bombycilla cedrorum*), yellow-rumped warbler, and golden-crowned sparrow (*Zonotrichia atricapilla*). Bird species observed along the riparian corridor during LSA’s reconnaissance-level survey consisted of black phoebe, American goldfinch, mourning dove, Anna’s hummingbird, and bushtit. In addition to the bird species observed by LSA, WRA observed red-tailed hawk, American crow, house finch, house sparrow, California towhee, American robin (*Turdus migratorius*), bushtit, house wren (*Troglodytes aedon*), song sparrow (*Melospiza melodia*), and spotted towhee (*Pipilo maculatus*) during the June 2011 survey of the Calabazas Creek riparian corridor.27

The increased leaf litter, moisture content, and, in some areas, understory vegetation, of woodland habitats provides increased foraging opportunities and cover for amphibians and reptiles, such as western fence lizard (*Sceloporus occidentalis*), Sierran treefrog (*Pseudacris sierra*), arboreal salamander (*Aneides lugubris*), and California slender salamander (*Batrachoseps attenuatus*). WRA observed western fence lizard during the survey of the Calabazas Creek riparian corridor.28

Mammal species expected to occur within the on-site riparian habitat include Virginia opossum, Botta’s pocket gopher, house mouse, northern raccoon, and striped skunk. The linear nature of the riparian vegetation within the project site facilitates some movement and dispersal for these species through the urban environment, although the presence of a fence along both sides of the creek restricts movement into the project site. Bat species, such as big brown bat (*Eptesicus fuscus*), hoary bat (*Lasiurus cinereus*), (winter and migration only), Townsend’s big-eared bat (*Corynorhinus townsendii*), pallid bat (*Antrozous pallidus*), Brazilian free-tailed bat (*Tadarida brasiliensis*), and Yuma myotis (*Myotis yumanensis*) may also forage along the riparian corridor, although the overall urban nature of the site and lack of suitable roosts makes it unlikely that the isolated corridor is used by bats on a regular basis.

**Creek.** Approximately 1,550 linear feet (approximately 0.3 mile) of Calabazas Creek occurs in the project site.29 This creek originates in the Santa Cruz Mountains and discharges into San Francisco Bay through Guadalupe Slough. The portion of the creek within the project site includes concrete box culverts at the upstream and downstream ends of the creek where it passes under I-280 and North Tantau Avenue, respectively, and comprises approximately 1,000 feet of shallow intermittent stream channel with rocks, sandy substrate, and herbaceous vegetation. Plant species observed along the

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27 Ibid.
28 Ibid.
29 Ibid.
channel consist of fringed willowherb (*Epilobium ciliatum*), watercress (*Nasturtium officinale*), rabbits-foot grass (*Polypogon monspeliensis*), smartweed (*Polygonum punctatum*), curly dock (*Rumex crispus*), wild radish (*Raphanus sativus*), sweet fennel, and wild oats (*Avena fatua*).

Calabazas Creek is known to support both native and introduced fish species. Fish species known to occur in the Calabazas Creek watershed include the native threespine stickleback (*Gasterosteus aculeatus*) and the introduced goldfish (*Carassius auratus*) and western mosquitofish (*Gambusia affinis*).³⁰

Many of the same amphibian species that occur in developed habitats may use Calabazas Creek for breeding, foraging, and dispersal. A Sierran treefrog was heard calling from the creek channel during LSA’s reconnaissance-level survey.

Within the urban environment, birds such as mallard (*Anas platyrhynchos*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), and great blue heron (*Ardea herodias*) are most likely to be found along creeks. Creeks also provide ideal foraging habitat for tree swallows (*Tachycineta bicolor*), cliff swallows (*Petrochelidon pyrrhonata*), barn swallows (*Hirundo rustica*), and black phoebes. A mallard was observed in the Calabazas Creek channel during LSA’s reconnaissance-level survey.

Mammals that may inhabit the riparian vegetation may also forage or drink from Calabazas Creek. Fresh northern raccoon tracks were observed along the lower bank of the creek channel during LSA’s reconnaissance-level survey.

(2) **Special-Status Species.** This section outlines special-status species and sensitive habitats within the project site.

For the purposes of this report, special-status species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under the federal Endangered Species Act;
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under the California Endangered Species Act;
- Plant species on Lists 1A, 1B, and 2 in the CNPS Inventory of Rare and Endangered Plants;
- Animal species designated as Species of Special Concern or Fully Protected by CDFW;
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the *CEQA Guidelines*; and
- Species that are considered a taxa of special concern by the relevant local agencies.

