
6. BIOLOGICAL RESOURCES

This EIR chapter describes biological resource implications of the proposed PSB project. The chapter addresses the specific biological resource concerns identified by the CEQA Guidelines-- i.e., would development under the proposed project have a substantial adverse effect on special-status species, sensitive natural habitat, protected wetlands, or wildlife or fish movement, or would it conflict with adopted policies or plans for protecting biological resources.¹

6.1 SETTING

6.1.1 Natural Communities in Palo Alto

Palo Alto encompasses a variety of natural plant communities amidst a densely built environment. The plant communities provide habitat for wildlife species. The City limits extend from the San Francisco bay wetlands to the Santa Cruz mountains, including several microclimates² and, as a result, several habitats. The undeveloped land near San Francisco Bay (in the area known as the “Baylands”) and undeveloped land in the western hills contain undisturbed plant communities and habitat for a variety of species. The natural vegetation has been substantially altered in the developed areas of the city, leaving the urban forest as the dominant habitat. Some of the stream corridors in the developed portions of the city also support natural vegetation.

Most of Palo Alto east of Interstate 280, including the PSB project site, is urban habitat. The “urban forest” is comprised of street trees, trees in parks, landscaping trees planted around public facilities, and trees on private property throughout the city. The city’s urban forest functions as a bridge for wildlife movement between the crest of the Santa Cruz Mountains and the baylands, particularly for birds. It provides cover, forage, and nesting habitat for common wildlife. The urban forest is well established in the older parts of the city, where mature street trees provide a dense canopy. There are more than 300 different species of trees on Palo Alto’s streets. However, the following five species make up almost 35 percent of the total trees planted: southern magnolia, London plane, American sweetgum, Modesto ash, and camphor. In the foothills the urban forest intersects with the natural forests.

6.1.2 PSB Project Site

There are multiple trees that surround the two surface parking areas that comprise the project site. These trees could provide nesting habitat for raptor species and habitat for sensitive bat species. Some raptor species, like Cooper’s hawk (*Accipiter cooperii*, a state species of special concern on its nesting sites) are specifically listed as sensitive, and all raptor species are

¹CEQA Guidelines, appendix G, item IV (a through f).

²Microclimate refers to localized environmental conditions. Because the City limits include the baylands, the Santa Cruz Mountains, and all of the terrain in between, there are several microclimatic situations that affect what plants and animals occur in that location.

protected while nesting by Fish and Game Code Section 3503.5. Sensitive bat species with potential for occurrence in large trees and groves include the pallid bat (*Antrozous pallidus*, a State species of special concern), Townsend's big-eared bat (*Plecotus townsendii*), and Myotis species. These bat species have no legal protection under federal or State Endangered Species Act, but may meet the criteria of section 15380 (Endangered, Rare or Threatened Species) of the CEQA Guidelines.

The environmental setting information below is taken directly from the Tree Survey Report prepared for the project (Tree Survey Report, Public Safety Building and Parking Garage, Parking Lots C-6 and C-7, Palo Alto, California; David L. Babby, Registered Consulting Arborist; March 17, 2016).

The tree survey report identified the type, amount, and condition of the 39 existing trees on and immediately adjacent to the project site, including both surface parking lots and the center street median along Birch Street. The survey also identified which trees are regulated as defined by Title 8 (Trees and Vegetation) of the Palo Alto Municipal Code (see section 6.2, Regulatory Setting – Local Regulations, below), and provided general guidelines to help avoid or mitigate impacts on any retained trees.

Thirty-nine (39) trees of 10 species were inventoried for the survey report. The most prevalent trees include:

