
Appendix D

**BIOLOGICAL RESOURCES ANALYSIS
SMP-39
ALAMEDA COUNTY, CALIFORNIA**

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Prepared for

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TABLE OF CONTENTS

1. INTRODUCTION 1

2. PROPERTY LOCATION, HISTORY AND SETTING..... 1

3. PROPOSED PROJECT 1

4. ANALYSIS METHODS 1

5. RESULTS OF RESEARCH AND PROJECT SITE ANALYSES 2

 5.1 Topography 2

 5.2 Hydrology 2

 5.3 Plant Communities and Associated Wildlife Habitats 2

 5.3.1 RUDERAL HERBACEOUS COMMUNITY 3

 5.4 Wildlife Corridors 3

6. SPECIAL-STATUS SPECIES DEFINITION 4

 6.1 Definitions 4

 6.2 Potential Special-Status Plants on the Project Site 6

 6.3 Potential Special-Status Animals on the Project Site 6

 6.3.1 CALIFORNIA TIGER SALAMANDER 7

 6.3.2 CALIFORNIA RED-LEGGED FROG 10

 6.3.3 WESTERN BURROWING OWL 12

7. REGULATORY FRAMEWORK FOR NATIVE WILDLIFE, FISH, AND PLANTS 13

 7.1 Federal Endangered Species Act 13

 7.1.1 RESPONSIBLE AGENCY 15

 7.1.2 APPLICABILITY TO THE PROPOSED PROJECT 15

 7.2 California Endangered Species Act 15

 7.2.1 SECTION 2081 OF THE CALIFORNIA ENDANGERED SPECIES ACT 15

 7.2.2 APPLICABILITY TO THE PROPOSED PROJECT 17

 7.3 California Fish and Game Code § 3503, 3503.5, 3511, and 3513 17

 7.3.1 APPLICABILITY TO THE PROPOSED PROJECT 17

8. EAST ALAMEDA COUNTY CONSERVATION STRATEGY 18

 8.1 Applicable Goals: 19

 8.2 Applicable Objectives: 19

 8.3 Applicability to the Proposed Project 19

9. REGULATORY REQUIREMENTS PERTAINING TO WATERS OF THE UNITED STATES AND STATE 19

 9.1 U.S. Army Corps of Engineers Jurisdiction and Permitting 20

 9.1.1 SECTION 404 OF THE CLEAN WATER ACT 20

 9.1.2 APPLICABILITY TO THE PROPOSED PROJECT 23

 9.2 California Regional Water Quality Control Board (RWQCB) 23

 9.2.1 SECTION 401 OF THE CLEAN WATER ACT 23

 9.2.2 PORTER-COLOGNE WATER QUALITY CONTROL ACT 24

10. STATE WATER RESOURCES CONTROL BOARD (SWRCB)/RWQCB – STORM WATER MANAGEMENT 25

 10.1 Construction General Permit 25

 10.1.1 APPLICABILITY TO THE PROPOSED PROJECT 26

 10.2 RWQCB Municipal Storm Water Permitting Programs 27

 10.2.1 NPDES C.3 REQUIREMENTS 27

Biological Resources Analysis
SMP-39
Alameda County, California

10.2.2 APPLICABILITY TO THE PROPOSED PROJECT 28

10.3 California Department of Fish and Wildlife Protections..... 29

 10.3.1 SECTION 1602 OF CALIFORNIA FISH AND GAME CODE..... 29

 10.3.2 APPLICABILITY TO THE PROPOSED PROJECT 29

11. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REGULATIONS..... 30

 11.1.1 APPLICABILITY TO THE PROPOSED PROJECT 30

12. IMPACTS ANALYSIS 30

 12.1 Significance Criteria 31

 12.1.1 THRESHOLDS OF SIGNIFICANCE 31

13. IMPACT ASSESSMENT AND PROPOSED MITIGATION 32

 13.1 Impact BIO-1. Development of The Project Would Have a Potentially Significant Adverse Impact on Nesting Birds (Potentially Significant) 32

 13.2 Mitigation Measure BIO-1. Nesting Birds 32

 13.3 Impact BIO-2. Development of the Project Could Have a Potentially Significant Adverse Impact on Western Burrowing Owl (Potentially Significant)..... 33

 13.4 Mitigation Measure BIO-2. Western Burrowing Owl..... 33

14. LITERATURE CITED 36

Biological Resources Analysis
SMP-39
Alameda County, California

FIGURES
(At Back of Report)

Figure 1. Oaks Business Park Project Site Regional Map.

Figure 2. Oaks Business Park Project Site Location Map.

Figure 3. Aerial photograph of the Oaks Business Park Project Site.

Figure 4. Closest Known Records for Special-Status Species Within 3 Miles of the Oaks Business Park Project Site.

TABLES
(At Back of Report)

Table 1. Plant Species Observed on the Oaks Business Park Project Site.

Table 2. Wildlife Species Observed on the Oaks Business Park Project Site.

Table 3. Special-Status Plant Species Known to Occur in the Vicinity of the Oaks Business Park Project Site.

Table 4. Special-Status Animal Species Known to Occur in the Vicinity of the Oaks Business Park Project Site.

ATTACHMENTS
(At Back of Report)

Attachment A. Conceptual Site Plan for the Jack London Boulevard Project Site otherwise known as SMP-39

1. INTRODUCTION

Monk & Associates, Inc. (M&A) has prepared this biological resources analysis for the proposed Oaks Business Park development site located in Alameda County, California (herein referred to as the project site) (Figures 1-3). The purpose of our analysis is to provide a description of existing biological resources on the project site and to identify potentially significant impacts that could occur to sensitive biological resources from the construction of the proposed project.

Biological resources include common plant and animal species, and special-status plants and animals as designated by the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Wildlife (CDFW), and other resource organizations including the California Native Plant Society. Biological resources also include waters of the United States and State, as regulated by the U.S. Army Corps of Engineers (Corps), California Regional Water Quality Control Board (RWQCB), and CDFW. It is important to note that our analysis includes an assessment of the potential for impacts to regulated waters but does not provide the level of detail required for a formal delineation of “waters of the U.S.” suitable for submittal to the Corps, the regulatory agency that defines waters of the U.S.

This biological resources analysis also provides mitigation measures for “potentially significant” and “significant” impacts that could occur to biological resources. Whenever possible, upon implementation, the prescribed mitigation measures would reduce impacts to levels considered less than significant pursuant to the California Environmental Quality Act (CEQA) (Pub. Resources Code §§ 21000 et seq.; 14 Cal. Code Regs §§ 15000 et seq). Accordingly, this report is suitable for review and inclusion in any review being conducted by the City of Livermore for the proposed project pursuant to the CEQA.

2. PROPERTY LOCATION, HISTORY AND SETTING

This 52.8-acre project site is located within the County of Alameda but will be annexed into the City of Livermore prior to development. West Jack London Boulevard is located directly to the north of the project site, with the Livermore Municipal Airport located north of West Jack London Boulevard. The Oaks Business Park is located to the east and a series of quarry ponds are located to the south of the project site (Figure 3). The project site is disked annually and periodically dry-land farmed, though historically it was used as pasturelands. In October 2021, the project site was being used for dry-land farming and had gone fallow.

3. PROPOSED PROJECT

The proposed project consists of building an industrial center with six buildings representing a total of 517,450 square feet on six parcels of land (Attachment A). Landscaping will be incorporated throughout the project and landscaping along Jack London Boulevard shall mirror landscaping at the Oaks Business Park.

4. ANALYSIS METHODS

Prior to preparing this biological resource analysis report, M&A researched the most recent version of CDFW’s Natural Diversity Database (CNDDDB) (RareFind 5 application) for historic and recent records of special-status plant and animal species (that is, threatened, endangered,

Biological Resources Analysis
SMP-39
Alameda County, California

rare) known to occur in the region of the project site (CNDDDB 2021). All special-status species records were compiled in tables (Tables 3 & 4). M&A examined all known record locations for special-status species to determine if special-status species could occur on the project site or within an area of affect.

M&A has a long history with this project site, first surveying this site and adjacent sites in 2000, with follow up surveys in following years including in November 2013 and June 2019 for various development proposals. However, as the CEQA requires an assessment of the existing conditions, M&A Project Biologist II Ms. Monica Matthews and M&A biologist Ms. Sarah McNamara conducted a general survey of the project site on October 14, 2021 to record biological resources and to assess the likelihood of resource agency regulated areas occurring on the project site. Each site survey involved searching all habitats on the site and recording all plant and wildlife species observed. M&A cross-referenced the habitats found on the project site against the habitat requirements of local or regionally known special-status species to determine if the proposed project could directly or indirectly impact such species.

M&A's site evaluation included an examination of the site to determine if there could be potential areas within the project site that would be regulated as waters of the United States and/or State (the level of analyses was not sufficient for a preliminary wetlands investigation report suitable for submittal to the Corps). The results of our literature research and field reconnaissance are provided in the sections below.

5. RESULTS OF RESEARCH AND PROJECT SITE ANALYSES

5.1 Topography

The relatively flat site has a gentle downward slope from east to west. Elevation on the site ranges from 417 to 395 feet above mean sea level.

5.2 Hydrology

There are no creeks, drainages or wetlands present on the project site, and since the site is relatively flat and regularly disked for farming, there are no noticeable drainage patterns onsite.

5.3 Plant Communities and Associated Wildlife Habitats

A complete list of plant species observed on the project site is presented in Table 1. Nomenclature used for plant names follows *The Jepson Manual* Second Edition (Baldwin 2012) and changes made to this manual as published on the Jepson Interchange Project website (<http://ucjeps.berkeley.edu/interchange/index.html>). Table 2 is a list of wildlife species observed on the project site. Nomenclature for wildlife follows CDFW's *Complete list of amphibian, reptile, bird, and mammal species in California* (2016) and any changes made to species nomenclature as published in scientific journals since the publication of CDFW's list.

Past land use activities (grazing, farming, and disking) have disturbed the entire project site, leaving a ruderal herbaceous plant community dominated by non-native vegetation. The project site has been used for many years as a pastureland and for dry-land farming and is currently used

Biological Resources Analysis
SMP-39
Alameda County, California

for dry-land farming. During each of M&A's field surveys, the site had been recently mowed or grazed.

5.3.1 RUDERAL HERBACEOUS COMMUNITY

Ruderal (weedy) communities are assemblages of plants that thrive in waste areas, roadsides and other sites that have been disturbed by human activity. Typically, hard-packed soils of roadsides, parking lots, industrial areas and construction sites support communities of ruderal species. Ruderal vegetation is adapted to high levels of disturbance and persists almost indefinitely in areas with continuous disturbance. At the time of M&A's October 2021 survey, the project site was being used for dry-land farming and was dominated by slender wild oats (*Avena barbata*), Russian thistle (*Salsola tragus*) and stinkwort (*Dittrichia graveolens*). During the October 2021 survey, the site appeared to have been recently mowed, but no hay bales or other evidence of recent use was observed.

Animals observed or expected to occur in ruderal habitats are typically those species adapted to human disturbance such as the American crow (*Corvus brachyrhynchos*), northern mockingbird (*Mimus polyglottos*), Brewer's blackbird (*Euphagus cyanocephalus*), striped skunk (*Mephitis mephitis*), California ground squirrel (*Otospermophilus beechyi*), mourning dove (*Zenaida macroura*), and Eurasian collared dove (*Streptopelia decaocto*).

5.4 Wildlife Corridors

Wildlife corridors are linear and/or regional habitats that provide connectivity to other natural vegetation communities within a landscape fractured by urbanization and other development. Wildlife corridors have several functions: 1) they provide avenues along which wide-ranging animals can travel, migrate, and breed, allowing genetic interchange to occur; 2) populations can move in response to environmental changes and natural disasters; and 3) individuals can recolonize habitats from which populations have been locally extirpated (Beier and Loe 1992). All three of these functions can be met if both regional and local wildlife corridors are accessible to wildlife. Regional wildlife corridors provide foraging, breeding, and retreat areas for migrating, dispersing, immigrating, and emigrating wildlife populations. Local wildlife corridors also provide access routes to food, cover, and water resources within restricted habitats.

The project site is undeveloped and is periodically used for dry land agriculture. As mentioned previously, the project site is bordered on all sides by well-trafficked roads, the Livermore Municipal Airport, the Oaks Business Park and a series of quarry ponds. These quarry ponds were excavated in uplands (that is, they are not associated with a creek or drainage) and have nearly vertical slopes, preventing wildlife from traversing them easily or using the quarry area as a corridor. This project site is isolated from regional open spaces and as such has no regional wildlife corridor value to terrestrial mammals and minimal habitat that could be used by some migrating avian species.

6. SPECIAL-STATUS SPECIES DEFINITION

6.1 Definitions

For purposes of this analysis, special-status species are plants and animals that are legally protected under the California and Federal Endangered Species Acts (CESA and FESA, respectively) or other regulations, and species that are considered rare by the scientific community (for example, the CNPS). Special-status species are defined as:

- plants and animals that are listed or proposed for listing as threatened or endangered under the CESA (Fish and Game Code §2050 *et seq.*; 14 CCR §670.1 *et seq.*) or the FESA (50 CFR 17.12 for plants; 50 CFR 17.11 for animals; various notices in the Federal Register [FR] for proposed species);
- plants and animals that are candidates for possible future listing as threatened or endangered under the FESA (50 CFR 17; FR Vol. 64, No. 205, pages 57533-57547, October 25, 1999); and under the CESA (California Fish and Game Code §2068);
- plants and animals that meet the definition of endangered, rare, or threatened under the California Environmental Quality Act (CEQA) (14 CCR §15380) that may include species not found on either State or Federal Endangered Species lists;
- Plants occurring on Ranks 1A, 1B, 2A, 2B, 3, and 4 of CNPS' electronic *Inventory* (CNPS 2001). The CDFW recognizes that Ranks 1A, 1B, 2A and 2B of the CNPS inventory contain plants that, in the majority of cases, would qualify for State listing, and CDFW requests their inclusion in EIRs. Plants occurring on CNPS Ranks 3 and 4 are "plants about which more information is necessary," and "plants of limited distribution," respectively (CNPS 2001). Such plants may be included as special-status species on a case by case basis due to local significance or recent biological information (more on CNPS Rank species below);
- animals that are designated as "species of special concern" by CDFW (2021);
- Animal species that are "fully protected" in California (Fish and Game Codes 3511, 4700, 5050, and 5515).
- Bat Species that are designated on the Western Bat Working Group's (WBWG) Regional Bat Species Priority Matrix as: "RED OR HIGH." This priority is justified by the WBWG as follows: "Based on available information on distribution, status, ecology, and known threats, this designation should result in these bat species being considered the highest priority for funding, planning, and conservation actions. Information about status and threats to most species could result in effective conservation actions being implemented should a commitment to management exist. These species are imperiled or are at high risk of imperilment."

Biological Resources Analysis
SMP-39
Alameda County, California

In the paragraphs below we provide further definitions of legal status as they pertain to the special-status species discussed in this report or in the attached tables.