**Special-Status Plants.** Table V.D-1 lists seven special-status vascular plant species that were evaluated for their potential to occur on the project site: Santa Cruz manzanita (*Arctostaphylos andersonii*), Schreiber's manzanita (*A. glutinosa*), Ohlone manzanita (*A. ohloneana*), Pajaro manzanita (*A. pajaroensis*), Kings Mountain manzanita (*A. regismontana*), Bonny Doon manzanita (*A. *

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silvicola), and western leatherwood (Dirca occidentalis). None of these seven plant species were observed during WRA’s survey of the study area conducted on June 23 and July 19, 2011, or during LSA’s reconnaissance-level survey on October 19, 2011, which is expected since these species are generally found only in natural areas, whereas the study area is mostly landscaped and developed. Several other special-status plant species, many of which were evaluated within the Biological Resources Assessment for the project, were removed from further consideration due to the lack of suitable habitat or soil substrates (i.e., chaparral, salt marsh, vernal pools, serpentine soils) at the project site.

Plants removed from consideration in the EIR due to the lack of suitable habitat on the project site include: San Mateo thorn-mint (Acanthomintha duttonii), San Francisco onion (Allium peninsulare var. franciscanum), alkali milk-vetch (Astragalus tener var. tener), brittlescale (Atriplex depressa), San Joaquin spearscale (Atriplex joaquiniana), lesser saltscale (Atriplex minuscula), Santa Cruz Mountains pussypaws (Calyptridium parryi var. Hesseae), Congdon’s tarplant (Centromadia parryi ssp. congonii), robust spineflower (Chorizanthe robusta var. robusta), Ben Lomond spineflower (Chorizanthe pungens var. Hartwegiana), Mt. Hamilton thistle (Cirsium fontinale var. campylophylus), fountain thistle (Cirsium fontinale var. fontinale), lost thistle (Cirsium praeteriens), San Francisco collinsia (Collinsia multicolor), Point Reyes bird’s-beak (Cordylanthus maritimus ssp. palustris), Santa Clara Valley dudleya (Dudleya abramsii ssp. setchellii), Ben Lomond buckwheat (Eriogonum nudum var. decurrens), San Mateo woolly sunflower (Eriophyllum latilobum), Hoover's button-celery (Eryngium aristulatum var. hooveri), Santa Cruz wallflower (Erysimum teretifolium), fragrant fritillaria (Fritillaria liliacea), short-leaved evax (Hesperevax sparsiflora var. brevifolia), Santa Cruz cypress (Hesperocyparis abramsiana var. abramsiana), Marin western flax (Hesperolinon congestum), Loma Prieta hoita (Hoita strobilina), Contra Costa goldfields (Lasthenia conjugens), legenere (Legenerelimos), smooth lessingia (Lessingia micradenia var. glabrata), arcuate bush mallow (Malcothamnus arcuatus), Davidson's bush-mallow (Malacothamnus davidsonii), Hall’s bush mallow (Malacothamnus hallii), robust monardella (Monardella villosa ssp. globosa), woodland wooly-threads (Monolopia gracilens), prostrate vernal pool navarretia (Navarretia prostrata), Kellman's bristle moss (Orthotrichum kellmanii), Dudley's lousewort (Pedicularis dudleyi), Santa Cruz Mountains beardtongue (Penstemon rattanii var. kleei), white-rayed pentachaeta (Pentachaeta bellidiflora), white-flowered rein orchid (Piperia candida), hairless popcorn-flower (Plagiobothrys glaber), San Francisco campion (Silene verecunda ssp. verecunda), Santa Cruz microseris (Stebbinsoseris decipiens), Metcalf Canyon jewelflower (Streptanthus albidus ssp. albidus), most beautiful jewelflower (Streptanthus albidus ssp. peramoenus), California seablite (Suaeda clairformica), and caperfruit tropidocarpum (Tropidocarpum capparidum).

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31 WRA, Inc. 2012, op. cit.
32 Ibid.
Table V.D-1: Special-Status Species Known to Occur or Potentially Occurring in the Vicinity of the Project Site

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential for Occurrence within Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plants</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Santa Cruz manzanita <em>Arctostaphylos andersonii</em></td>
<td>1B</td>
<td>Broadleaved upland forest, chaparral, openings and edges of north coast coniferous forest; 60-730 meters (elevation); blooms November-April.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Schreiber's manzanita <em>Arctostaphylos glutinosa</em></td>
<td>1B</td>
<td>Closed-cone coniferous forest, chaparral, on diatomaceous shale soils; 170-685 meters; blooms March-April.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Ohlone manzanita <em>Arctostaphylos ohloneana</em></td>
<td>1B</td>
<td>Closed-cone coniferous forest, coastal scrub on siliceous shale soils; 450 - 530 meters; blooms February-March.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Pajaro manzanita <em>Arctostaphylos pajaroensis</em></td>
<td>1B</td>
<td>Chaparral on sandy soils; 30-760 meters; blooms December-March.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Kings Mountain manzanita <em>Arctostaphylos regismontana</em></td>
<td>1B</td>
<td>Broadleaved upland forest, chaparral, north coast coniferous forest, on granitic or sandstone substrate; 305-730 meters; blooms January-April.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Bonny Doon manzanita <em>Arctostaphylos silvicola</em></td>
<td>1B</td>
<td>Chaparral, closed-cone coniferous forest, lower montane coniferous forest; restricted to inland marine sands; 120-390 meters; blooms February-March.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
<tr>
<td>Western leatherwood <em>Dirca occidentalis</em></td>
<td>1B</td>
<td>Brushy slopes, mesic sites, mostly in mixed evergreen and foothill woodland communities in broadleafed upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, north coast coniferous forest, riparian forest, riparian woodland; 30-550 meters; blooms January-March.</td>
<td>Not present. The vegetative form of this shrub species was not observed during WRA’s survey of the Calabazas Creek study area. No suitable habitat present within the landscaped portions of the project site.</td>
</tr>
</tbody>
</table>
Table V.D-1: Special-Status Species Known to Occur or Potentially Occurring in the Vicinity of the Project Site