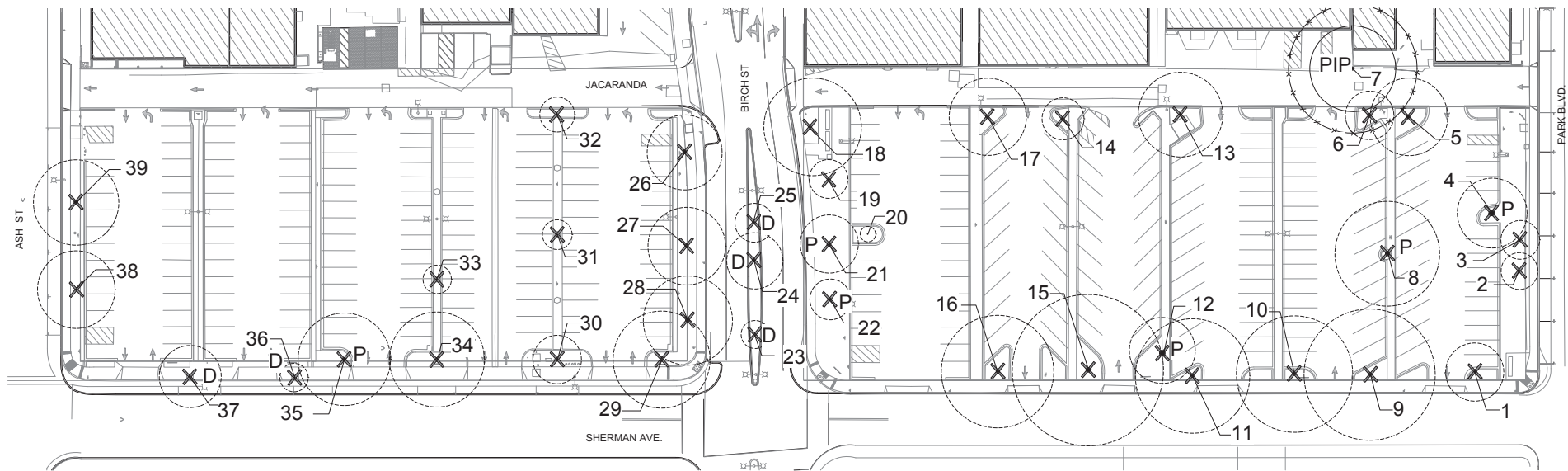
- holly oak (15 trees)
- Chinese elm (7 trees)
- coast redwood (7 trees)

Other surveyed trees include Palo Alto sweetgum (3), weeping bottlebrush (2), coast live oak, Colorado blue spruce, evergreen pear, London plane tree, and valley oak. All surveyed trees except one are publicly owned (i.e., on City property); the privately owned tree is in Jacaranda Lane.

The Palo Alto Municipal Code regulates specific types of trees on public and private property. Three categories included under the term "regulated trees" include "protected trees" (Municipal Code 8.10 - Tree Preservation and Management Regulations), "street trees" (Municipal Code 8.04 - Street Trees, Shrubs, and Plants), and "designated trees" (i.e., as identified by the City for a particular development site). See section 6.2 (Regulatory Setting, Local Regulations) below.

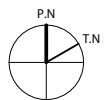
The survey report defines six (6) trees as protected trees because they are either coast live oak (1 tree) or valley oak (1 tree) with trunk diameter \geq 11.5 inches, or coast redwood (4 trees) with trunk diameter \geq 18 inches. Five (5) surveyed trees are designated street trees (i.e., in the public right-of-way). The six protected trees to be removed as part of the proposed PSB project (tree #4, 8, 12, 21, 22 and 35) have a canopy of 210 linear feet (representing the sum total of each tree's crown diameter).

Figure 6.1 includes information from the Tree Survey Report and reproduces Plan Sheet ARB 06.01. As shown on the figure, one of the 39 surveyed trees would be retained and protected in place – a Chinese elm in Jacaranda Lane (tree #7). Because protected and designated trees are proposed to be removed, Palo Alto Municipal Code Title 8 (Trees and Vegetation) would apply to the project.



SHEET NOTES

1. TREE NUMBERS REFERENCE ABORIST REPORT BY DAVID L. BABBY (CONSULTING ABORIST) DATED 3-17-16



LEGEND	
SYMBOL	DESCRIPTION
●	APPROX. TRUNK DIAMETER (EX)
○	APPROX. TREE CANOPY (EX)
X	TREE TO REMOVE
1	TREE NUMBER
●PIP	PROTECT IN PLACE
●P	PROTECTED TREE
●D	DESIGNATED STREET TREE
—x—x—x—x—x—	10 FT. OFFSET TREE PROTECTION FENCING

TOTAL TREES TO BE REMOVED	38
TOTAL PROTECTED TREES TO BE REMOVED	6
TOTAL DESIGNATED TREES TO BE REMOVED	5

Source: RossDrulisCusenbery Architecture

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Figure 6.1 - Tree Removal/Protection Plan

Palo Alto Public Safety Building and Parking Garage

6.2 REGULATORY SETTING

Biological resources in California are managed by a complex network of federal and State regulations, in addition to local ordinances (such as tree preservation ordinances). The California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) administer laws pertaining to the protection of threatened and endangered species, as well as permits for project activities occurring near or in waters of the State or United States. For marine environment species, the National Oceanic and Atmospheric Administration (NOAA)/National Marine Fisheries Service (NMFS) administers the same or similar laws as the CDFW and USFWS. This section describes the federal, State, and local regulations that provide protection and management of sensitive biological resources.