Federal Endangered or Threatened Species. A species listed as Endangered or Threatened under the FESA is protected from unauthorized “take” (that is, harass, harm, pursue, hunt, shoot, trap) of that species. If it is necessary to take a Federal listed Endangered or Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from the USFWS prior to initiating the take.

State Threatened Species. A species listed as Threatened under the state Endangered Species Act (§2050 of California Fish and Game Code) is protected from unauthorized “take” (that is, harass, pursue, hunt, shoot, trap) of that species. If it is necessary to “take” a state listed Threatened species as part of an otherwise lawful activity, it would be necessary to receive permission from CDFW prior to initiating the “take.”

California Species of Special Concern. These are species in which their California breeding populations are seriously declining and extirpation from all or a portion of their range is possible. This designation affords no legally mandated protection; however, pursuant to the CEQA Guidelines (14 CCR §15380), some species of special concern could be considered “rare.” Pursuant to its rarity status, any unmitigated impacts to rare species could be considered a “significant effect on the environment” (§15382). Thus, species of special concern must be considered in any project that will, or is currently, undergoing CEQA review, and/or that must obtain an environmental permit(s) from a public agency.

CNPS Rank Species. The CNPS maintains an “Inventory” of special status plant species. This inventory has four lists of plants with varying rarity. These lists are: Rank 1, Rank 2, Rank 3, and Rank 4. Although plants on these lists have no formal legal protection (unless they are also state or federal listed species), CDFW requests the inclusion of Rank 1 species in environmental documents. In addition, other state and local agencies may request the inclusion of species on other lists as well. The Rank 1 and 2 species are defined below:

- Rank 1A: Presumed extinct in California;
- Rank 1B: Rare, threatened, or endangered in California and elsewhere;
- Rank 2A: Plants presumed extirpated in California, but more common elsewhere;
- Rank 2B: Rare, threatened, or endangered in California, but more common elsewhere.

All of the plants constituting Rank 1B meet the definitions of Section 1901, Chapter 10 (Native Plant Protection Act) or Sections 2062 and 2067 (California Endangered Species Act) of the Fish and Game Code, and are eligible for state listing (CNPS 2001). Rank 2 species are rare in California, but more common elsewhere. Ranks 3 and 4 contain species about which there is some concern, and are reviewed by CDFW and maintained on “watch lists.”

Additionally, in 2006 CNPS updated their lists to include “threat code extensions” for each list. For example, Rank 1B species would now be categorized as Rank 1B.1, Rank 1B.2, or Rank 1B.3. These threat codes are defined as follows:

Biological Resources Analysis
SMP-39
Alameda County, California

- .1 is considered “seriously endangered in California (over 80% of occurrences threatened/high degree and immediacy of threat)”;
- .2 is “fairly endangered in California (20-80% of occurrences threatened)”;
- .3 is “not very endangered in California (less than 20% of occurrences threatened or no current threats known).”

Under the CEQA review process only CNPS Rank 1 and 2 species are considered since these are the only CNPS species that meet CEQA’s definition of “rare” or “endangered.” Impacts to Rank 3 and 4 species are not regarded as significant pursuant to CEQA.

Fully Protected Birds. Fully protected birds, such as the white-tailed kite and golden eagle, are protected under California Fish and Game Code (§3511). Fully protected birds may not be “taken” or possessed (i.e., kept in captivity) at any time.

6.2 Potential Special-Status Plants on the Project Site

Figure 4 provides a graphical illustration of the closest known records for special-status species within 3 miles of the project site and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status plants have been mapped on or adjacent the project site. However, according to the CDFW’s CNDDDB (RareFind), a total of seven special-status plant species are known to occur in the region of the project site (Table 3). Most of these plants occur in specialized habitats such as alkaline flats and hills or vernal pools/mesic grasslands. None of the seven special-status plant species listed in Table 3 are expected to occur on the project site due to intensive past agricultural activities that have been practiced for decades on this project site. These activities have removed all native plant communities. Hence, this project site does not provide suitable special-status plant habitats. No special-status plants have been observed onsite during years of surveys in different months of the year. Accordingly, *no impacts to special-status plants are expected from implementation of the development project.*

6.3 Potential Special-Status Animals on the Project Site

Figure 4 provides a graphical illustration of the closest known records for special-status species within 3 miles of the project site and helps readers visually understand the number of sensitive species that occur in the vicinity of the project site. No special-status animal records have ever been mapped on the project site. However, a total of five special-status animal species are known to occur within three miles of the project site (Table 4). These species include tricolored blackbird, western pond turtle, western burrowing owl, California red-legged frog and California tiger salamander. The first two of those species, tricolored blackbird and the western pond turtle require aquatic habitats that are not present on the project site. These species are dismissed in Table 4. The western burrowing owl, California red-legged frog and California tiger salamander are further discussed below.

Biological Resources Analysis
SMP-39
Alameda County, California

6.3.1 CALIFORNIA TIGER SALAMANDER

6.3.1.1 Legal status

The Central California Distinct Population Segment (DPS) of the California tiger salamander (CTS) (*Ambystoma californiense*) was federally listed as threatened on August 4, 2004. The USFWS designated critical habitat for the Central California DPS in 2005; the project site is located *outside* designated critical habitat. On August 19, 2010, the CTS was state listed as a threatened species under the California Endangered Species Act (CESA).

6.3.1.2 Life History

This salamander occurs in grasslands and open oak woodland that provide both suitable over-summering habitats and aquatic habitats where CTS reproduce. CTS spend the majority of their lives underground in California ground squirrel burrows, Botta's pocket gopher (*Thomomys bottae*) burrows, and other subterranean refugia. This salamander has also been found in areas with no apparent underground retreats. In these areas it may utilize cracks in the ground or may burrow into loose soil, or seek refuge in and under rotting logs or fallen branches. The CTS emerges from its over-summering sites for only a few weeks each year during the rainy season to migrate to its breeding ponds. Seasonal wetlands, vernal pools, or artificial impoundments such as stock ponds that typically hold water until the month of May allow enough time for larvae to fully metamorphose. CTS rarely successfully breed in ponds supporting non-native species such as bullfrogs (*Rana catesbeiana*), Centrarchid fish species (such as sunfish, blue gill, or largemouth bass), and signal and red swamp crayfish (*Pacifastacus leniusculus* and *Procambarus clarkii*, respectively), all of which readily prey on CTS eggs and larvae. Adult California tiger salamanders have been observed up to 2,092 meters (1.3 miles) from breeding ponds (USFWS 2004). As such, unobstructed migration corridors are an important component of CTS habitat.

6.3.1.3 Breeding/Larval Development Requirements

Deep, seasonal and sometimes perennial wetlands typically provide most of the breeding habitat used by California tiger salamanders. California tiger salamanders attach their eggs to rooted, emergent vegetation, and other stable filamentous objects in the water column. Eggs are gelatinous and are laid singly or occasionally in small clusters. Eggs range in size from about three-quarters ($\frac{3}{4}$) the diameter of a dime to the full diameter of a dime. Typically, seasonal breeding pools must hold water into the month of May to allow enough time for larvae to fully metamorphose. Pools that are 16 inches or deeper in the peak winter months usually will remain inundated long enough to provide good breeding conditions for California tiger salamanders. Optimal pools are typically deeper than 16 inches consistently in most winters. One reason deeper pools are generally better for larval development is because the water remains cooler. Shallow pools are warmed faster by the sun, evaporate more quickly becoming smaller and more prone to successful predation, and most importantly, warmer water carries less free oxygen which is necessary for California tiger salamander larvae to mature and metamorphose. With ample free oxygen in the water, California tiger salamander larvae are able to reach full metamorphosis even with partially to fully absorbed gills.

Biological Resources Analysis
SMP-39
Alameda County, California

Shallow pools are not optimal California tiger salamander breeding sites. Pools that are as shallow as 10 to 12 inches may still attract breeding salamanders, but young do not often successfully metamorphose from such pools except in years exhibiting wet springs. In dry years, seasonal wetlands, especially shallower pools, may dry too early to allow enough time for California tiger salamander larvae to successfully metamorphose. As pools dry down to very small areas of inundation, California tiger salamander larvae become concentrated and are particularly susceptible to predation. Ducks (various spp.) are often observed preying on breeding pools. In duck-ravaged pools, larvae may be concentrated in deeper water or are found in areas along the pool margins where pools remain relatively deep and there is dense emergent vegetation. When pools dry too soon, desiccated California tiger salamander larvae can be found, but owing to scavengers usually disappear within a day or two.

6.3.1.4 Migration

As mentioned previously, adult California tiger salamanders have been observed up to 2,092 meters (1.3 miles) from breeding ponds (USFWS 2004). As such, unobstructed migration corridors are an important component of California tiger salamander habitat. It is M&A's direct experience that California tiger salamanders move to their breeding pools at night during the first heavy, typically warmer, rainfall events of the year, usually in late-October into early December. In most instances, early movements from over-summering refugia to breeding sites do not occur until it has been raining continuously for several days, but occasionally errant salamanders may move to breeding pools during light rainfall events too. Typically, movements of California tiger salamander occur when temperatures are above 48° F.

A primary factor encouraging larger movements of California tiger salamanders is continuous or nearly continuous rainfall over many days. Resulting widespread ground saturation that otherwise floods over-summering refugia can result in relatively large numbers of California tiger salamanders leaving their refugia in search of breeding sites over a one- or two-night period (as observed by G. Monk and S. Lynch during numerous studies). In addition to pitfall trapping results that demonstrate such movements, often these focused movement periods are evident in breeding pools where up to several size classes of larvae can be identified later in the spring, each size class likely being representative of a focused movement period for adult breeding salamanders.

6.3.1.5 Closest Known California Tiger Salamander Breeding Population

There are four known records for CTS located within 1.3 miles of the project site (Occurrence Nos. 170, 530, 893 and 894). Three out of four of the occurrences are separated from the project site by Interstate 580, located approximately 0.7-mile north of the project site. Interstate 580 functions as a barrier that would prevent migration from any CTS occurrence north of the project site. There are no records for CTS in the CNDDDB for the land lying between the project site and I-580. This area between the project site and I-580 consists of the Livermore Municipal Airport and the Las Positas Golf Course, which has ponds supporting CTS predators (fish, bullfrogs), and other development.

The remaining CNDDDB Occurrence No. 530 is located southwest of the project site, south of Stanley Boulevard, as well as a series of quarry ponds that are located just south of the project

site. This occurrence has likely been extirpated, as the CTS associated with this occurrence was observed in a breeding pond that has since been developed into a recreation area.

Thus, there are no occurrences of CTS within 1.3 miles of the project site that are considered to be extant or that are not separated from the project by a barrier to CTS movement.

6.3.1.6 Absence of CTS Habitat on the Project Site

The project site does not support waters of any kind, including any type of seasonal wetland, that would pond or pool water that CTS could breed in. Additionally, there are no suitable breeding habitats within 1.3 miles of the project site on the south side of Interstate 580 where the project site is located. Any CTS located north of Interstate 580 would be unable to migrate across this interstate to the south side of this 10-lane freeway and thus it is an effective geographic barrier between lands north of Interstate 580 and lands south of this major commuter freeway. The quarry “lakes” to the southwest of the project site are large, permanent, man-made water features that were excavated in uplands. The water in quarry lakes typically supports a low percentage of dissolved oxygen. The quarry lakes near the project site are known to support large numbers of non-native bullfrogs and Centrarchid fish (CTS predators). Finally, the side slopes on all the quarry lakes are typically near vertical making egress in or out of the lakes by migrating/metamorphosing CTS impossible or prohibitively difficult. Thus, for all of these reasons, it is extremely unlikely that CTS would breed in these lakes.

Though the Arroyo Mocho is an aquatic habitat located within 1.3 miles of the project site, this tributary is mostly channelized in the vicinity of the project site; it serves as a flood control channel for the area and receives high winter flows. Channels that exhibit high or flashy flows do not provide suitable breeding conditions for CTS. Eggs readily detach from vegetation in flowing water (G. Monk pers. observation), and thus, CTS reproduction in flowing streams/ditches typically does not occur. Rather, this salamander almost always breeds in temporary pools such as vernal pools or isolated wetlands that provide calm conditions for the eggs and larvae to develop. The high flows that pass through Arroyo Mocho in the winter and early spring months would not be conducive for egg laying or larval development. Accordingly, M&A concludes that the Arroyo Mocho in the vicinity of the project site would not provide suitable California tiger salamander habitat. Additionally, the project site is included in the East Alameda Conservation Strategy’s Conservation Zone 2 which is: “highly urbanized Livermore Valley.” This Conservation Zone is not an area designated for protection and preservation of CTS habitat. This is likely due to the absence of CTS records and suitable habitats within this Conservation Zone and the fact that the area is outside USFWS designated CTS critical habitat. The project site has been intensively farmed for at least the last 50 years. There is a long history of disking, grazing, hay farming, ground squirrel control, and mowing. These areas do not provide suitable CTS over-summering habitat. The majority of known sightings for over-summering tiger salamanders have been in grassland habitats that are either undisturbed or only disturbed by grazing. Disking, hay planting, and rodent control are all activities that are not conducive for maintaining underground retreat habitats that could be used by the CTS. *Therefore, given the lack of aquatic habitat on the project site, and geographical barriers preventing dispersal from aquatic habitats in the region, it is M&A’s conclusion that the proposed project will not impact the CTS or its habitat. No mitigation should be warranted.*

Biological Resources Analysis
SMP-39
Alameda County, California

6.3.2 CALIFORNIA RED-LEGGED FROG

The California red-legged frog (*Rana draytonii*) is a federally listed threatened species and a State “species of special concern.” This frog is typically found in ponds, slow-flowing portions of perennial streams, and in intermittent streams that maintain water in the summer months. This frog is also found in hillside seeps that maintain pool environments or saturated soils throughout the summer months, based on M&A personal observations. Populations probably cannot be maintained if all surface water disappears (i.e., no available surface water for egg laying and larval development habitat) (Jennings and Hayes 1994). Larval California red-legged frogs require 11 to 20 weeks of permanent water to reach metamorphosis (i.e., to change from a tadpole into a frog). Riparian vegetation such as willows and emergent vegetation such as cattails (*Typha* spp.) are preferred California red-legged frog habitats, though not necessary for this species to be present. Populations of California red-legged frog will be reduced in size or eliminated from ponds supporting non-native species such as bullfrogs, Centrarchid fish species (such as sunfish, blue gill, or largemouth bass), and signal and red swamp crayfish, all of which are known California red-legged frog predators. However, the presence of these non-native species does not necessarily preclude the presence of the California red-legged frog.

The USFWS’ *Recovery Plan for the California Red-Legged Frog* states that California red-legged frog overland excursions via uplands can vary between 0.25-mile up to three miles during the course of a wet season, and that frogs “have been observed to make long-distance movements that are straight-line, point to point migrations rather than using corridors for moving in between habitats.”

There are two occurrences of California red-legged frog on the south side of Interstate 580 within migration distance of the project site. The closest known record is 0.4-mile north of the site (CNDDDB Occurrence No. 227). At this record location in 1997, one adult California red-legged frog was observed in small pools in Arroyo Las Positas south of Interstate-580, between Las Positas Golf Course and the west end of Livermore Municipal Airport. There is only one other occurrence of California red-legged frogs within three miles of the project site on the south side of Interstate 580 is of two subadults observed in a flood control channel approximately two miles west of the project site (Occurrence No. 1383).

