APPENDIX E
Biological Resources Report

LIVE OAK ASSOCIATES, INC.

MOFFETT PARK SPECIFIC PLAN
BIOLOGICAL EVALUATION
SUNNYVALE, SANTA CLARA COUNTY, CALIFORNIA

Prepared by

LIVE OAK ASSOCIATES, INC.

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December 5, 2022 PN 2433-01

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1 INTRODUCTION

This technical biological evaluation report, prepared by Live Oak Associates, Inc. (LOA) in support of California Environmental Quality Act (CEQA) review, describes the biological resources of the approximately 1,300-acre Moffett Park area located in Sunnyvale (hereafter referred to as the "study area") and evaluates possible impacts to those resources resulting from the proposed Moffett Park Specific Plan (MPSP) for development within the study area. The site is bounded by Moffett Airfield to the west, Highway 237 to the south, with the Bay Trail along the northern border, and Caribbean Drive and the San Francisco Bay to the north in the City of Sunnyvale, Santa Clara County, California (Figure 1). The site can be found on the Mountain View and Milpitas U.S.G.S. 7.5' quadrangles in Sections 12, 13, and 24 of Township 6 South, Range 2 West, Sections 7, 17, and 18 of Township 6 South, 1 West.

In general, the development of parcels can damage or modify biotic habitats used by sensitive plant and wildlife species. In such cases, site development may be regulated by state or federal agencies, subject to provisions of CEQA, and/or covered by local policies and ordinances. Therefore, this report addresses: 1) sensitive biotic resources potentially occurring in the study area; 2) the federal, state, and local laws regulating such resources, 3) possible significant impacts to these resources that could result from the project; and 4) best management practices that would reduce these impacts to a less-than-significant level as defined by CEQA.

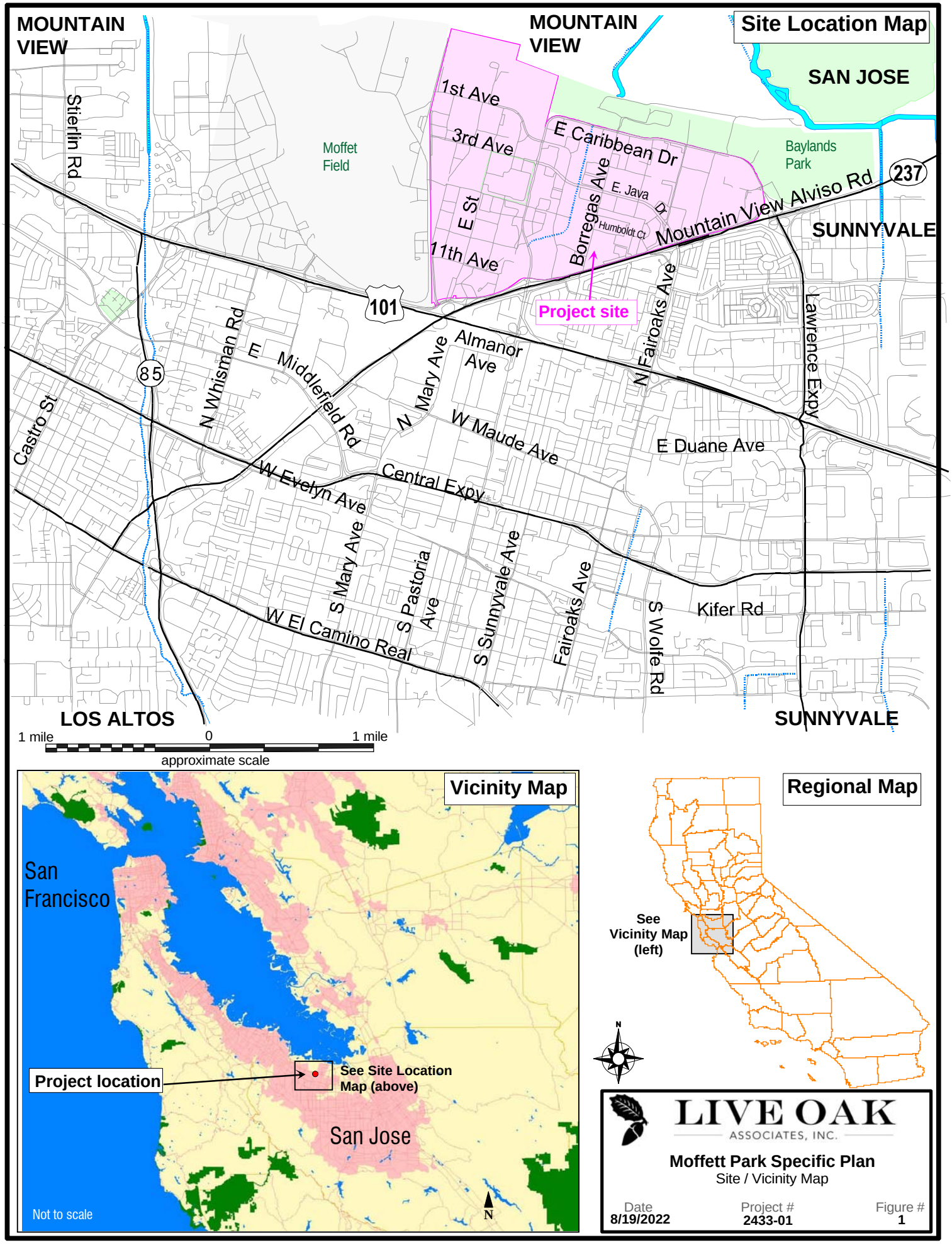
The analysis of impacts, as discussed in Section 3.0 of this report, was based on the known and potential biotic resources of the study area discussed in Section 2.0. Sources of information used in the preparation of this analysis included: 1) the *California Natural Diversity Data Base* (CDFW 2022); 2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2022); 3) manuals and references related to plants and animals of the Santa Clara County region; and 4) the City of Sunnyvale policies and ordinances.

A field survey of the study area was conducted on June 4 and 22, 2020, by LOA ecologists Katrina Krakow and Robert Shields.

1.1 PROJECT DESCRIPTION

The project is the preparation of an updated Moffett Park Specific Plan (MPSP). The proposed Specific Plan update would allow for a net increase of 20,000 residential units (where there are no residential units existing today), 650,000 square feet of commercial uses, 10.0 million square feet of office/industrial/R&D uses, and 200,000 square feet of institutional uses beyond what is currently existing and recently approved. As a result, the buildout of the proposed MPSP (which would include existing, recently approved, and proposed uses) would result in a total of

20,000 residential units and approximately 33.5 million square feet of commercial, office/industrial/R&D, and institutional uses. The MPSP would then be used to direct development within the MPSP area (Figure 1).


Site Location Map
MOUNTAIN VIEW
MOUNTAIN VIEW
SAN JOSE
Stierlin Rd
Moffet Field
1st Ave
3rd Ave
E St
11th Ave
E Caribbean Dr
E. Java Dr
Humboldt Ct
Borregas Ave
Baylands Park
237
Mountain View Alviso Rd
SUNNYVALE
Project site
101
85
N Whisman Rd
E Middlefield Rd
N Mary Ave
Almanor Ave
N Fairoaks Ave
Lawrence Expy
Castro St
W Maude Ave
E Duane Ave
W Evelyn Ave
Central Expy
S Mary Ave
S Pastoria Ave
S Sunnyvale Ave
Fairoaks Ave
S Wolfe Rd
Kifer Rd
W El Camino Real
LOS ALTOS
SUNNYVALE
1 mile
0
1 mile
approximate scale
Vicinity Map
San Francisco
Project location
See Site Location Map (above)
San Jose
Not to scale
N
Regional Map
See Vicinity Map (left)
N
LIVE OAK ASSOCIATES, INC.
Moffett Park Specific Plan
Site / Vicinity Map
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1

2 EXISTING CONDITIONS

The study area is located on the Bay-side of Highway 237 and includes mostly developed property with some ruderal fields as well as some more natural lands along the San Francisco Bay. Moffett Airfield and Moffett Field Golf Club is to the west of the study area, with urban development to the south and east, and open space and the San Francisco Bay to the north of the study area. The study area is situated on a relatively flat area sloping from the southwest toward the San Francisco Bay at elevations ranging from approximately 40 feet (12 meters) National Geodetic Vertical Datum (NGVD) to 0 feet NGVD (0 meters) at the top of the slope near the existing residence.

Annual precipitation in the general vicinity of the study area is about 15-20 inches, almost 85% of which falls between the months of October and March. Virtually all precipitation falls in the form of rain.

Five soil map units occur within the study area, which are outlined below and shown on Figure 2.

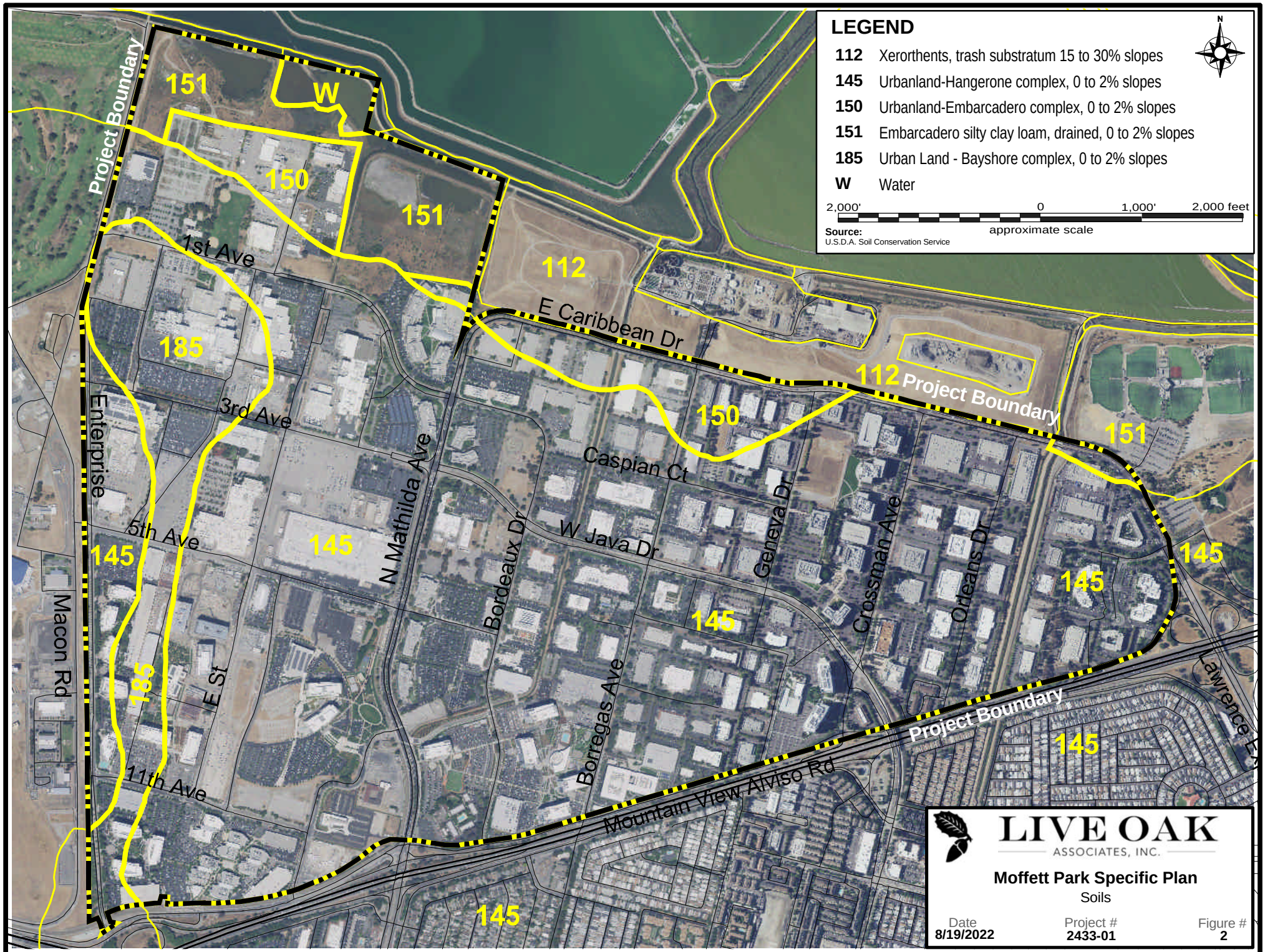
TABLE 1. SOILS OF THE STUDY AREA

Map Unit Name	Drainage	Permeability	Hydric?
Xerorthents, trash substratum 15 to 30 percent slopes	Artificial fill (trash)	Artificial fill (trash)	Nonhydric
Urbanland-Hangerone complex, 0 to 2 percent slopes, drained	poorly drained	Slow	Partially Hydric
Urbanland-Embarcadero complex, 0 to 2 percent slopes, drained	poorly drained	frequently flooded	Partially Hydric
Embarcadero silty clay loam, drained, 0 to 2 percent slopes	poorly drained	frequently flooded	Predominantly Hydric
Urban Land – Bayshore complex, 0 to 2 percent slopes, drained	Somewhat poorly and poorly drained	moderate to moderately slow	Partially Hydric

The study area supports hydric soils. Bayshore soils are moderately alkaline and Embarcadero soils are strongly alkaline, therefore, the presence of alkaline soils on the site and proximity to the Bay shoreline makes the site potentially capable of supporting alkaline plant species.

2.1 BIOTIC HABITATS

The site is separated by the San Francisco Bay by an old salt pond, Moffett Channel, and the Bay Trail. Eight land cover types are present on the project site: developed, California annual grassland, ruderal, freshwater stormwater basin, riparian, potential wetland, emergent wetland, and ditches (Figures 3a and 3b).


LEGEND
112 Xerorthents, trash substratum 15 to 30% slopes
145 Urbanland-Hangerone complex, 0 to 2% slopes
150 Urbanland-Embarcadero complex, 0 to 2% slopes
151 Embarcadero silty clay loam, drained, 0 to 2% slopes
185 Urban Land - Bayshore complex, 0 to 2% slopes
W Water
2,000' 0 1,000' 2,000 feet
approximate scale
Source:
U.S.D.A. Soil Conservation Service
N
Project Boundary
1st Ave
3rd Ave
5th Ave
11th Ave
E Caribbean Dr
Caspian Ct
W Java Dr
Mountain View Alviso Rd
Enterprise
Macon Rd
E St
N Mathilda Ave
Bordeaux Dr
Borregas Ave
Geneva Dr
Crossman Ave
Orleans Dr
Lawrence Expy
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Moffett Park Specific Plan
Soils
Date
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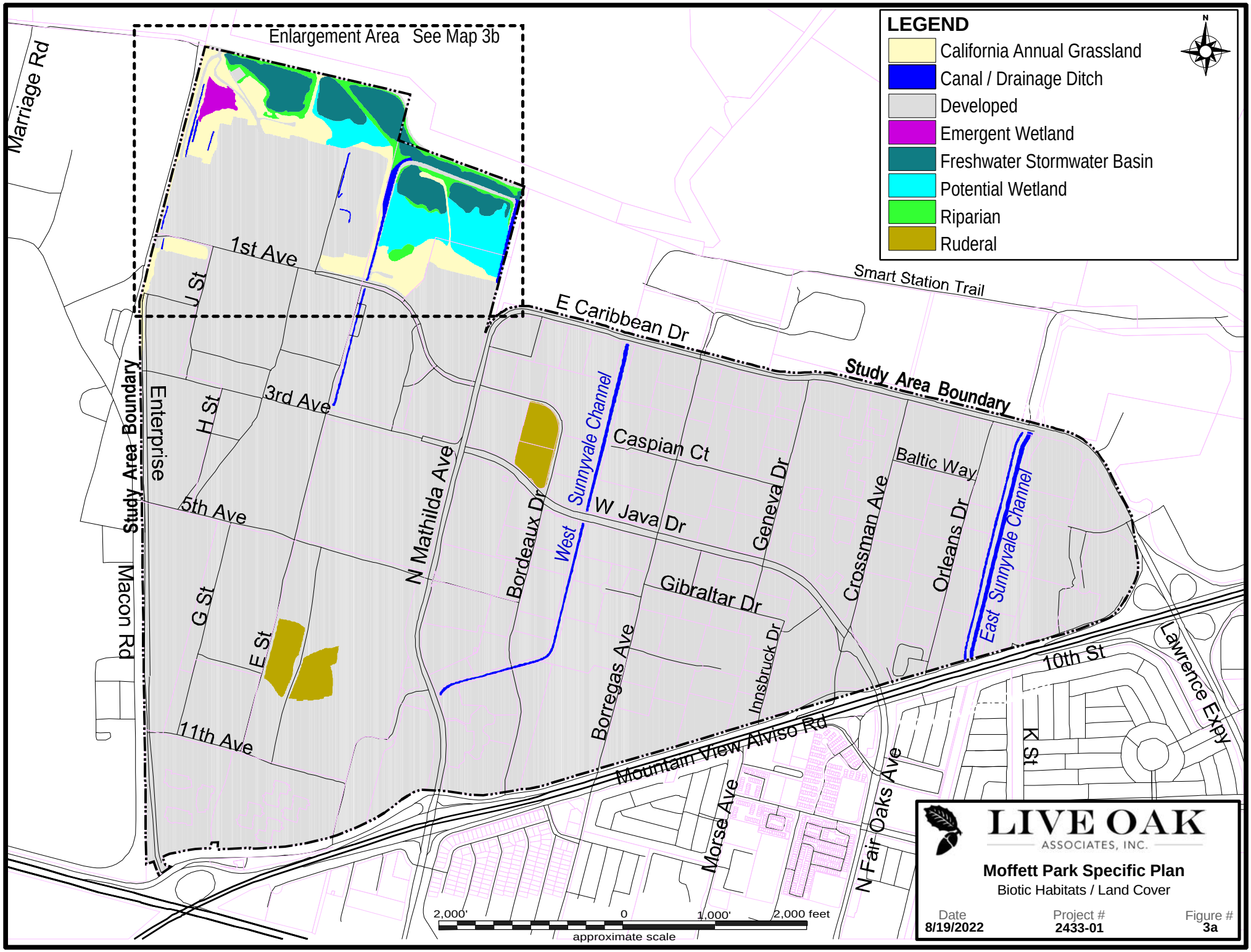
Figure #
2


