

APPENDIX L

Biological Resources

Biological Resources Assessment Report

Introduction

AECOM was retained to prepare this biological resources assessment in support of the Environmental Impact Report (EIR) for the Sacramento Commons infill project for purposes of compliance with the California Environmental Quality Act (CEQA). The purpose of this biological resources assessment is to characterize habitat present on the Sacramento Commons project site; evaluate the potential for the site to support special-status species; identify other sensitive biological resources on the site, such as wetlands, waters, or riparian habitat; identify potential adverse impacts to biological resources that could result from implementing the proposed project; and provide mitigation recommendations to offset any potential project impacts on biological resources. Because this biological resources assessment has been prepared in support of CEQA, potential adverse impacts on biological resources are evaluated in the context of the State CEQA Guidelines and the City of Sacramento Environmental Checklist.

The project site is located in downtown Sacramento approximately 0.3 mile east of the Sacramento River and is within the Sacramento West and Sacramento East U.S. Geological Survey (USGS) 7.5-minute quadrangles. The site is generally bounded by 5th, 7th, N, and P Streets and encompasses approximately 10 developed acres on portions of four city blocks. The project site is currently developed with residential, commercial, and recreational uses, with some landscaped areas with mature vegetation, a parking structure, and a surface parking area. The project site is generally flat, with elevations ranging from approximately 15 to 20 feet above mean sea level.

The project site is located in an urban setting in the City of Sacramento's Central Business District (CBD) and is currently developed with residential rental property consisting of two- and three-story garden apartments and the 15-story Capitol Towers Building, approximately 4,122 square feet of neighborhood-serving retail space, recreational amenities (including a swimming pool), laundry facilities, various landscaped areas, and a three-level parking structure containing 200 parking spaces and 190 spaces on surface lots. Sharing the four-block project area, but not part of the project site, are the separately owned 15-story 500 N Street condominium tower and the 12-story Pioneer Towers senior apartments. The CBD is Sacramento's most intensely developed area. The CBD includes a mixture of retail, residential, office, governmental, entertainment, and visitor-serving uses built on a framework of streets and park spaces associated with the original Sutter Land Grant in the 1840s.

A mix of high-density residential and office complexes are located in the immediate vicinity of the project site. Surrounding land uses include federal and state offices to the north, west, and east. Two multi-family properties (Governor's Square and Pioneer House) are located at the southeast and northwest corners, respectively, of 5th and P Streets. In addition, the State of California Central Plant, which heats and cools state buildings, is located on the south side of P Street, across the street from the project site.

Methodology

AECOM biologist, Tracy Walker, performed a reconnaissance survey of the project site on April 9, 2014, to determine if habitat present on the project site could support any special-status species that are known to occur in the Sacramento area. The weather during the survey was sunny and warm with a temperature of 68 degrees Fahrenheit, winds of approximately 2 miles per hour, and zero precipitation.

The entire site, including the bordering roadsides that are technically outside of the project boundary, was surveyed for sensitive biological resources, particularly nesting raptors such as Swainson's hawk (*Buteo swainsonii*) and white-tailed kite (*Elanus leucurus*), active nests of migratory birds, and roosting bats. Suitable nest trees around the perimeter of the project site were also noted, as these trees may be subject to removal or pruning to facilitate access to the project site and any birds nesting in these trees could be affected by construction activities.

Prior to conducting the reconnaissance-level site assessment, the California Natural Diversity Database (CNDDDB) (2014) and the California Native Plant Society (CNPS) inventory (CNPS 2014) were consulted to obtain records of special-status plant and wildlife species that have been documented in the vicinity of the project site. In accordance with the California Department of Fish and Wildlife (CDFW) guidance, the CNDDDB and CNPS databases were queried using the U.S. Geological Survey (USGS) 7.5-minute quadrangles that include the project site (Sacramento East and Sacramento West) and the eight surrounding quadrangles. In addition, the U.S. Fish and Wildlife Service (USFWS) list of federal endangered and threatened species that could occur in or be affected by projects in the Sacramento East and Sacramento West USGS quadrangles was obtained from the USFWS Sacramento Fish and Wildlife Office website (USFWS 2014).

SENSITIVE BIOLOGICAL RESOURCES

Sensitive biological resources for this assessment consist of habitats and species that are afforded specific consideration through the California Environmental Quality Act (CEQA), California Fish and Game Code, including the California Endangered Species Act (CESA), the federal Endangered Species Act (ESA), the federal Clean Water Act (CWA), the state's Porter–Cologne Water Quality Control Act, or local plans, policies, and regulations. The project site is not within an area covered by an adopted Habitat Conservation Plan and the site does not serve as an important migration or movement corridor for any wildlife species.

Special-Status Species

For the purposes of this assessment special-status species include plants and animals in the following categories:

- ▶ species officially listed by the State of California or the Federal government as endangered, threatened, or rare;
- ▶ candidates for state or federal listing as endangered or threatened;
- ▶ taxa (i.e., taxonomic categories or groups) that meet the criteria for listing, even if not currently included on any list, as described in California Code of Regulations (CCR) Section 15380 of the State CEQA Guidelines;
- ▶ species identified by CDFW as species of special concern;

- ▶ species listed as Fully Protected under the California Fish and Game Code;
- ▶ plant taxa considered by CDFW to be “rare, threatened, or endangered in California” and assigned a California Rare Plant Rank (CRPR) of 1A, 1B, 2A, or 2B.