However, the closest marginally suitable habitat located near the project site is the Arroyo Mocho. It has been routinely and highly disturbed over many decades due to a long history of grazing, hay farming, disking, and mowing. Hence, it is unlikely that red-legged frogs, if they are present in the area, would use the project site as upland retreat habitat. The Arroyo Mocho does not support water through the summer months which is critical to California red-legged frog larval development and metamorphosis which requires inundated pools that are large enough and deep enough to evade predators. This pool habitat is not present in this channelized section of the Arroyo Mocho. Thus, it is not suitable for larval development.

M&A does not believe the project site supports the California red-legged frog. The project site is nearly a mile away from any remotely suitable aquatic habitat and thus does not constitute a likely migration corridor for the California red-legged frog. Farming activities on the project site would certainly deter this frog from migrating overland through the project site, while Stanley

Biological Resources Analysis
SMP-39
Alameda County, California

Boulevard, a heavily trafficked four-lane road with a concrete island located approximately one mile south of the project site, would potentially deter this frog from migrating onto the project site from habitats to the south. In addition, there is no realistically viable habitat for this frog outside of the Arroyo Mocho, which conceivably could be used by this frog as a dispersal corridor. Nonetheless, adjacent lands that have been farmed or quarried for decades would not be used as dispersal habitat. Risking overland migration in highly open, farmed land would not be an evolutionary strategy that would promote continuation of the species. More simply, this frog would be highly susceptible to predation and other forms of harm if it ventured from the protected environs of the Arroyo Mocho onto and across farmed lands or the disturbed lands south of the arroyo and south of the project site.

When M&A originally studied the nearby SMP-40 project site, which sits directly adjacent to the Arroyo Mocho, M&A contacted the USFWS' Sacramento Endangered Species Office and spoke with their biologist in charge of California red-legged frog issues at that time, Mr. Curtis McCasland. Mr. McCasland stated that the project site is not within an area that the USFWS was concerned with; that is, *it is not within an area designated by the USFWS as California red-legged frog "critical habitat."* Mr. McCasland further stated that farmed land does not likely constitute habitats that would be used by the California red-legged frog. As such, Mr. McCasland stated that the USFWS would have no further interest in the proposed project. While many years have passed since M&A worked on this project site in 2000, site conditions in the area have only become more densely developed, reducing habitat value to California red-legged frogs such that the USFWS' conclusion in 2000 remains even more valid today.

In 2002, M&A conducted four California red-legged frog surveys in the Arroyo Mocho which is approximately 0.85-mile south of the project site. These surveys were conducted using field survey methods provided in the USFWS' 1997 survey protocol (the then current protocol). M&A biologists Geoff Monk and Sarah Lynch conducted these surveys. Both Mr. Monk and Ms. Lynch were "U.S. Fish and Wildlife Service-approved" California red-legged frog biologists at the time of these surveys. Additionally, both were authorized by the USFWS under a federal 10(a)(1)(A) permit to survey for and handle the California red-legged frog. Finally, both Mr. Monk and Ms. Lynch held valid state Scientific Collector's Permits to survey for this frog species at the time of these surveys. Ms. Lynch is still a "U.S. Fish and Wildlife Service approved" California red-legged frog biologist, authorized under a federal 10(a)(1)(A) permit, and still holds a state Scientific Collector's Permit to survey for California red-legged frogs.

In accordance with the field survey methods provided in the USFWS' survey protocol valid in 2002 (which remain valid today), Geoff Monk and Sarah Lynch conducted two nocturnal (night-time) surveys. These surveys were conducted on May 29 and June 3, 2002. The weather conditions on the survey nights were favorable for seeing and/or hearing California red-legged frogs (that is, it was warm and calm; it was not windy). During the nocturnal surveys, M&A biologists walked the length of Arroyo Mocho using medium-powered lights to illuminate the vegetation and water column in the search for frogs. Following the nocturnal surveys, Ms. Lynch conducted diurnal (day-time) surveys. The diurnal surveys were conducted on June 14 and 25, 2002. At the time of M&A's May and June surveys, the water in Arroyo Mocho was approximately 20 to 24 inches deep and rapidly flowing. Weather conditions on these days were appropriate conditions for observing frogs: warm, calm, and clear. These surveys entailed

walking the length of Arroyo Mocho, glassing the reaches of the channel for frogs, and dip-netting the water randomly. All wildlife observed during the surveys (including invertebrates) was recorded in project notes, along with the weather and other pertinent information.

No California red-legged frogs were observed during either the nocturnal or the diurnal surveys. Only adult Sierran tree frogs (*Pseudacris sierra*) were observed. Arroyo Mocho adjacent to the project site does not provide suitable habitat for the California red-legged frog. Under normal conditions, this reach of Arroyo Mocho dries up completely by April, not providing hydrated conditions over long enough periods for California red-legged frog eggs or developing red-legged frog larvae to survive. Under the current management regime, Zone 7 water releases from upstream sources in the spring and summer months may rehydrate the channel but do not last for a long enough period to create long-term wetted conditions, or conditions that would allow for successful California red-legged frog reproduction. Nor do these conditions support non-native crayfish, fish, or bullfrogs (species that would be expected in a perennial stream). Hence, when flows are released into the dry arroyo, little aquatic life is present in the fast-flowing water. M&A did not observe or dip-net any fish or amphibians in the channel (a few adult Sierran tree frogs were on the banks; no larvae were observed). Only amphipods and flat worms were identified in the channel during our surveys. When M&A surveyed the Arroyo Mocho and surrounding areas in June 2019 and September 2021, the time of year when California red-legged frog larvae are living in the water and entering metamorphosis (that is, the transition from a tadpole into a terrestrial frog), the Arroyo Mocho was completely dry. Thus, it was not suitable habitat for tadpoles (larvae).

Based on all the above factors, and the results of California red-legged frog surveys that M&A completed in the Arroyo Mocho, M&A concludes that the Arroyo Mocho does not likely provide habitat where the California red-legged frog would reside. *Thus, the project would not impact the California red-legged frog, since it is not onsite nor in the arroyo adjacent, and no mitigation is warranted for the California red-legged frog.*

6.3.3 WESTERN BURROWING OWL

The western burrowing owl (*Athene cunicularia hypugaea*) is a California designated “species of special concern.” The “species of special concern” status designation does not provide any special legally mandated protection for this owl species. However, this status designation likely meets the definition of “rare” pursuant to the CEQA (14 CCR §15380(2)(A)). As such, potential impacts to the burrowing owl should be considered during any CEQA review. Any unmitigated impacts to this species would likely be regarded by the State resource agency (the CDFW) as a significant adverse impact pursuant to CEQA (§21068). Its nest, eggs, and young are also protected under California Fish and Game Code (§3503 and §3503.5).

Burrowing owl habitat is usually found in annual and perennial grasslands, characterized by low-growing vegetation. Often, the burrowing owl utilizes rodent burrows, typically California ground squirrel burrows, for nesting and cover. They may also on occasion dig their own burrows or use man-made objects such as concrete culverts or rip-rap piles for cover. They exhibit high site fidelity, reusing burrows year after year. Occupancy of suitable burrowing owl habitat can be verified at a site by observation of these owls during the spring and summer months or, alternatively, its molted feathers, cast pellets, prey remains, eggshell fragments, or

Biological Resources Analysis
SMP-39
Alameda County, California

excrement (whitewash) at or near a burrow. Burrowing owls typically are not observed in grasslands with tall vegetation or wooded areas because the vegetation obscures their ability to detect avian and terrestrial predators. Since burrowing owls spend the majority of their time sitting at the entrances of their burrows, grazed grasslands seem to be their preferred habitat because it allows them to view the world at 360 degrees without obstructions.

Despite the California ground squirrel burrows on the site, M&A did not note any evidence of current or previous use of California ground squirrel burrows by burrowing owls during the site survey conducted on October 14, 2021. Areas adjacent to the project site were also visually surveyed for burrowing owl. No burrowing owls or their sign were observed in adjacent areas. M&A's 2021 negative survey results are consistent with our previous surveys conducted on the project site in November 2013 and June 2019. Burrowing owls have never been recorded on the project site.

Since the burrowing owl is a highly mobile species that has nested within one mile just west of the project site (CNDDDB Occurrence No. 457 last updated 2006), a series of four surveys will be required to satisfy the CDFW's survey guidelines (CDFG 2012).

If no owls are found during these surveys, no further regard for the burrowing owl would be necessary. If burrowing owls are observed during surveys, a fenced protective buffer around the nest burrow would be required in accordance with the CDFW's Staff Report. Please see the Impacts and Mitigations section for details.

7. REGULATORY FRAMEWORK FOR NATIVE WILDLIFE, FISH, AND PLANTS

This section provides a discussion of those laws and regulations that are in place to protect native wildlife, fish, and plants. Under each law we discuss its relevance to the proposed project.

7.1 Federal Endangered Species Act

The Federal Endangered Species Act (FESA) forms the basis for the federal protection of threatened or endangered plants, insects, fish and wildlife. FESA contains four main elements, they are as follows:

Section 4 (16 USCA §1533): Species listing, Critical Habitat Designation, and Recovery Planning: outlines the procedure for listing endangered plants and wildlife.

Section 7 (§1536): Federal Consultation Requirement: imposes limits on the actions of federal agencies that might impact listed species.

Section 9 (§1538): Prohibition on Take: prohibits the "taking" of a listed species by anyone, including private individuals, and State and local agencies.

Section 10: Exceptions to the Take Prohibition: non-federal agencies can obtain an incidental take permit through approval of a Habitat Conservation Plan.

Biological Resources Analysis
SMP-39
Alameda County, California

In the case of saltwater fish and other marine organisms, the requirements of FESA are enforced by the National Marine Fisheries Service (NMFS). The USFWS enforces all other cases. Below, Sections 9, 7, and 10 of FESA are discussed since they are the sections most relevant to the proposed project.

Section 9 of FESA as amended, prohibits the "take" of any fish or wildlife species listed under FESA as endangered. Under Federal regulation, "take" of fish or wildlife species listed as threatened is also prohibited unless otherwise specifically authorized by regulation. "Take," as defined by FESA, means "to harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect, or to attempt to engage in any such conduct." "Harm" includes not only the direct taking of a species itself, but the destruction or modification of the species' habitat resulting in the potential injury of the species. As such, "harm" is further defined to mean "an act which actually kills or injures wildlife; such an act may include significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering" (50 CFR 17.3). A December 2001 decision by the 9th Circuit Court of Appeals (*Arizona Cattle Growers' Association, Jeff Menges, vs. the U.S. Fish and Wildlife Service and Bureau of Land Management, and the Southwest Center for Biological Diversity*) ruled that the USFWS must show that a threatened or endangered species is present on a project site and that it would be taken by the project activities. According to this ruling, the USFWS can no longer require mitigation based on the probability that the species could use the site. Rather they must show that it is "reasonably certain to occur."

Section 9 applies to any person, corporation, federal agency, or any local or State agency. If "take" of a listed species (other than a plant species) is necessary to complete an otherwise lawful activity, this triggers the need to obtain an "incidental take permit" either through a Section 7 Consultation as discussed further below (for federal actions or private actions that are permitted or funded by a federal agency such as the Corps), or through Section 10 of FESA which requires preparation of a Habitat Conservation Plan (HCP) (for state and local agencies, or individuals, and projects without a federal "nexus"; for example, projects that do not need a Corps permit).

Section 7(a)(2) of the Act requires that each federal agency consult with the USFWS to ensure that any action authorized, funded or carried out by such agency is not likely to jeopardize the continued existence of an endangered or threatened species or result in the destruction or adverse modification of critical habitat for listed species. Critical habitat designations mean: (1) specific areas within a geographic region currently occupied by a listed species, on which are found those physical or biological features that are essential to the conservation of a listed species and that may require special management considerations or protection; and (2) specific areas outside the geographical area occupied by a listed species that are determined essential for the conservation of the species.

The Section 7 consultation process only applies to actions taken by federal agencies that are considering authorizing discretionary projects. Section 7 is by and between the NMFS and/or the USFWS and the federal agency contemplating a discretionary approval (that is, the federal "action agency," for example, the Corps or the Federal Highway Administration). Private parties, cities, counties, etc. (i.e., applicants) may participate in the Section 7 consultation *at the discretion of the federal agencies conducting the Section 7 consultation*. The Section 7

consultation process is triggered by a determination of the “action agency” – that is, the federal agency that is carrying out, funding, or approving a project - that the project “may affect” a listed species or critical habitat. If an action is likely to adversely affect a listed species or designated critical habitat, formal consultation between the nexus agency and the USFWS/NMFS is required. As part of the formal consultation, the USFWS/NMFS may resolve any issues informally with the nexus agency or may prepare a formal Biological Opinion assessing whether the proposed action would be likely to result in “jeopardy” to a listed species or if it could adversely modify designated critical habitat. If the USFWS/NMFS prepares a Biological Opinion it will contain either a “jeopardy” or “non-jeopardy” decision. If the USFWS/NMFS concludes that a proposed project would result in adverse modification of critical habitat or would jeopardize the continued existence of a federal listed species (that is, it will issue a jeopardy decision), the nexus federal agency would be most unlikely to authorize its discretionary permit. If the USFWS/NMFS prepares a “non-jeopardy” Biological Opinion, the nexus federal agency may authorize the discretionary permit making all conditions of the Biological Opinion conditions of its discretionary permit. A non-jeopardy Biological Opinion constitutes an “incidental take” permit that allows applicants to “take” federally listed species while otherwise carrying out legally sanctioned projects.

For non-federal entities, for example private parties, cities, and counties that are proposing a project that might result in incidental take, Section 10 provides the mechanism for obtaining that take authorization. Under Section 10 of FESA, for the applicant to obtain an "incidental take permit," the applicant is required to submit a "conservation plan" to the USFWS or NMFS that specifies the impacts that are likely to result to federally listed species, and the measures the applicant will undertake to minimize and mitigate such impacts, and the funding that will be available to implement those steps. Conservation plans under FESA have come to be known as "habitat conservation plans" or "HCPs" for short. The terms incidental take permit, Section 10 permit, and Section 10(a)(1)(B) permit are used interchangeably by the USFWS. Section 10(a)(2)(B) of FESA provides statutory criteria that must be satisfied before an incidental take permit can be issued.

7.1.1 RESPONSIBLE AGENCY

FESA gives regulatory authority to the USFWS for federally listed terrestrial species and non-anadromous fish. The NMFS has regulatory authority over federally listed marine mammals and anadromous fish.

7.1.2 APPLICABILITY TO THE PROPOSED PROJECT

There are no federally listed species expected to occur on the project site. The project site does not provide habitat for any federally listed, or state-listed, wildlife species.

7.2 California Endangered Species Act

7.2.1 SECTION 2081 OF THE CALIFORNIA ENDANGERED SPECIES ACT

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

Biological Resources Analysis
SMP-39
Alameda County, California

available. Because CESA does not have a provision for "harm" (see discussion of FESA, above), CDFW considerations pursuant to CESA are limited to those actions that would result in the direct take of a listed species.