Enlargement Area See Map 3b
LEGEND
California Annual Grassland
Canal / Drainage Ditch
Developed
Emergent Wetland
Freshwater Stormwater Basin
Potential Wetland
Riparian
Ruderal
N
Marriage Rd
1st Ave
J St
Smart Station Trail
E Caribbean Dr
Study Area Boundary
Study Area Boundary
Enterprise
H St
3rd Ave
Sunnyvale Channel
Caspian Ct
Baltic Way
5th Ave
N Mathilda Ave
Bordeaux Dr
West
W Java Dr
Geneva Dr
Crossman Ave
Orleans Dr
East Sunnyvale Channel
Macon Rd
G St
E St
Gibraltar Dr
Borregas Ave
Innsbruck Dr
10th St
Lawrence Expy
11th Ave
Mountain View Alviso Rd
Morse Ave
N Fair Oaks Ave
K St
2,000'
0
1,000'
2,000 feet
approximate scale
LIVE OAK
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Moffett Park Specific Plan
Biotic Habitats / Land Cover
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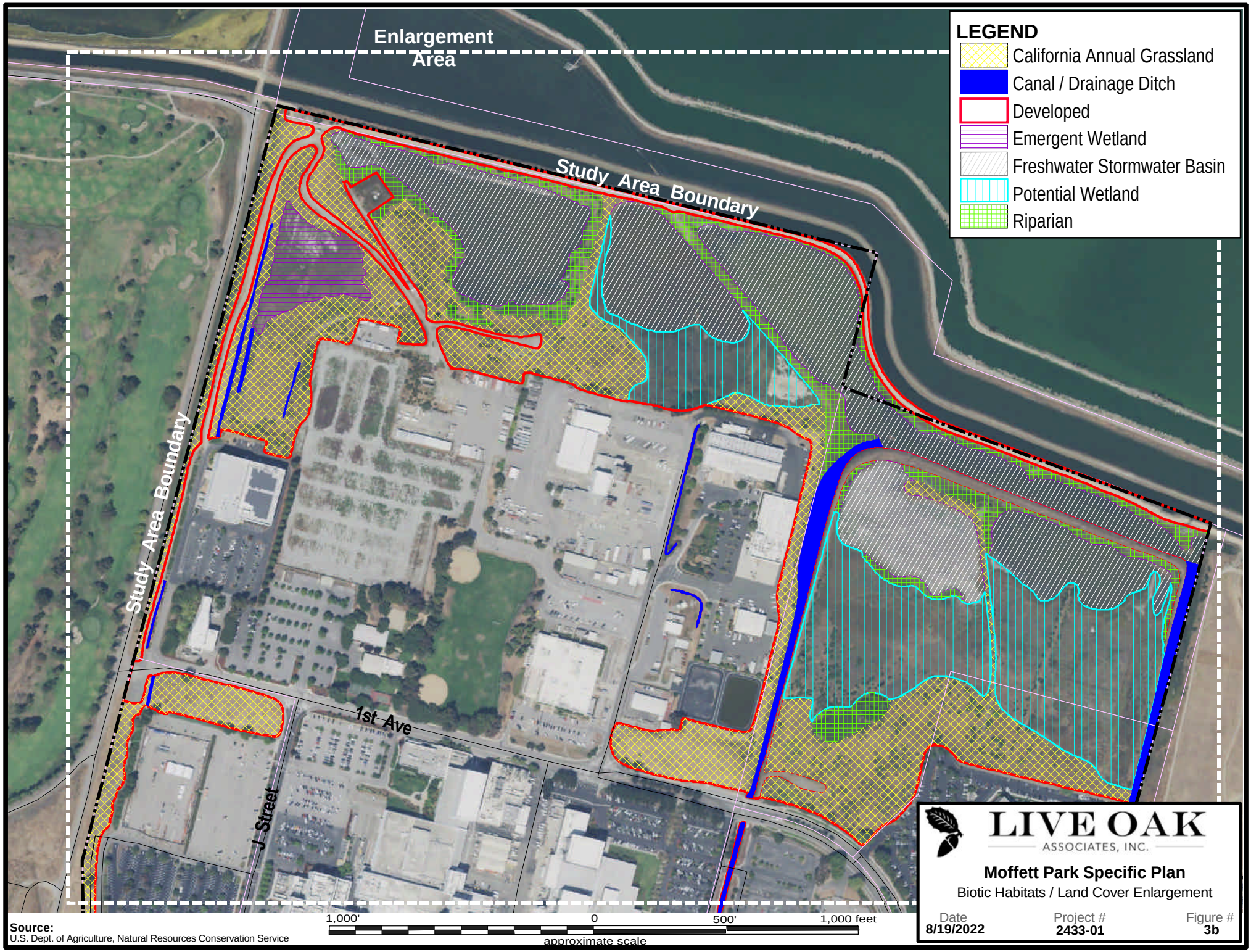
Figure #
3a



Source:
U.S. Dept. of Agriculture, Natural Resources Conservation Service

LIVE OAK ASSOCIATES, INC.

Moffett Park Specific Plan

Biotic Habitats / Land Cover Enlargement

Date	Project #	Figure #
8/19/2022	**2433-01**	**3b**

2.1.2 Developed

The majority of the study area is developed and includes Lockheed Martin, industrial buildings, and a couple small pockets of retail. Buildings within this habitat vary from single story to multiple story buildings and much of this habitat within the study area is either currently under construction and/or is fenced off presumably for near-future demolition and construction activities. At least two buildings support vegetated roofs. Vegetation within this habitat consists of landscaped trees, shrubs, lawns, and other landscaped plants typical of industrial and commercially developed landscapes with some weedy species mixed in.

Herpetofauna observed within this habitat during the June 2020 field visits was limited to the coast range fence lizard (*Sceloporus occidentalis borcourtii*), although several other species would be expected to occur in this habitat, including the Pacific chorus frog (*Pseudacris regilla*), northern alligator lizard (*Elgaria coerulea*), and Pacific gopher snake (*Pituophis catenifer catenifer*).

Avian species observed within this habitat during the June 2020 field visits may nest on or off the study area and include the turkey vulture (*Cathartes aura*) and golden eagle (*Aquila chrysaetos*) which likely nest outside of the study area, as available nesting habitat is absent from the study area; white-tailed kite (*Elanus leucurus*) and red-tailed hawk (*Buteo jamaicensis*), which potentially nest in large trees of the study area; Eurasian collared-dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), Nuttal's woodpecker (*Picoides nuttallii*), common raven (*Corvus corax*), American crow (*Corvus brachyrhynchos*), bushtit (*Psaltriparus minimus*), white-breasted nuthatch (*Sitta carolinensis*), Bewick's wren (*Thryomanes bewickii*), northern mockingbird (*Mimus polyglottos*), European starling (*Sturnus vulgaris*), California towhee (*Melozone crissalis*), Bullock's oriole (*Icterus bullockii*), house finch (*Haemorhous mexicanus*), lesser goldfinch (*Spinus psaltria*), and house sparrow (*Passer domesticus*) which likely nest in trees and shrubs of the study area; black phoebe (*Sayornis nigricans*), cliff swallow (*Petrochelidon pyrrhonota*), barn swallow (*Hirundo rustica*), build mud nests and can be expected to nest on buildings of the study area; and killdeer (*Charadrius vociferous*) which nests on open ground and would be expected to nest in parking strips of abandoned buildings or in gravel or dirt lots of the study area.

Mammalian species observed within this habitat during the June 2020 field visits were limited to the California ground squirrel (*Otospermophilus beecheyi*) and Botta's pocket gopher (*Thomomys bottae*); other species expected to occur in this habitat include but are not limited to the raccoon (*Procyon lotor*), striped skunk (*Mephitis mephitis*), feral cat (*Felis catus*), gray fox (*Urocyon cinereoargenteus*), coyote (*Canis latrans*), and domestic dog (*Canis familiaris*).

2.1.3 California Annual Grassland

The northwestern corner of study area on both Lockheed Martin property supports California annual grassland. These areas are generally dominated by wild oats (*Avena sp.*) and other non-native invasive grasses and weedy species. The California annual grassland in the northwestern portion of the study area on the Lockheed Martin property abuts freshwater stormwater basins, potential wetlands, and emergent wetlands; this area more closely approximates a natural habitat than the other California annual grassland within the study area as it is an intact habitat and supports intermixed coyote brush (*Baccharis pilularis*) and some trees. Other areas identified as California annual grassland include two small areas on Lockheed Martin property with similar weedy vegetation which appears to be maintained by mowing. The easternmost of these two areas appears to be on a capped landfill or other fill, as vents are throughout the field.

As the majority of this habitat is more "natural" and due to its close proximity to the San Francisco Bay, a variety of wildlife species are expected to occur here, including a large variety of migratory birds. Animal species observed in this habitat type during the June 2020 site visits include the turkey vulture, black phoebe, and barn swallow which likely nests outside of the study area; mourning dove, Anna's hummingbird, bushtit, Bewick's wren, northern mockingbird, European starling, California towhee, house finch which likely nest in shrubs of this habitat within the study area, killdeer and mourning dove may also nest on the ground of this habitat within the study area. Botta's pocket gopher, and California ground squirrel were also observed onsite, which provide potential habitat for other species including frogs, lizards, snakes, and rodents. A low density of ground squirrels was observed onsite, and their burrows provide winter and breeding habitat for burrowing owls (*Athene cunicularia*) which are known to occur regionally. Other species that may be expected to occur within this habitat may include, but are not limited to, the western fence lizard, Pacific gopher snake, raccoon, striped skunk, feral cat, gray fox, coyote, feral cat, and domestic dog.

2.1.4 Ruderal

Some parcels within the greater developed area have been left undeveloped for an extended time and support ruderal habitat, dominated by weedy species similar to those found in the California annual grassland habitat and landscaped trees. These areas offer additional habitat value than the developed parcels and some parcels support a moderate density of California ground squirrel burrows which frogs, lizards, snakes, burrowing owls, and mice may use.

2.1.5 Freshwater Stormwater Basin

Five freshwater stormwater basins exist on Lockheed Martin land in the northwestern corner of the study area. These basins are filled with water from Lockheed Martin property which is carried to them via canals and ditches. These

fresh water basins provide important wetland habitat for migratory birds even though they are separated from the brackish and salt-water of the San Francisco Bay. Species observed either on or in the riparian habitat surrounding the freshwater stormwater basins at the time of the June 2020 site visits include the mallard (*Anas platyrhynchos*), cinnamon teal (*Anas cyanoptera*), ruddy duck (*Oxyura jamaicensis*), pied-billed grebe (*Podilymbus podiceps*), great blue heron (*Ardea Herodias*), great egret (*Ardea alba*), black-crowned night-heron (*Nycticorax nycticorax*), American coot (*Fulica americana*), turkey vulture, killdeer, mourning dove, Anna's hummingbird, black phoebe, barn swallow, bushtit, Bewick's wren, marsh wren (*Cistothorus palustris*), northern mockingbird, European starling, saltmarsh common yellowthroat (*Geothlypis trichas sinuosa*) which is a California species of concern, California towhee, song sparrow (*Melospiza melodia*), Bullock's oriole (*Icterus bullockii*), and house finch.

2.1.6 Riparian

Riparian habitat exists along the margins of the freshwater stormwater basins and includes vegetative species such as coyote brush, ice plant (*Carpobrotus edulis*), cottonwood (*Populus sp.*), coast live oak (*Quercus agrifolia*), willow (*Salix* sp.), elderberry (*Sambucus nigra*), and fan palm (*Washingtonia sp.*). Animal species observed in and around the freshwater stormwater basins and expected to occur in the adjacent California annual grassland would also be expected to occur within this habitat. Riparian habitat would likely be used as nesting habitat by tree and shrub-nesting species listed above in the California annual grassland and freshwater stormwater basin habitats.

2.1.7 Potential Wetland

Potential wetlands exist along the margins of the freshwater stormwater basins, as these areas appear to be seasonally or periodically inundated and includes species such as bulrush (*Scirpus acutus*) and cattail (*Typha sp.*). This habitat was surveyed from a distance, as fencing prevented direct access to much of this area. Species occurring in adjacent habitats are likely to occur in this habitat, especially along the edges of this habitat.

2.1.8 Emergent Wetland

An emergent wetland dominated by pickleweed (*Salicornia sp.*) which also supported Bermuda grass, dodder (*Cuscuta* sp.), and whitetop (*Lepidium draba*) exists in the northwestern corner of the study area surrounded by California annual grassland. This wetland did not support standing water, however, was muddy near the center during the June 2020 site visit. Water appears to be directed to this wetland via a small drainage ditch/canal. Although animal species in this habitat were not identified during the site visit, species occurring in adjacent habitats are likely to occur in this habitat; as this habitat is small, species in adjacent habitats are likely to pass through this habitat.

2.1.9 Ditches and Canals

A series of ditches and canals exist within the study area. Lockheed Martin land has a series of ditches and canals which moves water to the freshwater stormwater basins on the northern side of Lockheed Martin. These features include vegetation typical of wetlands such as nutsedge (*Cyperus* sp.), rabbitsfoot grass (*Polypogon monspeliensis*), willow, elderberry, and cattail as well some upland vegetation consistent with species found in California annual grassland in some areas such as tree of heaven (*Ailanthus altissima*), pampas grass (*Cortaderia selloana*), fennel (*Foeniculum vulgare*), bristly ox-tongue (*Helminthotheca echioides*), curly dock (*Rumex crispus*), and hedge parsley (*Torilis arvensis*). Two large canals, the Sunnyvale West Channel and Sunnyvale East Channel run through the developed portion of the study area and are described below.

Sunnyvale East Channel and associated channel- The Sunnyvale East Channel is a channelized waterway that feeds into the San Francisco Bay by way of the eastern branch of Guadalupe Slough into Sunnyvale and appears to be tidally influenced. This feature supports vegetation on the banks including, but not limited to celery (*Apium graveolens*), Bermuda grass (*Cynodon dactylon*), fennel, whitetop, curly dock, bulrush, and cattail. A secondary freshwater channel parallels the Sunnyvale East Channel that does not appear to be tidally influenced; it is unclear whether the channel ends near Stevens Creek Quarry or continues to the San Francisco Bay by way of the western branch of Guadalupe Slough. This feature supports vegetation including nutsedge, ash (*Fraxinus sp.*), water primrose (*Ludwigia peploides*), sweet clover (*Melilotus officinalis*), bristly ox-tongue, olive (*Olea* sp.), canary palm (*Phoenix canariensis*), coast live oak, castor bean (*Ricinus communis*), cattail, and fan palm.

Animal species observed during the June 2020 site visit include Canada goose (*Branta canadensis*), mallard (*Anas platyrhynchos*), red-breasted merganser (*Mergus serrator*), great blue heron (*Ardea herodias*), great egret (*Ardea alba*), snowy egret (*Egretta thula*), California gull (*Larus californicus*), Eurasian collared-dove (*Streptopelia decaocto*), rock pigeon (*Columba livia*), mourning dove (*Zenaida macroura*), black phoebe (*Sayornis nigricans*), California scrub jay (*Aphelocoma californica*), northern rough-winged swallow (*Stelgidopteryx serripennis*), bushtit (*Psaltriparus minimus*), song sparrow (*Melospiza melodia*), and California ground squirrels.

Sunnyvale West Channel- The Sunnyvale West Channel is a channelized waterway that feeds into the San Francisco Bay by way of the western branch of Guadalupe Slough into Sunnyvale and appears to be tidally influenced. Vegetation along this channel during the June 2020 site visit included, but was not limited to, agapanthus (*Agapanthus* sp.), narrow-leaf milkweed (*Asclepias fascicularis*), carob (*Ceratonia siliqua*), nutsedge, fennel, bristly ox-tongue, English ivy (*Hedera helix*), privet (*Ligustrum sp.*), whitetop, oleander (*Nerium oleander*), smilo grass

(*Piptatherum miliaceum*), English plantain (*Plantago lanceolata*), coast live oak, bulrush, nasturtium (*Tropaeolum sp.*), cattail, and fan palm.

Animal species observed during the June 2020 site visit include carp (*Cyprinus sp.*) and smaller fish which could not be readily identified at the time of the site visits, mallard (*Anas platyrhynchos*), snowy egret (*Egretta thula*), California gull (*Larus californicus*), Eurasian collared-dove (*Streptopelia decaocto*), mourning dove (*Zenaida macroura*), Anna's hummingbird (*Calypte anna*), white-throated swift (*Aeronautes saxatalis*), black phoebe (*Sayornis nigricans*), California scrub jay (*Aphelocoma californica*), northern rough-winged swallow (*Stelgidopteryx serripennis*), bushtit (*Psaltriparus minimus*), Bewick's wren (*Thryomanes bewickii*), California towhee (*Melozone crissalis*), house finch (*Haemorhous mexicanus*), and California ground squirrels.

2.2 MOVEMENT CORRIDORS

Habitat corridors are vital to terrestrial animals for connectivity between and amongst core habitat areas (i.e., larger intact habitat areas where species make their living). Connections between two or more core habitat areas help ensure that genetic diversity is maintained, thereby diminishing the probability of demographic extinctions (i.e., dramatic changes in age and/or sex structure that adversely influence growth rates) and/or inbreeding depression and geographic extinctions.