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</thead>
<tbody>
<tr>
<td><strong>Fish</strong></td>
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<td></td>
</tr>
<tr>
<td>Coho salmon (Central California Coast ESU) Oncorhynchus kisutch</td>
<td>FE, SE</td>
<td>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</td>
<td>Does not occur. Not known to occur in Calabazas Creek.33</td>
</tr>
<tr>
<td>Steelhead (Central California Coast ESU) Oncorhynchus mykiss</td>
<td>FT</td>
<td>Coastal streams from Russian River south to Aptos Creek (Santa Cruz Co.), including streams tributary to San Francisco and San Pablo Bays.</td>
<td>Does not occur. Although known to occur in the early 1970s, due to barriers to migration, steelhead are considered extinct in Calabazas Creek.34,35</td>
</tr>
<tr>
<td><strong>Amphibians</strong></td>
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<td></td>
</tr>
<tr>
<td>California red-legged frog Rana draytonii</td>
<td>FT, SSC</td>
<td>Ponds, streams, drainages and associated uplands; requires areas of deep, still, and/or slow-moving water for breeding.</td>
<td>Does not occur. Does not occur in the segment of Calabazas Creek on the site due to lack of deep pools and vegetation cover. Not known to occur in the channelized portions of Calabazas Creek.36 Not observed during SCVWD surveys of Calabazas Creek conducted in 2005. Study for Calabazas Creek upstream of the project site determined red-legged frogs to be absent due to the lack of suitable habitat and negative results of protocol-level surveys conducted in 2007.37</td>
</tr>
<tr>
<td><strong>Reptiles</strong></td>
<td></td>
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</tr>
<tr>
<td>Western pond turtle Actinemys marmorata</td>
<td>SSC</td>
<td>Ponds, streams with deep pools, drainages and associated uplands for egg laying.</td>
<td>Unlikely to occur due to lack of suitable pools and basking sites.</td>
</tr>
</tbody>
</table>

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34 Leidy, R. A., G. S. Becker, and B. 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.
35 Ibid.
36 California Department of Fish and Wildlife, 2011. *California Natural Diversity Data Base Computer Printout for Species Occurrences Within a 5-mile Radius of the Project Site.* Sacramento, CA.
Table V.D-1: Special-Status Species Known to Occur or Potentially Occurring in the Vicinity of the Project Site

<table>
<thead>
<tr>
<th>Species</th>
<th>Status</th>
<th>Habitat</th>
<th>Potential for Occurrence within Project Site</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Birds</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>White-tailed kite <em>Elanus leucurus</em></td>
<td>CFP</td>
<td>Open grasslands, meadows, or marshes; requires dense-topped trees or shrubs for nesting and perching.</td>
<td>Unlikely to occur due to lack of suitable foraging habitat in the vicinity.</td>
</tr>
<tr>
<td>Northern harrier <em>Circus cyaneus</em></td>
<td>SSC</td>
<td>Nests in wet meadows and marshes, forages over open grasslands and agricultural fields.</td>
<td>May occasionally fly or forage over the project site, but not expected to remain for long periods or breed within project site.</td>
</tr>
<tr>
<td>American peregrine falcon <em>Falco peregrinus</em></td>
<td>SE, CFP</td>
<td>A variety of open habitats, including coastlines, mountains, marshes, bay shorelines, and urban areas. Nests on cliffs, bridges, and tall buildings.</td>
<td>May fly or forage over the project site, but not expected to remain for long periods or breed within the project site.</td>
</tr>
<tr>
<td>Long-eared owl <em>Asio otus</em></td>
<td>SSC</td>
<td>Conifer, oak, riparian, pinyon-juniper, and desert woodlands adjacent to grasslands, meadows, or shrublands.</td>
<td>Does not occur due to lack of high quality suitable habitat, such as dense woodlands; confirmed nesting in Santa Cruz Mountains in 1990s.</td>
</tr>
<tr>
<td><strong>Mammals</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Townsend’s big-eared bat <em>Corynorhinus townsendii</em></td>
<td>SSC</td>
<td>Riparian woodlands, wetlands, forest edges, and open woodlands; roosts in caves, mines, and old buildings.</td>
<td>May occasionally forage over Calabazas Creek, but not expected to roost on the project site due to the lack of suitable roost sites. No known active roost sites in vicinity.</td>
</tr>
<tr>
<td>Pallid bat <em>Antrozous pallidus</em></td>
<td>SSC</td>
<td>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 roosts in caves and rock crevices.</td>
<td>May occasionally forage over Calabazas Creek, but not expected to roost on the project site due to the lack of suitable roost sites. No known active roost sites in vicinity.</td>
</tr>
<tr>
<td>San Francisco dusky-footed woodrat <em>Neotoma fuscipes annectens</em></td>
<td>SSC</td>
<td>Forest habitats of moderate canopy and moderate to dense understory.</td>
<td>Does not occur due to lack of suitable mature woodland habitat and project site’s isolation from larger tracts of woodland habitat.</td>
</tr>
</tbody>
</table>