If CDFW determines that a proposed project could impact a State listed threatened or endangered species, CDFW will provide recommendations for "reasonable and prudent" project alternatives. The CEQA lead agency can only approve a project if these alternatives are implemented, unless it finds that the project's benefits clearly outweigh the costs, reasonable mitigation measures are adopted, there has been no "irreversible or irretrievable" commitment of resources made in the interim, and the resulting project would not result in the extinction of the species. In addition, if there would be impacts to threatened or endangered species, the lead agency typically requires project applicants to demonstrate that they have acquired "incidental take" permits from CDFW and/or USFWS (if it is a Federal listed species) prior to allowing/permitting impacts to such species.

If proposed projects would result in impacts to a State listed species, an "incidental take" permit pursuant to §2081 of the Fish and Game Code would be necessary (versus a Federal incidental take permit for Federal listed species). CDFW will issue an incidental take permit only if:

- 1) The authorized take is incidental to an otherwise lawful activity;
- 2) the impacts of the authorized take are minimized and fully mitigated;
- 3) measures required to minimize and fully mitigate the impacts of the authorized take:
 - a) are roughly proportional in extent to the impact of the taking on the species;
 - b) maintain the project applicant's objectives to the greatest extent possible; and,
 - c) capable of successful implementation; and,
- 4) adequate funding is provided to implement the required minimization and mitigation measures and to monitor compliance with, and the effectiveness of, the measures.

If an applicant is preparing a habitat conservation plan (HCP) as part of the federal 10(a) permit process, the HCP might be incorporated into the §2081 permit if it meets the substantive criteria of §2081(b). To ensure that an HCP meets the mitigation and monitoring standards in Section 2081(b), an applicant should involve CDFW staff in development of the HCP. If a final Biological Opinion (federal action) has been issued for the project pursuant to Section 7 of the federal Endangered Species Act, it might also be incorporated into the §2081 permit if it meets the standards of §2081(b).

No §2081 permit may authorize the take of a species for which the Legislature has imposed strict prohibitions on all forms of "take." These species are listed in several statutes that identify "fully protected" species and "specified birds." See Fish and Game Code §§ 3505, 3511, 4700, 5050, 5515, and 5517. If a project is planned in an area where a "fully protected" species or a "specified bird" occurs, an applicant must design the project to avoid all take.

Fish and Game Code §2080.1 allows an applicant who has obtained a "non-jeopardy" federal Biological Opinion pursuant to Section 7 of the FESA, or who has received a federal 10(a) permit (federal incidental take permit) pursuant to the FESA, to submit the federal opinion or permit to CDFW for a determination as to whether the federal document is "consistent" with

Biological Resources Analysis
SMP-39
Alameda County, California

CESA. If after 30 days CDFW determines that the federal incidental take permit is consistent with state law, and that all state listed species under consideration have been considered in the federal Biological Opinion, then no further permit or consultation is required under CESA for the project. However, if CDFW determines that the federal opinion or permit is not consistent with CESA, or that there are state listed species that were not considered in the federal Biological Opinion, then the applicant must apply for a state CESA permit under Section 2081(b). Section 2081(b) is of no use if an affected species is state-listed, but not federally listed.

State and federal incidental take permits are issued on a discretionary basis and are typically only authorized if applicants are able to demonstrate that impacts to the listed species in question are unavoidable, and can be mitigated to an extent that the reviewing agency can conclude that the proposed impacts would not jeopardize the continued existence of the listed species under review. Typically, if there would be impacts to a listed species, mitigation that includes habitat avoidance, preservation, and creation of endangered species habitat is necessary to demonstrate that projects would not threaten the continued existence of a species. In addition, management endowment fees are usually collected as part of the agreement for the incidental take permit(s). The endowment is used to manage any lands set-aside to protect listed species, and for biological mitigation monitoring of these lands over (typically) a five-year period.

7.2.2 APPLICABILITY TO THE PROPOSED PROJECT

No state-listed plant or wildlife species (Tables 3 and 4 respectively) are expected to occur on the project site. Consequently, no impacts are expected to occur to plant or animal species protected pursuant to the CESA. As such, no CESA (2081b) Incidental Take Permit is warranted for the proposed project.

7.3 California Fish and Game Code § 3503, 3503.5, 3511, and 3513

California Fish and Game Code §3503, 3503.5, 3511, and 3513 prohibit the “take, possession, or destruction of birds, their nests or eggs.” Disturbance that causes nest abandonment and/or loss of reproductive effort (killing or abandonment of eggs or young) is considered “take.”

All raptors (that is, hawks, eagles, owls) their nests, eggs, and young are protected under California Fish and Game Code (§3503.5). Additionally, “fully protected” birds, such as the white-tailed kite (*Elanus leucurus*) and golden eagle (*Aquila chrysaetos*), are protected under California Fish and Game Code (§3511). “Fully protected” birds may not be taken or possessed (that is, kept in captivity) at any time.

7.3.1 APPLICABILITY TO THE PROPOSED PROJECT

Ground-nesting birds such as burrowing owls, and common passerine birds could be impacted by grading activities associated with initial clearing of surface soils. Preconstruction surveys would have to be conducted for nesting birds to ensure that there is no direct take of these birds including their eggs, or young. Any active nests found during preconstruction surveys would have to be avoided by the project. Suitable non-disturbance buffers would have to be established around nest sites until the nesting cycle is complete. More specifics on the size of buffers are provided below in the Impacts and Mitigations section.

8. EAST ALAMEDA COUNTY CONSERVATION STRATEGY

The East Alameda County Conservation Strategy (hereafter referred to as “Conservation Strategy”) was deemed final in December 2010. It has been approved and accepted by the City of Dublin, Zone 7 Water Agency, and the City of Livermore. It has not been adopted by the City of Pleasanton or Alameda County (S. Stewart, Principal Planner, City of Livermore, email communication with S. Lynch, November 19, 2014). The City of Livermore is the Lead Agency who will review this development project pursuant to the CEQA. Since the City of Livermore is a participant in the East Alameda County Conservation Strategy it is expected that they will follow the recommendations of the Conservation Strategy.

The Conservation Strategy is intended to provide an effective framework to protect, enhance, and restore natural resources in eastern Alameda County, while improving and streamlining the environmental permitting process for impacts resulting from infrastructure and development projects. The Conservation Strategy focuses on impacts to biological resources such as endangered and other special-status species as well as sensitive habitat types (e.g., wetlands, riparian corridors, rare upland communities).

To support the project permitting process, the Conservation Strategy identifies a set of mitigation standards. These standards include avoidance and minimization measures and a compensation program to offset impacts expected from projects in the study area. It also includes a set of specific management prescriptions to benefit natural communities and focal species. The Conservation Strategy sets long-range conservation goals for preservation of all natural communities in the study area. It is designed to contribute to listed species recovery and to prevent the listing of non-listed focal species through the protection, restoration, and enhancement of natural communities and species habitat. By focusing on conservation at the natural community level as well as at the focal species level, the Conservation Strategy will also ensure that common habitats and common species continue to be common in the study area.

The mitigation compensation ratios in the Conservation Strategy vary depending on the quality of habitat being lost. The ratio also varies depending on the total acreage and quality of the natural community in any given Conservation Zone. In other words, if the project will affect a rare, natural community the ratio could be higher. If the community is fairly common or heavily impacted already, the ratio could be lower. The mitigation ratios presented in the Conservation Strategy are only valid if a project application is in compliance with all other parts of the Conservation Strategy (i.e., avoidance and minimization measures).

The Conservation Strategy also requires project applicants to demonstrate habitat enhancement, not just permanent protection, on properties used for mitigation. In addition to mitigating the loss of species habitat on the basis of acreage, it is the intent of the Conservation Strategy to ensure that species’ habitat quality is preserved. For some species, habitat restoration can be used in lieu of some habitat preservation. If habitat restoration can be provided, less habitat preservation may be required. Project applicants will also be required to demonstrate that more species habitat will be preserved or restored at a mitigation site than will be lost at the impact site.

Biological Resources Analysis
SMP-39
Alameda County, California

8.1 Applicable Goals:

- Protect and enhance natural and semi-natural landscapes that are large enough to accommodate natural processes beneficial to populations of native species.
- Maintain and enhance the effective movement and genetic exchange of native organisms within and between natural communities inside and outside the study area.

8.2 Applicable Objectives:

- Avoid or minimize direct impacts on streams during project construction and indirect impacts that result from post-project activities by implementing avoidance measures.

8.3 Applicability to the Proposed Project

The project site is located within Conservation Zone 2 (CZ 2) of the Conservation Strategy; this is the largely urbanized Livermore Valley. This CZ includes the intersections of I-580 and I-680 and the intersection of State Route 84 and I-580. I-580 forms the northeast boundary.

Conservation priorities for CZ-2 are listed below.

- Protection of burrowing owl nesting and foraging habitat.
- Protection of and restoration opportunities in mixed willow riparian scrub along Arroyo Valle and Arroyo Mocho.
- Protection of and restoration opportunities along Arroyo Seco and Arroyo Mocho to support California red-legged frog and future central California coast steelhead habitat.
- Surveys for San Joaquin spearscale and protection of extant populations.
- Surveys for Congdon's tarplant and protection of extant populations.
- Protection of vernal pool habitat.

As stated earlier in this report, the project site is farmed and has been farmed, or used for some type of agricultural practices, over many decades. The project site is annually disked and maintained and as such does not provide native plant or wildlife habitat. In subsequent years ruderal (weedy) vegetation developed in the resulting depressions formed by farming activities.

The project site does not provide suitable habitats for Federal or State listed plant or animal species. The applicant will follow the standard CEQA avoidance and mitigation prescriptions for those species listed in this document (for example, the western burrowing owl). These mitigations are provided at the end of this document and follow agency-imposed mitigation requirements. The proposed project will also implement the general avoidance and minimization measures presented in the Conservation Strategy as applicable to the proposed project to ensure that the proposed project will not impact special-status species.

9. REGULATORY REQUIREMENTS PERTAINING TO WATERS OF THE UNITED STATES AND STATE

This section presents an overview of the criteria used by the Corps, the RWQCB, the State Water Resources Control Board (SWRCB), and the CDFW to determine those areas within a project area that would be subject to their regulation.

Biological Resources Analysis
SMP-39
Alameda County, California

9.1 U.S. Army Corps of Engineers Jurisdiction and Permitting

9.1.1 SECTION 404 OF THE CLEAN WATER ACT

Congress enacted the Clean Water Act “to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters” (33 U.S.C. §1251(a)). Pursuant to Section 404 of the Clean Water Act (CWA) (33 U.S.C. 1344), the Corps regulates the disposal of dredged or fill material into "waters of the United States" (33 CFR Parts 328 through 330). This requires project applicants to obtain authorization from the Corps prior to discharging dredged or fill materials into any water of the United States.

In the Federal Register “waters of the United States” are defined as, “...all interstate waters including interstate wetlands...intrastate lakes, rivers, streams (including intermittent streams), wetlands, [and] natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce...” (33 CFR Section 328.3).

Limits of Corps’ jurisdiction:

(a) Territorial Seas. The limit of jurisdiction in the territorial seas is measured from the baseline in a seaward direction a distance of three nautical miles. (See 33 CFR 329.12)

(b) Tidal Waters of the United States. The landward limits of jurisdiction in tidal waters:

- (1) Extends to the high tide line, or
- (2) When adjacent non-tidal waters of the United States are present, the jurisdiction extends to the limits identified in paragraph (c) of this section.

(c) Non-Tidal Waters of the United States. The limits of jurisdiction in non-tidal waters:

- (1) In the absence of adjacent wetlands, the jurisdiction extends to the ordinary high water mark, or
- (2) When adjacent wetlands are present, the jurisdiction extends beyond the ordinary high water mark to the limit of the adjacent wetlands.
- (3) When the water of the United States consists only of wetlands the jurisdiction extends to the limit of the wetland.

Section 404 jurisdiction in "other waters" such as lakes, ponds, and streams, extends to the upward limit of the OHWM or the upward extent of any adjacent wetland. The OHWM on a non-tidal water is:

- the "line on shore established by the fluctuations of water and indicated by physical characteristics such as a clear natural line impressed on the bank; shelving; changes in the character of soil; destruction of terrestrial vegetation; the presence of litter or debris; or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR Section 328.3[e]).

Biological Resources Analysis
SMP-39
Alameda County, California

Wetlands are defined as: "...those areas that are inundated or saturated by surface or ground water at a frequency and duration to support a prevalence of vegetation adapted for life in saturated soil conditions" (33 CFR Section 328.8 [b]). Wetlands usually must possess hydrophytic vegetation (i.e., plants adapted to inundated or saturated conditions), wetland hydrology (e.g., topographic low areas, exposed water tables, stream channels), and hydric soils (i.e., soils that are periodically or permanently saturated, inundated or flooded) to be regulated by the Corps pursuant to Section 404 of the Clean Water Act.

It should be noted that following the vacating of the Navigable Waters Protection Rule in August 2021, the Corps has reverted back to modifications to the extent of Corps jurisdiction pursuant to Section 404 of the Clean Water Act established in 2001 in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers*. In this case, the U.S. Supreme Court [148 L. Ed. 2d 576 (2001) (SWANCC)] ruled that the Corps exceeded its authority under the Clean Water Act when it regulated discharges of fill material into "isolated" waters used as habitat by migratory birds. Accordingly, waters (including wetlands) that are not connected hydrologically to navigable waters are not subject to regulation by the Corps.

Another Supreme Court decision also significantly changes how the Corps defines waters of the United States. On June 19, 2006 the United States Supreme Court, in a "four-one-four" decision, addressed the extent of Clean Water Act jurisdiction over wetlands adjacent to tributaries of navigable waters. In two consolidated cases, *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers*, a five-Justice majority of the Court remanded the case to the Sixth circuit for further consideration. The Court was unable to produce a majority vote in favor of any one jurisdictional standard for the Sixth Circuit to apply (or for the regulated community to follow). Instead, Justice Scalia authored a plurality opinion that would significantly narrow the reach of federal wetlands jurisdiction, while Justice Kennedy, concurring in the judgment only, concluded that the appropriate test for jurisdiction over wetlands was the presence of a "significant nexus" between wetlands and "navigable waters" in the traditional sense. The remaining four Justices, in a dissenting opinion by Justice Stevens, would have upheld the Corps of Engineers' assertion of jurisdiction and would have affirmed the Sixth Circuit's decision. When no opinion garners at least five votes, lower courts follow the concurrence that reached the result on the narrowest grounds. Here, that is Justice Kennedy's opinion. Unfortunately, Justice Kennedy did not provide specific guidance about the extent of federal jurisdiction over wetlands that are adjacent to tributaries of navigable waters.