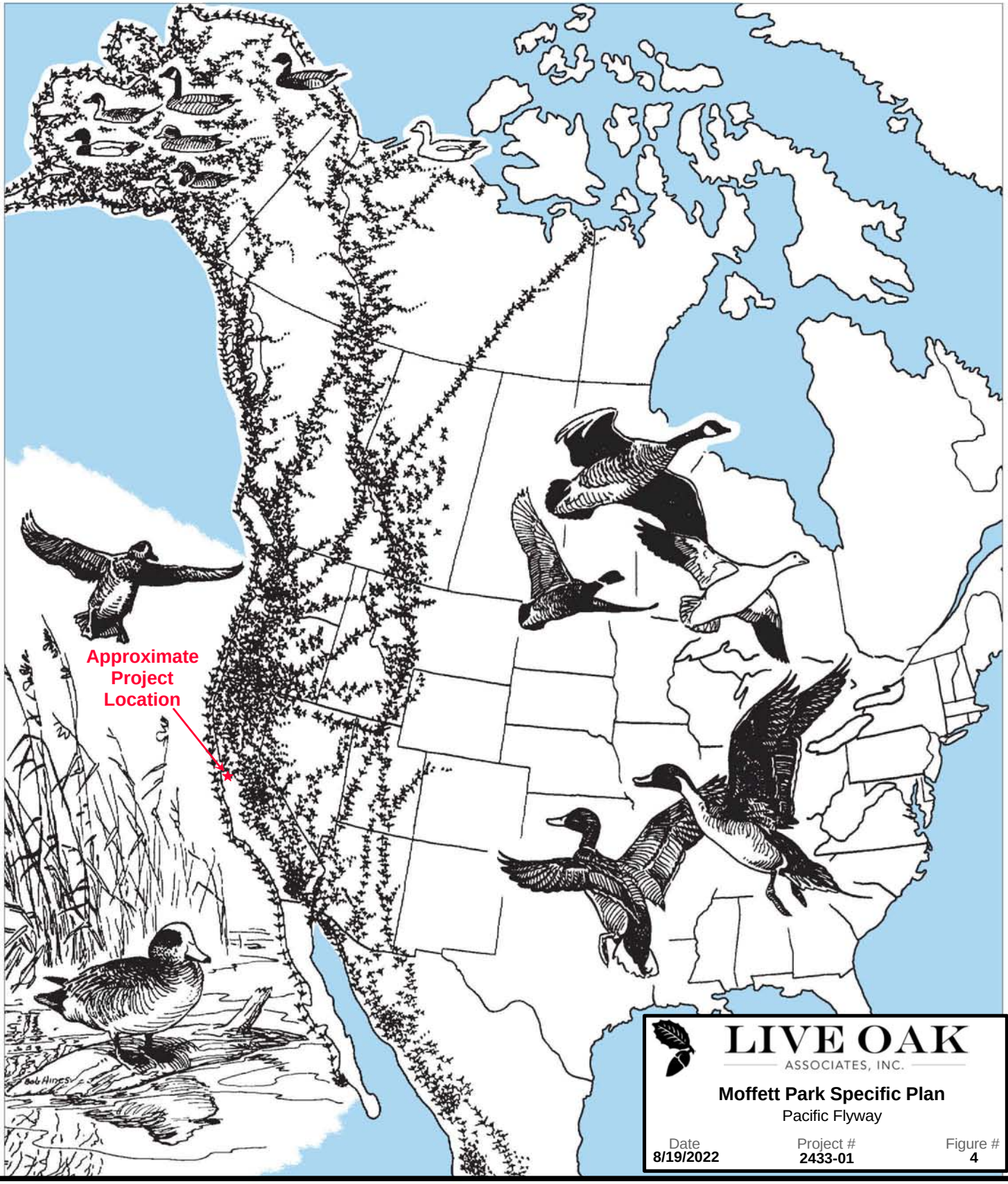
Movement corridors in California are typically associated with valleys, rivers and creeks supporting riparian vegetation, and ridgelines. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles.

The San Francisco Bay is well known to support migrating birds along the mass migration route known as the "Pacific Flyway". As the study area is adjacent to the San Francisco Bay, numerous avian species are expected to pass over or through the study area for local, regional, and migratory movement on their way to and from the San Francisco Bay. The Pacific Flyway is a wide area that supports the movement of large numbers of migratory birds between the Arctic and South America. Several routes exist within the Pacific Flyway, as each species requires slightly different habitats during migration and start and end locations vary by species and population within each species. Therefore, due to the proximity to the San Francisco Bay, the study area may support seasonal movement of avian species not normally occurring in similar developed landscapes further from the San Francisco Bay or other large water bodies. Figure 4 shows one representation by the USFWS of the Pacific Flyway.

Although the study area likely supports local terrestrial movement, the study area is not likely to facilitate large-scale movement of terrestrial animals due to its isolation from more natural in the region. However, a significant amount of avian movement across the study area is expected to occur and as such this region likely facilities regional movements of avian species.

U.S. Fish & Wildlife Service

Pacific Flyway



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Moffett Park Specific Plan
Pacific Flyway

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2.3 SPECIAL STATUS PLANTS AND ANIMALS

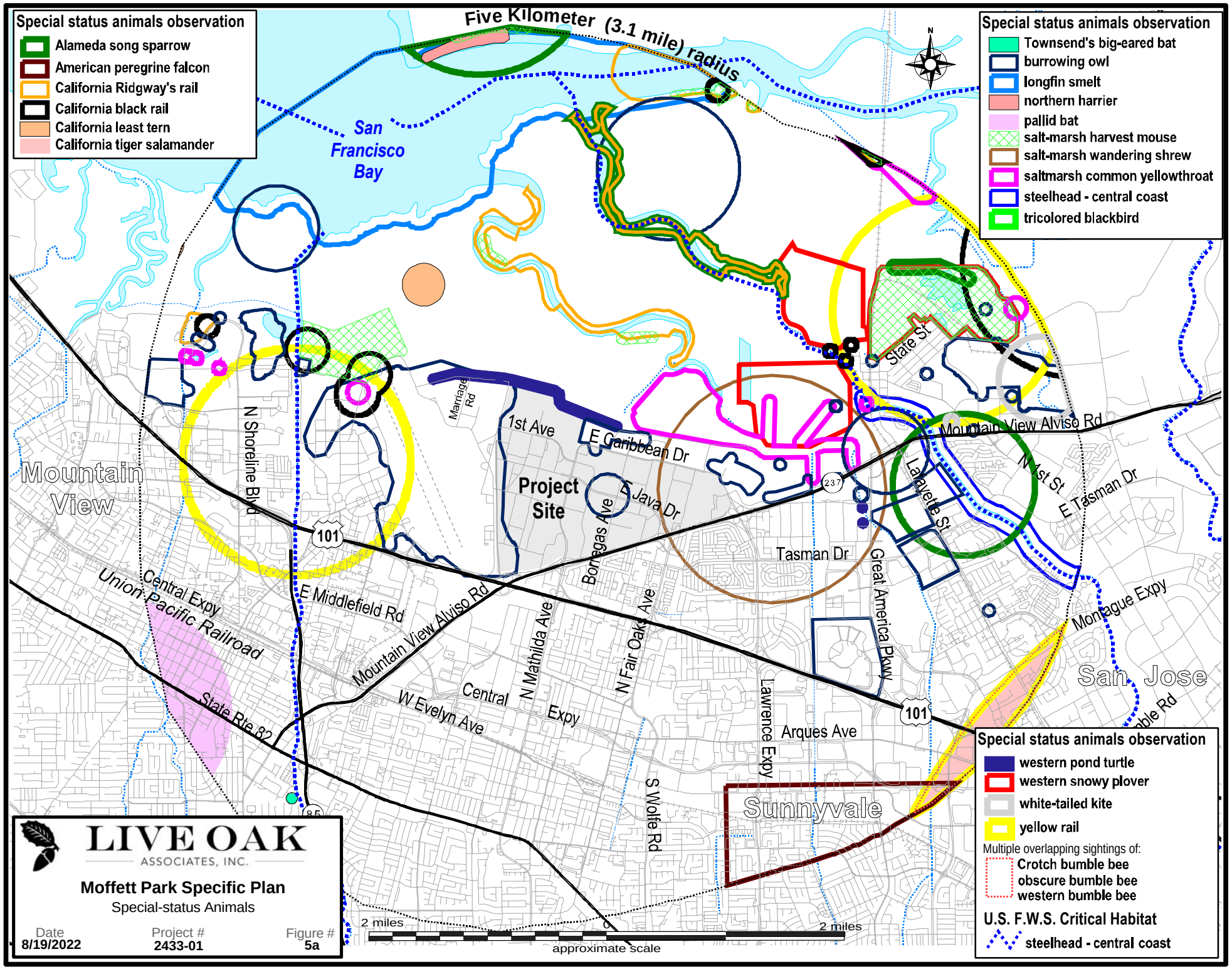
Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been formally designated as threatened or endangered under state and federal endangered species legislation, others have been designated as "candidates" for such listing, and others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own lists of native plants considered rare, threatened, or endangered (CNPS 2001). Collectively, all of these plants and animals are referred to as "special status species."

A number of special status plants and animals are known to occur, or to once have occurred, in the vicinity of the study area. These species and their potential to occur in the study area are listed in Table 1. Sources of information for this table included the *California Natural Diversity Data Base* (CNDDB) (CDFW 2022), *Listed Plants* and *Listed Animals* (USFWS 2019), *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2019), *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2022), *Flora of North America* (accessed on-line at www.efloras.org on 3/23/2020), *California Bird Species of Special Concern* (Shuford and Gardall 2008), and *California Amphibian and Reptile Species of Special Concern* (Thompson et al. 2016). Figures 5a and 5b depict local occurrences of special status species found in the CNDDB.

A search of published accounts for all of the relevant special status plant and animal species was conducted for the Mountain View and Milpitas USGS 7.5-minute quadrangles in which the project site occurs, and for the 10 surrounding quadrangles (Redwood Point, Newark, Niles, La Costa Valley, Palo Alto, Calaveras Reservoir, Mindego Hill, Cupertino, San Jose West, and San Jose East) using the CNDDB Rarefind 5 Program (CDFW 2022). All plant species listed as occurring in these quadrangles on CNPS Lists 1A, 1B, 2, or 4 were also reviewed (Figure 5b).

Serpentine soils are absent from the site; as such, those plant species that are uniquely adapted to serpentine conditions in the project's vicinity are considered absent from the site and are dismissed from further consideration in this document. These species include the San Mateo thorn-mint (*Acanthomintha duttonii*), Franciscan onion (*Allium peninsulare* var. *franciscanum*), chaparral harebell (*Campanula exigua*), Mt. Hamilton thistle (*Cirsium fontinale* var.

campylon), fountain thistle (*Cirsium fontinale* var. *fontinale*), San Francisco collinsia (*Collinsia multicolor*), Santa Clara Valley dudleya (*Dudleya abramsii ssp. setchellii*), San Mateo woolly sunflower (*Eriophyllum latilobum*), fragrant fritillary (*Fritillaria liliacea*), Marin western flax (*Hesperolinon congestum*), Loma Prieta hoita (*Hoita strobilina*), smooth lessingia (*Lessingia micradenia* ssp.


Special status animals observation
Alameda song sparrow
American peregrine falcon
California Ridgway's rail
California black rail
California least tern
California tiger salamander
Five Kilometer (3.1 mile) radius
San Francisco Bay
Special status animals observation
Townsend's big-eared bat
burrowing owl
longfin smelt
northern harrier
pallid bat
salt-marsh harvest mouse
salt-marsh wandering shrew
saltmarsh common yellowthroat
steelhead - central coast
tricolored blackbird
Mountain View
Project Site
1st Ave
E Caribbean Dr
E Java Dr
Marriage Rd
N Shoreline Blvd
Borregas Ave
State St
Mountain View Alviso Rd
N 1st St
E Tasman Dr
Lafayette St
Tasman Dr
Great America Pkwy
Montague Expy
San Jose
101
237
Central Expy
Union Pacific Railroad
E Middlefield Rd
Mountain View Alviso Rd
State Rte 82
W Evelyn Ave
Central Expy
N Mathilda Ave
N Fair Oaks Ave
S Wolfe Rd
Lawrence Expy
Arques Ave
Sunnyvale
85
Special status animals observation
western pond turtle
western snowy plover
white-tailed kite
yellow rail
Multiple overlapping sightings of:
Crotch bumble bee
obscure bumble bee
western bumble bee
U.S. F.W.S. Critical Habitat
steelhead - central coast
LIVE OAK
ASSOCIATES, INC.
Moffett Park Specific Plan
Special-status Animals
Date
8/19/2022
Project #
2433-01
Figure #
5a
2 miles
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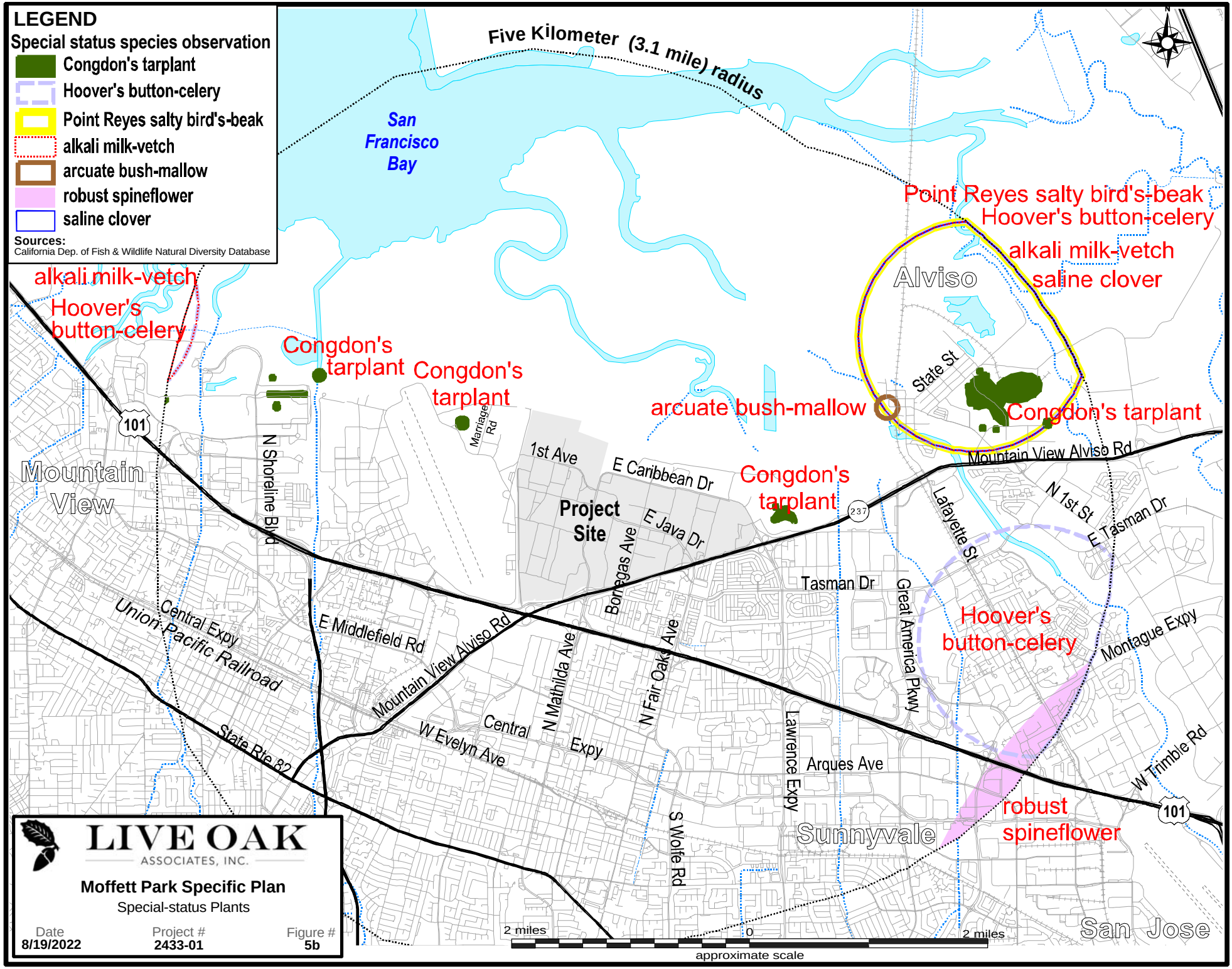
approximate scale


LEGEND
Special status species observation
Congdon's tarplant
Hoover's button-celery
Point Reyes salty bird's-beak
alkali milk-vetch
arcuate bush-mallow
robust spineflower
saline clover
Sources:
California Dep. of Fish & Wildlife Natural Diversity Database
Five Kilometer (3.1 mile) radius
San Francisco Bay
Point Reyes salty bird's-beak
Hoover's button-celery
alkali milk-vetch
saline clover
Alviso
alkali milk-vetch
Hoover's button-celery
Congdon's tarplant
Congdon's tarplant
arcuate bush-mallow
Congdon's tarplant
Congdon's tarplant
Project Site
Mountain View
Hoover's button-celery
robust spineflower
Sunnyvale
San Jose
101
237
State St
Marriage Rd
1st Ave
E Caribbean Dr
E Java Dr
Bonegas Ave
N Shoreline Blvd
Mountain View Alviso Rd
Lafayette St
N 1st St
E Tasman Dr
Tasman Dr
Great America Pkwy
Montague Expy
W Trimble Rd
Central Expy
Union Pacific Railroad
E Middlefield Rd
Mountain View Alviso Rd
State Rte 82
W Evelyn Ave
Central Expy
N Mathilda Ave
N Fair Oaks Ave
S Wolfe Rd
Lawrence Expy
Arques Ave
2 miles
0
2 miles
approximate scale
LIVE OAK ASSOCIATES, INC.
Moffett Park Specific Plan
Special-status Plants
Date 8/19/2022
Project # 2433-01
Figure # 5b

glabrata), woodland woollythreads(*Monolopia gracilens*), Metcalf Canyon jewel-flower (*Streptanthus albidus* ssp. *albidus*),

most beautiful jewel-flower (*Streptanthus albidus* ssp. *peramoenus*), and two-forked clover (*Trifolium amoenum*). Suitable habitat for ringtail (*Bassariscus astutus*) is also absent from the site.

Several other special status plant species are dismissed from further consideration as they occur in habitats not present in the study area (e.g., redwoods, oak woodlands, coastal dunes, etc.) or at elevations significantly above elevations of the site (approximately 12 meters NGVD). These species include the Kings Mountain manzanita (*Arctostaphylos regismontana*), robust spineflower (*Chorizanthe robusta* var. *robusta*), Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*), round-headed Chinese-houses (*Collinsia corymbosa*), Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*), Hoover's button-celery (*Eryngium aristulatum var. hooveri*), minute pocket moss (*Fissidens pauperculus*), legenere (*Legenere limosa*), arcuate bush-mallow (*Malacothamnus arcuatus*), Hall's bush-mallow (*Malacothamnus hallii*), Dudley's lousewort (*Pedicularis dudleyi*), white-flowered rein orchid (*Piperia candida*), Choris' popcornflower (*Plagiobothrys chorisianus* var. *chorisianus*), chaparral ragwort (*Senecio aphanactis*), Santa Cruz clover (*Trifolium buckwestiorum*), and Methuselah's beard lichen (*Usnea longissima*).