* Status: 
  FE = Federally Endangered
  FT = Federally Threatened
  ST = State endangered
  SSC = California Species of Special Concern
  CFP = California Fully Protected Species
  1B = California Rare Plant Rank 2: Rare, threatened or endangered in California and elsewhere

b ESU = Evolutionarily Significant Unit
Special-Status Animals. Table V.D-1 lists 11 special-status animals that have the potential to occur in the general vicinity of the project site. Several other special-status animal species, some of which were evaluated within the Biological Resources Assessment \(^{38}\) for the project, were removed from further consideration due to the lack of suitable habitat (i.e., chaparral, salt marsh, vernal pools) at the project site. The species removed from further consideration include vernal pool fairy shrimp (Lepidurus packardi), Bay checkerspot butterfly (Euphydryas editha bayensis), Zayante band-winged grasshopper (Trimerotropis infantilis), green sturgeon (Acipenser medirostris), California tiger salamander (Ambystoma californiense), foothill yellow-legged frog (Rana boylii), San Francisco garter snake (Thamnophis sirtalis tetrateaenia), redhead (Aythya americana), American white pelican (Pelecanus erythrorhynchos), California brown pelican (Pelecanus occidentalis Californicus), bald eagle (Haliaeetus leucocephalus), golden eagle (Aquila chrysaetos), marbled murrelet (Brachyramphus marmoratus), California black rail (Laterallus jamaicensis coturniculus), California clapper rail (Rallus longirostris obsoletus), western snowy plover (Charadrius alexandrinus nivosus), California least tern (Sternula antillarum browni), black skimmer (Rynchops niger), burrowing owl (Athene cunicularia), short-eared owl (Asio flammeus), loggerhead shrike (Lanius ludovicianus), San Francisco common yellowthroat (Geothlypis trichas sinuosa), Bryant’s savannah sparrow (Passerculus sandwichensis alaudinus), Alameda song sparrow (Melospiza melodia pusillula), tricolored blackbird (Agelaius tricolor), salt marsh wandering shrew (Sorex vagrans halicoetes), salt marsh harvest mouse (Reithrodontomys raviventris), western red bat (Lasiurus blossevillii), American badger (Taxidea taxus), and ringtail (Bassariscus astutus). Table V.D-1 also does not include wildlife species, such as hoary bat (Lasiurus cinereus), and Yuma myotis (Myotis yumanensis), that were evaluated in the Biological Resources Assessment, \(^{39}\) but not considered to be special-status species under CEQA.

Due to the lack of high quality suitable habitat and prior disturbance at the project site, no special-status animal species are expected to occur at the site. Calabazas Creek is not known to support steelhead (Oncorhynchus mykiss) and coho salmon (Oncorhynchus kisutch) due to the absence of high quality habitat, such as pools, cover, and adequate stream flows, and barriers to passage along the lower portions of the creek. \(^{40,41}\) San Francisco dusky-footed woodrat (Neotoma fuscipes annectens) is unlikely to occur on the site due to lack of suitable mature woodland habitat and the site’s isolation from larger tracts of woodland habitat. Some special-status bats could forage on or over the project site, but these bats are not expected to roost in the trees on the site due to the small size of the trees and lack of suitable cavities. The following special-status animal species may occasionally pass through or forage within the project site, but are not expected to breed on the project site or remain on the site for prolonged periods of time: white-tailed kite (Elanus leucurus), American peregrine falcon (Falco peregrinus anatum), northern harrier (Circus cyaneus), long-eared owl (Asio otus), pallid bat, and Townsend’s big-eared bat. The California red-legged frog (Rana draytonii) and western pond turtle (Actinemys marmorata) are not expected to inhabit the segment of Calabazas Creek on the project site due to the lack of suitable habitat conditions, such as deeper pools and vegetative cover. \(^{42}\) Additional information on these two species and their habitat requirements is discussed in further detail below.

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\(^{38}\) WRA, Inc. 2012, op. cit.

\(^{39}\) Ibid.


\(^{41}\) Leidy, R. A, 2007, op. cit.