6.2.1 Federal Regulations

The federal laws that regulate the treatment of biological resources include the Federal Endangered Species Act, the Migratory Bird Treaty Act, and the Clean Water Act. The following describes these laws and their relevant principles.

Federal Endangered Species Act. The United States Endangered Species Act (federal ESA) is administered and implemented by the U.S. Fish and Wildlife Service (USFWS) and National Oceanic and Atmospheric Administration (NOAA) Fisheries, whereby the USFWS is responsible for all species but fish, and NOAA Fisheries is responsible for fish species. The federal ESA provides protection for species listed as threatened or endangered by the federal government, including their habitat. "Endangered" species, subspecies, or distinct population segments are those that are in danger of extinction through all or a significant portion of their range, and "threatened" species, subspecies, or distinct population segments are likely to become endangered in the near future.

In particular, the federal ESA has specific sections that regulate projects based on effects to listed species. Section 7 mandates that if a proposed project that is funded by or has a permit from a federal agency may affect listed species or its habitat, then that federal agency must consult with USFWS and/or NOAA Fisheries (depending on the species involved). The aim of the consultation is to ensure that the project does not jeopardize the existence of a listed species, or destroy or adversely modify critical habitat for the species. Section 9 of the federal ESA prohibits the take of any fish or wildlife species listed as endangered, including the destruction of habitat that prevents the species' recovery. "Take" is defined by the ESA as "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect a federally listed, endangered species of wildlife, or to attempt to engage in any such conduct." Federal regulations also define take to include the incidental destruction of animals in the course of an otherwise lawful activity, such as habitat loss due to development. Under those rules, the definition of "take" includes significant habitat modification or degradation that actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding, or shelter (50 CFR Section 17.3).

Take may be allowed under a permit by either Section 7 or Section 10(a) of the ESA. The permit is issued under Section 7 if another federal agency funds or issues a permit for the project (US Army Corps of Engineers [USACE] for example). The permit is issued under Section 10(a) if there is no federal involvement in the project.

Migratory Bird Treaty Act. The Migratory Bird Treaty Act (MBTA) implements various treaties and conventions between the U.S. and Canada, Japan, Mexico, and the former Soviet Union for the protection of migratory birds. Unless permitted by regulations, the Act provides that it is unlawful to pursue, hunt, take, capture or kill; attempt to take, capture or kill; possess, offer to or sell, barter, purchase, deliver; or cause to be shipped, exported, imported, transported, carried or received any migratory bird, part, nest, egg or product, manufactured or not, except as authorized under a valid permit (50 CFR 21.11).

In short, under the MBTA it is illegal to remove vegetation-containing nests that are in active use, since this could result in killing a bird or destroying an egg. This would also be a violation of California Fish and Game Code (described under Section 4.3.1.1, State Regulations). Most, but not all, bird species are protected under the MBTA. Birds that are considered non-native, human-introduced species (whether they were deliberately or unintentionally introduced) are not protected. Furthermore, native birds that are members of unprotected bird families are also not protected. Invasive birds such as the house sparrow and European starling are not protected, but neither are many game birds such as wild turkeys, different types of grouse, and different ptarmigan species.

Federal Clean Water Act. The federal Clean Water Act is the primary federal law regulating water quality. The implementation of the Clean Water Act is the responsibility of the US Environmental Protection Agency (EPA). That agency depends on other agencies, such as the individual states and the USACE, to assist in implementing the Act. The objective of the Clean Water Act is to “restore and maintain the chemical, physical, and biological integrity of the Nation’s waters.” Section 404 and 401 apply to project activities that would impact “waters of the United States (lakes, ponds, creeks, streams, wetlands, etc.).” As part of its mandate under the Clean Water Act, the USACE regulates the discharge of dredged or fill material into “waters of the United States” under Section 404 of the Act. The USACE enforces Section 404 of the Clean Water Act and the California State Water Resources Control Board enforces Section 401. “Waters of the United States” include territorial seas, tidal waters, and non-tidal waters in addition to wetlands and drainages that support wetland vegetation, exhibit ponding or scouring, show obvious signs of channeling, or have discernible banks and high-water marks.

The EPA also regulates excavation and changes in drainage. The discharge of dredged or fill material into waters of the United States is prohibited under the Clean Water Act except when it is in compliance with Section 404 of the Act. Enforcement authority for Section 404 was given to the USACE, which it accomplishes under its regulatory branch.

Any applicant for a federal permit to impact waters of the United States under Section 404 of the Clean Water Act, including Nationwide Permits where pre-construction notification is required, must also provide to the USACE a certification from the State of California. The “401 Certification” is provided by the State Water Resources Control Board through the local Regional Water Quality Control Board (RWQCB).