Justice Kennedy concluded that the Clean Water Act applies only to those wetlands with a "significant nexus" to "navigable waters in the traditional sense." A significant nexus exists when a wetland, "either alone or in combination with similarly situated lands in the region, significantly affect[s] the chemical, physical, and biological integrity" of factually navigable waters. Under Supreme Court precedent, wetlands adjacent to navigable waters meet this test. For wetlands located near tributaries of navigable waters, however, each wetland demands a case-by-case jurisdictional inquiry. We know that a "mere hydrological connection" is not enough in all cases, and that "speculative or insubstantial" effects on water quality will not suffice to satisfy the test. [Preceding text excerpted from a newsletter prepared by Briscoe, Ivester, and Bazel LLP]. The Corps of Engineers and the Environmental Protection Agency jointly prepared an Instructional Guidebook to aid Corps field staff in completing the new

Biological Resources Analysis
SMP-39
Alameda County, California

“Approved Jurisdictional Determination Form,” and is intended to be used as the U.S. Army Corps of Engineers Regulatory National Standard Operating Procedures for conducting an approved jurisdictional determination.

9.1.1.1 Permitting Corps Jurisdictional Areas

To remain in compliance with Section 404 of the CWA, project proponents and property owners (applicants) are required to be permitted by the Corps prior to discharging or otherwise impacting waters of the United States. In many cases, the Corps must visit a proposed project area (to conduct a “jurisdictional determination”) to confirm the extent of area falling under their jurisdiction prior to authorizing any permit for that project area. Typically, at the time the jurisdictional determination is conducted, applicants (or their representative) will discuss the appropriate permit application that would be filed with the Corps for permitting the proposed impact(s) to “waters of the United States.”

Pursuant to Section 404, the Corps normally provides two alternatives for permitting impacts to the type of waters of the United States found in the project area. The first alternative would be to use Nationwide Permit(s) (NWP). The second alternative is to apply to the Corps for an Individual Permit (33 CFR Section 235.5(2)(b)). The application process for Individual Permits is extensive and includes public interest review procedures (i.e., public notice and receipt of public comments) and must contain an “alternatives analysis” that is prepared pursuant to Section 404(b) of the Clean Water Act (33 U.S.C. 1344(b)). The alternatives analysis is also typically reviewed by the federal EPA and thus brings another resource agency into the permitting framework. Both the Corps and EPA take the initial viewpoint that there are practical alternatives to the proposed project if there would be impacts to waters of the U.S., and the proposed permitted action is not a water dependent project (e.g., a pier or a dredging project). Alternative analyses therefore must provide convincing reasons that the proposed permitted impacts are unavoidable. Individual Permits may be available for use in the event that discharges into regulated waters fail to meet conditions of NWP(s).

NWPs are a type of general permit administered by the Corps and issued on a nationwide basis that authorize minor activities that affect Corps regulated waters. Under NWP, if certain conditions are met, the specified activities can take place without the need for an individual or regional permit from the Corps (33 CFR, Section 235.5[c][2]). In order to use NWP(s), a project must meet 27 general nationwide permit conditions, and all specific conditions pertaining to the NWP being used (as presented at 33 CFR Section 330, Appendices A and C). It is also important to note that pursuant to 33 CFR Section 330.4(e), there may be special regional conditions or modifications to NWPs that could have relevance to individual proposed projects. Finally, pursuant to 33 CFR Section 330.6(a), Nationwide permittees may, and in some cases must, request from the Corps confirmation that an activity complies with the terms and conditions of the NWP intended for use (i.e., must receive “verification” from the Corps).

Prior to finalizing design plans, the applicant needs to be aware that the Corps maintains a policy of “no net loss” of wetlands (waters of the United States) from project area development. Therefore, it is incumbent upon applicants that propose to impact Corps regulated areas to submit a mitigation plan that demonstrates that impacted regulated areas would be recreated (i.e.,

impacts would be mitigated). Typically, the Corps requires mitigation to be “in-kind” (i.e., seasonal wetlands would be filled, mitigation would include seasonal wetland mitigation), and at a minimum of a 1:1 replacement ratio (i.e., one acre or fraction thereof recreated for each acre or fraction thereof lost). Often a 2:1 replacement ratio is required if the Permittee is responsible for the mitigation. In some cases, the Corps allows “out-of-kind” mitigation if the compensation site has greater value than the impacted site. Finally, there are many Corps approved wetland mitigation banks where wetland mitigation credits can be purchased by applicants to meet mitigation compensation requirements. Mitigation banks have defined service areas and the Corps may only allow their use when a project would have minimal impacts to wetlands.

9.1.2 APPLICABILITY TO THE PROPOSED PROJECT

The site is flat and farmed. There are no potential waters of the United States on the project site or within a zone of influence of the project site. Hence, no impacts to waters of the United States are expected from the proposed project and prior authorization from the Corps should not be necessary.

9.2 California Regional Water Quality Control Board (RWQCB)

9.2.1 SECTION 401 OF THE CLEAN WATER ACT

The SWRCB and RWQCB regulate activities in “waters of the State” (which includes wetlands) through Section 401 of the Clean Water Act. While the Corps administers a permitting program that authorizes impacts to waters of the United States, including wetlands and other waters, any Corps permit authorized for a proposed project would be inoperative unless it is a NWP that has been certified for use in California by the SWRCB, or if the RWQCB has issued a project specific certification of water quality. Certification of NWPs requires a finding by the SWRCB that the activities permitted by the NWP will not violate water quality standards individually or cumulatively over the term of the permit (the term is typically for five years). Certification must be consistent with the requirements of the federal Clean Water Act, the California Environmental Quality Act, the California Endangered Species Act, and the SWRCB’s mandate to protect beneficial uses of waters of the State. Any denied (i.e., not certified) NWPs, and all Individual Corps permits, would require a project specific RWQCB certification of water quality. Where a project will result in dredge or fill of non-federal waters of the State, the RWQCB will authorize those fills through waste discharge requirements issued under the Porter Cologne Water Quality Control Act.

On April 2, 2019, the State Water Resources Control Board adopted a state-level definition of “wetlands,” which is broader than the federal definition in that unvegetated areas may be considered a wetland water of the State. As a part of the same policy, the Water Board adopted permit procedures and standards governing the discharge of dredged or fill material into wetlands and other waters of the State. The policy includes, among other things, requirements for analyses to identify the least environmentally damaging practicable alternative (LEDPA) and compensatory mitigation standards including a minimum 1:1 ratio for wetlands and streams, and full functional replacement of all waters on top of this minimum where applicable. The policy, which will govern both Section 401 certifications and WDRs, is scheduled to become effective nine months following the completion of review by the California Office of Administrative Law.

Biological Resources Analysis
SMP-39
Alameda County, California

9.2.1.1 Applicability to the Proposed Project

There are no potential waters of the State on the project site or within a zone of influence of the project site. Thus, Clean Water Act Section 401 certification (“authorization”) from the RWQCB will not be not required for the proposed project.

9.2.2 PORTER-COLOGNE WATER QUALITY CONTROL ACT

The uncontrolled discharge of pollutants into impaired water bodies is considered particularly detrimental. According to the U.S. Environmental Protection Agency (USEPA), **sediment is one of the most widespread pollutants contaminating U.S. rivers and streams**. Sediment runoff from construction sites is 10 to 20 times greater than from agricultural lands and 1,000 to 2,000 times greater than from forest lands (EPA 2005). Consequently, the discharge of stormwater from large construction sites is regulated by the RWQCB under the federal CWA and California’s Porter-Cologne Water Quality Control Act.

The Porter-Cologne Water Quality Control Act, Water Code § 13260, requires that “any person discharging waste, or proposing to discharge waste, that could affect the waters of the State to file a report of discharge” with the RWQCB through an application for waste discharge (Water Code Section 13260(a)(1)). The term “waters of the State” is defined as any surface water or groundwater, including saline waters, within the boundaries of the State (Water Code § 13050(e)). It should be noted that pursuant to the Porter-Cologne Water Quality Control Act, the RWQCB also regulates “isolated wetlands,” or those wetlands considered to be outside of the Corps’ jurisdiction pursuant to the SWANCC decision (see Corps Section above).

The RWQCB generally considers filling in waters of the State to constitute “pollution.” Pollution is defined as an alteration of the quality of the waters of the state by waste that unreasonably affects its beneficial uses (Water Code §13050(1)). The RWQCB litmus test for determining if a project should be regulated pursuant to the Porter-Cologne Water Quality Control Act is if the action could result in any “threat” to water quality.

The RWQCB requires complete pre- and post-development Best Management Practices (BMPs) of any portion of the project site that is developed. This means that a water quality treatment plan for the pre- and post-developed project site must be prepared and implemented. Preconstruction requirements must be consistent with the requirements of the National Pollutant Discharge Elimination System (NPDES). That is, a *Stormwater Pollution Prevention Plan* (SWPPP) must be developed prior to the time that a site is graded (see NPDES section below). In addition, a post construction BMPs plan, or a Stormwater Management Plan (SWMP) must be developed and incorporated into any site development plan.

9.2.2.1 Applicability to The Proposed Project

Since any “threat” to water quality could conceivably be regulated pursuant to the Porter-Cologne Water Quality Control Act, care will be required when constructing the proposed project to ensure that adequate pre-and post-construction Best Management Practices (BMPs) are incorporated into the project implementation plans. The project has been designed according to all MS-4 requirements. Since a full Storm Water Pollution Prevention Plan (SWPPP) would be implemented prior to constructing the project and would be maintained throughout the duration

Biological Resources Analysis
SMP-39
Alameda County, California

of the construction project, there would not be deleterious receiving water discharges from the project. Also, since the City of Livermore will enforce development of a post-construction Storm Water Management Plan that will treat and hydromodify all stormwater falling on impervious surfaces, the project would not impact downstream water quality in any way. Thus, the project will remain in compliance with the Porter-Cologne Water Quality Control Act.

10. STATE WATER RESOURCES CONTROL BOARD (SWRCB)/RWQCB – STORM WATER MANAGEMENT

10.1 Construction General Permit

While federal Clean Water Act NPDES regulations allow two permitting options for construction related stormwater discharges (individual permits and General Permits), the State Water Resources Control Board (SWRCB) has elected to adopt only one statewide Construction General Permit at this time that will apply to all stormwater discharges associated with construction activity, except from those on Tribal Lands, in the Lake Tahoe Hydrologic Unit, and those performed by the California Department of Transportation (CalTrans).

The Construction General Permit requires all dischargers where construction activity disturbs greater than one acre of land or those sites less than one acre that are part of a common plan of development or sale that disturbs more than one acre of land surface to:

1. Develop and implement a Storm Water Pollution Prevention Plan (SWPPP) which specifies Best Management Practices (BMPs) that will prevent all construction pollutants from contacting stormwater with the intent of keeping all products of erosion from moving off site into receiving waters.
2. Eliminate or reduce non-stormwater discharges to storm sewer systems and other waters of the nation. Achieve quantitatively-defined (i.e., numeric) pollutant-specific discharge standards, and conduct much more rigorous monitoring based on the project's projected risk level.
3. Perform inspections of all BMPs.

This Construction General Permit is implemented and enforced by the nine RWQCBs. It is also enforceable through citizens' suits and represents a dramatic shift in the State Water Board's approach to regulating new and redevelopment sites, imposing new affirmative duties and fixed standards on builders and developers.

Types of Construction Activity Covered by the Construction General Permit

- clearing,
- grading,
- disturbances to the ground such as stockpiling, or excavation that results in soil disturbances of at least one acre or more of total land area.

Biological Resources Analysis
SMP-39
Alameda County, California

Construction activity that results in soil disturbances to a smaller area would still be subject to this General Permit if the construction activity is part of a larger common plan of development that encompasses greater than one acre of soil disturbance, or if there is significant water quality impairment resulting from the activity.

Construction activity does not include:

- routine maintenance to maintain original line and grade,
- hydraulic capacity, or original purpose of the facility,
- nor does it include emergency construction activities required to protect public health and safety.

The Construction General Permit includes several “post-construction” requirements. These requirements entail that site designs provide no net increase in overall site runoff and match pre-project hydrology by maintaining runoff volume and drainage concentrations. To achieve the required results where impervious surfaces such as roofs and paved surfaces are being increased, developers must implement non-structural off-setting BMPs, such as landform grading, site design BMPs, and distributed structural BMPs (bioretention cells, rain gardens, and rain cisterns). This “runoff reduction” approach is essentially a State Water Board-imposed regulatory requirement to implement Low Impact Development (“LID”) design features. Volume that cannot be addressed using non-structural BMPs must be captured in structural BMPs that are approved by the RWQCB.

Improving the quality of site runoff is necessary to improve water quality in impaired and threatened streams, rivers, and lakes (that is, water bodies on the EPA’s 303(d) list). The RWQCB prioritizes the water bodies on the 303(d) list according to potential impacts to beneficial uses. Beneficial uses can include a wide range of uses, such as nautical navigation; wildlife habitat; fish spawning and migration; commercial fishing, including shellfish harvesting; recreation, including swimming, surfing, fishing, boating, beachcombing, and more; water supply for domestic consumption or industrial processes; and groundwater recharge, among other uses. The State is required to develop action plans and establish Total Maximum Daily Loads (TMDLs) to improve water quality within these impaired water bodies. The TMDL is the quantity of a pollutant that can be safely assimilated by a water body without violating the applicable water quality standards.

Pursuant to the CWA, the RWQCB regulates construction discharges under the National Pollutant Discharge Elimination System (NPDES). The project sponsor of construction or other activities that disturb more than 1 acre of land must obtain coverage under NPDES Construction General Permit Order 2009-0009-DWQ, administered by the RWQCB.

10.1.1 APPLICABILITY TO THE PROPOSED PROJECT

To obtain coverage under the SWRCB administered Construction General Permit, the applicant (typically through its civil engineer) must electronically file a number of permit-related compliance documents (Permit Registration Documents (PRDs), including a Notice of Intent (NOI), a risk assessment, site map, signed certification, Stormwater Pollution Prevention Plan (SWPPP), Notice of Termination (NOT), NAL exceedance reports, and other site-specific PRDs

that may be required. The PRDs must be prepared by a Qualified SWPPP Practitioner (QSP) or Qualified SWPPP Developer (QSD) and filed by a Legally Responsible Person (LRP) on the RWQCB's Stormwater Multi-Application Report Tracking System (SMARTS). (QSDs are typically civil engineers, professional hydrologists, engineering geologists, or landscape architects). Once filed, these documents become immediately available to the public for review and comment. At a minimum, the SWPPP shall identify BMPs for implementation during project construction that are in accordance with the applicable guidance and procedures contained in the California Stormwater Quality Association's *California Stormwater Best Management Practices Handbook* (2015).

10.2 RWQCB Municipal Storm Water Permitting Programs

The federal Clean Water Act (CWA) was amended in 1987 to address urban stormwater runoff pollution of the nation's waters. In 1990, the U.S. Environmental Protection Agency (USEPA) promulgated rules establishing Phase 1 of the National Pollutant Discharge Elimination System (NPDES) stormwater program. The Phase 1 program for Municipal Separate Storm Sewer System (MS4s) requires operators that serve populations of 100,000 or greater to implement a stormwater management program to control polluted discharges from these MS4s. While Phase 1 of the municipal stormwater program has focused on large urban areas, Phase 2 of the municipal stormwater program was promulgated by the USEPA for smaller urban areas including non-traditional Small MS4s, which are governmental facilities such as military bases, public campuses, and prison and hospital complexes.