\(^{42}\) WRA, Inc. 2012, op. cit.
California Red-Legged Frog (Federally Threatened). The California red-legged frog has been extirpated or nearly extirpated from 70 percent of its former range. Population declines of this species have been attributed to a variety of factors, with habitat loss and predation by non-native aquatic predators (e.g., bullfrogs, crayfish, other non-native fishes) typically implicated as the primary threats. California red-legged frog occurs in and along freshwater marshes, streams, ponds, and other semi-permanent water sources. Optimal habitat contains dense emergent or shoreline riparian vegetation closely associated with deep (i.e., greater than 2.3 feet), still, or slow-moving water. Cattails (Typha spp.), bulrushes (Scripus spp.), and arroyo willows (Salix lasiolepis) provide the habitat structure that seems to be most suitable for California red-legged frog. Although the species can occur in intermittent streams and ponds, it is unlikely to persist in streams in which all surface water disappears. Suitable breeding ponds and pools usually have a minimum depth of 20 inches, but California red-legged frog sometimes breeds successfully in pools as shallow as 10 inches. Regardless of water depth, suitable breeding habitat must contain water during the entire development period for eggs and tadpoles.

California red-legged frog has been observed in the upper reaches of Calabazas Creek near Mt. Eden Road in Saratoga, approximately 4.9 miles from the site, but is not expected to occur in the channelized portion of the creek that occurs on the project site due to reduced water quality from urban stormwater, lack of suitable breeding pools, and lack of natural streamside vegetation. The on-site reach of the creek is surrounded by dense urban development, isolating it from natural habitat that could support native species such as California red-legged frog. Significant portions of the creek have been placed in culverts (approximately 700- to 1,000-foot sections) upstream of the project site, further reducing the likelihood that native species from natural areas upstream would occur on the on-site section of the creek. SCVWD did not observe red-legged frog in Calabazas Creek during surveys conducted in 2005, and results from a protocol-level habitat assessment conducted in 2007 determined that no suitable habitat was present along Calabazas Creek in a channelized portion upstream from the project site. Because habitat conditions are similar or of lower quality than the portions of the creek surveyed in 2005 and 2007, it is not likely that California red-legged frogs inhabit the on-

44 Ibid.
45 Ibid.
47 California Department of Fish and Wildlife, 2011. California Natural Diversity Data Base Computer Printout for Species Occurrences Within a 5-mile Radius of the Project Site. Sacramento, CA.
49 WRA, Inc. 2012, op. cit.
site portion of Calabazas Creek. Further, the 2012 study conducted by WRA did not identify any California red-legged frogs or suitable on-site breeding habitat.51

Western Pond Turtle (California Species of Special Concern). Western pond turtle occurs in a wide variety of aquatic habitats, including ponds, lakes, marshes, rivers, streams, and irrigation ditches that typically have a rocky or muddy bottom and contain stands of aquatic vegetation.52 The presence or absence of pond turtle at a given aquatic site is largely dependent on the availability of suitable basking sites and adjacent upland habitat for egg-laying (e.g., sandy banks or grassy open fields) and over-wintering. Nests are typically dug in dry substrate with a high clay or silt fraction since the female moistens the site where she will excavate the nest prior to egg-laying.53 Hatchlings require shallow water habitat with relatively dense submergent or short emergent vegetation in which to forage.54

The project site’s portion of Calabazas Creek provides limited habitat for pond turtle, due to the lack of suitable basking sites (sandy banks and/or rocks), vegetative cover, and deep pools. The surrounding development has also likely resulted in the elimination of suitable upland habitat for egg-laying, reducing the likelihood that the species is present in the urbanized portion of the creek. The closest CNDDB occurrence of the species is approximately 4.7 miles from the project site in the Guadalupe River in San Jose.55

(3) Sensitive Habitats. Special plant communities and jurisdictional waters are described below.

Special Plant 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 publication List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Database.56 These communities are sometimes addressed by lead or trustee agencies in CEQA documents, but generally are not afforded the same protection as CNPS List 1B and 2 plant species. Many special plant communities support special-status plants and animals and are addressed under CEQA as habitat for those species. No such special plant communities occur on the site.

51 WRA Inc. 2012, op. cit.
55 California Department of Fish and Wildlife, 2011. California Natural Diversity Data Base Computer Printout for Species Occurrences Within a 5-mile Radius of the Project Site. Sacramento, CA.
56 California Department of Fish and Wildlife, 2003. List of California Terrestrial Natural Communities Recognized by the California Natural Diversity Data Base. Wildlife and Habitat Data Analysis Branch, Vegetation Classification and Mapping Program, California Department of Fish and Wildlife, Sacramento.
**Jurisdictional Waters.** Although a formal jurisdictional delineation of wetlands and other waters of the U.S. and waters of the State was not conducted for this study, the portions of Calabazas Creek below the Ordinary High Water Mark would fall under Corps and RWQCB jurisdiction pursuant to Sections 401 and 404 of the federal Clean Water Act and the Porter-Cologne Water Quality Control Act. Modifications to the bed, bank, or riparian vegetation along Calabazas Creek are also expected to be regulated by CDFW pursuant to Section 1602 of the FGC. However, unlike Corps jurisdiction, which is limited to the Ordinary High Water Mark, CDFW requires activities which occur within the top of the bank, or the outer drip line of riparian vegetation, whichever is greater, to be authorized under a Streambed Alteration Agreement.