6.2.2 State Regulations

State laws regulating the treatment of biological resources in California include the California Endangered Species Act, the California Fish and Game Code, and the California Native Plant Protection Act. The following sections describe these laws and the relevant principles.

California Endangered Species Act. The California Endangered Species Act (CESA; Fish and Game Code 2050 et seq.) establishes the policy of the State to conserve, protect, restore, and enhance threatened or endangered species and their habitats. CESA mandates that State agencies shall not approve projects that would jeopardize the continued existence of threatened or endangered species if reasonable and prudent alternatives are available that would avoid jeopardy. For projects that would affect a species that is on the federal and State lists, compliance with the federal ESA satisfies CESA if the California Department of Fish and Wildlife (CDFW) determines that the federal incidental take authorization is consistent with CESA under California Fish and Game Code Section 2080.1. For projects that would result in the take of a species that is only State-listed, the project proponent must apply for a take permit under Section 2081(b).

California Fish and Game Code. CDFW is authorized under the California Fish and Game Code, Sections 1600-1607 to develop mitigation measures and enter into Streambed Alteration Agreements with applicants who propose projects that would obstruct the flow of, or alter the bed, channel, or bank of a river or stream in which there is a fish or wildlife resource, including intermittent and ephemeral streams.

Sections 3500-3516, 4700, 5050, and 5515 address Fully Protected species. Prior to the passage of CESA, the classification of Fully Protected was the State's initial effort to identify and provide additional protection to those animals that were rare or faced possible extinction. Subsequently, many Fully Protected species have been listed under the State and/or federal endangered species acts. The only exceptions are golden eagle, white-tailed kite, trumpeter swan, northern elephant seal, and ringtail. Fully Protected species may not be taken or possessed at any time and no licenses or permits may be issued for their take except for collecting these species for necessary scientific research and relocation of the bird species for the protection of livestock.

Nesting birds, including raptors, are protected by the California Fish and Game Code Section 3503, which reads, "It is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by this code or any regulation made pursuant thereto." In addition, under Fish and Game Code section 3503.5, "it is unlawful to take, possess, or destroy any birds in the orders Falconiformes or Strigiformes (birds-of-prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto". Passerines and non-passerine land birds are further protected under the federal Migratory Bird Treaty Act. As such, the CDFW typically recommends surveys for nesting birds that could potentially be directly (actual removal of trees/vegetation) or indirectly (noise disturbance) impacted by project-related activities. Disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

California Fish and Game Code Section 4150 states, "All mammals occurring naturally in California which are not game mammals, fully protected mammals, or fur-bearing mammals, are nongame mammals. Nongame mammals or parts thereof may not be taken or possessed except as provided in this code or in accordance with regulations adopted by the commission." The non-game mammals that may be taken or possessed are primarily those that cause crop damage.

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

6.2.3 Local Regulations

(1) City of Palo Alto Municipal Code. The Palo Alto Municipal Code includes provisions for the preservation and protection of trees as well as the protection of flora and fauna within the City limits.

Title 8 (Trees and Vegetation), Chapter 8.04 (Street Trees, Shrubs and Plants), and Chapter 8.10 (Tree Preservation and Management Regulations); and Title 18 (Zoning), Chapter 18.76 (Permits and Approvals). Title 8 Trees and Vegetation, and Title 18 Zoning include regulations that protect trees in the city.

Chapter 8.04 gives the City control of all street trees, shrubs and plants in any street, park or public place within City limits, and the power to maintain them. It prohibits others from planting, removing, or damaging these resources without a permit. It identifies when these resources constitute a public nuisance (such as a diseased or dead tree) and the remedy.

Chapter 8.10 protects specified trees in the city and establishes a standard for removal, maintenance, and planting of trees in the city, with the goal of preserving the city’s trees. Chapter 8.10 provides rules for the protection of trees, designation of heritage trees, and for when trees can be removed. The Palo Alto community has long valued the environmental, aesthetic, and functional benefits of trees¹ as recognized by the Palo Alto Municipal Code, Chapter 8.10 (Tree Preservation Ordinance) and Palo Alto’s status as “Tree City USA.”

The City of Palo Alto Municipal Code regulates specific types of trees on public and private property for the purpose of avoiding their removal or disfigurement without first being reviewed and permitted by the City’s Planning or Public Works Departments. Three categories within the status of regulated trees include protected trees (Municipal Code Title 8, Chapter 8.10), public trees (Municipal Code Title 8, Chapter 8.04) and designated trees (Municipal Code Title 18), when so provisioned to be saved and protected by a discretionary approval.