All plants identified with a California Rare Plant Rank (CRPR) are considered “special plants” by CDFW. The term “special plants” is a broad term used by CDFW to refer to all of the plant taxa inventoried in CDFW’s CNDDDB, regardless of their legal or protection status. Plants ranked as CRPR 1A, 1B, 2A, and 2B may qualify as endangered, rare, or threatened species within the definition of State CEQA Guidelines Section 15380.

The term “California species of special concern” is applied by CDFW to animals not listed under the federal ESA or CESA, but that are nonetheless declining at a rate that could result in listing, or that historically occurred in low numbers and have known threats to their persistence.

The term “Fully Protected” was the first classification used by the State of California to identify and protect animal species that are rare or facing possible extinction. Most of these species were subsequently listed as threatened or endangered under CESA or ESA. The remaining fully protected species that are not officially listed under CESA or ESA are still considered rare and may be eligible for listing. Section 5050 lists fully protected amphibians and reptiles, Section 5515 lists fully protected fish, Section 3511 lists fully protected birds, and Section 4700 lists fully protected mammals. The California Fish and Game Code explicitly prohibits all “take” of individuals of species listed as fully protected except take permitted for scientific research.

Other Species of Concern

While the species listed above under “Special-Status Species” are typically those that are rare or otherwise experiencing declining populations within their ranges, a number of common bird species are protected under state and/or federal statutes. Under Section 3503 of the California Fish and Game Code, it is unlawful to take, possess, or needlessly destroy the nest or eggs of any bird, except as otherwise provided by the California Fish and Game Code or any regulation made pursuant thereto. Section 3503.5 specifically prohibits take, possession, or destruction of any birds in the orders Falconiformes (hawks) or Strigiformes (owls), or of their nests and eggs. Migratory nongame birds are protected under Section 3800, while other specified birds are protected under Section 3505. Most native bird species in the United States are also protected under the federal Migratory Bird Treaty Act (MBTA). Species collectively protected under these statutes are, for the purposes of this assessment and the EIR, considered “sensitive biological resources”.

Trees Protected under City Ordinance

Based on the results of an arborist survey (Dudek 2014) conducted on the site, there are 50 trees (16 different species) on or adjacent to the project site that meet the City’s definition of either a City Street Tree or a Heritage Tree and are protected under City ordinance. There are currently 50 trees within or adjacent to the project site meeting the criteria of either a City Street Tree or Heritage Tree, as defined by the City of Sacramento. Of these, 39 are located along the project perimeter and meet the definition of a City Street Tree (City Code Section 12.56.020), which includes any tree growing on a public street right-of-way. Of the 39 City Street Trees, 6 meet the size criteria for classification as Heritage Trees. In addition, there are 11 trees on the project site that are not in the public street right-of-way that meet the criteria for classification as a Heritage Tree, as defined by the City of Sacramento (City Code Section 12.64.020), which includes any tree of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location of its species with a trunk

circumference measuring 100 inches or more; any oak, sycamore, buckeye, or riparian tree of good quality in terms of health, vigor of growth and conformity to generally accepted horticultural standards of shape and location of its species with a trunk circumference measuring 36 inches or more; or any tree designated by the City Council to be of special historical or environmental value or of significant community benefit.

Results

COMMON BIOLOGICAL RESOURCES

As described in the "Introduction" section of this report, the project site is located within an urban setting in Sacramento's most intensely developed area (the CBD). The site and surrounding area has been developed since the mid- to late-1800s. Vegetation on the project site is comprised entirely of ornamental landscaping and does not include any native plant communities or natural habitats. The closest natural habitat is approximately 0.3 mile east of the project site on the Sacramento River, but the river corridor is also heavily altered by humans and surrounded by intense urban development leaving only narrow strips of riparian vegetation and the open water in the river channel itself as remnants of natural habitat. Areas of natural habitat are also located approximately 1.5 miles north of the project site in and along the American River.

Habitat on the project site is classified as *urban* according to CDFW's California Wildlife Habitat Relationship System (Mayer and Laudenslayer 1988). The structure of the on-site urban vegetation consists of street tree strips (i.e., linear rows of trees) and shade tree/lawn structure (i.e., grassy lawn areas with trees shading portions of the lawn). Trees are most commonly distributed in planting strips around the perimeter of the project site along City streets and around on-site buildings, parking lots, and walkways. Tree/lawn distribution is found within the interior of the project site where small, mostly rectangular patches of lawn are generally surrounded by trees. Tree cover is distributed fairly evenly across the site overall. All on-site trees were previously planted in conjunction with development of the project site in the 1960s. Most of the on-site trees are therefore mature; however, some immature trees exist in spots where dead, dying, or structurally unsound trees have been removed and replaced. There are approximately 291 trees in total associated with the project, consisting of on-site trees and City Street Trees along the perimeter of the project site. Dominant tree species include Japanese maple (*Acer palmatum*), Hackberry (*Celtis sinensis*), Camphor (*Cinnamomum camphora*) and Tree of Heaven (*Ailanthus altissima*). The majority of the trees on or around the project site are nonnative species.