2. Impacts and Mitigation Measures

The following section describes potential impacts to biological resources that could result from implementation of the proposed project. This section begins with the criteria of significance, which establish thresholds to determine whether an impact is significant. The latter part of this section identifies biological resource impacts that could result from the proposed project. Mitigation measures are identified to reduce such impacts, as appropriate.

a. **Significance Criteria.** The project would have a significant impact on biological resources if it would:

   - Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
   - Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS;
   - Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act or State protected wetlands as defined by the Porter-Cologne Water Quality Control Act. Such wetlands include but are not limited to, marsh, vernal, pool, coastal etc. Such adverse effects include but are not limited to direct removal, filling, hydrological interruption, excavation, or other means;
   - 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;
   - Conflict with any local policies or ordinances protecting biological resources, including the City of Cupertino’s Protected Tree Ordinance; or
   - Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan.

b. **Less-Than-Significant Impacts.** The developed nature of the site reduces the potential of the project to adversely affect threatened, endangered, or otherwise protected plant and animal species. Rare plants that grow in the region of the project site are associated with the following habitat types:

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57 Substantial effects could occur to isolated wetlands not jurisdictional under the federal CWA; however, such isolated wetlands would be subject to State jurisdiction under the Porter-Cologne Water Quality Control Act.
broadleaved and coniferous forests, chaparral, vernal pools, wetlands, marshes, gravelly alluvium, sandy terraces, brushy slopes, and habitats with serpentine and alkaline substrates. None of these habitat types occur on the project site due to its prior development as a business park and landscaping with ornamental plants. Because suitable native habitats for rare plants do not occur on the project site, special-status plants known from the region would not occur on this site and no impacts to these species would occur. No wetlands or waters of the U.S. would be filled as a result of the project.

The project does not include encroachment into the Calabazas Creek corridor. The gated existing concrete maintenance access pathways (one north of I-280 and one adjacent to North Tantau Avenue) would be maintained, as well as a 50-foot buffer from the top of the bank. To the extent that planting occurs within the buffer, the applicant would follow guidelines and standards for land use near streams from both the California Native Plant Society and the SCVWD’s Qualifying Plant List. The project only includes cultivars of native species along the creek. Planting is designed to support creek access for maintenance. All plans for any planting would be reviewed with the SCVWD and require a permit prior to final approval.

In addition, the proposed project would not affect any existing wildlife movement corridors, most notably the Calabazas Creek stream channel, because the project would maintain all current fencing, planting and setbacks from the creek.

As noted previously, the project site (and the entirety of the City of Cupertino) are located adjacent to but outside the boundaries of the Santa Clara Valley Habitat Plan. The only cities within the Santa Clara Valley Habitat Conservation Plan/Natural Community Conservation Plan area are the cities of San Jose, Morgan Hill, and Gilroy. Therefore, the Apple Campus 2 Project is not covered by the Plan and would not be required to pay Plan development fees, including the Nitrogen Deposition Fee.

However, in response to the environmental concerns raised by the Habitat Plan, Apple has voluntarily agreed to pay the Nitrogen Deposition Fee, which, assuming the project generates 35,106 net new daily trips, would amount to a fee of $126,381.60. This amount would be paid to the Implementing Entity of the Habitat Conservation Plan, which is expected to be a Joint Powers Authority made up of the cities of San Jose, Gilroy and Morgan Hill; Santa Clara Valley Water District; Valley Transportation Authority; and Santa Clara County. Apple would pay the Nitrogen Deposition Fee upon issuance of the grading permit for the project, unless the Joint Powers Authority has not yet been formed. In that case, Apple would pay the fee upon formation of the Joint Powers Authority. The project site is not located within any other habitat conservation plan or natural community conservation plan and would not conflict with any such plan.

c. **Significant Impacts.** Implementation of the proposed project could affect special-status animals, nursery sites, and protected trees. The following discussion describes and evaluates potential significant impacts to biological resources and identifies measures that would mitigate these impacts to a less-than-significant level.

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58 Santa Clara County, 2012. Ibid.