Plant and animal species having some potential to occur on the project site or in the immediate vicinity are discussed further below.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (adapted from CDFW 2022 and CNPS 2022)

Species listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Species	Status	Habitat	Occurrence in the Study Area*
Contra Costa goldfields *Lasthenia conjugens*	FE, CRPR 1B	Habitat: Valley and foothill grasslands, vernal pools, alkaline playas, and cismontane woodlands. Generally, in low depressions and open grassy areas. Elevation: 1-450 meters. Blooms: March-June. Life form: Annual herb.	**Absent.** The study area is located outside of the known range of this species.
California seablite *Suaeda californica*	FE, CRPR 1B	Habitat: Margins of coastal salt marshes. Elevation: 0-15 meters. Blooms: July–October. Life form: Perennial evergreen shrub.	**Absent.** Salt marsh habitat does not occur on the study area. The nearest and most recent documented occurrence of this species is from 1971 and is believed to be extirpated.

Special status plants listed by CNPS

Species	Status	Habitat	Occurrence in the Study Area*
Bent-flowered fiddleneck *Amsinckia lunaris*	CRPR 1B	Habitat: Coastal bluff scrub, cismontane woodland, and valley and foothill grasslands. Elevation: 3-800 meters. Blooming period: March–June. Life form: Annual herb.	**Absent.** While a limited amount of potentially suitable habitat is present in the site's northwest corner, the only documented regional occurrence of this species is from 1933.
Alkali milk-vetch *Astragalus tener var. tener*	CRPR 1B	Habitat: Alkali playa, and valley and foothill grasslands, and vernal pools. Occurs in alkaline soils. Elevation: 1-60 meters. Blooming period: March–June. Life form: Annual herb.	**Possible.** Potentially suitable habitat for this species is present in the site's northwest quadrant. This species has been documented in alkaline habitats near the San Francisco Bay.
Brittlescale *Atriplex depress*	CRPR 1B	Habitat: Alkaline clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grasslands, and vernal pools. Elevation: 1-320 meters. Blooms: April-October. Life form: Annual herb.	**Absent.** While grasslands on the site could potentially support habitat, this species has not been documented along the southern edge of the Bay. The nearest documented occurrence of this species is more than five miles north of the site, in Alameda County.
Lesser saltscale *Atriplex minuscula*	CRPR 1B	Habitat: Occurs in alkaline and sandy soils in chenopod scrub, playas, and valley and foothill grasslands. Elevation: 15-200 meters Blooms: May-October. Life form: Annual herb.	**Absent.** While grasslands on the site could potentially support habitat, this species has not been documented along the southern edge of the Bay. The nearest documented occurrence of this species is more than five miles north of the site, in Alameda County.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (Continued adapted from CDFW 2022 and CRPR 2022)

Other special status plants listed by CNPS

Species	Status	Habitat	Occurrence in the Study Area*
Big-scale Balsamroot *Balsamorhiza macrolepis var. macrolepis*	CRPR 1B	Habitat: Occurs in chaparral, cismontane woodland, valley, and foothill grassland, sometimes on serpentine. Elevation: 90-1400 meters. Blooms: March-June. Life form: Perennial herb.	**Absent.** This species has not been documented along the edge of the Bay. Serpentine soils are absent from the site. The nearest documented occurrence of this species is more than ten miles southeast of the site.
Congdon's tarplant *Centromadia parryi ssp. congdonii*	CRPR 1B	Habitat: Occurs on valley and foothill grasslands on alkaline soils. Elevation: 0-230 meters. Blooms: Annual herb; May-November.	**Possible.** Grasslands in the site's northwest quadrant support potentially suitable habitat for this species. This species has been documented approximately one mile from the site, the nearest being at the NASA Ames Research Center west of the site.
Point Reyes salty bird's-beak *Cordylanthus maritimum ssp. palustre*	CRPR 1B	Habitats: Found in coastal salt areas such as marshes and swamps. Elevation: 0-10 meters. Blooms: June-October. Life form: Annual herb.	**Absent.** Salt marshes are not present on the site. The most recent documented occurrences of this species along the southern edge of the Bay are from the early 1900s.
Lost thistle *Cirsium praeteriens*	CRPR 1A	Habitat: Unknown. This species was last collected in 1897 and 1901 in the Palo Alto area. Elevation: 0-100 meters. Blooms: June–July. Life form: Perennial herb.	**Absent.** This species has not been observed since 1901 and is presumed extinct.
Western leatherwood *Dirca occidentalis*	CRPR 1B	Habitat: Broad-leafed upland forest, closed-cone coniferous forest, chaparral, cismontane woodland, North Coast coniferous forest, riparian forest, and riparian woodland. Occurs on brushy slopes and mesic sites, mostly in mixed evergreen and foothill communities. Elevation: 25-425 meters. Blooms: January–March. Life form: Perennial deciduous shrub.	**Absent.** This species typically occurs in foothill communities and has not been documented along the edge of the Bay. The nearest document occurrences of this species are more than six miles southwest of the site in the foothills of the Santa Cruz Mountains.
Jepson's Coyote-thistle *Eryngium jepsonii*	CRPR 1B	Habitats: Occurs on clay in valley and foothill grassland and vernal pools. Elevation: 3-300 meters. Blooms: April-August. Life form: Perennial herb.	**Absent.** Soils of the site are not suitable for this species. The nearest documented occurrences of this species are on Jasper Ridge, more than eight miles west of the site.
San Joaquin spearscale *Extriplex joaquiniana*	CRPR 1B	Habitat: Alkaline soils in chenopod scrub, meadows and seeps, playas, valley and foothill grasslands, and vernal pools. Elevation: 1-835 meters. Blooms: April-October. Life form: Annual herb.	**Absent.** While grasslands on the site could potentially support habitat, this species has not been documented along the southern edge of the Bay. The nearest documented occurrence of this species is more than five miles north of the site, in Alameda County.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

PLANTS (Continued adapted from CDFW 2022 and CRPR 2022)

Other special status plants listed by CNPS

Species	Status	Habitat	Occurrence in the Study Area*
Prostrate vernal pool navarretia *Navarretia prostrate*	CRPR 1B	Habitat: Occurs in coastal scrub, meadows and seeps, valley and foothill grasslands on alkaline soils, and vernal pools on mesic soils. Elevation: 3-1210 meters. Blooms: April-July. Life form: Annual herb.	**Absent.** While grasslands on the site could support potentially suitable habitat, this species has not been documented along the southern edge of the Bay. The nearest documented occurrence of this species is more than five miles north of the site, in Alameda County.
Hairless popcornflower *Plagiobothrys chorisianus var. chorisianus*	CRPR 1A	Habitat: Alkaline meadows and seeps, and coastal salt marshes and swamps. Elevation: 15-180 meters. Blooms: March-May. Life form: Annual herb.	**Unlikely.** Suitable habitat is not present on the site. The nearest documented occurrences of this species are more than three miles southeast of the site. This species has not been documented in the region since the mid-1900s.
California alkali grass *Puccinellia simplex*	CRPR 1B	Habitat: Vernally mesic areas and alkaline soils within chenopod scrub, vernal pools, meadows, seeps, and valley and foothill grasslands. Elevation: 2-930 meters. Blooms: March-May. Life form: Annual herb.	**Absent.** While grasslands on the site could potentially support habitat, this species has not been documented along the southern edge of the Bay. The nearest documented occurrence of this species is more than five miles north of the site, in Alameda County.
Sanford's arrowhead Sagittaria sangfroid	CRPR 1B	Habitat: Standing or slow-moving freshwater ponds, marshes, or ditches. Elevation: 0-650 meters. Blooms: May-October. Life form: Perennial rhizomatous herb.	**Unlikely.** Although freshwater aquatic and riparian areas on the site could potentially support habitat, this species is not known to occur around San Francisco Bay. The nearest documented occurrence of this species is along San Francisquito Creek, more than nine miles west of the site.
Maple-leaved checkerbloom *Sidalcea malachroides*	CRPR 4	Habitat: Occurs in broadleaved upland forests, coastal prairie, coastal scrub, North Coast coniferous forests, and riparian woodland, often in disturbed areas. Elevation: 0-730 meters. Blooms: March-August.	**Absent.** Suitable habitat for this species is not present on the site. The only documented occurrence of this species in the region is from 1896 more than ten miles east of the site.
Long-styled sand-spurrey *Spergularia macrotheca var. longistyla*	CRPR 1B	Habitat: Meadows and seeps, and also marshes and swamps. Occurs in alkaline soils. Elevation: 0-255 meters. Blooms: February-May. Life form: Perennial herb.	**Absent.** Suitable habitat for this species is not present on the site. The only documented occurrence of this species in the region is from 1934 in Alameda County.
Slender-leaved pondweed *Stuckenia filiformis ssp. alpina*	CRPR 2B	Habitat: Shallow freshwater marshes and swamps. Elevation: 300-2150 meters. Blooms: May-July. Life form: Perennial rhizomatous herb.	**Absent.** Marshes and swamps are not present on the site. The nearest documented occurrence of this species is more than three miles west of the site.
Saline clover *Trifolium depauperatum var. hydrophilum*	CNPS 1B	Habitat: Marshes and swamps, valley and foothill grasslands on mesic or	**Unlikely.** While potentially suitable habitat may be present in the site's northwest quadrant, there are no

		alkaline soils, and vernal pools. Elevation: 0-300 meters. Blooms: April–June. Life form: Annual herb.	occurrences of this species in the vicinity in the last hundred years.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (adapted from CDFW 2022 and USFWS 2022)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence in the Study Area*
Crotch bumble bee *Bombus crotchii*	CCE	In California, inhabits open grassland and scrub habitats of the southern 2/3 of California. Historically in, but largely extirpated from the Central Valley. Flight period for queens is late February to late October peaking in April and July; flight period for males and workers is March through September peaking in early July. Constructs nests underground in animal burrows. Overwintering sites are likely in soft soils or in debris or leaf litter.	**Possible.** Natural lands on the northern side of Lockheed Martin property are suitable for the crotch bumble bee. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).
Western bumble bee *Bombus occidentalis*	CCE	In California, mainly occurs within the coastal and Sierra Nevada ranges within meadows and grasslands and some natural areas within urban environments. There is some indication that the current distribution is potentially restricted to high elevation and coastal areas. Historically occurred from the Channel Islands to the northern California border. Flight period is February to late November, peaking in late June and late September. Tends to construct nest underground in animal burrows on west and south-west facing slopes. Overwintering sites are likely in friable soils or in debris or leaf litter.	**Possible.** Natural lands on the northern side of Lockheed Martin property are suitable for the western bumble bee. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (adapted from CDFW 2022 and USFWS 2022)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence in the Study Area*
Vernal pool tadpole shrimp *Lepidurus packardi*	FE	Occurs in vernal pools of California. Vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.	**Absent.** Suitable habitat for vernal pool tadpole shrimp in the form of vernal pools is absent from the study area. The study area is also not within the range of the VPTS.
Steelhead Central California Coast ESU *Oncorhynchus mykiss irideus*	FT	Spawn in freshwater rivers or streams in the spring and spend the remainder of their life in the ocean.	**Possible.** Steelhead are known to occur in the San Francisco Bay. As the East and West Sunnyvale Channels are connected to the San Francisco Bay, steelhead may move upstream within those channels on the site. However, these channels are not considered to be Critical Habitat for the steelhead. However, the remaining hydrological features within the study area appear to lack hydrological connectivity to the San Francisco Bay, and therefore, steelhead would not be expected to occur in those areas. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).
Green sturgeon – southern DPS *Acipenser medirostris*	FT, CSC	Live in coastal marine waters, estuaries, and freshwater for spawning in spring. California has one of 3 known river systems in which green sturgeon spawn, the Sacramento River system.	**Absent.** Although the CNDDB record (occurrence #11) notes occurrences between the Bay Bridge and the Dumbarton Bridge, it is not shown on the GIS file from CNDDB. Additionally, this species is known to spawn in the Sacramento, Feather, and Yuba Rivers, which are many miles to the north of the project site (CDFW 2022).
Longfin smelt *Spirinchus thaleichthys*	CT, CSC	Anadromous. In California, occurs in Sacramento-San Joaquin estuary and one record from Monterey Bay. Spawns in sandy to gravely substrates near the ocean November to June; some populations are landlocked.	**Unlikely.** Although the study area is connected to the San Francisco Bay in which the longfin smelt is known to occur, the study area is outside of the longfin smelt range. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).
California tiger salamander *Ambystoma californiense*	FT, CT	Breeds in stagnant pools with continuous inundation for a minimum of three months, which may include vernal pools and stock ponds of central California; adults aestivate in grassland habitats adjacent to the breeding sites.	**Absent.** California tiger salamanders are not known to occur in the local vicinity of the study area, additionally, the study area is outside of Critical Habitat for the California tiger salamander. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).
Foothill yellow-legged frog (FYLF) *Rana boylii*	CSC CCT	Occurs in swiftly flowing streams and rivers with rocky substrate with open, sunny banks in forest, chaparral, and woodland habitats, and can sometimes be found in isolated pools.	**Absent.** Foothill yellow-legged frogs are not known to occur in the local vicinity of the study area. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (Continued adapted from CDFW 2022 and USFWS 2022)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence in the Study Area
California red-legged frog (CRLF) *Rana aurora draytonii*	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and Bay Area, preferring pools with overhanging vegetation.	**Absent.** California red-legged frogs are not known to occur in the local vicinity of the study area. The closest documented observation of this species is more than three miles from the study area (CDFW 2022).
San Francisco garter snake *Thamnophis sirtalis tetrataenia*	FE, CE, CP	Occur in and around standing water such as ponds on the San Francisco Peninsula south to Ano Nuevo Point, San Mateo County, CA.	**Absent.** The study area is not within the range of the San Francisco garter snake.
Western snowy plover *Charadrius alexandrines nivosus*	FT, CSC	Uses man-made agricultural wastewater ponds and reservoir margins. Breeds on barren to sparsely vegetated ground at alkaline or saline lakes, reservoirs, ponds, and riverine sand bar.	**Possible.** Marginal breeding and foraging habitat is available along the settling ponds on the Lockheed Martin portion of the study area. The nearest recorded observation is less than two miles from the study area (CDFW 2022).
California least tern *Sterna antillarum browni*	FE, CE, CP	Occurs in central to southern California April to November. Found in and near coastal habitat including coasts, beaches, bays, estuaries, lagoons, lakes, and rivers.	**Possible.** Marginal breeding and foraging habitat is available along the settling ponds on the Lockheed Martin portion of the study area. The nearest recorded observation is just over a mile from the study area (CNDDB 2022) and a known breeding area at Shoreline Lake is just over 3 miles away from the study area.
California black rail *Laterallus jamaicensis coturniculus*	CT, CP	Occurs in coastal and freshwater marshes, estuaries, and tidal slough areas.	**Possible.** The East and West Sunnyvale Channels are hydrologically connected to the San Francisco Bay, and therefore, may support some movement of the California black rail. They may also occasionally use the settling ponds onsite due to the proximity to more suitable habitat. The nearest recorded observation is approximately 1.25 miles from the study area (CNDDB 2022).
California Ridgway's rail *Rallus obsoletus obsoletus*	FE, CE, CP	Occurs in tidal salt and brackish marshes of the San Francisco Bay and historically in tidal estuaries from Marin to San Luis Obispo Counties, CA.	**Possible.** The East and West Sunnyvale Channels are hydrologically connected to the San Francisco Bay, and therefore, may support some movement of the California Ridgway's rail. They may also occasionally use the settling ponds onsite due to the proximity to more suitable habitat. The nearest recorded observation is approximately one mile from the study area (CNDDB 2022).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (Continued adapted from CDFW 2022 and USFWS 2022)

Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Act

Species	Status	Habitat	Occurrence in the Study Area
Swainson's hawk (SWHA) *Buteo swainsoni*	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Absent.** The SWHA is only known in the region from one pair which breeds each year in Coyote Valley, more than 15 miles to the southeast of the site (CDFW 2022). The CNDDB reported location is a historical location. Therefore, Swainson's hawks are not expected to occur within the study area.
Bald eagle *Haliaeetus leucocephalus*	CE, CP	Breeding habitat is usually within 4 km of a water source in a tall tree or cliffs; roosting in large numbers in winter is common.	**Possible.** The bald eagle may be expected to fly over the site from time to time to forage; this species has not been recorded breeding within three miles of the study area (CDFW 2022) and appears to prefer reservoirs and lakes to settling ponds.
Bank Swallow *Riparia riparia*	CT	Occurs in open areas near flowing water, nests in steep banks along inland water or coast. State-wide.	**Absent.** Although the site supports a large area of water, suitable habitat for this species is absent from the study area. Additionally, the nearest documented observation of this species is more than three miles from the site (CDFW 2022)
Western yellow-billed cuckoo *Coccyzus americanus occidentalis*	FC, CE	Breed in large blocks of riparian habitats, particularly cottonwoods and willows.	**Unlikely.** Dense riparian habitat required by the western yellow-billed cuckoo is absent from the project site. Additionally, the nearest documented observation of this species is more than three miles from the site (CDFW 2022).
Tricolored blackbird *Agelaius tricolor*	CSC, CT	Breeds near fresh water in dense emergent vegetation.	**Possible.** Suitable nesting habitat for this species is present in the study area in the form of bulrush and cattails along the settling pond edges and the canals and East and West Sunnyvale Channels. The nearest documented observation of this species is more than three miles from the site (CDFW 2022).
Salt-marsh harvest mouse *Reithrodontomys raviventris*	FE, CE, CP	Occurs in the salt and brackish marshes of Corte Madera, Richmond, and South San Francisco Bay, especially those with pickleweed and saltgrass.	**Possible.** This species is mainly restricted to those areas with pickleweed and saltgrass. The emergent wetland in the northwestern corner of the site supports a large area of pickleweed, which appears to be isolated from other pickleweed habitats outside of the study area; therefore, habitat within the emergent wetland is moderately suitable for the salt-marsh harvest mouse. The nearest recorded observation (occurrence #133) of this species is within a mile from the study area (CDFW 2022) in a tidal marsh plain.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (Continued adapted from CDFW 2022 and USFWS 2022)