MS4 permits require the discharger (or dischargers that are permitted by the MS4 permittees) to develop and implement a Storm Water Management Plan/Program (SWMP) with the goal of reducing the discharge of pollutants to the maximum extent practicable (MEP). MEP is the performance standard specified in Section 402(p) of the Clean Water Act. The management programs specify what best management practices (BMPs) will be used to address certain program areas. The program areas include public education and outreach; illicit discharge detection and elimination; construction and post-construction; and good housekeeping for municipal operations. In general, medium and large municipalities are required to conduct chemical monitoring, though small municipalities are not.

10.2.1 NPDES C.3 REQUIREMENTS

The NPDES C.3 requirements went into effect for any project (public or private) that is "deemed complete" by the City or County (Lead Agency) on or after February 15, 2005, and which will result in the creation or replacement (other than normal maintenance) of at least 10,000 square feet of impervious surface area (roofs, streets, patios, parking lots, etc. Provision C.3 requires the onsite treatment of stormwater prior to its discharge into downstream receiving waters. Note that these requirements are in addition to the existing NPDES requirements for erosion and sedimentation controls during project construction that are typically addressed through acquisition of coverage under the SWRCB administered Construction General Permit. The C.3 requirements are typically required to be implemented by MS4 permittees (and their constituencies).

Projects subject to Provision C3 must include the capture and onsite treatment of all stormwater from the site prior to its discharge, including rainwater falling on building rooftops. Project applicants are required to implement appropriate source control and site design measures and to design and implement stormwater treatment measures in order to reduce the discharge of stormwater pollutants to the *maximum extent practicable*. While the Clean Water Act does not define “maximum extent practicable,” the Stormwater Quality Management Plans required as a condition of the municipal NPDES permits identify control measures (known as Best Management Plans, or BMPs) and, where applicable, performance standards, to establish the level of effort required to satisfy the maximum extent practicable criterion. It is ultimately up to the professional judgment of the reviewing municipal staff in the individual jurisdictions to determine whether a project’s proposed stormwater controls will satisfy the maximum extent practicable criterion. However, there are numeric criteria used to ensure that treatment BMPs have been adequately sized to accommodate and treat a site’s stormwater. The C3 requirements are quite extensive, and their complete explanation is not provided here. However, the following are minimums that should be understood and adhered to:

- The applicant must provide a detailed and realistic site design *and impervious surface area calculations*. This site design *and calculations* will be used by the Lead Agency (County or City) to determine/*verify* the amount of impervious surface area that is being created or replaced. It should include all proposed buildings, roads, walkways, parking lots, landscape areas, etc., that are being created or redeveloped. If large (greater than 10,000 square feet) lots are being created an effort will need to be made to determine the total impervious surface area that could be created on that parcel. For example if only a portion of the lot is shown as a “building envelope” then the lead agency will need to consider that a driveway will have to be constructed to access the envelope and that the envelope will then be developed as shown. If the C.3 thresholds are met (creation/redevelopment of 10,000 square feet of impervious surface area), a Stormwater Control Plan (SWCP) (if required by the Lead Agency, or whatever steps for compliance with Provision C3 are required locally) must accompany the application.
- If a SWCP is required by the Lead Agency for the project it must be stamped by a Licensed Civil Engineer, Architect, or Landscape Architect.

10.2.2 APPLICABILITY TO THE PROPOSED PROJECT

The Water Board issued county-wide municipal stormwater permits in the early 1990s to operators of MS4s. On November 19, 2015, the Water Board re-issued these county-wide municipal stormwater permits as one Municipal Regional Stormwater NPDES Permit to regulate stormwater discharges from municipalities and local agencies. Permittees in the San Francisco Bay area are included in a Municipal Regional Permit (MRP), issued to 76 cities, counties and flood control districts in 2009 and revised in 2015. The City of Livermore is an MS4 permittee. Each of the Permittee’s must file an Annual Report that is comprised of three parts: regional, countywide, and individual. Some requirements of the MRP are being implemented by the Bay Area Stormwater Management Agencies Association (BASMAA) on behalf of all the MRP Permittees. Other elements are being implemented collaboratively by the Permittees through

Biological Resources Analysis
SMP-39
Alameda County, California

their respective countywide programs. As such, BASMAA and the countywide programs have submitted Annual Report elements on the regional and countywide collaborative tasks, respectively, on behalf of the MRP Permittees and the individual MRP Permittees have also submitted Annual Report elements on the Permit Provisions they have implemented individually.

It is the applicant's responsibility to ensure that the project civil engineer prepares all required Storm Water Planning documents (i.e., a Storm Water Management Plan) for submittal to the City of Livermore to comply with its MS4 permit requirements.

10.3 California Department of Fish and Wildlife Protections

10.3.1 SECTION 1602 OF CALIFORNIA FISH AND GAME CODE

Pursuant to Section 1602 of the California Fish and Game Code: "An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake, unless all of the following occur:

- (1) CDFW receives written notification regarding the activity in the manner prescribed by CDFW. The notification shall include, but is not limited to, all of the following:
 - (A) A detailed description of the project's location and a map.
 - (B) The name, if any, of the river, stream, or lake affected.
 - (C) A detailed project description, including, but not limited to, construction plans and drawings, if applicable.
 - (D) A copy of any document prepared pursuant to Division 13 (commencing with Section 21000) of the Public Resources Code.
 - (E) A copy of any other applicable local, state, or federal permit or agreement already issued.
 - (F) Any other information required by CDFW" (Fish & Game Code 2014).

Please see Section 1602 of the current California Fish and Game Code for further details.

Please also note that while not stated in the regulations above, CDFW typically considers its jurisdiction to include riparian vegetation (that is, the trees and bushes growing along the stream). Thus, any proposed activity in a natural stream channel that would substantially adversely affect an existing fish and/or wildlife resource, including its riparian vegetation, would require entering into a Streambed Alteration Agreement (SBAA) with CDFW prior to commencing with work in the stream. However, prior to authorizing such permits, CDFW typically reviews an analysis of the expected biological impacts, any proposed mitigation plans that would be implemented to offset biological impacts and engineering and erosion control plans.

10.3.2 APPLICABILITY TO THE PROPOSED PROJECT

There are no drainages or creeks present on or within a zone of influence of project site. Hence, a Section 1602 Agreement from CDFW should not be necessary for this project.

11. CALIFORNIA ENVIRONMENTAL QUALITY ACT (CEQA) REGULATIONS

A CEQA lead agency must determine if a proposed activity constitutes a project requiring further review pursuant to the CEQA. Pursuant to CEQA, a lead agency would have to determine if there could be significant adverse impacts to the environment from a proposed project. Typically, if within the city limits, the city would be the CEQA lead agency. If a discretionary permit (i.e., conditional use permit) would be required for a project (e.g. an occupancy permit must be issued), the lead agency typically must determine if there could be significant environmental impacts. This is usually accomplished by an “Initial Study.” If there could be significant environmental impacts, the lead agency must determine an appropriate level of environmental review prior to approving and/or otherwise permitting the impacts. In some cases, there are “Categorical Exemptions” that apply to the proposed activity; thus the activity is exempt from CEQA. The Categorical Exemptions are provided in CEQA. There are also Statutory Exemptions in CEQA that must be investigated for any proposed project. If the project is not exempt from CEQA, the lowest level of review typically reserved for projects with no significant effects on the environment would be for the lead agency to prepare a “Negative Declaration.” If a proposed project would have only minimal impacts that can be mitigated to a level of no significance pursuant to the CEQA, then a “Mitigated Negative Declaration” is typically prepared by the lead agency. Finally, those projects that may have significant effects on the environment, or that have impacts that can’t be mitigated to a level considered less than significant pursuant to the CEQA, typically must be reviewed via an Environmental Impact Report (EIR). All CEQA review documents are subject to public circulation, and comment periods.

Section 15380 of CEQA defines “endangered” species as those whose survival and reproduction in the wild are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, disease, or other factors. “Rare” species are defined by CEQA as those who are in such low numbers that they could become endangered if their environment worsens; or the species is likely to become endangered within the foreseeable future throughout all or a significant portion of its range and may be considered “threatened” as that term is used in FESA. The CEQA Guidelines also state that a project will normally have a significant effect on the environment if it will “substantially affect a rare or endangered species of animal or plant or the habitat of the species.” The significance of impacts to a species under CEQA, therefore, must be based on analyzing actual rarity and threat of extinction to that species despite its legal status or lack thereof.

11.1.1 APPLICABILITY TO THE PROPOSED PROJECT

This report has been prepared as a Biology section that is suitable for incorporation by the CEQA lead agency (in this case the City of Livermore) into a CEQA review document such as a Mitigated Negative Declaration or an Environmental Impact Report. This document addresses potential impacts to species that would be defined as endangered or rare pursuant to Section 15380 of the CEQA.

12. IMPACTS ANALYSIS

Below the criteria used in assessing impacts to Biological Resources is presented.

12.1 Significance Criteria

A significant impact is determined using CEQA and CEQA Guidelines. Pursuant to CEQA §21068, a significant effect on the environment means a substantial, or potentially substantial, adverse change in the environment. Pursuant to CEQA Guideline §15382, a significant effect on the environment is further defined as 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 historical or aesthetic significance. Other Federal, State, and local agencies' considerations and regulations are also used in the evaluation of significance of proposed actions.

Direct and indirect adverse impacts to biological resources are classified as “significant,” “potentially significant,” or “less than significant.” Biological resources are broken down into four categories: vegetation, wildlife, threatened and endangered species, and regulated “waters of the United States” and/or stream channels.

12.1.1 THRESHOLDS OF SIGNIFICANCE

12.1.1.1 Plants, Wildlife, Waters

In accordance with Appendix G (Environmental Checklist Form) of the CEQA Guidelines, implementing the project would have a significant biological impact if it would:

- Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS.
- Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the CDFW or USFWS.
- Have a substantial adverse effect on federally protected “wetlands” as defined by Section 404 of the Clean Water Act (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.
- Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan.

Biological Resources Analysis
SMP-39
Alameda County, California

12.1.1.2 Waters of the United States and State.

Pursuant to Section 404 of the CWA (33 U.S.C. 1344), the Corps regulates the discharge of dredged or fill material into waters of the United States, which includes wetlands, as discussed in the bulleted item above, and also includes “other waters” (stream channels, rivers) (33 CFR Parts 328 through 330). Substantial impacts to Corps regulated areas on a project site would be considered a significant adverse impact. Similarly, pursuant to Section 401 of the Clean Water Act, and to the Porter-Cologne Water Quality Control Act, the RWQCB regulates impacts to waters of the state. Thus, substantial impacts to RWQCB regulated areas on a project site would also be considered a significant adverse impact.

12.1.1.3 Stream Channels

Pursuant to Section 1602 of the California Fish and Game Code, CDFW regulates activities that divert, obstruct, or alter stream flow, or substantially modify the bed, channel, or bank of a stream which CDFW typically considers to include riparian vegetation. Any proposed activity that would result in substantial modifications to a natural stream channel would be considered a significant adverse impact.

13. IMPACT ASSESSMENT AND PROPOSED MITIGATION

In this section we discuss potential impacts to sensitive biological resources from the proposed project. We follow each impact with a mitigation prescription that when implemented would reduce impacts to the greatest extent possible. This impact analysis is based on the conceptual site plan prepared by HPA on September 28, 2021.

13.1 Impact BIO-1. Development of The Project Would Have a Potentially Significant Adverse Impact on Nesting Birds (Potentially Significant)

Red-tailed hawk, red-shouldered hawks, and loggerhead shrikes are all known from the area and could nest on the project site. Common songbirds (passerine birds) could also nest on the project site. All of these birds and their eggs and young are protected under California Fish and Game Code Sections 3503, 3503.5. Any project-related impacts to these species would be considered a significant adverse impact. Potential impacts to these species from the proposed project include disturbance to nesting birds and possibly death of adults and/or young. In the absence of survey results, it must be concluded that impacts to nesting raptors and song birds from the proposed project would be **potentially significant pursuant to CEQA**. This impact could be mitigated to a level considered less than significant.

13.2 Mitigation Measure BIO-1. Nesting Birds

To avoid impacts to nesting birds, a nesting survey shall be conducted within 15 days of commencing with earth-work (site grubbing, clearing, grading) or construction if this work would commence between February 1st and August 31st (the nesting season). The nesting survey should include walking transects to search for ground nesting birds, and an examination of all trees onsite and within 200 feet of the entire project site (i.e., within a zone of influence of nesting birds). The zone of influence includes those areas outside the project site where birds could be disturbed by earth- moving vibrations and/or other construction-related noise.

Biological Resources Analysis
SMP-39
Alameda County, California

If birds are identified nesting on or within the zone of influence of the construction project, a qualified biologist shall establish a temporary protective nest buffer around the nest(s). The nest buffer should be staked with orange construction fencing. The buffer must be of sufficient size to protect the nesting site from construction-related disturbance and shall be established by a qualified ornithologist or biologist with extensive experience working with nesting birds near and on construction sites. Typically, adequate nesting buffers are 75 feet from the nest site or nest tree dripline for small birds and up to 300 feet for sensitive nesting birds that include several raptor species known the region of the project site but that are not expected to occur on the project site. Upon completion of nesting surveys, if nesting birds are identified on or within a zone of influence of the project site, a qualified ornithologist/biologist that frequently works with nesting birds shall prescribe adequate nesting buffers to protect the nesting birds from harm while the project is constructed.

No construction or earth-moving activity shall occur within any established nest protection buffer prior to September 1 unless it is determined by a qualified ornithologist/biologist that the young have fledged (that is, left the nest) and have attained sufficient flight skills to avoid project construction zones, or that the nesting cycle is otherwise completed. In the region of the project site, most species complete nesting by mid-July. This date can be significantly earlier or later, and would have to be determined by the qualified biologist. At the end of the nesting cycle, and fledging from the nest by its occupants, as determined by a qualified biologist, temporary nesting buffers may be removed and construction may commence in established nesting buffers without further regard for the nest site. If active nesting buffers are established and a biologist does not confirm that the nesting cycle is completed, then the nesting buffers must be maintained until the end of the CDFW recognized nesting season (September 1). *Implementation of these mitigation measures would reduce impacts to nesting birds to a level regarded as less than significant pursuant to CEQA.*

13.3 Impact BIO-2. Development of the Project Could Have a Potentially Significant Adverse Impact on Western Burrowing Owl (Potentially Significant)

While western burrowing owls have not been observed on the project site and their likelihood of presence is low, suitable nesting and foraging habitat (e.g., California ground squirrel burrows) occur on the project site. Since the western burrowing owl is a mobile species, impact avoidance measures are warranted. The closest known record is one mile northwest of the project site (Occurrence No. 457). The western burrowing owl is a California Species of Special Concern. This raptor (that is, bird of prey), its nest, eggs, and young are protected under California Fish and Game Code Sections 3503, 3503.5. As such, the project may result in impacts to the western burrowing owl that would be **potentially significant**. This impact could be mitigated to a level considered less than significant pursuant to CEQA.

13.4 Mitigation Measure BIO-2. Western Burrowing Owl

Based on the presence of this species in the project vicinity and the potential habitat found on the project site, a survey for burrowing owls should be conducted.