Special-Status Animals and Nursery Sites. Table V.D-1 lists 11 special-status wildlife species and evaluates their potential to occur on or in the vicinity of the site. Six of these species (western pond turtle, white-tailed kite, northern harrier, American peregrine falcon, pallid bat, and Townsend’s big-eared bat) could occasionally occur on the site in marginally suitable habitat. San Francisco dusky-footed woodrat is not expected to occur on the site due to the lack of mature woodland habitat on the site and isolation of the reach of Calabazas Creek on the site from other natural areas. Long-eared owl is not expected to occur on the site due to the lack of high quality suitable habitat, such as dense woodlands. Likewise, California red-legged frog is not expected to occur on the site due to the lack of suitable cover, deep pools within the creek for breeding and larval development, and isolation of the site from natural areas that support red-legged frog. The two remaining species evaluated in Table V.D-1, coho salmon and steelhead, are not known to occur on the site due to barriers to migration along Calabazas Creek downstream of the site.60,61

Although western pond turtle could disperse through this reach of Calabazas Creek, this species is not expected to occur on the site with any regularity. Bat species are not expected to roost in the Calabazas Creek channel box culverts, riparian vegetation, or landscaped trees on the site due to the lack of quality foraging habitat, the small tree size within the riparian corridor, and the proximity of human disturbance to the landscaped trees on the site. Although not every tree was inspected, no suitable cavities were observed in the trees during LSA’s reconnaissance-level survey. Impacts are discussed below for protected bird species.

Impact BIO-1: The proposed project may result in the destruction or abandonment of nests occupied by special-status or non-special-status bird species that are protected under the Migratory Bird Treaty Act and Fish and Game Code. (S)

The riparian vegetation and developed habitat on the project site provide nesting habitat for native bird species, including eggs and young birds in active nests. Intentional actions which kill or take these birds are regulated under the MBTA and/or FGC. Although no active or inactive nests were observed during LSA’s reconnaissance-level survey, several protected bird species were observed foraging on the project site and have the potential to nest in the existing landscaping and riparian vegetation on the site. As of March 2013, there are currently 4,506 trees at the site.62 The proposed project would retain in-place a minimum of 800 trees and would transplant a minimum of 90 trees on the project site. A maximum of 3,620 trees would be removed from the site. The trees that would be preserved are primarily located along the periphery of the site and along the Calabazas Creek riparian corridor. At least 6,200 trees would be planted on the site, resulting in a net increase of at least 2,494 trees on the site. In addition, trees along street rights-of-way may be removed or impacted due to road widening associated with the project or improvements required by mitigation measures identified in Section V.I, Transportation and Circulation. Grading and construction activities near nests during the nesting season could cause nest abandonment and/or loss of eggs or young during the breeding season and would represent a significant impact.

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62 As noted in Chapter III, Project Description, since collection of data on existing conditions and a tree census conducted in 2011, the number of trees on the project site may have changed as some have been removed due to poor health. Additionally, as project design and plans progress, the number of trees being removed and/or transplanted on site may change slightly.
Implementation of the following mitigation measure would reduce impacts to nesting common and special-status bird species to a less-than-significant level:

**Mitigation Measure BIO-1:** A qualified biologist shall conduct surveys prior to tree pruning, tree removal, transplantation, ground disturbing activities, or construction activities on the site to locate active nests containing either viable eggs or young birds. Preconstruction surveys are not required for tree removal, tree pruning, or construction activities outside the nesting period. If construction would occur during the nesting season (February 1 to August 31), preconstruction surveys shall be conducted no more than 14 days prior to the start of pruning, construction, or ground disturbing activities. Preconstruction surveys shall be repeated at 14-day intervals until construction has been initiated in the area after which surveys can be stopped. Locations of active nests containing viable eggs or young birds shall be described and protective measures implemented until the nests no longer contain eggs or young birds. Protective measures shall include establishment of clearly delineated exclusion zones (i.e., demarcated by uniquely identifiable fencing, such as orange construction fencing or equivalent) around each nest site as determined by a qualified wildlife biologist, taking into account the species of birds nesting on-site and their tolerance for disturbance. In general, exclusion zones shall be a minimum of 300 feet from the drip line of the nest tree or nest for raptors and 50 feet for passerines and other species. The active nest sites within an exclusion zone shall be monitored on a weekly basis throughout the nesting season to identify signs of disturbance or to determine if each nest no longer contains eggs or young birds. The radius of an exclusion zone may be increased by the project biologist if project activities are determined to be adversely affecting the nesting birds. Exclusion zones may be reduced by the project biologist only in consultation with CDFW. The protection measures shall remain in effect until the young have left the nest and are foraging independently or the nest is no longer active. For any project-related activities involving the removal of trees during the nesting season, a report shall be submitted to the City of Cupertino and CDFW once per year documenting the observations and actions implemented to comply with this mitigation measure. (LTS)

**Impact BIO-2:** New buildings that would be developed as part of the project could result in bird collisions. (S)

Avian injury and mortality resulting from collisions with buildings 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. In addition, buildings’ artificial lighting can interfere with some night-migrating birds. The frequency of bird collisions in any particular area depends on many factors, including local and migratory avian populations; densities and species composition; migration characteristics; resting and feeding patterns; habitat preferences; time of year; prevailing winds; and weather conditions.

The proposed project could result in bird collisions and mortalities due to the large percentage of glass proposed for use in campus buildings, the wide expanse of windows along the perimeter of the Main Building and some of the ancillary buildings, and the extensive landscaping proposed for the on-site open space. The project site is not located in a migratory bird flight path (thereby lessening the risk of interference with avian behavior and migration patterns) and any collisions that do result should not have a substantial adverse effect on sensitive species identified in Table V.D-1. Imple-
mentation of the following mitigation measure would reduce impacts associated with bird strikes to a less-than-significant level.