State Species of Special Concern and Protected Species

Species	Status	Habitat	Occurrence in the Study Area*
Santa Cruz black salamander (SCBS) *Aneides niger*	CSC	Occurs in deciduous woodland, coniferous forests, and coastal grasslands around the Santa Cruz Mountains and foothills. This species is also known to occur on the developed flats in pockets within older developments. They can be found under rocks near streams, in talus, under damp logs, rotting wood, and other objects.	**Absent.** Suitable habitat for the Santa Cruz black salamander is absent from the study area. This species is known to occur in the Santa Cruz Mountains, with the nearest documented observation of this species being more than three miles from the study area (CDFW 2022).
California giant salamander *Dicamptodon ensatus*	CSC	Occurs in or adjacent to cold clear permanent to semi-permanent streams and seeps.	**Absent.** The study area is outside of this species' range. The nearest documented observation of this species is more than three miles from the study area (CDFW 2022).
Red-bellied newt *Taricha rivularis*	CSC	This species lays eggs in running water and can be found in coastal woodlands and redwood forest along the coast of northern California north of San Francisco except a small population occurring in the Stevens Creek watershed near the San Francisco Bay.	**Absent.** The only location this species is known to occur in the vicinity of the site is the Stevens Creek watershed. The nearest documented observation of this species is more than three miles from the site (CDFW 2022).
Northern California legless lizard (NCLL) *Anniella pulchra*	CSC	The NCLL (previously called black legless lizard) occurs mostly underground in warm moist areas with loose soil and substrate. The NCLL occurs in habitats including sparsely vegetated areas of beach dunes, chaparral, pine-oak woodlands, desert scrub, sandy washes, and stream terraces with sycamores, cottonwoods, or oaks.	**Absent.** Habitats required by northern California legless lizards are absent from the site, as the site lacks sandy soils and consists of oak woodland habitat which is not suitable for this species. The nearest documented observation of this species is more than three miles from the site (CDFW 2022).
Western pond turtle (WPT) *Actinemys marmorata*	CSC	Intermittent and permanent waterways including streams, marshes, rivers, ponds, and lakes. Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	**Possible.** Suitable habitat for the WPT occurs onsite in the form of the settling ponds, seasonal wetland, stormwater canals, and East and West Channel. The nearest recorded location of the WPT is adjacent to the site in 2012 (CDFW 2022).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (Continued adapted from CDFG 2022 and USFWS 2022)

State Species of Special Concern and Protected Species

Species	Status	Habitat	Occurrence in the Study Area*
Yellow rail *Coturnicops noveboracensis*	CSC	Frequents grassy meadows and sedge marshes with dense cover, breeds in marshes.	**Possible.** The East and West Sunnyvale Channels are hydrologically connected to the San Francisco Bay, and therefore, may support some movement of the yellow rail. They may also occasionally use the settling ponds onsite due to the proximity to more suitable habitat. The nearest recorded observation is approximately 1.75 miles from the study area within Stevens Creek (CDFW 2022).
Black skimmer *Rynchops niger*	CSC	Occurs on open sandy beaches, gravel bars, or floating vegetation/debris in saltmarshes. Nest on bare sand or gravel.	**Possible.** Black skimmers are known to occur at nearby Shoreline Lake (a little more than three miles away from the study area), and although breeding habitat appears to be absent from the site, they may be expected to use the settling ponds from time to time. The nearest documented occurrence is more than three miles from the study area (CDFW 2022).
Northern harrier *Circus cyaneus*	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Present.** This species was observed over the study area during the June 2020 site visit flying over the California annual grassland, potential wetlands, and freshwater stormwater basins.
White-tailed kite *Elanus leucurus*	CP	Open grasslands and agricultural areas throughout central California.	**Present.** This species was observed on the study area during the June 2020 site visit.
American peregrine falcon *Falco peregrines anatum*	CP	Individuals breed on cliffs in the Sierra or in coastal habitats; occurs in many habitats of the state during migration and winter.	**Unlikely.** The site does not support suitable nesting habitat for the peregrine falcon, and the nearest documented occurrence is approximately three miles east of the site. As this species is well documented in the region as occurring within cities. However, depending on the availability of potentially suitable breeding habitat on tall buildings within the study, this species may be expected to occur within the study area at a later date. The nearest documented occurrence of this species is more than three miles from the site.
Golden eagle *Aquila chrysaetos*	CP	Typically frequents rolling foothills, mountain areas, sage-juniper flats, and desert.	**Present.** Suitable breeding habitat is largely absent from the site; however, suitable foraging habitat occurs within the grasslands of the study area and adjacent to the study area. A golden eagle was observed perched on a tall building within the study area during the June 2020 site visits.

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THE PROJECT VICINITY

ANIMALS (Continued adapted from CDFW 2022 and USFWS 2022)

State Species of Special Concern and Protected Species

Species	Status	Habitat	Occurrence in the Study Area*
Short-eared owl *Asio flammeus*	CSC	Occur in wide open spaces including marshes, open shrublands, grassland, prairie, and agricultural field habitats, and need dense ground cover to conceal nests.	**Unlikely.** Short-eared owls may use the study area as foraging area, but unlikely. The nearest documented occurrence is more than three miles from the study area (CDFW 2022).
Long-eared owl *Asio otus*	CSC	Occur on edge habitats including in clumps of trees or edges of open forests that are adjacent to grasslands, shrublands, wetlands, marshes, and farmlands. Need stick nests built by other birds in trees.	**Unlikely.** Long-eared owls are unlikely to occur on the site, as the site does not support edge habitats used by this species. The nearest documented occurrence is more than three miles from the study area (CDFW 2022).
Burrowing owl *Athene cunicularia*	CSC	Found in open, dry grasslands, deserts and ruderal areas. Requires suitable burrows for nesting and cover. This species is often associated with California ground squirrels.	**Possible.** Suitable habitat for the burrowing owl exists within grasslands of the study area; man-made burrow structures may also be available within the study area. Additionally, a burrowing owl was recorded to be onsite in 1983, with a 2002 observation to the east of the site and a 2004 observation to the north of the site (CDFW 2022).
Saltmarsh common yellowthroat *Geothlypis trichas sinuosa*	CSC	Breeds in herbaceous wetlands and salt marshes of the San Francisco Bay Area, can also be found in non-breeding along the California coast. Nests in thick herbaceous vegetation up to one meter above the ground or over water.	**Present.** This species was observed during the June 2020 site visit at the freshwater stormwater basins in the northwestern corner of the study area. Suitable habitat for this species is present in the study area in the form of the riparian area of the settling ponds, canals, and East and West Sunnyvale Chanel.
Alameda song sparrow *Melospiza melodia pusillula*	CSC	Found in tidal salt marsh habitat with exposed ground for foraging with no more than 2-5 cm between bases of plants. Current range is generally only along the San Francisco Bay.	**Possible.** Suitable habitat for this species is present in the study area in the form of the riparian area of the settling ponds, canals, and East and West Sunnyvale Chanel. The nearest record is just more than two miles from the study area (CDFW 2022).
Townsend's big-eared bat *Corynorhinus townsendii*	CSC	Primarily a cave-dwelling bat that may also roost in buildings, bridges, rock crevices, and hollow trees. Occurs in a variety of habitats.	**Possible.** Suitable foraging habitat occurs onsite for the Townsends big-eared bat and suitable roosting habitat is present in the study area. Roofs, attics, lighting fixtures, lose paneling, and other features on buildings can provide potentially suitable roosting areas. Some trees may also provide suitable roosting habitat. The nearest documented occurrence is nearly three miles from the study area (CDFW 2022).

TABLE 2. LIST OF SPECIAL STATUS SPECIES THAT COULD OCCUR IN THEPROJECT VICINITY

ANIMALS (Continued adapted from CDFW 2022 and USFWS 2022)

State Species of Special Concern and Protected Species

Species	Status	Habitat	Occurrence in the Study Area*
Pallid bat *Antrozous pallidus*	CSC	Occurs in grasslands, chaparral, woodlands, and forests; most common in dry rocky open areas providing roosting opportunities. Roost sites include caves, mines, rock crevices, and large cavities of trees.	**Possible.** Suitable foraging habitat occurs onsite for the pallid bat and suitable roosting habitat is present in the study area. Roofs, attics, lighting fixtures, lose paneling, and other features on buildings can provide potentially suitable roosting areas. Some trees may also provide suitable roosting habitat. The nearest documented occurrence is nearly three miles from the study area (CDFW 2022).
Salt-marsh wandering shrew *Sorex vagrans halicoetes*	CSC	Found in salt marshes along the San Francisco Bay.	**Unlikely.** Although the seasonal wetland on the Lockheed Martin property is dominated by pickleweed, this area of pickleweed is isolated from pickleweed on the San Francisco Bay, however, the nearest recorded observation of the salt-marsh wandering shrew is less than a half-mile from the study area on the eastern side of Caribbean Drive from the study area (CDFW 2022).
San Francisco dusky-footed woodrat *Neotoma fuscipes annectens*	CSC	Found in hardwood forests, oak riparian, and shrub habitats.	**Possible.** Suitable habitat is present in the form of riparian habitat on the site. This species is unlikely to occur in the rest of the study area. The nearest documented occurrence is more than three miles from the study area (CDFW 2022).
American badger *Taxidea taxus*	CSC	Found in drier open stages of most shrub, forest, and herbaceous habitats with friable soils, specifically grassland environments. Natal dens occur on slopes.	**Unlikely.** Although the site supports grassland habitat suitable for badgers, suitable habitat is only linked along the San Francisco Bay, therefore, it is unlikely a badger would move onto the study area. The nearest documented occurrence is more than three miles from the study area (CDFW 2022).

*Explanation of Occurrence Designations and Status Codes

Present: Species observed on the sites at time of field surveys or during recent past.

Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.

Possible: Species not observed on the sites, but it could occur there from time to time.

Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.

Absent: Species not observed on the site and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered	CE	California Endangered
FT	Federally Threatened	CT	California Threatened
FPE	Federally Endangered (Proposed)	CR	California Rare
FC	Federal Candidate	CP	California Protected
CSC	California Species of Special Concern	CCE	California Candidate Endangered

CNPS	California Native Plant Society Listing		
1A	Plants Presumed Extinct in California	3	Plants about which we need more information – a review list
1B	Plants Rare, Threatened, or Endangered in California and elsewhere	4	Plants of limited distribution – a watch list
2	Plants Rare, Threatened, or Endangered in California, but more common elsewhere		

2.4 JURISDICTIONAL WATERS

Jurisdictional waters include rivers, creeks, and drainages that have a defined bed and bank and which, at the very least, carry ephemeral flows. Jurisdictional waters also include lakes, ponds, reservoirs, and wetlands. Such waters may be subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE), the CDFW, and the California Regional Water Quality Control Board (RWQCB). See Section 3.2.4 of this report for additional information.

While a formal wetland delineation was not conducted within the study area, the East and West Sunnyvale Channels as well as other canals, settling ponds, the emergent wetland and other potential wetlands may be considered jurisdictional waters of the U.S. and/or State.

3 REGULATORY FRAMEWORK

3.1 CALIFORNIA ENVIRONMENTAL QUALITY ACT

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act. The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc., may replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant. According to *2022 CEQA Status and Guidelines* (2022), "Significant effect on the environment" means a substantial, or potentially substantial, adverse change in any of the physical conditions within the area affected by the project including land, air, water, minerals, flora, fauna, ambient noise, and objects of historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

- 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;
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;
- Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means;
- Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites;
- Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance; and
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal "endangered species" legislation has provided the CDFW and USFWS with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal Endangered Species Acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFW and USFWS if activities associated with a proposed project will result in the take of a listed species. To "take" a listed species, as defined by the state of California, is "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" said species (California Fish and Game Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" of a listed species (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under CEQA. Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal laws also protect most bird species. The State of California signed Assembly Bill 454 into law in 2019, which clarifies native bird protection and increases protections where California law previously deferred to Federal law. The Federal Migratory Bird Treaty Act (FMBTA: 16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are protected in California under provisions of the State Fish and Game Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order *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." Construction 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.

Additionally, the Bald and Golden Eagle Protection Act (16 U.S.C., scc. 668-668c) prohibits anyone from taking bald or golden eagles, including their parts, nests, or eggs, unless authorized under a federal permit. The act prohibits any disturbance

that directly affects an eagle or an active eagle nest as well as any disturbance caused by humans around a previously used nest site during a time when eagles are not present such that it agitates or bothers an eagle to a degree that interferes with or interrupts normal breeding, feeding, or sheltering habits, and causes injury, death or nest abandonment.

3.2.4 Bats

Section 2000 and 4150 of the California Fish and Game Code states that it is unlawful to take or possess a number of species, including bats, without a license or permit, as required by Section 3007. Additionally, Title 14 of the California Code of Regulations states it is unlawful to harass, herd, or drive a number of species, including bats. To harass is defined as "an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering." For these reasons, bat colonies in particular are considered to be sensitive and therefore, disturbances that cause harm to bat colonies are unlawful.

3.2.5 Jurisdictional Waters and Wetlands

Jurisdictional waters include waters of the United States subject to the regulatory authority of the U.S. Army Corps of Engineers (USACE) and waters of the State of California subject to the regulatory authority of the California Department of Fish and Wildlife (CDFW) and the California Regional Water Quality Control Board (RWQCB).

3.2.5.1 Clean Water Act, Section 404

The USACE regulates the filling or grading of Waters of the U.S. under the authority of Section 404 of the Clean Water Act. Drainage channels and adjacent wetlands may be considered "waters of the United States" or "jurisdictional waters" subject to the jurisdiction of the USACE. The extent of jurisdiction has been defined in the Code of Federal Regulations and clarified in federal courts.

The definition of waters of the U.S. have changed several times in recent years. In January 2020, the Environmental Protection Agency (EPA) and USACE jointly issued the Navigable Waters Protection Rule. The new rule was published in the Federal Register on April 21, 2020, and took effect on June 22, 2020.

On August 30, 2021, the U.S. District Court for the District of Arizona issued an order vacating and remanding the Navigable Waters Protection Rule. In light of this order, the EPA and USACE have halted implementation of the Navigable Waters Protection Rule and are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice.

The pre-2015 regulatory regime defines waters of the U.S. as:

1. All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
2. All interstate waters including interstate wetlands;
3. All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation, or destruction of which could affect interstate or foreign commerce including any such waters:
    a. Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
    b. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    c. Which are used or could be used for industrial purposes by industries in interstate commerce;
4. All impoundments of waters otherwise defined as waters of the United States under this definition;
5. Tributaries of waters identified in paragraphs (s)(1) through (4) of this section;
6. The territorial sea;
7. Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (s)(1) through (6) of this section; waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not waters of the United States.

All activities that involve the discharge of dredge or fill material into waters of the U.S. are subject to the permit requirements of the USACE under Section 404 of the Clean Water Act. Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued without a CWA Section 401 Water Quality Certification (or waiver of such certification) verifying that the proposed activity will meet state water quality standards (Section 3.6.2).

3.2.5.2 Porter-Cologne Water Quality Act/Clean Water Act, Section 401

There are nine Regional Water Quality Control Boards (RWQCB) statewide; collectively, they oversee regional and local water quality in California. The RWQCB administers Section 401 of the Clean Water Act and the Porter-Cologne Water Quality Control Act. The RWQCB for a given region regulates discharges of fill or pollutants into waters of the State through the issuance of various permits and orders.

Pursuant to Section 401 of the Clean Water Act, the RWQCB regulates waters of the State that are also waters of the U.S. Discharges into such waters require a Section 401 Water Quality Certification from the RWQCB as a condition to

obtaining certain federal permits, such as a Clean Water Act Section 404 permit (Section 3.6.1). Discharges into all Waters of the State, even those that are not also Waters of the U.S., require Waste Discharge Requirements (WDRs), or a waiver of WDRs, from the RWQCB.

The Porter-Cologne Water Quality Control Act, Water Code Section 13260, requires that "any person discharging waste, or proposing to discharge waste, within any region that could affect the 'waters of the State' to file a report of discharge" with the RWQCB. Waters of the State as defined in the Porter-Cologne Act (Water Code Section 13050[e]) are "any surface water or groundwater, including saline waters, within the boundaries of the state." This gives the RWQCB authority to regulate a broader set of waters than the Clean Water Act alone; specifically, in addition to regulating waters of the U.S. through the Section 401 Water Quality Certification process, the RWQCB also claims jurisdiction and exercises discretionary authority over "isolated waters," or waters that are not themselves waters of the U.S. and are not hydrologically connected to waters of the U.S.

The RWQCB also administers the Construction Stormwater Program and the federal National Pollution Discharge Elimination System (NPDES) program. Projects that disturb one or more acres of soil must obtain a Construction General Permit under the Construction Stormwater Program. A prerequisite for this permit is the development of a Stormwater Pollution Prevention Plan (SWPPP) by a certified Qualified SWPPP Developer. Projects that discharge wastewater, stormwater, or other pollutants into a Water of the U.S. may require a NPDES permit.

3.2.5.3 California Fish and Game Code, Section 1602

The CDFW has jurisdiction over the bed and bank of natural drainages and lakes according to provisions of Section 1602 of the California Fish and Game Code. Activities that may substantially modify such waters through the diversion or obstruction of their natural flow, change or use of any material from their bed or bank, or the deposition of debris require a Notification of Lake or Streambed Alteration. If the CDFW determines that the activity may adversely affect fish and wildlife resources, a Lake or Streambed Alteration Agreement will be prepared. Such an agreement typically stipulates that certain measures will be implemented to protect the habitat values of the lake or drainage in question.

3.2.6 City of Sunnyvale Policies and Ordinances

3.2.6.1 General Plan (updated 2017)

The City of Sunnyvale's General Plan (updated 2017) includes goals, policies, and action items. Goals of the General Plan include:

- GOAL LT-1: Coordinated regional and local planning
- GOAL LT-2: Environmentally sustainable land use and transportation planning and development
- GOAL LT-3: An effective multimodal transportation system
- GOAL LT-4: An attractive community for residents and businesses
- GOAL LT-5: Creation, preservation, and enhancement of Village Centers and neighborhood facilities that are compatible with residential neighborhoods
- GOAL LT-6: Protected, maintained, and enhanced residential neighborhoods
- GOAL LT-7: Diverse housing opportunities
- GOAL LT-8: Options for healthy living
- GOAL LT-9: Adequate and balanced recreation facilities
- GOAL LT-10: Regional approach to providing and receiving open space
- GOAL LT-11: Supportive economic development environment
- GOAL LT-12: A balanced economic base
- GOAL LT-13: Protected, maintained, and enhanced commercial areas, shopping centers, and business districts
- GOAL LT-14: Special and unique land uses to create a diverse and complete community

Chapter 3 (Land Use and Transportation) of the City of Sunnyvale's General Plan (adopted in 2011, updated in 2017) focuses on land use, transportation, open space, and economy and sets forth goals and policies for each of these topics. Chapter 3 of the General Plan has several goals and policies pertaining to natural resources which are applicable to development projects. Relevant goals from Chapter 3 are below; for the full list of goals and policies in Chapter 3.