In general, urban landscapes provide low-value habitat for most wildlife species because of an overall lack of vegetative cover and high levels of human disturbance. Fauna on the project site is dominated by species adapted to human activity and urban landscapes. Species observed during the survey include house finch (*Carpodacus mexicanus*), house sparrow (*Passer domesticus*), bushtit (*Psaltriparus minimus*), American robin (*Turdus migratorius*), rock pigeon (*Columba livia*), western scrub-jay (*Aphelocoma californica*), northern mockingbird (*Mimus polyglottos*), black phoebe (*Sayornis nigricans*), American goldfinch (*Carduelis tristis*), Anna's hummingbird (*Calypte anna*), and gray squirrel (*Sciurus griseus*). Other wildlife species that are likely to use the developed and disturbed habitats present on or immediately adjacent to the project site include mourning dove (*Zenaida macroura*), American crow (*Corvus branchyrrhychos*), brown rat (*Rattus norvegicus*), and raccoon (*Procyon lotor*).

SENSITIVE BIOLOGICAL RESOURCES

No wetlands, riparian habitat, waterways, or other sensitive habitats are present on the project site, and there is a general lack of suitable habitat for sensitive biological resources.

Special-Status Species

There are documented occurrences of 15 special-status plant species in the nine quadrangles containing and surrounding the project site. All of these species are associated with vernal pools, freshwater marsh, or other aquatic habitats. There is no suitable habitat on the project site for these or any other special-status plant species known to occur in the region.

Thirty-eight special-status wildlife species have been documented in the nine quadrangles containing and surrounding the project site, and additional species listed under ESA were identified in the USFWS list as potentially being affected by projects in the Sacramento East or Sacramento West quadrangles. Nine of these are special-status fish species that have been documented in the Sacramento and American Rivers or in the Delta. Fish species have no potential to occur on the project site because there is no aquatic habitat present. Likewise, the following species have no potential to occur on the project site because they are associated with vernal pool, riparian, freshwater marsh, or other aquatic habitats (or immediately adjacent uplands) that are not present on the project site:

- ▶ Vernal pool fairy shrimp (*Branchinecta lynchi*)
- ▶ Vernal pool tadpole shrimp (*Lepidurus packardii*)
- ▶ Western spadefoot (*Spea hammondi*)
- ▶ California red-legged frog (*Rana draytonii*)
- ▶ Western pond turtle (*Emys marmorata*)
- ▶ California tiger salamander (*Ambystoma californiense*)
- ▶ Giant garter snake (*Thamnophis gigas*)
- ▶ Least bittern (*Ixobrychus exilis*)
- ▶ Mountain plover (*Charadrius montanus*)
- ▶ Western yellow-billed cuckoo (*Coccyzus americanus occidentalis*)
- ▶ Bank swallow (*Riparia riparia*)
- ▶ Yellow-breasted chat (*Icteria virens*)
- ▶ Modesto song sparrow (*Melospiza melodia maxillaris*)
- ▶ Greater sandhill crane (*Grus canadensis tabida*)
- ▶ Yellow warbler (*Setophaga petechial*)
- ▶ Least Bell's vireo (*Vireo bellii pusillus*)
- ▶ Tricolored blackbird (*Agelaius tricolor*)
- ▶ Yellow-headed blackbird (*Xanthocephalus xanthocephalus*)

The potential for the remaining special-status species, which are primarily associated with upland habitats, and may sometimes be found in urban areas, is evaluated further based on species-specific habitat requirements, as described in Table 1.

Table 1 Special-Status Wildlife Species Known to Occur in the Vicinity of the Project Site				
Species	Federal Status	State Status	Habitat	Potential to Occur on the Project Site
Invertebrates				
Valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	T	-	Associated with elderberry shrubs for completion of life cycle. Elderberry shrubs often, but not always, associated with riparian habitats.	None. No suitable habitat (i.e., elderberry shrubs) present for this species.
Birds*				
Swainson's hawk <i>Buteo swainsoni</i> (nesting)	-	T	Typically nests in tall (generally around 50 feet or taller) trees in riparian woodlands, along roadsides or field borders, isolated trees, and on the edges of remnant oak woodlands or small groves. Nest trees are generally located within 2 miles of foraging habitat and typically provide a panoramic view of the territory. Will nest in large trees in urban landscapes if foraging habitat is available nearby. Forages in open grassland and agricultural habitats.	Very low. Trees on-site provide potential nest sites for this species.
White-tailed kite <i>Elanus leucurus</i> (nesting)	-	FP	Nests in riparian zones, oak woodlands, and occasionally in isolated trees, typically within 0.5 mile of foraging habitat. Forages in agricultural fields, meadows with emergent vegetation, and grasslands.	Very low. Trees on-site provide potential nest sites for this species.
Grasshopper sparrow <i>Ammodramus savannarum</i> (nesting)	-	CSC	Forages and nests in dense grasslands; favors a mix of native grasses, forbs, and scattered shrubs. Nests in depressions on the ground at the bases of grass clumps. Prefers large tracts of habitat.	None. No suitable nesting habitat present for this species.
Golden eagle <i>Aquila chrysaetos</i> (nesting)	-	FP	Open grassland and oak savannah with large trees or cliffs for nesting.	None. No suitable habitat present for this species.
Burrowing owl <i>Athene cunicularia</i> (burrow sites, wintering sites)	-	CSC	Open dry grasslands and desert habitat; nests and dens in underground burrows, especially those of ground squirrels.	None. No suitable burrow habitat present for this species.
Northern harrier <i>Circus cyaneus</i> (nesting)	-	CSC	Forages and nests in open (treeless) grasslands, marshes, and agricultural areas. Nests on the ground in dense, tall vegetation in undisturbed areas.	None. No suitable habitat present for this species.
American peregrine falcon <i>Falco peregrinus anatum</i>	D	D/FP	Typically nests in scrapes on cliff ledges in woodland, forest, and coastal habitats; however, this species has become adapted to urban environments where it may nest on protected ledges of tall buildings or bridges. The ledges must have some edge barrier to prevent eggs and nestlings from falling off and be protected from predators and human interaction. Prefers breeding sites in close proximity to water.	None. There are no suitable nesting structures for this species on the project site, but could nest nearby.
Loggerhead shrike <i>Lanius ludovicianus</i> (nesting)	-	CSC	Forages in grasslands, shrublands, and open woodlands with areas of bare ground. Nests in trees or shrubs within suitable foraging habitat.	None. This species nests only within suitable foraging habitat, which is not present on the project site.
Purple martin	-	CSC	Nests in caves or other overhanging structures such	None. No suitable