**Mitigation Measure BIO-2:** The project sponsor shall incorporate the following design features (developed through a review of bird-safe design guidelines\(^{63}\)) into the project to reduce bird collisions:

**Main Building and North Tantau Structures**

- From outside most buildings, glass often appears highly reflective, reproducing habitat and appearing attractive to some birds. To limit reflectivity and prevent exterior glass from attracting birds, the project shall utilize low-reflectivity glass (7 percent reflectivity, 0 percent ultra-violet transmittance). This low-reflectivity glass shall be used for the entirety of the building’s glass surface (not just the lower levels nearest trees where bird collisions may be the most common) to provide additional avian safety.
- The Main Building shall include 10-foot-wide awnings at each story (or a similar feature) to create “visual noise” by covering windows and muting image reflections.
- All indoor potted plants shall be placed away from the glass perimeter so that birds do not attempt to fly into the vegetation.
- All roof mechanical equipment shall be covered by low-profile angled roofing so that obstacles to bird flight are minimized.
- Interior light “pollution” shall be reduced during evening hours through the use of a lighting control system.

**Main Parking Structure and North Tantau Parking Structures**

- The above-grade parking structures shall be designed with open-air façades. No glass shall be utilized so birds can access open through-passages.

**Corporate Auditorium/Corporate Fitness Center**

- To limit reflectivity and prevent exterior glass from attracting birds, the project shall utilize low-reflectivity glass (7 percent reflectivity, 0 percent ultra-violet transmittance).
- Interior light “pollution” shall be reduced during evening hours through the use of a lighting control system.
- The Corporate Fitness Center shall include 5-foot wide awnings (or a similar feature) to create “visual noise” by covering windows and muting image reflections. (LTS)

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(2) Protected Trees. The following impact and associated mitigation measure address protected trees.

**Impact BIO-3:** The proposed project would result in the removal of trees that are protected under the City of Cupertino’s Tree Protection Ordinance, and could thus conflict with a local policy or ordinance protecting biological resources. (S)

The arborist reports identify 4,506 trees that meet the definition of protected trees under Chapter 14.18.035 of the Cupertino Municipal Code (all trees on the site are considered protected because they were “required to be planted or retained as part of an approved development application, building permit, tree removal permit, or code enforcement action”). According to the project plans, a maximum of 3,620 trees would be removed from the site, and other trees would be removed due to road widening at other locations in the City associated with the project or improvements required by mitigation measures identified in Section V.I, Transportation, Circulation and Parking. A minimum of 90 trees would be transplanted on-site. In a memorandum prepared by OLIN (the project’s lead landscape architect), Table 1 – Tree Transplant Schedule identifies all of the existing tagged trees to be transplanted and their status and future location. At least 6,200 new trees would be planted on the site, resulting in a net increase of at least 2,494 trees on-site (see Figure III-3, Existing and Proposed Trees in Chapter III, Project Description).

Implementation of the following mitigation measure would reduce impacts associated with removal of protected trees to a less-than-significant level.

**Mitigation Measure BIO-3:** Replacement/compensation of all protected trees shall be undertaken in accordance with the Review of the Consolidated Arborist Report for the Apple Campus 2 Project and City Municipal Code requirements, prior to the initiation of construction. Recommendations noted within the Review of the Consolidated Arborist Report for the Apple Campus 2 Project, as modified by the Adjustments to Response to the Review of the Consolidated Arborist Report per EIR Plan Revision and A Review of the Trees Recommended for Transplant at the Apple Campus 2 Project shall be implemented to the satisfaction of the Community Development Director. Protected trees that are damaged or removed during construction or roadway improvements shall be subject to replacement/compensation according to the City’s tree protection ordinance. However, replacement for removed trees subject to the City’s Protected Tree Ordinance shall be consistent with the requirements of Chapter 14.18 of the Protected Tree Ordinance. Trees that have been identified as being suitable for transplantation shall be relocated in accordance with the Tree Transplant Schedule approved by the Community Development Director. (LTS)

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65 Bench, Michael L., 2013, op. cit.


A. Cumulative Impacts. Development of the proposed project would not contribute to the cumulative regional loss of open lands/habitat which may support special-status species and sensitive communities. Due to prior disturbance and lack of suitable habitat at the project site, the proposed project is not likely to affect special-status species and sensitive habitats. The proposed project (including mitigation measures recommended in this EIR) would also not adversely affect the Calabazas Creek channel, other creek channels, and associated riparian vegetation. Existing wildlife movement corridors within the Calabazas Creek corridor and project site would not be affected by the proposed project. With implementation of the mitigation measures identified above, the project would not make a significant contribution to cumulative impacts to biological resources. In general, the impacts to biological resources that would result from the project would be confined to the project site.