- Protected Trees. Includes all coast live oak (*Quercus agrifolia*) and valley oak trees 11.5 inches or greater in diameter, coast redwood trees 18 inches or greater in diameter at standard height, and heritage trees designated by the City Council according to any of the following provisions: it is an outstanding specimen of a desirable species; it is one of the largest or oldest trees in Palo Alto; or it possesses distinctive form, size, age, location, and/or historical significance.

¹Public Tree Resource Benefits provided by shade trees are: carbon dioxide reduction, extended asphalt service life, urban runoff management, real estate value, etc.

- **Public Trees.** Includes City-owned street trees (all trees growing within the street right-of-way, outside of private property), and trees in City parks and other City-controlled public places.
- **Designated Trees.** Designated or amenity trees are established by the City when a project is subject to discretionary environmental or design review process, such as architectural review by the Architecture Review Board. Municipal Code Section 18.76.020(d)(2)(B) includes as part of the findings for architectural review approval, “Preserves, respects and integrates existing natural features that contribute positively to the site...”. An amenity tree or grouping of trees may be “designated” if it has a particular significance because of its screening function or as a unique natural or other feature that contributes to the existing site, neighborhood, or community area. Outstanding tree specimens contributing to the existing site, neighborhood or community, and that have a rating of “High” Suitability for Preservation would constitute a typical designated tree.

In accordance with Municipal Code Section 8.10.040 (Disclosure of information regarding existing trees), for all development projects within the City of Palo Alto, discretionary or ministerial, a Tree Disclosure Statement (TDS) is part of the submittal checklist to establish and verify trees that exist on the site, trees that overhang the site originating on an adjacent property, and trees that are growing in a City easement, parkway, or publicly owned land adjacent to the site. Section 8.10.050 (Prohibited acts) explains when a tree survey prepared by a certified arborist is required (for multiple trees), when a tree preservation report is required (for development within the dripline of a Regulated Tree), and specifies who may prepare these documents. The City of Palo Alto Tree Technical Manual (PAMC Section 8.10.030) describes procedures and standards to preserve regulated trees (Protected Trees, Public Trees and Designated Trees, referred to collectively as “Regulated Trees”), including:¹

- The protection of trees during construction;
- If allowed to be removed, the acceptable replacement strategy;
- Maintenance of protected trees (such as pruning guidelines);
- Format and procedures for tree reports; and
- Criteria for determining whether a tree is a hazard.

Title 22 Parks, Chapter 22.04. Chapter 22.04 of the Palo Alto Municipal Code provides for the protection of flora and fauna in city parks and open space by prohibiting the removal or injury to plants, trees, or wildlife in the parks without written consent of the director unless authorized by park regulations.

(2) City of Palo Alto Urban Forest Plans and Policies. The City has adopted a range of plans and policies aimed at maintaining, protecting, and enhancing the urban forest. The management plans and programs for trees in the city consist of the Urban Forest Master Plan (UFMP),

¹City of Palo Alto, City of Palo Alto Tree Technical Manual, June 2001, <http://www.cityofpaloalto.org/civicax/filebank/documents/6436>, accessed on June 8, 2015 by Placeworks, for the Comprehensive Plan Update Environmental Impact Report.

approved in 2015; the Street Tree Management Plan (STMP); and the Line Clearing and Right Tree, Right Place (RTRP) Programs.

The Urban Forest Master Plan (UFMP) establishes long-term management goals and strategies to foster a sustainable urban forest in Palo Alto. The UFMP addresses topics such as the state of Palo Alto's tree canopy, best management practices, interdepartmental coordination, and tree-related City regulations. The UFMP advises tree trimming and removal practices within the City limits to include inspection for nests and restricting removal as appropriate. It also indicates how to select appropriate, site-specific, tree species to ensure successful growth and that unwanted invasive species are not planted. The UFMP advises virtually all aspects of land development and use, sustainability and human health programs, and vegetative environmental services benefits. Additionally, the UFMP advises all potential land use changes outside County lands to maximize tree canopy benefits.

The Street Tree Management Plan (STMP) sets strategies for the preservation and care of the street tree system – one component of the urban forest.

The Right Tree Right Place (RTRP) Program assists residents and businesses with removal and replacement of private trees that conflict with power lines. Palo Alto operates its own utility, and Line Clearing activities involve trimming trees around power lines. It is done to comply with State law, to help ensure continued service, and to help ensure safety.