Table 1				
Special-Status Wildlife Species Known to Occur in the Vicinity of the Project Site				
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<i>Progne subis</i> (nesting)			as freeway overpasses.	nesting habitat present for this species.
Mammals				
Pallid bat <i>Anthrozous pallidus</i>	-	CSC	Deserts, grasslands, shrublands, woodlands, and forests. Most common in open, dry habitats. Roosts in rock crevices, oak hollows, bridges, or buildings.	None. No suitable roosting habitat present for this species.
Western red bat <i>Lasiurus blossevilli</i>	-	CSC	Roosts primarily in tree foliage, especially in cottonwood, sycamore, and other riparian trees or orchards (Pierson et al. 2004). Prefers habitat edges and mosaics with trees that are protected from above and open below with open areas for foraging, including grasslands, shrublands, and open woodlands.	None. No suitable roosting habitat present for this species.
American Badger <i>Taxidea taxus</i>	-	CSC	Forages and burrows in open shrub, forest, and herbaceous habitats with friable soils.	None. No suitable habitat present for this species.
Notes: CNDDDB = California Natural Diversity Database 1 Federal Status: E = Endangered T = Threatened 2 State Status: CSC = California Species of Special Concern E = Endangered FP = Fully Protected T = Threatened *Because the distribution and abundance of individual bird species varies seasonally, the season, or life phase, during which the species is of conservation concern in California is provided in parentheses beneath the bird species scientific name. There is potential for any of these bird species to fly over or pass through the project site, however, these species would not be nesting on or otherwise residing on the project site during the season or life phase when the species is of conservation concern in California. Sources: CNDDDB, 2014; CNPS, 2014; USFWS, 2014				

No raptor nests or migratory bird nests were observed during the reconnaissance survey. In addition, no raptors were observed flying overhead, on the project site or in the surrounding area. While the potential for the mature trees scattered throughout the site and along the perimeter to provide potential nest sites for the special-status raptor species Swainson’s hawk and white-tailed kite is considered very low, the urban tree landscape within the project site also does provide potential nesting habitat for a variety of other bird species, including common raptors and migratory birds protected under the federal MBTA and California Fish and Game Code. As described previously, there are 291 trees on the project site and surrounding the project perimeter. All of the on-site trees are potential nesting habitat for migratory songbirds and some of the trees are suitable for raptor nesting.

Swainson’s hawk and white-tailed kite are the only two special-status species that have some potential, albeit very low, to occur on the project site. Swainson’s hawk is the only species listed as threatened or endangered that could occur on the project site. White-tailed kite is a fully protected species. One additional special-status species, American peregrine falcon, has been observed in the project area although there are no documented nesting records known and there is no suitable nesting habitat on the project site.

A detailed discussion regarding the specific habitat requirements of these three species and the probability of them nesting on or near the project site follows.

American Peregrine Falcon

American peregrine falcon has been reported to nest on the Resources Building at 1416 9th Street near the project site. This species reportedly nested at the Resources Building many years ago, but the nest site on this building was screened to exclude the species and no subsequent nesting has been documented in downtown Sacramento (Jim Estep pers. comm. 2014). There is no CNDDDB record of this species ever nesting in downtown Sacramento. Adult peregrine falcons have been observed in downtown Sacramento, including in the project vicinity, as recently as summer 2014 (Estep pers. comm. 2014, Airola pers. comm. 2014), but no current nest sites are known. This species is not expected to nest on the project site due to a lack of preferred nesting structures (i.e., bridges or tall buildings with partially enclosed ledges that are protected from direct human interaction), but it is possible they could nest in surrounding buildings that provide suitable structure, such as the Resources Building. Buildings constructed in the initial project phases may provide suitable nesting conditions, but it is unlikely that a pair would nest on a new building on a site with ongoing demolition and construction. Protected ledges on tall buildings are preferred and the ledges must have some edge barrier to prevent eggs and nestlings from falling off and be protected from predators and human interaction.