- GOAL LT-1 COORDINATED REGIONAL AND LOCAL PLANNING – Protect the quality of life, the natural environment, and property investment, preserve home rule, secure fair share of funding, and provide leadership in the region.
- GOAL LT-2 ENVIRONMENTALLY SUSTAINABLE LAND USE AND TRANSPORTATION PLANNING AND DEVELOPMENT – Support the sustainable vision by incorporating sustainable features into land use and transportation decisions and practices.

- GOAL LT-9 ADEQUATE AND BALANCED OPEN SPACE – Provide and maintain adequate and balanced open space and recreation facilities of the benefit of maintaining a healthy community based on community needs and the ability of the City to finance, construct, maintain, and operate these facilities now and in the future. (Previously Open Space and Recreation Goal A/ Adopted in 2006)
- GOAL LT-10 REGIONAL APPROACH TO PROVIDING AND PRESERVING OPEN SPACE – The City embraces a regional approach to providing and preserving open space and providing open space and recreational services, facilities, and amenities for the broader community. (Previously Open Space and Recreation Goal 2.2C)

3.2.6.2 Tree Ordinance

The City of Sunnyvale's Municipal Code protects both city and private trees for which removal requires permits. The following are specifics for each category of tree.

City of Sunnyvale's Municipal Code Section 13.16 City Trees:

Removal, pruning, fertilizing, or planting of any City Tree or Official City Tree requires a permit from the City. The City defines "City Trees" and Official City Tree" as:

8. "City tree" means any woody plant which is growing within the public right-of-way along a city street and has a trunk four inches or more in diameter at four and one-half feet above normal ground level.
9. "Official city tree" means a species of tree designated by the superintendent and on the official tree list."

City of Sunnyvale's Municipal Code Article 6, Chapter 19.94 Tree Preservation:

This section states it is unlawful to damage or kill any protected tree, and a protected tree removal permit is required to do so (Ord. 2623-99 § 1; prior zoning code § 19.81.040). Heritage landmark trees are also protected unless a landmark alteration permit and a tree removal permit are obtained.

Definitions for this section are below:

1. "Damage" means any intentional action or gross negligence which causes injury, death, or disfigurement of a tree. Actions include, but are not limited to, cutting,

girdling, poisoning, overwatering, unauthorized relocation or transportation of a tree or trenching, excavating, altering the grade, or paving within the dripline of a tree.

2. "Dripline" means the outermost line of the tree's canopy projected straight down to the ground surface. As depicted in a plan view, the dripline appears as an irregularly shaped circle.
3. "Protected tree" means a tree of significant size.
4. "Significant size" means a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees "significant size" means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater.
5. "Tree" means any woody plant which has a trunk thirteen inches or more in circumference at four and one-half feet above ground level.
6. "Tree removal" means the physical removal of a tree or causing the death of a tree through damaging, poisoning, or other direct or indirect action, including excessive trimming, pruning, or mutilation that sacrifices the health, destroys, or diminishes the aesthetic quality, or diminishes the life expectancy of the tree. (Ord. 2808-06 § 2; Ord. 2623-99 § 1; prior zoning code § 19.81.030)."

Trees removed may need replacement trees planted at the discretion of the Director of Community Development.

City of Sunnyvale's Municipal Code Section 19.94.110 Requirements Concerning Protected Trees During Site Development or Modification and Section 19.94.120 Tree Protection During Construction:

The following requirements should be adhered to:

"When site development or modification is occurring and a discretionary permit and a public hearing are required, the developer or owner shall meet the following requirements:

(a) Tree Survey. A tree survey conducted by an arborist who has been certified by the International Society of Arboriculture shall be submitted as part of the required application materials for all use, design, or special development permits on developing or redeveloping property. The survey shall show the location, size, and species (both common and Latin names required) of all trees (protected and unprotected) on the site and shall include a calculation of the value of each tree. A written letter shall be included when a protected tree(s) is proposed to be removed

explaining why the tree(s) cannot be relocated or the design of the structures altered to maintain the trees.

10. Plan Modifications.

(1) The approving body shall have the ability to require the reasonable alteration of a proposed building in order to retain protected trees.

(2) The approving body shall have the ability to require relocation (on or off site) of protected trees which the applicant proposes to remove.

(b) Replanting Plans. When protected trees must be removed, replanting plans shall be submitted as part of the landscaping plan for the proposed project. The replanting plan shall be subject to the requirements of Section 19.94.090, but actual number and sizes of replacement trees shall be reviewed on a case by case basis.

(c) Tree Protection Plan. The developer shall submit a tree protection plan which shall demonstrate how tree protection shall be provided during and after construction and shall include, where appropriate, a description of any of the protective measures set forth in Section 19.94.120.

(d) Tree Bonds. The approving body shall have the authority to require a developer to post a bond with the City for the value of any tree required to remain as a condition of permit approval during development activities on a site.

(1) The bond may be for a maximum period of five years.

(2) The value of the tree shall be determined by the director of community development.

(3) The bond will be released back to the developer if the tree remains in good health through the end of the bond period.

(4) In the event the tree dies or begins to decline in poor health, the bond will be used by the City to replace the aesthetic value of the tree that was lost.

(e) Soil Mitigation. The approving body shall have the authority to require underground soil or planting measures, such as structural soils, in any location deemed

appropriate for future or existing tree growth. (Ord. 2808-06 § 5; Ord. 2623-99 § 1; prior zoning code § 19.81.120)."

"Protected trees designated for preservation shall be protected during construction of a project by use of the following methods:

(a) Protective fencing shall be installed no closer to the trunk than the dripline, and far enough from the trunk to protect the integrity of the tree. The fence shall be a minimum of four feet in height and shall be set securely in place. The fence shall be of a sturdy but open material (i.e., chain link) to allow visibility to the trunk for inspections and safety.

(b) The existing grade level around a tree shall normally be maintained out to the dripline of the tree. Alternate grade levels, as described in the tree protection plan, may be approved by the director of community development.

(c) Drain wells shall be installed whenever impervious surfaces will be placed over the root system of a tree (the root system generally extends to the outermost edges of the branches).

(d) Pruning that is necessary to accommodate a project feature, such as a building, road or walkway shall be reviewed and approved by the department of community development and the department of public works.

(e) New landscaping installed within the dripline of an existing tree shall be designed to reproduce a similar environment to that which existed prior to construction. (Ord. 2623-99 § 1; prior zoning code § 19.81.130)."

3.2.6.3 Bird Safe Building Design Guidelines

The City of Sunnyvale approved Bird Safe Building Design Guidelines in 2014. These guidelines are split into two options:

1. Option 1 applies "If within 300 feet of a body of water larger than one acre in size or located immediately adjacent to a landscaped area, open space or park larger than one acre in size."
2. Option 2 applies in all other locations of the City.

For all locations, project owners shall:

1. "Reduce the use of night lighting in the building without incorporating blinds into the window design;
2. Donation of discovered dead birds to an authorized bird conservation organization or museum;
3. Consider placing signs in several locations around the building with the telephone number an authorized bird conservation organization or museum to aid in species identification and to benefit scientific study"

For projects which Option 1 applies, bird safe design elements would be used for building and site design operation. These would include:

4. "Avoid the use of multi-floor expanse of reflective or transparent glass in the first 60 feet of the building design, specifically in these area[s] facing the water or open space;
5. Building glass shall be limited to low reflectivity levels such as 25% or less;
6. Limit the amount of glass on ground level stories, especially in areas adjacent to landscaping;
7. Add architectural devices, such as louvers, awnings, sunshades or light shelves to building design to reduce massing of glass;
8. Consider use of opaque, fritted or etched glass on ground floor in areas adjacent to landscaped areas;
9. If site is near water features, use soil berms, furniture, landscaping or other features to prevent reflection of water in glass building facades;
10. Consider using angled glass (20-40 degrees) from vertical to reflect ground instead of adjacent habitat or sky buildings with an expanse of glass near water or landscaping areas
11. Avoid placing tall landscaping in front of highly reflective glass and the use of green roofs and water features near glass;
12. Avoid the funneling of open space towards a building face;
13. Avoid glass skyways or freestanding glass walls;
14. No up lighting or spot lights on site;
15. Ensure all site lighting uses shielded fixtures;
16. Turn building lights off at night or incorporate blinds into window treatment to use when lights are on at night;
17. Create smaller zones in internal lighting layouts to discourage wholesale area illumination;
18. Place signs at several locations near building with the telephone number [of] an authorized bird conservation organization or museum to aid in species identification and to benefit scientific study;
19. Monitoring efforts shall include a bird-safe program developed by the project owner of the methods to ensure necessary steps are taken to reduce bird strikes. These efforts would include how each dead bird will be handled and donated to scientific study, providing a yearly inventory to the City of the number of birds found and locations, and the steps necessary to resolve any consistent location's bird deaths. Options include shades to reduce transparency and night lighting, fritted glass, netting, stickers, etc."

For projects which Option 2 applies, bird safe design elements would include:

1. Avoid large expanse of glass near open areas, especially when tall landscaping is immediately adjacent to the glass walls;
2. Avoid the funneling of open space towards a building face;
3. Prohibit glass skyways or freestanding glass walls;
4. Avoid transparent glass walls coming together at building corners to avoid birds trying to fly through glass;
5. Reduce glass at top of building, especially when incorporating a green roof into the design;
6. Prohibit up lighting or spotlights;
7. Shield lighting to cast light down onto the area to be illuminated;
8. Turn commercial building lights off at night or incorporate blinds into window treatment to use when lights are on at night;
9. Create smaller zones in internal lighting layouts to discourage wholesale area illumination.

4 IMPACTS AND BEST MANAGEMENT PRACTICES

The project, as proposed, would create the MPSP which would direct development within the study area. The natural resource issues specific to this project and the recommended best management practices (BMPs) pertaining to each potential impact are discussed in detail below. This section has been split into two categories; Section 4.1 discusses project-specific impacts and associated BMPs required in the developed areas of the MPSP area and Section 4.2 discusses project-specific impacts and associated BMPs required only within the "natural" lands in the northwestern corner of the MPSP area as well as within 250 feet of waterways and canals which move through the developed area. In general, those BMPs which apply to the developed areas also apply to the "natural" areas, with the "natural" areas requiring additional BMPs.

4.1 IMPACTS AND BEST MANAGEMENT PRACTICES FOR DEVELOPED AREAS WITHIN THE MOFFETT PARK SPECIFIC PLAN

This section includes potential project-specific impacts and associated BMPs within the developed areas of the MPSP area. Developed areas must follow Best Management Practices for migratory nesting birds and raptors, burrowing owl, bats, City of Sunnyvale trees ordinance, and risk of bird strike.

4.1.1 Impacts to Special Status Plants

Potential Impact. Twenty-one special status vascular plant species are known to occur in the general project vicinity (Table 2). Of these, no species have the potential to occur within the developed areas of the site.

Best Management Practices. None warranted.

4.1.2 Loss of Habitat for Special Status Animals

Potential Impact. Of the 41 special status animal species that are known to occur, or to once have occurred, in the project region and considered in Table 2, all except for some special status birds, nesting migratory birds, burrowing owls, and roosting bats are considered absent from or unlikely to occur in the developed area of the MPSP area due to a lack of suitable habitat, lack of nearby occurrences, and/or the site's location outside of the species' known range.

Any new development within the developed portions of the MPSP will result in a less-than-significant impact to the loss of habitat for the small number of special status animal species noted on Table 2 that may occasional or rarely (e.g. mostly birds) occur within this portion of the MPSP.

Ruderal habitat within the study area supports potential habitat for the burrowing owl. The Townsend's big-eared bat, pallid bat, and other bat species may forage

over the entire study with potentially suitable roosting habitat existing in many of the buildings and some trees within the study area.

Therefore, harm, injury or mortality to any individual special status species may be considered a significant impact and a potentially a violation of state and/or federal laws. See Sections 4.1.3 through 4.1.5 for further discussion and suitable BMPs for individuals of these species.

Best Management Practices. No BMPs warranted for loss of habitat for special status animal habitat within the developed portions of MPSP.

4.1.3 Migratory Nesting Birds and Raptors

Potential Impacts. The entire MPSP area has the potential to support migratory nesting birds and raptors, including special status birds/raptors noted in Table 2. Active bird nests may occur on the ground, in grassland, in shrubs and trees, on power poles, on bridges, and on buildings. Should any portion of the MPSP area be impacted during nesting season (February 1-August 31), active bird nests would have the potential to be impacted. Therefore, the below BMPs shall be followed.

Best Management Practices. All projects within the MPSP area shall follow the below BMPs regarding nesting birds and raptors.

BMP 4.1.3a. If possible, initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur outside of the breeding season (i.e., September 1st - January 31st).

BMP 4.1.3b. If initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur during the bird breeding season (typically February 1st to August 31st), a qualified biologist will conduct a pre-construction survey for nesting migratory birds and raptors. The survey for nesting migratory birds will cover the project site itself and the immediate vicinity of the site, with the survey for nesting raptors encompassing the site and surrounding lands within 250 feet, where accessible. The survey should occur within 7 days prior to the onset of ground disturbance.

BMP 4.1.3c. If active nests are detected, appropriate construction-free buffers will be established. The buffer sizes will be determined by the project biologist based on species, topography, and type of activity occurring in the vicinity of the nest. Typical buffers are 25-50 feet for passerines and up to 250 feet for raptors. The project buffer will be monitored periodically by the project biologist to ensure compliance. After the nesting is completed, as determined by the biologist, the buffer will no longer be required.

***BMP 4.*1.3c.** A report shall be prepared for submission to the City summarizing the results of the survey which identifies any buffer zones, and outlines recommended next steps, including measures implemented to prevent impacts to nesting birds (BMP 4.1.3d).

4.1.4 Impacts to Burrowing Owls

Potential Impacts. The ruderal habitats within the developed portion of the MPSP provide suitable, but limited habitat for burrowing owls. However, burrowing owls are known to occur in the higher quality habitat within the northern portion of the MPSP and as such they could easily use the ruderal areas for wintering or breeding roost. The best management practices for this species within the ruderal areas of the developed portion of MPSP as stated below shall be followed.

Best Management Practices. All projects within any potentially suitable habitat in the MPSP area shall follow these BMPs regarding burrowing owls.

BMP 4.1.4a. (pre-construction surveys). Pre-construction surveys shall be conducted for burrowing owls by a qualified biologist in areas where habitat occurs such as ruderal lots (this would not include impervious surfaces), no more than 14 days in advance of the on-set of ground-disturbing activity. These surveys shall be conducted according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) or the most recent CDFW guidelines. The surveys shall cover all areas of suitable burrowing owl habitat within the construction zones.

BMP 4.1.4b. (Avoidance of active nests during breeding season). If pre-construction surveys are undertaken during the breeding season (February through August) and active nest burrows are located within or near construction zones, a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer areas shall be enclosed with temporary fencing, and construction equipment and workers shall not be allowed to enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season. After the breeding season (i.e., once all young have left the nest), passive relocation of any remaining owls may take place, but only under the conditions described below.

BMP 4.1.4c. (Avoidance of occupied burrows during non-breeding season, and passive relocation of resident owls). During the non-breeding season (September through January), any burrows occupied by resident owls in areas planned for construction shall be protected by a construction-free buffer with a radius of 150 to 250 feet around each active burrow, with the required buffer distance to be determined in each case by a qualified biologist. Passive relocation of resident owls is not recommended by CDFW where it can be avoided. If passive relocation

is not avoidable, resident owls may be passively relocated according to a relocation plan prepared by a qualified biologist.

BMP 4.1.d. (Compensation for breeding burrowing owls). However, if breeding owls are detected, suitable compensation will be provided. Compensation could include collaborating with existing protected areas for the burrowing owl along the San Francisco Bay or collaborating and interacting with the Santa Clara Valley Habitat Plan burrowing owl program. Although the City of Sunnyvale is not within the SCVHP plan area, it is within the extended area for preserving habitat to assist with conservation of burrowing owls for the SCVHP; the applicant should collaborate with the Habitat Agency to define a suitable and acceptable compensation strategy. This most likely would result in the applicant funding a defined conservation need for the SCVHP. Providing protection in the form of deed restrictions or establishing a conservation easement in the northwestern "natural" area would also help to provide suitable compensation for breeding owls observed within the developed portion of the MPSP area.

BMP 4.1.4e. A report shall be prepared for submission to the City summarizing the results of the survey which identifies any buffer zones, and outlines recommended next steps, including measures implemented to prevent impacts to nesting birds (BMP 4.2.7c and/or BMP 4.2.7e).

4.1.5 Impacts to Roosting Bats

Potential Impacts. The MPSP area provides suitable habitat for roosting bats in the form of buildings, bridges, and trees. Therefore, the best management practices regarding roosting bats shall be followed.

Best Management Practices. All projects within the MPSP area shall follow the BMPs below regarding roosting bats.

BMP 4.1.5a. A bat assessment should be conducted by a qualified biologist and submitted to the City no more than 30 days prior to removal of trees or buildings. If a non-breeding bat colony is found, or if the tree supports suitable roosting habitat that cannot be fully visibly surveyed (such as peeling bark or cavities in trees, especially high up in trees), the individuals should be humanely evicted via two-step removal as directed by a qualified biologist to ensure no harm or "take" would occur to any bats as a result of demolition activities. Two-step removal shall occur during the volant seasons in fair weather and outside of the maternity season for bats (March 1-April 15 or September 1-October 15). Two-step removal consists of one day of disturbance and removing portions of buildings or trees, as directed by a qualified biologist followed by the removal of that building or tree the following day; the goal is to disturb the bats and rendering the trees and structures unsuitable for them. This passive effort allows bats using these structures or trees to nocturnally relocate to a suitable nearby roost. BMPs would

not be required for the loss of roosting or foraging habitat for bats, as such habitat is abundantly available regionally.

BMP 4.1.5b. Should a breeding colony be observed, two-step removal would need to wait until breeding season is over (September 1) or until all young are independent of their parents. An appropriate buffer as determined by a qualified biologist based on the site conditions and location of the maternity colony would be established. This buffer may be up to 350 feet, depending on site-specific conditions.

4.1.6 Loss of Habitat for Native Wildlife

Potential Impact. The proposed project will result in the redevelopment of existing developed habitat and will therefore result in a less-than-significant impact to the loss of habitat for native wildlife.