(3) San Francisquito Creek Joint Powers Authority. The San Francisquito Creek Joint Powers Authority (SFCJPA) was created by local land use agencies to address community concerns, primarily regarding flooding along San Francisquito Creek. The SFCJPA is comprised of the cities of Palo Alto, Menlo Park and East Palo Alto, the Santa Clara Valley Water District, and the San Mateo County Flood Control District. Stanford University and the San Francisquito Watershed Council are non-voting members of the SFCJPA. The organization plans, designs, and implements projects from the upper watershed to coastal wetlands that are of mutual interest to the member agencies. The organization also takes conservation issues into account in its work on projects that stabilize, restore, and maintain the channel for flood control.

6.3 IMPACTS AND MITIGATION MEASURES

6.3.1 Significance Criteria

Based on Appendix G of the CEQA Guidelines,¹ the proposed PSB would have a significant impact on biological resources if it would:

- (a) 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;
- (b) 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 California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

¹CEQA Guidelines, Appendix G, items IV (a) through (f).

- (c) 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;
- (d) 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;
- (e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; or
- (f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Regarding criterion (b), the State of California recognizes some plant communities as sensitive natural communities if they are uncommon, regionally declining, or vulnerable. Among these communities are riparian habitat, coast live oak forest, freshwater seeps, freshwater marshes, and coastal salt marsh. However, there is no riparian habitat or other sensitive natural community within or adjacent to the project site. The project would have no impact on riparian habitat or other sensitive natural community. There would be no impact, and this issue is not discussed further.

Regarding criterion (c), although definitions vary, wetlands are generally considered to be areas that are periodically or permanently inundated by surface or groundwater, and support vegetation adapted to life in saturated soil. Wetlands are recognized as important features on a regional and national level due to their inherent value to fish and wildlife; use as storage areas for storm water and floodwaters; and water recharge, filtration, and purification functions.

The U.S. Army Corps of Engineers (Corps), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) have jurisdiction over modifications to wetlands and other “waters of the United States.” Corps jurisdiction is established through provisions of Section 404 of the Clean Water Act, which prohibits the discharge of dredged or fill material into “waters of the United States” without a permit. RWQCB jurisdiction is established through Section 401 of the Clean Water Act, which requires certification or waiver for water quality whenever a Corps permit is required under Section 404 of the Clean Water Act. CDFW jurisdiction is established under Sections 1600-1607 of the State Fish and Game Code, which pertains to activities that would substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake. Any such activities require a Streambed Alteration Agreement to be issued by CDFW prior to project construction.

According to the U.S. Fish and Wildlife Service Wetlands Mapper (accessed March 2017), there are no wetlands or jurisdictional waters in or near the project site. There is a creek that bisects John Boulware Park, about one mile southeast of the project site. The proposed project would not involve the direct removal or fill of wetlands or indirectly affect the hydrology, soil, vegetation, or wildlife of wetlands. There would be no impact, and this issue is not discussed further.

Regarding criterion (d), wildlife use on the project site is expected to be relatively low due to the absence of natural habitat, the proximity to streets in a mostly built environment adjacent to the project site, and the lack of protective cover. Birds (e.g., house sparrow, starling, crow) and wildlife such as opossums and small rodents typically associated with developed commercial properties would be expected to occur. The project site is surrounded by the built environment, and therefore is limited as a potential wildlife movement corridor. Trees on the project site could potentially provide nesting habitat for small songbirds; nesting birds are protected by the Migratory Bird Treaty Act and the California Fish and Game Code. The project would have a less-than-significant impact on wildlife movement or native wildlife nursery sites. This issue is not discussed further.

Regarding criterion (e), no portion of the project site is located in the following land use designation categories: Open Space/Controlled Development, Streamside Open Space, or Publicly-owned Conservation Land (Palo Alto Comprehensive Plan, Land Use Designation Map). However, the proposed project will be subject to the City's Tree Preservation Ordinance (PAMC Chapter 8.10). The findings of the site-specific tree survey report prepared for the project (David L. Babby, 2016) are reported, and applicable tree preservation/replacement regulations explained, below.

Regarding criterion (f), there is no Habitat Conservation Plan, Natural Community Conservation Plan, or other adopted habitat conservation plan applicable to the project site. There would be no impact, and this issue is not discussed further.

6.3.2 Impacts and Mitigations

Would the project 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 (Significance Criterion [a])?

The Federal Migratory Bird Treaty Act and California Fish and Game Code sections 3503, 3503.5, 3513, and 3800 protect migratory and nesting birds. Trees that might provide nesting habitat would be removed by project construction. The possibility of removing trees that contain nests is identified here as a potentially significant impact. Any direct removal of trees or indirect disturbance by construction or operational activities during the nesting season that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered a "take." Mitigation 6-1 below would reduce this potentially significant impact to migratory and nesting birds to a less-than-significant level.