Swainson's Hawk

Swainson's hawks in the Central Valley typically nest in tall (around 50 feet tall on average) trees in riparian woodlands, along roadsides or field borders, isolated trees, and on the edges of remnant oak woodlands or small groves (Estep 1989, Anderson et al. 2007). Remnant riparian forest edges contain the majority of known nests in the Central Valley. However, this is a function of nest tree availability rather than dependence on riparian forest (Estep 1989, England et al. 1997). Nests are usually constructed high up in the tree (mean nest height is around 40 feet), providing protection to the nest as well as visibility from it. Nests are generally constructed in trees that provide a panoramic view of the hawk's territory. Tree species most commonly used for nesting in the Central Valley are Fremont cottonwood (*Populus fremontii*), valley oak (*Quercus lobata*), black walnut (*Juglans californica*), eucalyptus (*Eucalyptus* spp.), and willow (*Salix* spp.) (Anderson et al. 2007, Estep 2007a). Swainson's hawks will occasionally nest in urban areas if there is a suitable nest tree that is tall enough to provide a panoramic view of the surrounding landscape, has dense enough foliage to visually protect the nest from disturbances, and the site is within 2 miles of foraging habitat (England et al. 1995 in Estep 2009a). Most urban nest trees are ornamental pines (*Pinus* spp.), redwoods (*Sequoia sempervirens* and *Sequoiadendron giganteum*), or native valley oaks (England et al. 1995 in Estep 2009, Estep pers. comm. 2007a). Approximately 10 percent of the trees on the project site have the appropriate size and structure to provide potential nest sites for Swainson's hawk; however, these trees are surrounded by tall buildings that block views from the tree canopies and the urban setting is characterized by continuous traffic, light and noise pollution, and other disturbances that substantially reduce suitability and attractiveness for Swainson's hawk.

While Swainson's hawk will use a variety of nesting habitats, it is a species of open plains, not woodlands, and their nest trees are almost always selected along the edges of tree stands or woodlands and not on the interior of them (England et al. 1997, Estep pers. comm. 2007a, Estep 2009b) or within areas surrounded by tall buildings. Swainson's hawks are visually oriented and require large, wide-open spaces and visibility from the nest (Estep pers. comm. 2007a, Estep 2009b).

Of primary importance to nest site selection is proximity to high-quality foraging habitat. Swainson's hawks cover large areas in search of prey; however, they do not nest in areas that are not close to suitable foraging habitat (Estep 1989, England et al. 1995 in Estep 2009a). Nest sites are generally located within 2 miles of suitable foraging habitat, which consists of alfalfa, disced fields, fallow fields, dry-land pasture, beets, tomatoes, irrigated pasture, grains, other row crops, and uncultivated

grasslands (Estep 1989, Estep pers. comm. 2007b, Estep 2009a). There is no suitable foraging habitat for Swainson's hawk on the project site. Potential foraging habitat is located within 2 miles of the project site at the Railyards, vacant lots on the west bank of the Sacramento River in West Sacramento, at Sutter's Landing Regional Park, and along the American River Parkway.

Prey abundance (the amount of rodent prey) and accessibility (ability to visually detect and capture the prey) are the most important features determining the suitability of Swainson's hawk foraging habitat (Estep 1989, Estep 2009b). Prey accessibility is based largely on vegetative structure (cover and height) of the foraging habitat with lower vegetative cover providing greater access to prey (Estep 2009b). In addition, agricultural operations (e.g., mowing, flood irrigation) have a substantial influence on the accessibility of prey and thus create important foraging opportunities for Swainson's hawk. Crops that are tall and dense enough to preclude the capture of prey do not provide suitable habitat except around field margins, but prey animals in these habitats are accessible during and soon after harvest. Swainson's hawks feed primarily on small rodents, but also consume insects and birds. Although the most important foraging habitat for Swainson's hawks lies within a 1-mile radius of each nest (City of Sacramento et. al 2003: Appendix H, page 5-29), Swainson's hawks have been recorded foraging up to 18.6 miles from nest sites (Estep 1989). Any habitat within the foraging distance may provide food at some time in the breeding season that is necessary for reproductive success.

There are numerous Swainson's hawk nesting records in the CNDDDB for the project area. Most of these records are from the Sacramento and American Rivers. However, there is a record of a Swainson's hawk pair nesting in a 60-foot tall redwood tree in Fremont Park at the corner of 15th and Q Streets from 2006 to 2012 (CNDDDB 2014). Fremont Park is one square block in size and completely surrounded by urban development with minimal foraging habitat within 2 miles. Unlike the project site, however, the nest tree in this park setting provides panoramic views of the surrounding area and buildings in the area are two to three stories high and are not taller than the nest tree.

The probability of Swainson's hawks nesting on the Sacramento Commons site is very low because suitable foraging habitat within 2 miles of the site is very limited and the site is surrounded by tall (mid-rise and high-rise) buildings that do not allow panoramic views of the surrounding landscape even from the tallest trees on site. Reproductive success decreases for Swainson's hawks as distance from foraging habitat increases and Swainson's hawks nesting in urban areas have been shown to have lower reproductive success than those nesting in rural areas (England et al. 1995, England et al. 1997). Therefore, urban settings such as those in the project area are considered low-quality nesting habitat.