CDFW's Staff Report 2012 states that take avoidance (preconstruction) surveys should be conducted 14 days prior or less to initiating ground disturbance. As burrowing owls may

Biological Resources Analysis
SMP-39
Alameda County, California

recolonize a site after only a few days, time lapses between project activities trigger subsequent take avoidance surveys including but not limited to a final survey conducted within 24 hours prior to ground disturbance to ensure absence. If no owls are found during these surveys, no further regard for the burrowing owl would be necessary.

a. Burrowing owl surveys should be conducted by walking the entire project site and (where possible) in areas within 150 meters (approx. 500 feet) of the project impact zone. The 150-meter buffer zone is surveyed to identify burrows and owls outside of the project area which may be impacted by factors such as noise and vibration (heavy equipment) during project construction.

Pedestrian survey transects should be spaced to allow 100 percent visual coverage of the ground surface. The distance between transect center lines should be 7 meters to 20 meters and should be reduced to account for differences in terrain, vegetation density, and ground surface visibility. Poor weather may affect the surveyor's ability to detect burrowing owls thus, avoid conducting surveys when wind speed is greater than 20 kilometers per hour and there is precipitation or dense fog. To avoid impacts to owls from surveyors, owls and/or occupied burrows should be avoided by a minimum of 50 meters (approx. 160 ft.) wherever practical to avoid flushing occupied burrows. Disturbance to occupied burrows should be avoided during all seasons.

b. If burrowing owls are detected on the site, the following restricted activity dates and setback distances are recommended per CDFW's Staff Report (2012).

- From April 1 through October 15, low disturbance activities should have a 200 meter buffer while high disturbance activities should have a 500 meter buffer from occupied nests.
- From April 1 through August 15, however, medium disturbance activities should have a 500 meter buffer from occupied nests. Medium disturbance activities can have a reduced buffer of 200 meters starting August 16 through October 15.
- From October 16 through March 31, low disturbance activities should have a 50 meter buffer, medium disturbance activities should have a 100 meter buffer, and high disturbance activities should have a 500 meter buffer from occupied nests.
- No earth-moving activities or other disturbance should occur within the aforementioned buffer zones of occupied burrows unless monitoring of the nest site by a qualified biologist determines that the owls are acclimated to the disturbance and would not be disturbed by a smaller buffer. These buffer zones should be fenced as well. If burrowing owls were found in the project area, a qualified biologist would also need to delineate the extent of burrowing owl habitat on the site.
- If western burrowing owls are found occupying the project site they may be passively relocated from the project site between October 1 and February 1. Passive removal shall be conducted by a qualified biologist with demonstrated experience with passive relocation.

c. Finally, in accordance with the 2012 Staff Report, if burrowing owls were found nesting onsite, credits would have to be purchased from a mitigation bank to offset the project's habitat

Biological Resources Analysis
SMP-39
Alameda County, California

loss on the burrowing owl. This would be developed in coordination with CDFW and the City of Livermore.

These mitigation measures would reduce impacts to western burrowing owl to a level considered less than significant.

Biological Resources Analysis
SMP-39
Alameda County, California

14. LITERATURE CITED

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Figure 1. SMP-39 Project Site
Regional Map
Livermore, California

County: Alameda
Map Preparation Date: October 8, 2021

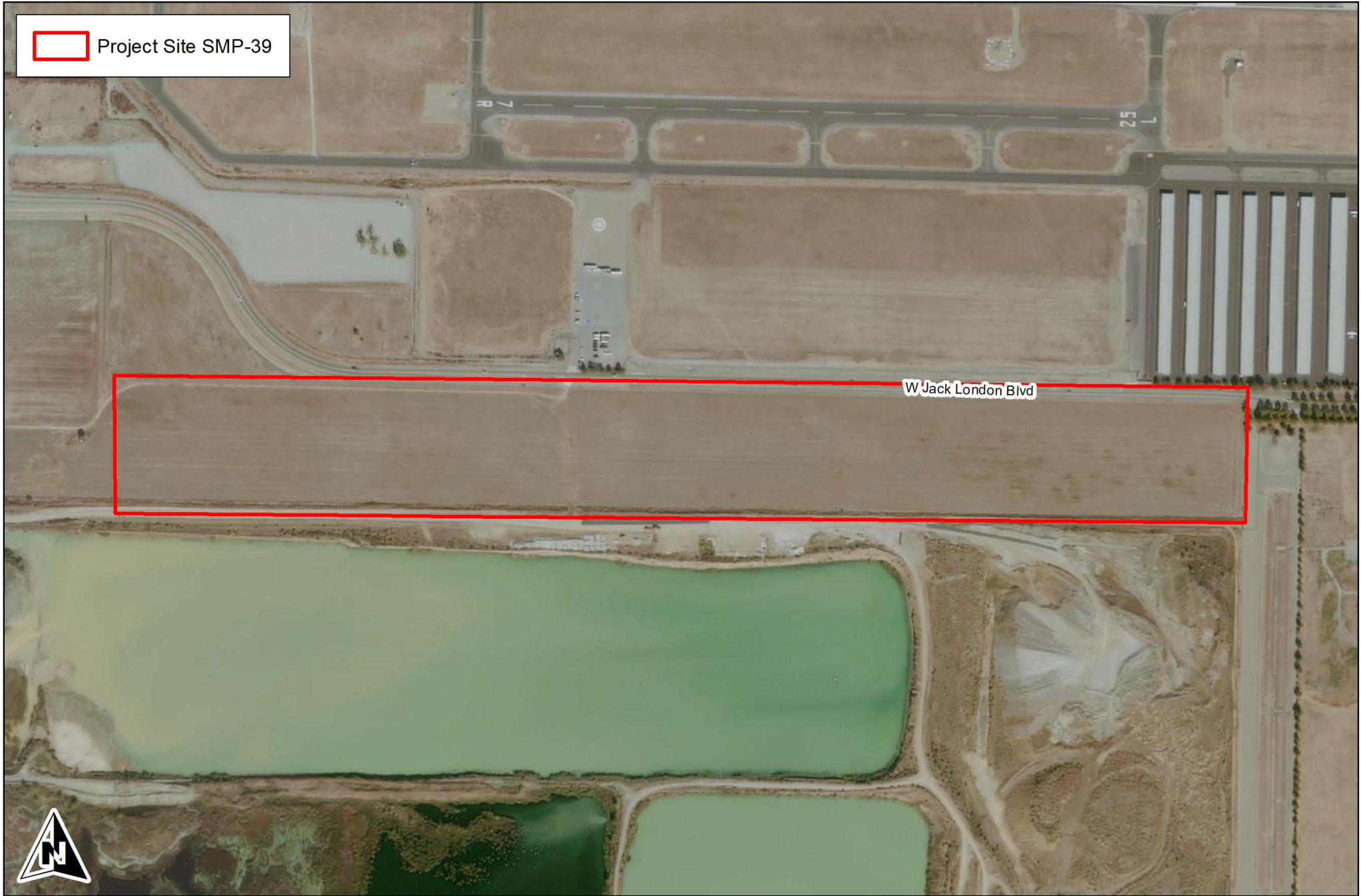


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Figure 2. SMP-39 Project Site
Location Map
Livermore, California

37.608723 -121.822431
Land Grant
7.5-Minute Livemire quadrangle
Aerial Photograph Source: ESRI
Map Preparation Date: October 8, 2021

 Project Site SMP-39



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0 250 500 1,000 1,500 Feet

Figure 3. Aerial Photograph of the
SMP-39 Project Site
Livermore, California

Aerial Photograph Source: ESRI
Map Preparation Date: October 8, 2021

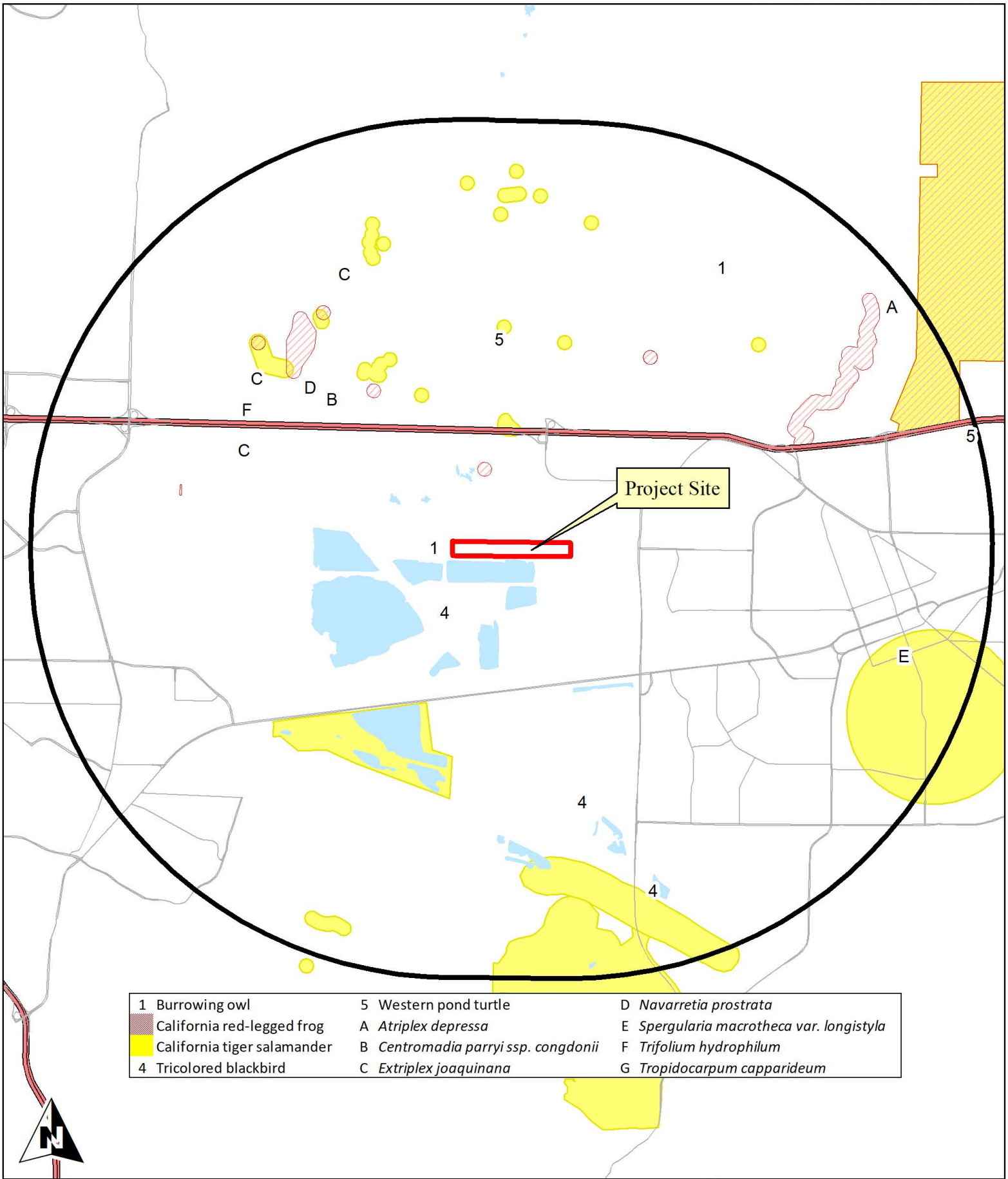


Figure 4. Known Special-Status CNDDDB Species Records Within 3 Miles of the SMP-39 Project Site

Table 1
Plant Species Observed at the SMP-39 Project Site

Angiosperms - Dicots

Apiaceae

**Foeniculum vulgare* Sweet fennel

Asteraceae

Baccharis pilularis subsp. consanguinea Coyote brush

Baccharis pilularis subsp. pilularis Baccharis

**Carduus pycnocephalus subsp. pycnocephalus* Italian thistle

**Dittrichia graveolens* Stinkwort

Erigeron canadensis Horseweed

Boraginaceae

Amsinckia douglasiana Douglas' fiddleneck

Brassicaceae

**Brassica nigra* Black mustard

**Lepidium latifolium* Broadleaf pepperweed

Chenopodiaceae

**Salsola tragus* Russian-thistle

Convolvulaceae

**Convolvulus arvensis* Bindweed

Juglandaceae

Juglans californica Southern California black walnut

Malvaceae

Malvella leprosa Alkali mallow

Onagraceae

Epilobium brachycarpum Summer cottonweed

Angiosperms - Monocots

Poaceae

**Avena barbata* Slender wild oat

**Bromus diandrus* Ripgut grass

**Bromus hordeaceus* Soft chess

**Cortaderia selloana* Pampas grass

Table 2
Wildlife Species Observed on the SMP-39 Project Site

Reptiles

Western fence lizard	<i>Sceloporus occidentalis</i>
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Birds

Turkey vulture	<i>Cathartes aura</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Red-tailed hawk	<i>Buteo jamaicensis</i>
American kestrel	<i>Falco sparverius</i>
Killdeer	<i>Charadrius vociferus</i>
Black phoebe	<i>Sayornis nigricans</i>
Common raven	<i>Corvus corax</i>
Violet-green swallow	<i>Tachycineta thalassina</i>
Barn swallow	<i>Hirundo rustica</i>
White-crowned sparrow	<i>Zonotrichia leucophrys</i>
House finch	<i>Haemorhous mexicanus</i>

Mammals

Black-tailed jackrabbit	<i>Lepus californicus</i>
California ground squirrel	<i>Otospermophilus beecheyi</i>

Table 3
Special Status Plant Species Known to Occur Within 3 Miles of the SMP-39 Project Site

Family Taxon Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Asteraceae					
<i>Centromadia parryi condonii</i> Congdon's tarplant	Fed: - State: - CNPS: Rank 1B.2	May-November	Valley and foothill grassland (alkaline).	The closest recorded occurrence of this species was recorded in 1999 and is located 1.06 miles northwest of the project site (Occurrence No. 11).	None. No alkaline habitat or any other suitable habitat on the project site. No impact expected.
Brassicaceae					
<i>Tropidocarpum capparideum</i> Caper-fruited tropidocarpum	Fed: - State: - CNPS: Rank 1B.1	March-April	Valley and foothill grassland (alkaline hills).	It is unknown when the closest recorded occurrence of this species was recorded and is located 0.52 miles east of the project site (Occurrence No. 11).	None. No alkaline habitat or any other suitable habitat on the project site. No impact expected.
Caryophyllaceae					
<i>Spergularia macrotheca longistyla</i> Long-styled sand-spurrey	Fed: - State: - CNPS: Rank 1B.2	February-May	Alkaline marshes, mud flats, meadows, hot springs. Occurs at elevations less than 200 M.	The closest recorded occurrence of this species was recorded in 1943 and is located 1.49 miles east of the project site (Occurrence No. 2).	None. No aquatic, alkaline habitat or any other suitable habitat on the project site. No impact expected.
Chenopodiaceae					
<i>Atriplex depressa</i> Brittlescale	Fed: - State: - CNPS: Rank 1B.2	May-October	Chenopod scrub; playas; valley and foothill grassland; [alkaline or clay].	The closest recorded occurrence of this species was recorded in 2000 and is located 2.72 miles northeast of the project site (Occurrence No. 65).	None. No alkaline habitat or any other suitable habitat on the project site. No impact expected.
<i>Extriplex joaquinana</i> San Joaquin spearscale	Fed: - State: - CNPS: Rank 1B.2	April-October	Chenopod scrub; meadows; valley and foothill grassland; [alkaline].	The closest recorded occurrence of this species was recorded in 1993 and is located 1.57 miles northwest of the project site (Occurrence No. 35).	None. No alkaline habitat or any other suitable habitat on the project site. No impact expected.