Impact 6-1: Potential Impacts on Nesting Birds. The proposed PSB project is intended to improve the natural environment on the project site with an extensive array of coordinated new landscaping and trees. However, 38 existing trees are proposed to be removed. Without a proactive mitigation procedure in place, project construction could inadvertently result in the removal of trees containing nests or eggs of migratory birds, raptors, or bird species during the nesting season, which would be considered an "unlawful take" under the Federal Migratory Bird Treaty Act and USFW provisions protecting migratory and nesting birds (see Regulatory Setting above). This is considered a ***potentially significant impact*** (see criterion [a] in subsection 6.3.1, "Significance Criteria," above).

Mitigation 6-1. To avoid impacts to nesting birds and violation of State and federal laws pertaining to birds, all construction-related activities (including but not limited to mobilization and staging, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) should occur outside the avian nesting season (that is, prior to February 1 or after August 31). If construction and construction noise occurs within the avian nesting season (from February 1 to August 31), all suitable habitats located within the project's area of disturbance, including staging and storage areas plus a 150-foot buffer around these areas, shall be thoroughly surveyed, as feasible, for the presence of active nests by a qualified biologist no more than five days before commencement of any site disturbance activities and equipment mobilization. If project activities are delayed by more than five days, an additional nesting bird survey shall be performed. Active nesting is present if a bird is sitting in a nest, a nest has eggs or chicks in it, or adults are observed carrying food to the nest. The results of the surveys shall be documented. If it is determined that birds are actively nesting within the survey area, the additional procedures below shall apply. Conversely, if the survey area is found to be absent of nesting birds, the additional procedures shall not be required.

Additional Procedures. If pre-construction nesting bird surveys result in the location of active nests, no site disturbance and mobilization of heavy equipment (including but not limited to equipment staging, fence installation, clearing, grubbing, vegetation removal, fence installation, demolition, and grading) shall take place within 150 feet of nests, or as determined by a qualified biologist, until the chicks have fledged. Monitoring shall be required to ensure compliance with the MBTA and relevant California Fish and Game Code requirements. Monitoring dates and findings shall be documented.

Implementation of this measure would reduce the impact to a ***less-than-significant level***.

Would the project conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance (Significance Criterion [e])? See section 6.2 (Regulatory Setting, Local Regulations) above. The Palo Alto Municipal Code

(PAMC) includes provisions for the preservation and protection of trees as well as the protection of flora and fauna within the City limits. PAMC Title 8 (Trees and Vegetation) and Title 18 (Zoning) include regulations that protect trees in the city. Implementing regulations are set forth in the Tree Technical Manual pursuant to PAMC Section 8.10.030. , Section 3.00 (Removal, Replacement, and Planting of Trees) of the Tree Technical Manual includes standards and procedures for preventing unnecessary tree removal, determining if a tree may be removed, describing replacement tree requirements, and determining the replacement value of a tree that cannot be replaced in its original location. Except for these identified provisions, the proposed PSB project would not conflict with other policies or ordinances protecting biological resources.

As shown on Figure 6.1 above, the tree survey report for the proposed PSB project defines six (6) trees on site as protected trees because they are either coast live oak (1 tree) or valley oak (1 tree) with a trunk diameter of 11.5 inches or more, or coast redwood (4 trees) with a trunk diameter of 18 inches or more. Five (5) surveyed trees are designated street trees (i.e., in the public right-of-way). These eleven (11) protected and designated trees are proposed to be removed under the PSB project. One of the 39 surveyed trees would be retained and protected in place – a Chinese elm in Jacaranda Lane (tree #7).

The City of Palo Alto Tree Technical Manual (TTM) provides guidance on tree replacement. For public property projects, the City can mitigate the removal of the six on-site Protected trees by planting trees on another City-owned site to provide an equal canopy (TTM 3.15 Alternatives When Trees Cannot Be Replaced Onsite). The site(s) and mitigation tree locations, sizes, and species are a collaborative effort between Urban Forestry staff and PWE staff, following the size and number specified in the “Size and Number” chart below.