White-Tailed Kite

White-tailed kites inhabit low elevation open grasslands, savannah-like habitats, agricultural areas, wetlands, oak woodlands, and riparian areas (Dunk 1995). White-tailed kites generally nest in dense stands of trees, but like Swainson's hawks, they nest on habitat edges adjacent to open foraging habitat (CDFW 2005). They occasionally nest in isolated trees. They typically nest within 0.5 mile of foraging habitat and are rarely found away from their preferred foraging habitats (Dunk 1995, CDFW 2005, Estep pers. comm. 2014). Preferred foraging habitat in the Central Valley includes alfalfa and other hay crops, irrigated pastures, sugar beets, and tomatoes (Erichsen et al. 1994, Estep pers. comm. 2014), but they also forage in dry pastures, annual grasslands, open oak woodlands, rice stubble fields, seasonal wetlands, marsh edges, and occasionally in orchards (Erichsen 1995, Estep pers. comm. 2014).

They have been reported to nest in a wide variety of tree and shrub species ranging from shrubs, such as coyote brush (*Baccharis pilularis*) that are less than 10 feet tall to redwood trees over 150 feet tall (Dunk 1995). However, they most often build their nests near the tops of trees (generally 20 to 100 feet

above ground) with dense canopies (CDFW 2010). White-tailed kite is common to uncommon and a year round resident in the Central Valley, other lowland valleys, and along the entire length of the coast (Dunk 1995).

This species has occasionally been found nesting on urban edges adjacent to preferred foraging habitat or in city parks (Estep 2014). The probability of white-tailed kites nesting on the project site, however, is very low because there is no preferred foraging habitat on or within 0.5 mile and this species tends to avoid human disturbance associated with urban areas (Estep 2014).

Impact Assessment

THRESHOLDS OF SIGNIFICANCE

Because this biological resources assessment has been prepared in support of CEQA, potential adverse impacts on biological resources are evaluated in the context of the State CEQA Guidelines and the City of Sacramento Environmental Checklist. These thresholds are listed in the “Biological Resources” section of the project EIR.

Additional biological resource issues were scoped out in an Initial Study that was prepared previously to evaluate the potential environmental effects of the proposed project, or are not relevant to the project site. Specifically, the project site does not contain riparian habitats or other sensitive natural communities and does not contain federally protected wetlands or other features regulated under Section 404 of the Clean Water Act. The project site does not support any wetlands or waters regulated by other agencies. The project site does not serve as an important migration or movement corridor for any wildlife species. These issues are not addressed further.

IMPACTS TO SWAINSON’S HAWK, WHITE-TAILED KITE AND OTHER NESTING BIRDS PROTECTED UNDER THE MBTA OR CALIFORNIA FISH AND GAME CODE

The project has the potential to affect nesting bird species (both on and immediately adjacent to the site) and would result in the removal of or other impacts on trees that could provide nesting habitat. However, the small, urban nature of the project site and the lack of bird or raptor nests observed during the survey make it less likely that removal of trees that could be used for nesting would adversely impact the regional bird population. Furthermore, the loss of existing trees would not be expected to have a substantial effect on the long-term viability of any common or special-status bird or raptor population or cause a population to drop below self-sustaining levels because most of the species that may use the site are relatively common and, because of the highly disturbed nature of the site and surrounding environment, the site provides poor quality nesting habitat for special-status raptors (i.e., Swainson’s hawk and white-tailed kite) compared to the open, undeveloped habitats in which these species typically nest. As discussed in the following paragraphs, there is abundant nesting habitat of equal or better quality available in the vicinity of the project site and in the greater Sacramento area to maintain current populations of birds and raptors (Hocker, April 27, 2014).

Implementing the project would result in removal of approximately 199 of the 291 trees existing on the project site or along its perimeter. Of the trees to be removed, approximately 11 have the size and structure characteristics to potentially support Swainson’s hawk nests. An additional 65 of these trees are potentially suitable nest trees for white-tailed kites. However, the probability of Swainson’s hawks nesting on or adjacent to the project site is very low because this species generally nests within close approximately (typically within 2 miles) to suitable foraging habitat (e.g., open fields, grasslands, agricultural fields, fallow fields, and pastures). Swainson’s hawks nesting within or adjacent to urban

areas have been shown to have lower reproductive success than those nesting in more rural areas (Estep pers. comm. 2007, Estep 2009). In addition, nests are generally constructed in trees that provide a panoramic view of the hawk's territory; trees on the project site are surrounded by tall buildings that block views from the tree canopies. White-tailed kites generally nest in dense stands of trees but, like Swainson's hawks, they typically nest on habitat edges adjacent to open foraging habitat (CDFW 2005). They occasionally nest in isolated trees, but in the Central Valley, are rarely found far from agricultural areas or open grasslands (CDFW 2005, Estep pers. comm. 2014). While this species has occasionally been found nesting on urban edges adjacent to preferred foraging habitat or in city parks (Estep 2014), the probability of white-tailed kites nesting on the project site is also very low because there is no preferred foraging habitat within approximately 0.5 mile of the site and this species tends to avoid human disturbance associated with urban areas (Estep 2014). Furthermore, the urbanized setting in which the project is located is characterized by continuous traffic, light and noise pollution, and other disturbances that substantially reduce suitability and attractiveness for Swainson's hawk and white-tailed kite that typically prefer more rural settings.