Best Management Practices. No BMPs warranted for loss of habitat for native wildlife within the developed portions of the MPSP.

4.1.7 Interference with the Movement of Native Wildlife

Potential Impact. The existing development within MPSP does not presently support or facilitate the regional movement of wildlife. Any terrestrial local wildlife moving through the area of the site would continue move through the area after project development. Therefore, redeveloping these developed areas will have a less-than-significant impact on regional wildlife movements, sans those of migratory birds. The buildout of the study area does, however, have the potential to interfere with regional avian movements. The San Francisco Bay is a well-known stopover on the Pacific Flyway and as such, certain building designs could result in an increase in bird-strikes within the MPSP. Therefore, measures relating to bird-strike issues should be employed and are as followed. The City of Sunnyvale approved Bird Safe Building Design Guidelines (2014), which has two options for project design element requirements (see Section 3.2.7). The MPSP will encompass areas where Option 1 applies and other areas where Option 2 applies, therefore, individual projects within the MPSP will need to adhere to one of the two options, depending on their specific locations. The City of Sunnyvale currently has design measures for developers to reduce the risk of bird-strike (Section 3.2.7); these measures have been updated in Chapter 5 of the updated MPSP with specific additional measures for the MPSP area.

Best Management Practices. The below BMP must be followed for all projects.

BMP 4.1.7a. The individual applicants applying for development permits will be required to take bird safe design elements into account when designing their

buildings and operations. Chapter 5 of the MPSP includes additional measures for bird safe design.

4.1.8 Degradation of Water Quality in Seasonal Drainages, Stock Ponds and Downstream Waters

Potential Impact. Eventual site development and construction may require grading that leaves the soil of construction zones barren of vegetation and, therefore, vulnerable to sheet, rill, or gully erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, urban runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. These pollutants may eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species. The deposition of pollutants and sediments in sensitive riparian and wetland habitats would be considered a potentially significant adverse environmental impact.

The project would comply with the City's grading requirements; this typically requires Best Management Practices (BMPs) to reduce the potential for off-site sedimentation, erosion, and pollution. Therefore, the project buildout would result in a less-than-significant impact to water quality.

Best Management Practices. The project would comply with the City's grading requirements; no additional BMPs are warranted.

4.1.9 Conflict with Local Policies and Ordinances: City of Sunnyvale's General Plan (updated 2017)

The entire study area is within the "Transform" section of Figure 3-1: *Changing Conditions 2010-2035* within the City of Sunnyvale's General Plan (updated 2017). The MPSP area is also identified in this document as being within a Specific Plan. The updated MPSP is expected to be consistent with the General Plan.

Best Management Practices. BMPs are not warranted.

4.1.10 Conflict with Local Policies and Ordinances: City of Sunnyvale's Moffett Park Specific Plan (2013)

The Moffett Park Specific Plan was adopted in 2013; The updated MPSP is expected to be consistent with the Previous MPSP. Proposed updates to the policies of the MPSP, as well as the proposed updated bird safe building design guidelines for the MPSP area are included in Appendix A.

Best Management Practices. BMPs are not warranted.

4.1.11 Conflict with Local Policies or Ordinances: City of Sunnyvale's Tree Ordinance

Potential Impact. The project will need to abide by the Tree Preservation Ordinance (Section 19.94 of the Municipal Code) of the City of Sunnyvale. This ordinance defines a protected tree as a tree of significant size, which includes:

"a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees "significant size" means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater."

The applicant will be responsible for conforming to these requirements and applying for necessary permits and replacements if a protected tree is to be affected or removed.

Best Management Practices. Each project within the MPSP area will adhere to this ordinance.

4.1.12 Conflict with Local Policies and Ordinances: City of Sunnyvale's Bird Safe Building Design Guidelines

Due to its proximity to the San Francisco Bay, which is along the Pacific Flyway, the entire MPSP area is within an area of increased risk for bird-strike. Bird-strike is the impacts to birds, specifically the high risk of mortality, from them flying into buildings, guywires, antennae, etc. The City of Sunnyvale approved Bird Safe Building Design Guidelines (2014), which has two options for project design element requirements (see Section 3.2.7). The MPSP will encompass areas where Option 1 applies and other areas where Option 2 applies, therefore, individual projects within the MPSP will need to adhere to one of the two options, depending on their specific locations. The City of Sunnyvale currently has design measures for developers to reduce the risk of bird-strike (Section 3.2.7); these measures have been updated in Chapter 5 of the updated MPSP with specific additional measures for the MPSP area.

Best Management Practices. The individual applicants applying for development permits will be required to take bird safe design elements into account when designing their buildings and operations. Chapter 5 of the MPSP includes additional measures for bird safe design.

4.1.13 Conflict with Local Policies and Ordinances: Habitat Conservation Plan or Natural Community Conservation Plan

There are no Habitat Conservation Plans or Natural Community Conservation Plans which cover the project site.

Best Management Practices. BMPs are not warranted.

4.2 IMPACTS AND BEST MANAGEMENT PRACTICES FOR THE NATURAL AREA, CHANNELS, AND CANALS

Additional BMPs are necessary for the natural area in the northwestern corner of the MPSP on the Lockheed Martin property as well as channels and canals which traverse the MPSP area. Therefore, the below BMPs apply to the above identified habitats plus a 250-foot buffer form these areas. Developed areas and vacant lots more than 250 feet from these identified areas do not need to follow the below BMPs. This section includes potential project-specific impacts and associated BMPs within the developed areas of the MPSP area. Developed areas must follow Best Management Practices for special status plants, protected bumble bees, steelhead, western pond turtle, migratory nesting birds and raptors, burrowing owl, bats, salt-marsh harvest mouse, San Francisco dusky-footed woodrat, sensitive habitats, including riparian habitat and wetlands, City of Sunnyvale trees ordinance, and risk of bird strike.

4.2.1 Impacts to Special Status Plants

Potential Impact. Twenty-one special status vascular plant species are known to occur in the general project vicinity (Table 2). Of these, two species—alkali milk-vetch and Congdon's tarplant—have the potential to occur on the site, specifically in the grasslands of the site's northwest corner. Alkali milk-vetch may also occur in vernally mesic areas in the northwest corner. Both species are considered a CRPR 1B list species ("Plants rare, threatened or endangered in California and elsewhere"). As a CRPR listed plant with no federal or state listing, impacts to these species may be considered significant under CEQA. Because the extent to which these species may occur in the northwest corner is not currently known, focused surveys should be conducted in this area to determine these species' presence or absence (see Best Management Practices below).

If detected in areas of the northwest corner that are proposed for development, a determination would need to be made as to whether impacts to individuals of these species should be considered significant. The determination of the significance of impacts would be based on, but not limited to, criteria such as the nature of the habitat impacts (i.e., temporary versus permanent impacts), extent of the species' range, relative abundance of regional populations of the species in its range, and the number of plant populations on the site.

If focused rare plant surveys determine that these species are absent from areas impacted by future development, then there would be no impact to habitat for these species, and BMPs would not be warranted.

Best Management Practices. All projects within the applicable portion of the MPSP area shall follow the BMPs below regarding special status plants.

BMP 4.2.1a: At the time development is proposed, focused special status plant surveys should be conducted by a qualified biologist for alkali milk-vetch and Congdon's tarplant in the grasslands and vernally mesic areas of the site's northwest corner. These surveys should be completed prior to ground disturbance and should be timed to occur during the appropriate blooming season for the species. Surveys conducted in or around April, June, and September should be sufficient to confirm their presence or absence; the timing and number of surveys should be adjusted based on environmental conditions that may affect blooming in a particular year. The surveys should follow protocols outlined in the *CNPS Botanical Survey Guidelines* (CNPS 2001) and the California Department of Fish and Wildlife's (2018) *Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities*. If alkali milk-vetch and Congdon's tarplant are determined absent, no additional measures are required.

The following BMPs should be implemented if special-status plants are detected within the project footprint, and should their loss be considered significant under CEQA.

BMP 4.2.1b: If alkali-milk vetch and/or Congdon's tarplant are present, to the maximum extent practicable, the project should be designed to avoid populations of special status plants. If the project cannot be redesigned to avoid impacts to the identified species, and these impacts are found to be significant as defined by CEQA, then compensation measures should include development of an onsite restoration plan for these species. Areas to be preserved onsite as open space are expected to be able to fully accommodate any compensation measures for these species. If compensation measures cannot be fully accommodated onsite, then off-site compensatory mitigation (in the immediate vicinity of the identified population(s), where feasible) would need to be considered. At a minimum, the restoration plan should contain the following elements: 1) location of restoration areas, 2) propagation and planting techniques to be employed for the restoration effort, 3) timetable for implementation, 4) monitoring plan and performance criteria, 5) adaptive management techniques, and 6) site maintenance plan. The plan would need to be approved by the City prior to the start of project construction and should, where feasible, occur in the immediate vicinity of the identified population(s). The objective of this BMP would be to replace the special status plants and habitat lost during project build-out at a proportional basis to the impact. This would incorporate both the spatial and relative density of the impacted plant and its habitat. Success of the restoration effort would be based on a 5-year monitoring program.. This and any other compensation (on- or off-

site mitigation) for anticipated impacts should be consistent with local policies and ordinances, and any other regulations protecting these plant communities.

4.2.2 Loss of Habitat for Special Status Animals

Potential Impact. Of the 41 special status animal species that are known to occur, or to once have occurred, in the project region and considered in Table 2, 19 are considered absent from or unlikely to occur on the site due to a lack of suitable habitat, lack of nearby occurrences, and/or the site's location outside of the species' known range. As these species are considered absent from or unlikely to occur on the site, the proposed project is expected to have no impact on them from loss of habitat.

Four of the remaining 22 animal species considered in Table 2, the northern harrier, white-tailed kite, golden eagle, and saltmarsh common yellowthroat have been observed in the study area.

The northwestern corner of the site with more naturalized lands supports suitable breeding and foraging habitat for the Crotch bumble bee, western bumble bee, western pond turtle, western snowy plover, California least tern, California black rail, California Ridgway's rail, yellow rail, black skimmer, burrowing owl, Alameda song sparrow, tricolored blackbird, salt-marsh harvest mouse, and San Francisco dusky-footed woodrat.

The East and West Sunnyvale Channels support potential habitat for steelhead, western pond turtle, California black rail, California Ridgway's rail, yellow rail, black skimmer, burrowing owl, Alameda song sparrow, and tricolored blackbird.

The Townsend's big-eared bat, pallid bat, and other bat species may forage over the entire study are and potentially suitable roosting habitat exists in many of the buildings and some trees within the study area.

Harm or mortality to individuals of protected species may be considered a significant impact and a violation of state and/or federal laws. See Sections 4.2.3 through 4.2.10 for further discussion and BMPs for individuals of these species.

Best Management Practices. As habitat for these species will not be impacted, no BMPs are proposed at this time for compensation. See the below sections for avoidance and minimization BMPs.

4.2.3 Protected Bumble Bees

Potential Impacts. The site provides potentially suitable habitat for the Crotch bumble bee and the western bumble bee in the natural lands on the northern side of the Lockheed Martin property. The remainder of the MPSP area is not suitable for these species.

Best Management Practices. The following BMPs shall be followed regarding special status bumble bees for any individual projects within the natural lands on the northern end of the Lockheed Martin property.

BMP 4.2.3a: In the event future development is proposed within the natural lands on the north side of the Lockheed Martin property, at the time development is proposed in the potentially suitable habitat in the northern side of the Lockheed Martin property, during the development review process, four separate surveys will be conducted by a qualified biologist when the ambient temperatures are greater than 60°F, wind speeds are ideally less than 8 mph, and skies are clear enough to see your shadow. Bumble bees typically have an active season, or flight period in warmer months. The flight periods of the two different bumble bees which have potential to occur in the Study Area and have been petitioned to be listed are: 1) the Crotch bumble bee's flight period is typically late February through late October, peeking in early April with a second pulse in July; and 2) the western bumble bee's flight period is typically early April to early November, with workers peaking in early August and males peaking in late September; the queens' flight period is early February through late November, peaking in late June and late September (The Xerces Society for Invertebrate Conservation, Defenders of Wildlife, Center for Food Safety, 2018). Although this gives a general timespan, the survey period should be from March through September and should aim for a survey in April, July, August, and September at the least; surveys will depend on local temperatures to identify the specific active season for any given area.

Ideally the surveys will be completed between noon and 4 pm, but they may be completed earlier if the weather conditions are good. The surveys will be completed by walking transects spaced up to approximately 100 feet apart within the affected habitat. Transect widths will be reduced if needed, so there is complete visual coverage of potential nest, overwintering, and forage sites. These bumblebees are typically found in potential nesting, overwintering, and forage habitat within brush piles, in un-mowed/overgrown areas, hollow logs, abandoned rodent burrows, but can also nest above ground in tufts of grass, old bird nests, rock piles, or cavities in dead trees, as well as milkweeds (*Asclepias*), daisies (*Chaenactis*), lupines (*Lupinus*), burclovers (*Medicago*), phacelias (*Phacelia*), and salvias (*Salvia*). To the degree any of this habitat exists onsite, focused surveys will occur within suitable habitat. If possible, bumble bee species will be determined, the location of potential or known Crotch bumble bees will be recorded via a handheld GPS unit, and a representative picture will be taken. No bumble bees will be handled to determine species.

BMP 4.2.3b (Avoidance): Should protected bumble bees be observed on the project site, they should be avoided.

BMP 4.2.3c (Minimization): Should protected bumble bees be observed on the site or adjacent to the site, and if they cannot be fully avoided, construction should occur during a period of time that minimizes the effect of dust on their lifecycles (which would be determined at the time surveys are prepared).

BMP 4.2.3d (Compensation): Should protected bumble bees be observed on the site, compensation may be necessary and any compensation that may be necessary would protect suitable habitat proportional to the impact.

Following completion of the surveys, a report will be prepared that documents the methods and summarizes the results of the survey which identifies any buffer zones, and outlines recommended next steps, including measures implemented to prevent impacts to protected bumble bees (BMPs 4.2.3b, 4.2.3c, and/or 4.2.3d). It will be submitted to the City within seven days following survey completion.

4.2.4 Impacts to Steelhead

Potential Impacts. The MPSP area provides potentially suitable habitat for the steelhead in some of the channels and canals. Although no substantial changes to the channels and canals are assumed, actions such as pedestrian bridges or unanticipated changes may occur during the lifetime of the Specific Plan. Therefore, the below BMPs should be followed to avoid impacts to steelhead.

Best Management Practices. The following BMPs shall be followed for projects adjacent to or including impacts to steelhead.

BMP 4.2.4a: All work adjacent to waterways which may support steelhead will use adequate silt fencing and SWPPP measures to ensure debris (i.e., soil, etc.) does not enter the waterway.

BMP 4.2.4b: All work over waterways (i.e., bridge work) will use netting to ensure items such as tools and pollutants do not fall into the waterway.

BMP 4.2.4c: All work in or around waterways will ensure an appropriate spill kit is onsite to avoid polluting the waterway.

4.2.5 Impacts to Western Pond Turtle

Potential Impacts. The habitat types with water provides potentially suitable habitat for the western pond turtle. Therefore, areas within 250 feet of these habitat types shall follow the below BMPs.

Best Management Practices. Each project will follow the BMPs below.

BMP 4.2.5: Pre-construction surveys shall be conducted by a qualified biologist within 250 feet of a waterway if development is proposed in or within 250 feet of a waterway within 48 hours prior to start of construction to ensure that western pond turtles (WPT) are absent from the construction area. If WPT are present, the turtle shall be able to leave on its own or a biologist possessing all necessary permits shall relocate them.

BMP 4.2.5b: A report shall be prepared summarizing the results of the preconstruction survey which outlines recommended next steps, including measures implemented to prevent impacts to the western pond turtle (BMP 4.2.5c and/or BMP 4.2.5d).

BMP 4.2.5c: Immediately following the pre-construction surveys, the construction zone should be cleared, and silt fencing should be erected and maintained around construction zones to prevent WPT from moving into these areas. The silt fencing can be removed once construction activities within the impacted area are complete.

BMP 4.2.5d: A biological monitor should be present onsite during particular construction activities, including initial silt fence installation along water features, to ensure no WPT are not harmed, injured, or killed during project buildout.

4.2.6 Migratory Nesting Birds and Raptors

Potential Impacts. The entire MPSP area has the potential to support migratory nesting birds and raptors, including special status birds/raptors noted in section 3.3.4. Active bird nests may occur on the ground, in grassland, in shrubs and trees, on power poles, on bridges, and on buildings. Should any portion of the MPSP area be impacted during nesting season (February 1-August 31), active bird nests would have the potential to be impacted. Therefore, the below BMPs shall be followed.

Best Management Practices. All projects within the MPSP area shall follow the below BMPs regarding nesting birds and raptors.

BMP 4.2.6a. If possible, initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur outside of the breeding season (i.e., September 1st - January 31st).

BMP 4.2.6b. If initial site disturbance activities, including tree, shrub, or vegetation removal, are to occur during the bird breeding season (typically February 1st to August 31st), a qualified biologist will conduct a pre-construction survey for nesting migratory birds and raptors. The survey for nesting migratory birds will cover the project site itself and the immediate vicinity of the site, with the survey for nesting raptors encompassing the site and surrounding lands within

250 feet, where accessible. The survey should occur within 7 days prior to the onset of ground disturbance.

BMP 4.2.6c. If active nests are detected, appropriate construction-free buffers will be established. The buffer sizes will be determined by the project biologist based on species, topography, and type of activity occurring in the vicinity of the nest. Typical buffers are 25-50 feet for passerines and up to 250 feet for raptors. The project buffer will be monitored periodically by the project biologist to ensure compliance. After the nesting is completed, as determined by the biologist, the buffer will no longer be required.

BMP 4.2.6d. A report shall be prepared for submission to the City summarizing the results of the survey which identifies any buffer zones, and outlines recommended next steps, including measures implemented to prevent impacts to nesting birds (BMP 4.2.6d).

4.2.7 Impacts to Burrowing Owls

Potential Impacts. The MPSP area provides suitable habitat for burrowing owls. Although the most suitable habitat exists in the northern area of the MPSP area, because this species is known to occur within the plan area, and it is possible to show up on any property within the MPSP area, the below best management practices for this species as stated below shall be followed.