Table 3
Special Status Plant Species Known to Occur Within 3 Miles of the SMP-39 Project Site

Family	Taxon	Common Name	Status*	Flowering Period	Habitat	Area Locations	Probability on Project Site
Fabaceae							
	<i>Trifolium hydrophilum</i>		Fed: - State: - CNPS: Rank 1B.2	April-June	Marshes and swamps; valley and foothill grassland (mesic, alkaline); vernal pools. 0-300 m.	The closest recorded occurrence of this species was recorded in 2002 and is located 1.5 miles northwest of the project site (Occurrence No. 7).	None. No aquatic, alkaline habitat or any other suitable habitat on the project site. No impact expected.
	Saline clover						
Polemoniaceae							
	<i>Navarretia prostrata</i>		Fed: State: CNPS: Rank 1B.1	April-July	Coastal scrub, meadows and seeps, valley and foothill grassland (alkaline), and vernal pools (mesic). Elevation 15-1210 m.	The closest recorded occurrence of this species was recorded in 2010 and is located 1.27 miles northwest of the project site (Occurrence No. 61).	None. No alkaline habitat or any other suitable habitat on the project site. No impact expected.
	Prostrate vernal pool navarretia						

***Status**

- Federal:
- FE - Federal Endangered
 - FT - Federal Threatened
 - FPE - Federal Proposed Endangered
 - FPT - Federal Proposed Threatened
 - FC - Federal Candidate
- State:
- CE - California Endangered
 - CT - California Threatened
 - CR - California Rare
 - CC - California Candidate
 - CSC - California Species of Special Concern
- CNPS:
- Rank 1A - Presumed extinct in California
 - Rank 1B - Plants rare, threatened, or endangered in California and elsewhere
 - Rank 1B.1 - Seriously endangered in California (over 80% occurrences threatened/ high degree and immediacy of threat)
 - Rank 1B.2 - Fairly endangered in California (20-80% occurrences threatened)
 - Rank 1B.3 - Not very endangered in California (<20% of occurrences threatened or no current threats known)

- CNPS Continued:
- Rank 2 - Plants rare, threatened, or endangered in California, but more common elsewhere
 - Rank 2A - Extirpated in California, common elsewhere
 - Rank 2B.1 - Seriously endangered in California, but more common elsewhere
 - Rank 2B.2 - Fairly endangered in California, but more common elsewhere
 - Rank 2B.3 - Not very endangered in California, but more common elsewhere
 - Rank 3 - Plants about which we need more information (Review List)
 - Rank 3.1 - Plants about which we need more information (Review List) Seriously endangered in California
 - Rank 3.2 - Plants about which we need more information (Review List) Fairly endangered in California
 - Rank 4 - Plants of limited distribution - a watch list

Table 4

Special Status Wildlife Species Known to Occur Within 3 Miles of the SMP-39 Project Site

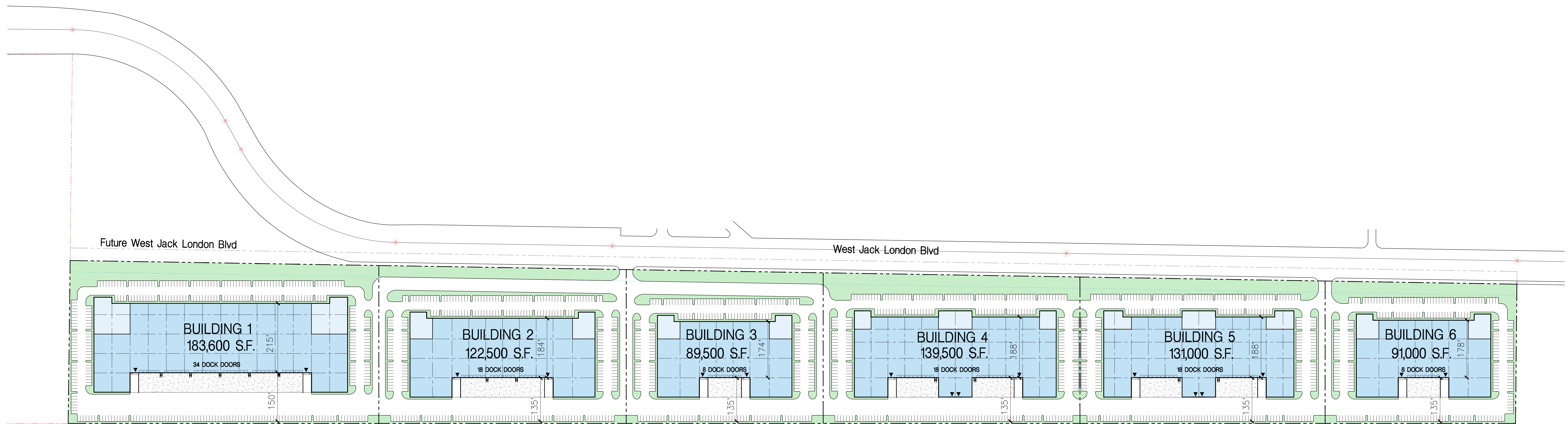
Species	*Status	Habitat	Closest Locations	Probability on Project Site
Amphibians				
California tiger salamander (Cnt CA DPS) <i>Ambystoma californiense</i>	Fed: FT State: CT Other:	Found in grassland habitats of the valleys and foothills. Requires burrows for aestivation and standing water until late spring (May) for larvae to metamorphose.	The closest recorded occurrence of this species was recorded in 1992 and is located 0.5 miles north of the project site (Occurrence No. 142).	None. No suitable breeding habitat or over-summering habitat and previous occurrence was seen north of I-580. No impact expected. See text.
California red-legged frog <i>Rana draytonii</i>	Fed: FT State: CSC Other:	Occurs in lowlands and foothills in deeper pools and streams, usually with emergent wetland vegetation. Requires 11-20 weeks of permanent water for larval development.	The closest recorded occurrence of this species was recorded in 1997 and is located 0.44 miles north of the project site (Occurrence No. 227).	None. No suitable aquatic habitat onsite and surrounding farming and development would not support this species. No impact expected. See text.
Reptiles				
Western pond turtle <i>Emys marmorata</i>	Fed: - State: CSC Other:	Uncommon to common in suitable aquatic habitat throughout CA, west of the Sierra-Cascade crest and absent from desert regions, except the Mojave River. Associated with permanent or nearly permanent water in a wide variety of habitat types.	The closest recorded occurrence of this species was recorded in 2010 and is located 1.37 miles north of the project site (Occurrence No. 1251).	None. No suitable aquatic habitat onsite and surrounding farming and development would not support this species. No impact expected.
Birds				
Western burrowing owl <i>Athene cunicularia hypugaea</i>	Fed: -- State: CSC Other:	Found in open, dry annual or perennial grasslands, deserts and scrublands characterized by low-growing vegetation. Subterranean nester, dependent upon burrowing mammals, most notably, the California ground squirrel.	The closest recorded occurrence of this species was recorded in 2004 and is located near the west end of the project site (Occurrence No. 457).	Not likely. Site is highly disturbed. Preconstruction surveys will be conducted prior to construction activities. No impact expected. See text.
Tricolored blackbird <i>Agelaius tricolor</i>	Fed: - State: CT Other: -	Colonial nester in dense cattails, tules, brambles or other dense vegetation. Requires open water, dense vegetation, and open grassy areas for foraging.	The closest recorded occurrence of this species was recorded in 1980 and is located near the south end of the project site (Occurrence No. 254).	None. This species has not been observed near the project location in nearly 40 years and there is no aquatic habitat of any type on the project site. No impact expected.

Table 4

Special Status Wildlife Species Known to Occur Within 3 Miles of the SMP-39 Project Site

Species	*Status	Habitat	Closest Locations	Probability on Project Site
*Status				
Federal:		State:	State:	
FE - Federal Endangered	CE - California Endangered		WL - Watch List. Not protected pursuant to CEQA	
FT - Federal Threatened	CT - California Threatened		S1 - Critically Imperiled	
FPE - Federal Proposed Endangered	CR - California Rare		S2 - Imperiled	
FPT - Federal Proposed Threatened	CC - California Candidate		Global:	
FC - Federal Candidate	CSC - California Species of Special Concern		G2 - Imperiled	
FPD - Federally Proposed for delisting	FP - Fully Protected		G4 - Apparently Secure	

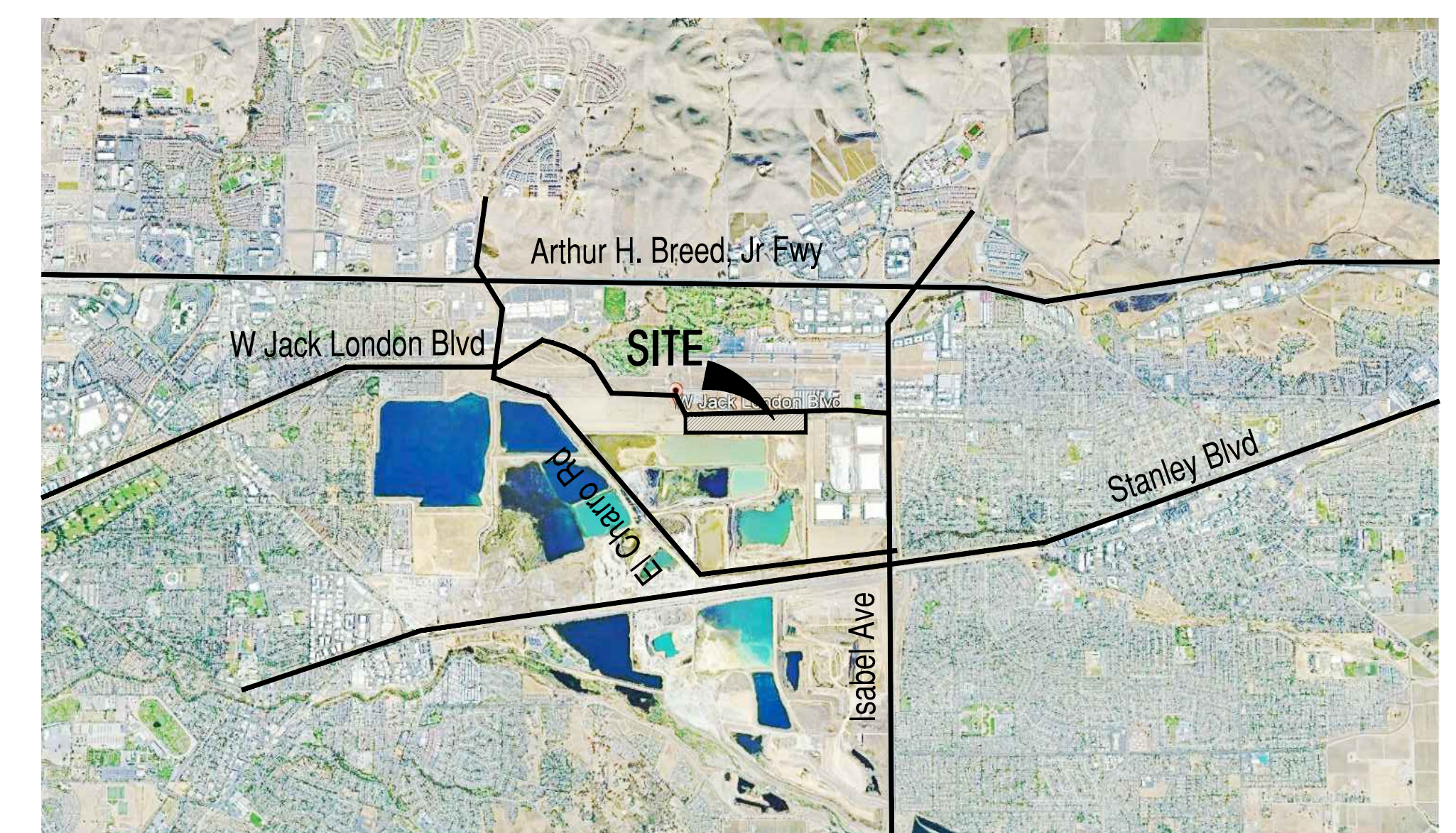
** This frog is listed as "endangered" in the Southern Sierra, central, and southern California coasts and "threatened" in the Northern Sierra and Feather River. This frog is not protected pursuant to CESA on the northern coast of California (all counties north of Marin and Solano Counties north to Oregon boarder).



Tabulation

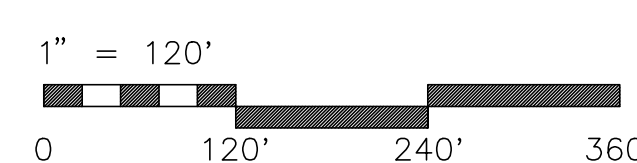
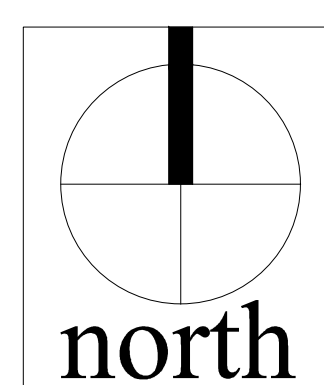
	BLDG.1	BLDG.2	BLDG.3	BLDG.4	BLDG.5	BLDG.6	TOTAL
SITE AREA							
In s.f.	473,671	367,700	285,788	363,649	337,531	256,615	2,084,953 s.f.
In acres	10.87	8.44	6.56	8.35	7.75	5.89	47.86 ac
BUILDING AREA							
Office	20,000	10,000	6,000	10,000	10,000	6,000	62,000 s.f.
Industrial	163,600	112,500	83,500	129,500	121,000	85,000	695,100 s.f.
TOTAL	183,600	122,500	89,500	139,500	131,000	91,000	757,100 s.f.
COVERAGE							
	38.8%	33.3%	31.3%	38.4%	38.8%	35.5%	36.3%
AUTO PARKING REQUIRED							
Office: 1/300 s.f.	67	33	20	33	33	20	207 stalls
Industrial 1/1,200 s.f.	136	94	70	108	101	71	579 stalls
TOTAL	203	127	90	141	134	91	786 stalls
CLIENT REQUIRED AUTO PARKING							
Standard 2/1000 s.f.	374	245	177	279	256	176	1,507 stalls
AUTO PARKING PROVIDED							
Standard (9' x 19')	360	280	225	287	277	234	1,663 stalls

Aerial Map



Legend

- POTENTIAL OFFICE
- INDUSTRIAL
- LANDSCAPE
- DRIVE THRU DOOR



Conceptual Site Plan Jack London Blvd.

Livermore, CA



September 28, 2021 / Job #20061

Scheme 6



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