The removal of approximately 199 trees should also be viewed in the context of the approximately 16,604 City-maintained trees existing in the Central City area, including a conservative estimate of approximately 4,700 of the largest trees (greater than 25 inches in diameter) that could support nesting habitat for raptors (Hocker, April 27, 2014). Within a 1-mile radius of the center of the project site, the City maintains approximately 7,738 trees of which approximately 2,053 are greater than 25 inches in diameter and could presumably support large raptor nests (Hocker 2014). The City's Urban Forestry section manages about 115,000 street, park, and city-facility trees citywide (American Forests 2014). There is also an undetermined number of larger trees on private property in the Central City area and throughout the rest of Sacramento. Based on the conceptual landscape plan, project implementation is estimated to include planting of approximately 247 trees on the project site to replace trees removed as a result of construction. Based on the conceptual landscape plan, project implementation would retain approximately 92 of the existing trees.

Trees within the Sacramento and American River corridors provide much higher quality nesting habitat for Swainson's hawk and white-tailed kite than those within the high-density urban environment characterizing the project site. Trees within City parks in the project area, such as Capitol Park, Crocker Park, and Southside Park, also provide better nesting conditions for Swainson's hawk and white-tailed kite than the project site. As previously discussed, high-density urban environments provide poor quality nesting habitat overall and are unlikely to sustain long-term reproductive success for these two raptor species.

Although the probability is very low, the possibility of Swainson's hawk or white-tailed kite nesting on the site cannot be entirely ruled out. If trees are to be removed during the raptor breeding season (March–August), direct destruction of an active Swainson's hawk or white-tailed kite nest, including mortality of eggs and chicks, could result if an active nest were present. In addition, project construction could disturb active nests near the construction area, potentially resulting in nest abandonment by the adults and mortality of chicks and eggs. Direct or indirect loss of an active Swainson's hawk or white-tailed kite nest is a potentially significant impact requiring mitigation because these species are uncommon, their regional population numbers are declining, and the species are considered vulnerable to extinction in the State of California due to a restricted range and relatively few populations. Therefore, the direct or indirect loss of an active nest of these species as a result of project implementation would be considered a substantial adverse effect on a special-status species, and, therefore, a significant impact under CEQA as well as a violation of the MBTA and California Fish and Game Code.

Tree removal and ground disturbances associated with project implementation could also result in direct destruction of active nests of other birds protected under the MBTA and California Fish and Game Code. Project construction could also result in disturbance of breeding birds causing nest abandonment by the adults and mortality of chicks and eggs. Loss of common birds and raptors (those not meeting the definition of special-status as provided above) would not be a significant impact under CEQA because it would not result in a substantial effect on their populations locally or regionally; however, destruction of any bird nest would be a violation of the MBTA or California Fish and Game Code and mitigation to avoid the loss of active nests of these species is required for compliance with these regulations.

Project construction has the potential to indirectly disturb peregrine falcons if they are nesting in the project vicinity during construction. While, as discussed above, there are no known active peregrine falcon nests documented in downtown Sacramento, should an active nest be established adjacent to the project site, the potential indirect impacts to an active nest as a result of project construction would be considered a substantial adverse effect on a special-status species, and, therefore, a significant impact under CEQA as well as a violation of the MBTA and California Fish and Game Code.

IMPACTS ON TREES PROTECTED UNDER THE CITY TREE PRESERVATION ORDINANCE

As described above, the project site contains 50 trees subject to the City's Tree Ordinance, including 39 trees that meet the definition of a City Street Tree and 11 trees that meet the criteria for classification as a Heritage Tree. Of the 39 City Street Trees, six also meet the criteria for classification as a Heritage Tree. Construction of the proposed project is expected to result in the removal of up to four Heritage Trees in good or fair condition and the potential removal of up to four City Street Trees (Dudek 2014). Removal of these trees would conflict with 2030 General Plan Policy ER 3.1.3 requiring retention of trees of significance, also known as Heritage Trees, as well as the City Tree Preservation Ordinance. The City's policy is to retain trees whenever feasible and a permit is required to remove Heritage or City Street Trees that cannot feasibly be retained. Therefore, the removal of Heritage Trees and City Street Trees would be a significant impact requiring mitigation.

Recommendations

The following mitigation measures are included in the EIR to mitigate potential impacts on nesting birds during tree removal or construction in general:

Swainson's hawk

- ▶ If construction, tree removal, trimming, or pruning for any project phase on the project site is to begin during nesting season for Swainson's hawk (March 1–August 31), a preconstruction survey for Swainson's hawk nests shall be conducted. Surveys for Swainson's hawk nests shall be conducted no more than 30 days before the beginning of construction for all project phases. Surveys for Swainson's hawk nests shall be conducted in all nesting habitat within line of sight of construction activities within 0.25-mile radius of the project site.
- ▶ If active Swainson's hawk nests are found within the nest survey area, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. Monitoring of the nest by a qualified biologist during construction activities will be required if the activity has potential to adversely affect the nest. Based on guidance for determining a project's potential for impacting Swainson's hawks (Swainson's hawk Technical Advisory Committee 2000),

projects in urban areas have a low risk of adversely affecting nests greater than 600 feet from project activities. Therefore, 600 feet is the minimum adequate buffer size for protecting nesting Swainson's hawks from disturbances associated with the proposed project. However, the qualified biologist shall consult with the California Department of Fish and Wildlife to confirm the adequacy of the no-disturbance buffer size prior to commencement of construction.