Best Management Practices. All projects within the MPSP area shall follow the BMPs below regarding burrowing owls.

BMP 4.2.7a. (pre-construction surveys). Pre-construction surveys shall be conducted for burrowing owls by a qualified biologist no more than 14 days in advance of the on-set of ground-disturbing activity. These surveys shall be conducted according to methods described in the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012) or the most recent CDFW guidelines. The surveys shall cover all areas of suitable burrowing owl habitat within the construction zones.

BMP 4.2.7b. (Avoidance of active nests during breeding season). If pre-construction surveys are undertaken during the breeding season (February through August) and active nest burrows are located within or near construction zones, a construction-free buffer of 250 feet shall be established around all active owl nests. The buffer areas shall be enclosed with temporary fencing, and construction equipment and workers shall not be allowed to enter the enclosed setback areas. Buffers shall remain in place for the duration of the breeding season. After the breeding season (i.e., once all young have left the nest), passive relocation of any remaining owls may take place, but only under the conditions described below.

BMP 4.2.7c (Avoidance of occupied burrows during non-breeding season, and passive relocation of resident owls). During the non-breeding season (September through January), any burrows occupied by resident owls in areas planned for construction shall be protected by a construction-free buffer with a radius of 150 to 250 feet around each active burrow, with the required buffer distance to be determined in each case by a qualified biologist. Passive relocation of resident owls is not recommended by CDFW where it can be avoided. If passive relocation is not avoidable, resident owls may be passively relocated according to a relocation plan prepared by a qualified biologist.

BMP 4.2.7d (Compensation for breeding burrowing owls). However, if breeding owls are detected, suitable compensation will be provided. Compensation could include collaborating with existing protected areas for the burrowing owl along the San Francisco Bay or collaborating and interacting with the Santa Clara Valley Habitat Plan burrowing owl program. Although the City of Sunnyvale is not within the SCVHP plan area, it is within the extended area for preserving habitat to assist with conservation of burrowing owls for the SCVHP; the applicant should collaborate with the Habitat Agency to define a suitable and acceptable compensation strategy. This most likely would result in the applicant funding a defined conservation need for the SCVHP. Providing protection in the form of deed restrictions or establishing a conservation easement in the northwestern "natural" area would also help to provide suitable compensation for breeding owls observed within the developed portion of the MPSP area.

BMP 4.2.7e A report shall be prepared for submission to the City summarizing the results of the survey which identifies any buffer zones, and outlines recommended next steps, including measures implemented to prevent impacts to nesting birds (BMP 4.2.7c and/or BMP 4.2.7e).

4.2.8 Impacts to Roosting Bats

Potential Impacts. The MPSP area provides suitable habitat for roosting bats in the form of buildings, bridges, and trees. Therefore, the below best management practices regarding roosting bats below shall be followed.

Best Management Practices. All projects within the MPSP area shall follow the BMPs below regarding roosting bats.

BMP 4.2.8a. A bat assessment should be conducted by a qualified biologist and submitted to the City no more than 30 days prior to removal of trees or buildings. If a non-breeding bat colony is found, or if the tree supports suitable roosting habitat that cannot be fully visibly surveyed (such as peeling bark or cavities in trees, especially high up in trees), the individuals should be humanely evicted via

two-step removal as directed by a qualified biologist to ensure no harm or "take" would occur to any bats as a result of demolition activities. Two-step removal shall occur during the volant seasons in fair weather and outside of the maternity season for bats (March 1-April 15 or September 1-October 15). Two-step removal consists of one day of disturbance and removing portions of buildings or trees, as directed by a qualified biologist followed by the removal of that building or tree the following day; the goal is to disturb the bats and rendering the trees and structures unsuitable for them. This passive effort allows bats using these structures or trees to nocturnally relocate to a suitable nearby roost. BMPs would not be required for the loss of roosting or foraging habitat for bats, as such habitat is abundantly available regionally.

BMP 4.2.8b. Should a breeding colony be observed, two-step removal would need to wait until breeding season is over (September 1) or until all young are independent of their parents. An appropriate buffer as determined by a qualified biologist based on the site conditions and location of the maternity colony would be established. This buffer may be up to 350 feet, depending on site-specific conditions.

4.2.9 Impacts to Salt-Marsh Harvest Mouse

Potential Impacts. Suitable areas for the salt-marsh harvest mouse (typical habitat includes pickleweed and/or salt grass) within the MPSP area is limited to the emergent wetland in the northeastern corner of the site. Therefore, this area is the only area which needs to follow BMPs for this species. As this is a no-take species, activities in this area would be limited.

Best Management Practices. The following BMPs shall be followed for the salt-marsh harvest mouse.

BMP 4.2.9a: A habitat survey will be conducted by a qualified biologist no more than 30 days prior to work within 250 feet of this mapped habitat to confirm current habitats. If pickleweed or salt grass habitats are within the work area, these areas will be avoided, and a report shall be prepared for submission to the City summarizing the results of the habitat survey which identifies any buffer zones and expected monitoring efforts to prevent impacts to the salt-marsh harvest mouse and their habitat.

BMP 4.2.9b: A qualified biological monitor will monitor work occurring within 50 feet of habitats identified as suitable for the salt-marsh harvest mouse. The biological monitor will be able to stop work should a salt-marsh harvest mouse be detected in the work area until the individual moves out of the construction area and into suitable habitat on its own. It is important to note the small size of suitable habitat onsite and the potential presence of this species may prevent work from being done or being completed.

4.2.10 Impacts to San Francisco Dusky-Footed Woodrat

Potential Impacts. The site provides potentially suitable habitat for the San Francisco dusky-footed woodrat in the riparian habitat of the site (Figure 3). Therefore, each project in or within 50 feet of riparian habitat shall adhere to the BMPs below.

Best Management Practices. Each project shall adhere to the following BMPs.

BMP 4.2.10a (Pre-construction survey): A qualified biologist will conduct a pre-construction survey for San Francisco dusky-footed woodrat nests no more than 30 days and no less than 14 days prior to the onset of construction activities in or within 50 feet of riparian habitat (Figure 3). This survey timing allows for the scheduling of and deconstruction of any woodrat nests which need relocating. The survey will encompass all construction zones and surrounding lands within 50 feet. If no woodrat nests are present, no additional measures are required.

***BMP 4.*2.10B**. A report shall be prepared for submission to the City summarizing the results of the survey which identifies any buffer zones and outlines recommended next steps, including measures implemented to prevent impacts to San Francisco dusky-footed woodrats (BMPs 4.2.10c and/or 4.2.10d).

BMP 4.2.10c (Nest deconstruction): Identified nests will be avoided, where possible. If avoidance is not possible, the nest(s) will be manually deconstructed by a qualified biologist when helpless young are not present, typically during the non-breeding season (October through January). The nest will be reconstructed in a nearby suitable area.

BMP 4.2.10d (Construction-free buffers): If it is determined during the pre-construction survey that young may be present, a suitable buffer, delineated with flagging, depending on the timing within the breeding season (ranging from 15-50 feet) will be established around the nest by the qualified biologist and maintained during construction until the young are independent and have successfully moved from the nest on their own.

4.2.11 Potential Impacts to Riparian Habitat and Other Sensitive Natural Communities, Including Federally and State Protected Wetlands

Potential Impacts. The MPSP study area includes riparian habitat around the settling ponds and waters and wetlands of the U.S. and/or State, including man-made settling ponds, a seasonal wetland, manmade stormwater canals, and the East and West Sunnyvale Channels. East and West Sunnyvale Channels traverse the study area from south to north in two places. The rest of the features occur on the Lockheed Martin property with the settling ponds and seasonal wetland within the undeveloped area in the northern portion of the property and northwestern corner of the study area. Some or all of these features may be

jurisdictional waters of the U.S. and/or waters of the State. Ongoing maintenance activities are not a covered activity under the MPSP, and our assumption is the operating entity will continue to follow the requirements of their regulatory permits.

The extent to which development within or near regulated waters, wetlands, riparian habitats, or other sensitive natural communities within the MPSP Area is planned is unknown at this time, although it is anticipated that the natural lands on the northern side of the Lockheed Martin property will not be developed.

Potential impacts to the manmade canals and channels in the MPSP area may include, but are not limited to, footbridges, vehicular bridges, or other infrastructure constructed over these waterways. These impacts may require additional permitting that would obligate project proponents to provide suitable avoidance, minimization, and compensation measures.

Best Management Practices. The following BMPs pertain to regulatory issues associated with any impacts of onsite aquatic resources or minor improvements to the manmade waterways.

BMP 4.2.11a: A formal aquatic resources delineation should be completed and submitted to the USACE for verification of the presence and extent of jurisdictional waters within the MPSP Area. Information about the riparian habitat would be collected during the site visit for this work as well to evaluate potential impacts to riparian habitat on a project-specific level.

BMP 4.2.11b: The project proponent must comply with all state and federal laws and regulations related to disturbance to jurisdictional waters. The project proponent would be required to obtain a Section 404 Clean Water Act permit from the USACE, Section 401 water quality certification from the RWQCB, and/or Section 1602 Streambed Alteration Agreement from the CDFW or demonstrate that such permits are not necessary prior to initiating any construction-related activities within jurisdictional waters. The project proponent would need to satisfy all agency requirements to mitigate for aquatic impacts. These may include avoidance of aquatic resources, measures to minimize impacts, or compensation (e.g., habitat enhancement) for impacts.

BMP 4.2.11c: The project proponent must mitigate for impacts to riparian habitat by a measure of at least 1:1. This can consist of onsite or off-site planting mitigation or fees paid to a suitable mitigation bank. For on- or off-site mitigation plantings, a restoration plan, including success criteria, must be written which would include a minimum monitoring period of 5 years.

4.2.12 Loss of Habitat for Native Wildlife

Potential Impact. The proposed project may result in the loss of developed land and a negligible fraction of California annual grassland and some wetland features including a seasonal wetland, man-made settling ponds, and man-made stormwater channels. The grassland habitat is regionally available to native wildlife. However, should impacts occur to wetland habitats, the project proponent would need to avoid, minimize, and compensate for any impacts to wetland habitats as written in BMP 4.2.11b. Therefore, impacts due to the loss of habitats for native wildlife resulting from the proposed project are considered less-than-significant.

Best Management Practices. No additional BMPs other than mentioned in BMP 4.2.11b are necessary for loss of habitat for native wildlife.

4.2.13 Interference with the Movement of Native Wildlife

Potential Impact. Buildout of the project would not constrain native wildlife movement for most animals, as the site does not support a major terrestrial or aquatic wildlife movement corridor. Any terrestrial local wildlife moving through the area of the site would continue to move through the area after project development. However, buildout of the study area has the potential to interfere with avian movement via the Pacific Flyway, as the San Francisco Bay is a well-known stopover on the Pacific Flyway. The City of Sunnyvale approved Bird Safe Building Design Guidelines (2014), which has two options for project design element requirements (see Section 3.2.7). The MPSP will encompass areas where Option 1 applies and other areas where Option 2 applies, therefore, individual projects within the MPSP will need to adhere to one of the two options, depending on their specific locations. The City of Sunnyvale currently has design measures for developers to reduce the risk of bird-strike (Section 3.2.7); these measures have been updated in Chapter 5 of the updated MPSP with specific additional measures for the MPSP area. Therefore, measures relating to bird-strike should be employed.

Best Management Practices. See the above Sections 4.2.3-4.2.10 for Best Management Practices for impacts to Crotch bumble bee, western bumble bee, steelhead, western pond turtle, migratory nesting birds, risk of bird strike, western snowy plover, California least tern, California black rail, California Ridgway's rail, yellow rail, black skimmer, northern harrier, white-tailed kite, golden eagle, burrowing owl, saltmarsh common yellowthroat, Alameda song sparrow, tricolored blackbird, salt-marsh harvest mouse, Townsend's big-eared bat, pallid bat, and San Francisco dusky-footed woodrat. Additionally, Individual applicants shall follow BMP 4.1.7a above with regards to bird-safe building design.

4.2.14 Degradation of Water Quality in Seasonal Drainages, Stock Ponds and Downstream Waters

Potential Impact. Eventual site development and construction may require grading that leaves the soil of construction zones barren of vegetation and, therefore, vulnerable to sheet, rill, or gully erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek beds, canals, and adjacent wetlands. Furthermore, urban runoff is often polluted with grease, oil, pesticide and herbicide residues, heavy metals, etc. These pollutants may eventually be carried to sensitive wetland habitats used by a diversity of native wildlife species. The deposition of pollutants and sediments in sensitive riparian and wetland habitats would be considered a potentially significant adverse environmental impact.

The project would comply with the City's grading requirements; this typically requires Best Management Practices (BMPs) to reduce the potential for off-site sedimentation, erosion, and pollution. Therefore, the project buildout would result in a less-than-significant impact to water quality.

Best Management Practices. The project would comply with the City's grading requirements; no additional BMPs are warranted.

4.2.15 Conflict with Local Policies and Ordinances: City of Sunnyvale's General Plan (updated 2017)

The entire study area is within the "Transform" section of Figure 3-1: *Changing Conditions 2010-2035* within the City of Sunnyvale's General Plan (updated 2017). The MPSP area is also identified in this document as being within a Specific Plan. The updated MPSP is expected to be consistent with the General Plan.

Best Management Practices. BMPs are not warranted.

4.2.16 Conflict with Local Policies and Ordinances: City of Sunnyvale's Moffett Park Specific Plan (2013)

The Moffett Park Specific Plan was adopted in 2013; The updated MPSP is expected to be consistent with the Previous MPSP. Proposed updates to the policies of the MPSP, as well as the proposed updated bird safe building design guidelines for the MPSP area are included in Appendix A.

Best Management Practices. BMPs are not warranted.

4.2.17 Conflict with Local Policies or Ordinances: City of Sunnyvale's Tree Ordinance

Potential Impact. The project will need to abide by the Tree Preservation Ordinance (Section 19.94 of the Municipal Code) of the City of Sunnyvale. This ordinance defines a protected tree as a tree of significant size, which includes:

"a tree thirty-eight inches or greater in circumference measured four and one-half feet above ground for single-trunk trees. For multi-trunk trees "significant size" means a tree which has at least one trunk with a circumference thirty-eight inches or greater measured four and one-half feet above ground level, or in which the measurements of the circumferences of each of the multi-trunks, when measured four and one-half feet above the ground level, added together equal an overall circumference one hundred thirteen inches or greater."

The applicant will be responsible for conforming to these requirements and applying for necessary permits and replacements if a protected tree is to be affected or removed.

Best Management Practices. Each project within the MPSP area will adhere to this ordinance.

4.2.18 Conflict with Local Policies and Ordinances: City of Sunnyvale's Bird Safe Building Design Guidelines

Due to its proximity to the San Francisco Bay, which is along the Pacific Flyway, the entire MPSP area is within an area of increased risk for bird-strike. Bird-strike is the impacts to birds, specifically the high risk of mortality, from them flying into buildings, guywires, antennae, etc. The City of Sunnyvale approved Bird Safe Building Design Guidelines (2014), which has two options for project design element requirements (see Section 3.2.7). The MPSP will encompass areas where Option 1 applies and other areas where Option 2 applies, therefore, individual projects within the MPSP will need to adhere to one of the two options, depending on their specific locations. The City of Sunnyvale currently has design measures for developers to reduce the risk of bird-strike (Section 3.2.7); these measures have been updated in Chapter 5 of the updated MPSP with specific additional measures for the MPSP area.

Best Management Practices. Individual applicants shall follow BMP 4.1.7a above.

4.2.19 Conflict with Local Policies and Ordinances: Habitat Conservation Plan or Natural Community Conservation Plan

There are no Habitat Conservation Plans or Natural Community Conservation Plans which cover the project site.

Best Management Practices. BMPs are not warranted.

5 LITERATURE CITED

California Department of Fish and Game. 2002. California Fish and Game Code. Gould Publications. Binghamton, N.Y.

California Department of Fish and Wildlife (CDFW). 2018. Protocols for surveying and evaluating impacts to special status native plant populations and sensitive natural communities. The Resources Agency, State of California, Sacramento.

California Department of Fish and Wildlife (CDFW). 2019. Annual Report on the Status of California State Listed Threatened and Endangered Animals and Plants. The Resources Agency, Sacramento, CA.

California Department of Fish and Wildlife. 2022. California Natural Diversity Database, Rarefind5. The Resources Agency, Sacramento, CA.

California Native Plant Society (CNPS). 2001. CNPS botanical survey guidelines. California.

California Native Plant Society (CNPS). 2022. Inventory of Rare and Endangered Plants (online edition, v6-05c). California Native Plant Society. Sacramento, CA. http://www.cnps.org/inventory.

City of Sunnyvale Municipal Code.

City of Sunnyvale. 2011 (updated 2017). General Plan.

City of Sunnyvale 2014. Bird Safe Building Design Guidelines.

Harris, L.D., Gallagher, P.B., 1989. New initiatives for wildlife conservation: the need for movement corridors. In: Mackintosh, G. (Ed.), Preserving Communities and Corridors. Defenders of Wildlife, Washington DC, pp. 11–34.

Holland, R.F. 1986. Preliminary Description of the Terrestrial Natural Communities of California. Resources Agency, Sacramento, CA. 156 pp.

Mayer, K. E., and W. F. Laudenslayer, Jr. Ed. 1988. A guide to wildlife habitats of California. California Department of Forestry and Fire Protection. Sacramento, CA. 166 pp.

Natural Resource Conservation Service. 2020. Web Soil Survey. USDA.

Remy, M. H., T. A. Thomas, J. G. Moose, and W. F. Manley. 1996. Guide to the California Environmental Quality Act.

Shuford, W. David and Thomas Gardall eds. 2008. California Bird Species of Special Concern. Western Field Ornithologists and California Department of Fish and Game.

Thomson, Robert C., Amber N. Wright, and H. Bradley Shaffer. 2016. California Amphibian and Reptile Species of Special Concern. California Department of Wildlife. University of California Press.

USACE. 1987. Corps of Engineers Wetlands Delineation Manual. Department of the Army.

U.S. Fish and Wildlife Service (USFWS). 2022. Endangered and threatened wildlife and plants.

Wetland Training Institute, Inc. 1990. Federal Wetland Regulation Reference Manual. B.N. Goode and R.J. Pierce (eds.) WTI 90-1. 281pp.

APPENDIX A: PROPOSED BUILDING-SAFE DESIGN GUIDELINES FROM CHAPTER 5 OF THE MPSP