C. Size and Number

Often it is not possible to replace a large, older tree with a single equivalent tree. In such cases, the following tree canopy replacement ratio shall be used:

TABLE 3-1
 Tree Canopy - Replacement Standard

COLUMN 1	COLUMN 2	COLUMN 3
Canopy of the Removed Tree (Avg. dist. across the canopy)	Replacement Trees	Alternative Tree
4'-9'	Two 24" Box Size (minimum)	One 36" Box Size
10'-27'	Three 24" Box Size	Two 36" Box Size
28'-40'	Four 24" Box Size	Two 48" Box Size
40'-56'	Six 24" Box Size	Two 48" Box & Two 36" Box Size
56'-60'	Two 24" Box & Two 36" Box + Two 48" Box Size	**
60'+	**	**

*Add half of the difference between the two to the narrowest measurement for the average canopy.
 ** Replace the tree with a combination of both Tree Canopy and Tree Value Standards.

Note: Basis of this table is determined by the growth of one 24" box size tree, growing at a rate equivalent to 9 feet of canopy over the course of ten years.

How to use Table 3-1, Tree Canopy Replacement Table.

- ▶ Column 1. Determine the leaf canopy of the removed tree by measuring the distance across the canopy at the widest point and narrowest point. Add half of the difference between the two to the narrowest measurement for the average canopy. The leaf canopy diameter of the tree (this information is typically supplied within the arborist report) is used to determine number and size of replacement trees in Column 2.
- ▶ Column 2. Determine the number of replacement trees. The planting of new trees should equal the leaf canopy of the removed tree within a period of ten years. The minimum replacement for removal of any *Protected or Designated Tree* shall be two 24-inch box trees.
- ▶ Column 3. Alternative size of trees may be desired. The property owner shall have the option to plant an alternative size tree to accommodate site specific landscape needs or constraints, such as space, design or soil volume limitations.

Example of Tree Canopy Replacement Ratio:

The removal of a tree with a 39' crown spread will require four 24-inch box trees to satisfy the criteria of this Section. Methodology- e.g. the average canopy of a new tree is 4' wide + the expected canopy growth of 6" per year x 10 years = a 9' net canopy of one replacement tree. Thus, four 9' trees = 36' of new canopy, and is a close approximate to the original 39' canopy tree.

Impact 6-2: Removal of Protected and Designated Trees. Because 6 protected trees and 5 designated trees are proposed to be removed as part of the proposed PSB project, Palo Alto Municipal Code Title 8 (Trees and Vegetation) Chapters 8.04 and 8.10 would apply to the project to require on-site tree replacement or off-site replacement and mitigation in accordance with the standards in the City's Tree Technical Manual (Section 8.10.050(d)(2)). Without adequate replacement or other mitigation as set forth in the Tree Technical Manual, the project would be inconsistent with the Municipal Code tree protection provisions. This potential inconsistency with the tree protection policy and these tree removals are considered a **potentially significant impact** (see criterion [e] in subsection 6.3.1, "Significance Criteria," above).

Mitigation 6-2. Prior to removal of the protected trees and street trees, the applicant shall obtain a tree removal permit issued by the City of Palo Alto Urban Forestry Division for the removal of any and all protected, designated, or street trees (referred to collectively as "Regulated Trees"). In all cases, replacement trees would be required as a condition of the tree removal permit, and the project applicant must demonstrate to the satisfaction of the City that there is no alternative that could preserve the tree(s) on-site. The project applicant must provide an evaluation and summary for any Regulated Tree (the collective term for any protected, designated, or street tree) proposed to be removed.

The applicant shall be required, in accordance with the Tree Protection and Management Regulations (PAMC 8.10) and Tree Technical Manual (PAMC 8.10.130), to replace the tree canopy for the six (6) protected trees, in accordance with the tree canopy formula identified in the Tree Technical Manual (TTM, 3.20). If the tree canopy cannot be replaced on-site, the canopy shall be replaced off-site as close to the project site as feasible. If trees are being replaced off-site, the applicant must submit a Tree Planting Plan to the Urban Forestry Division and obtain the Urban Forestry Division's approval of the plan prior to issuance of a building permit. The Tree Planting Plan must include:

- The canopy calculation for trees removed and the number of trees planned to replace them, consistent with the formula identified in the Tree Technical Manual
- The specific location where the new trees would be planted with specific baseline information about that proposed site (e.g., surrounding vegetation or development)
- The species of trees to be planted

(continued)

Mitigation 6-2 (continued):

- Specific planting details (e.g., size of sapling, size of containers, irrigation plan)
- Success criteria
- Monitoring and maintenance schedule

Replacement tree planting will be monitored by a qualified arborist. To verify the success of replacement trees, monitoring shall occur for two years after initial planting. After the two-year period, the arborist will determine if the trees are capable of surviving without further maintenance. Implementation of this measure would reduce the impact to a ***less-than-significant level***.