- ▶ No construction activity shall occur within the buffer area of a particular nest until a qualified biologist in consultation with CDFW, confirms that the chicks have fledged or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases according to CDFW guidance (Calderaro pers. comm. 2014). The no-disturbance buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

White-tailed Kite, Peregrine Falcon, and Other Protected Bird Species

- ▶ If construction activity, tree removal, trimming, or pruning for any project phase on the project site is to begin during the nesting season for white-tailed kite, peregrine falcon, other raptors (except Swainson's hawk), or other protected bird species in this region (generally late February through early September), a qualified biologist shall conduct preconstruction surveys in areas of suitable nesting habitat for white-tailed kite, peregrine falcon, common raptors, and bird species protected by the Migratory Bird Treaty Act or California Fish and Game Code that are within the line of sight of construction activities. Surveys shall be conducted no more than 30 days before any ground disturbance is expected to occur for all project phases and shall extend at least 300 feet from the edge of the disturbance activity for non-raptor bird species and at least 500 feet for all raptor species potentially nesting in the area.
- ▶ If no active nests are found, no further mitigation is required. If active nests are found, the construction contractor shall avoid impacts on such nests by establishing a no-disturbance buffer around the nest. The appropriate buffer size for all nesting birds shall be determined by a qualified biologist but shall extend a minimum of 300 feet from the nest for non-raptor bird species and 500 feet for raptor species. The buffer size may be adjusted, as determined by a qualified biologist, depending on the species of nesting bird, nature of the project activity, the extent of existing disturbance in the area, visibility of the disturbance from the nest site, and other relevant circumstances.
- ▶ No construction activity shall occur within the established buffer area of an active nest until a qualified biologist confirms that the chicks have fledged and are no longer dependent upon the nest or the nesting cycle has otherwise completed. Monitoring of the nest by a qualified biologist during construction activities shall be required if the activity has the potential to adversely affect the nest. If construction activities cause the nesting bird to vocalize, make defensive flights at intruders, get up from a brooding position, or fly off the nest, then the no-disturbance buffer shall be increased until the agitated behavior ceases, according to CDFW guidance (Calderaro pers. comm. 2014). The no-disturbance buffer will remain in place until the chicks have fledged or as otherwise determined by a qualified biologist.

The following mitigation measures are included in the environmental impact report to mitigate potential impacts on protected trees:

- ▶ The project applicant shall submit a tree permit application to the City of Sacramento Department of Transportation (Urban Forestry Services Division) as required for removal, pruning, or soil disturbance within the canopy dripline of a Heritage or City Street Tree.
- ▶ The four Heritage Trees to be removed for construction purposes shall each be replaced with one 24-inch box size tree. The four replacement trees shall be planted on site and incorporated into the 247 new trees to be planted as part of the project's landscape plan.
- ▶ The four City Street Trees to be removed for construction purposes shall be replaced with three 24-inch box size trees and one 15-gallon size tree (as required under City Code Section 12.56.090 based on the sizes of the City Street Trees to be removed). Replacement trees for City Street Trees should be replanted within the City right-of-way in coordination with the City's Urban Forester. If replacement trees for City Street Trees cannot be accommodated in the City's right-of-way, they shall be planted on site and incorporated into the project landscape plan. If City Street Tree replacement trees cannot be incorporated into the project landscape plan, they shall be planted at another off-site location at the City's direction.
- ▶ Replacement plantings shall consist of shade tree species recommended by the Sacramento Tree Foundation. A list of these trees is provided at <http://www.sactree.com/trees>.
- ▶ Tree planting shall comply with the City's landscaping requirements (City Code Sections 17.612.010 and 17.612.040).
- ▶ Canopy or root pruning of any retained trees to accommodate construction and/or fire lane access shall be conducted according to International Society of Arborists or ANSI A300 tree pruning standards. More detail on the tree pruning standards can be accessed at <http://tcia.org/business/ansi-a300-standards>.
- ▶ All retained trees on site (Heritage Trees, City Street Trees, and non-Heritage Trees) shall be protected from construction-related impacts pursuant to Sacramento City Code Section 12.64.040 (Heritage Trees) and Section 12.56.060 (City Street Trees). Full details of tree protection measures are available in the arborist report for the project provided as Appendix M of the EIR, but a summary is provided here:
 - Under the tree protective measures, an International Society of Arboriculture-certified arborist shall be assigned to monitor tree health and construction activity near trees retained on-site. Protection measures prior to construction include: health inspection of large trees; a pre-construction meeting with all contractors and the arborist to discuss protocols; pre-construction training for all construction crews; tree removal, pruning and inspection during site preparation; and erection of a protective fencing and signage around all trees or groups of trees. Tree protection measures during construction include: preserved trees shall not have signs, ropes, cables or other items attached to them; all heavy equipment will avoid the fenced protection zones; no storage or discard of any supply or material within the fenced protection zones; grade changes of more than two feet are not permitted within 30 feet of a tree's drip line; care will be taken when moving equipment or supplies near trees (especially overhead); all trenching will be outside the fenced protection zones unless a Tree Permit has been obtained; an irrigation

schedule shall be implemented for any substantially pruned tree within 48 hours; canopy pruning can only be done under a Tree Permit; and periodic washing of tree foliage is recommended required (but not more than once every two weeks).

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