Appendix C:
Biological Resources Supporting Information

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LIVE OAK ASSOCIATES, INC.

an Ecological Consulting Firm

BIOTIC EVALUATION
SPOTORNO RANCH

CITY OF PLEASANTON, ALAMEDA COUNTY, CALIFORNIA

By:

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1.0 INTRODUCTION

Live Oak Associates, Inc. (LOA) completed an analysis of the potential biological impacts of the 111-acre proposed Spotorno Ranch project. The Spotorno Ranch property is located on the east side of Alisal Street in the City of Pleasanton, Alameda County, California. The proposed project is the development of 39 homes and associated infrastructure on approximately 28 to 30 acres of the site, with the remaining approximately 81 acres set aside as a conservation area to be preserved in perpetuity under a deed restriction, conservation easement, or other similar conservation mechanism, with a habitat management plan (hereafter referred to as the "conservation area". The approximately 28 to 30-acre area proposed for development occurs in the lower and flatter western portion of the site near Alisal; while the proposed conservation area will occur within foothills in the eastern portion of the site above the 25% slope line. The site is bound by Alisal Street to the west and south, Westbridge Lane to the southeast, agricultural fields and residences to the north, and open rangelands to the east. The area of proposed development is primarily used as agricultural land for growing hay and the area proposed as a conservation area is used as rangeland for cattle.

This report analyzes potential impacts of future site development by the proposed Spotorno Ranch development on sensitive biotic resources, significant biotic habitats, regional fish and wildlife movement corridors, and existing local, state, and federal natural resource protection laws regulating land use. Provisions of the California Environmental Quality Act (CEQA), the federal Clean Water Act (CWA), the state and federal endangered species acts (CESA and FESA, respectively), California Fish and Wildlife Code, and California Water Code could greatly affect project costs, depending on the natural resources present on the site. The primary objectives of this report are as follows:

- Summarize all site-specific information related to existing biological resources;
- Make reasonable inferences about the biological resources that could occur on the site based on habitat suitability and the proximity of the site to a species' known range;
- Summarize all state and federal natural resource protection laws that may be relevant to possible future site development;
- Identify and discuss biological resource issues specific to the site that could constrain future development; and

- Identify potential avoidance, minimization and mitigation options that could significantly reduce the magnitude of any likely impacts to biological resources associated with future site development.

Natural resource issues related to these state and federal laws have been identified in past planning studies conducted in the general project area, and it is reasonable to presume that such issues could be relevant to the site examined in this report. A number of state and federally listed animals, as well as other special status animal species (i.e., candidate species for listing and California species of special concern) have been documented on the site or in close proximity to the site. These species include, but are not limited to, state and/or federally listed species such as the California tiger salamander and Callippe silverspot butterfly; California species of special concern including the burrowing owl and American badger; and rare plants including Congdon's tarplant (*Centromadia parryi* ssp. *congdonii*). This report evaluates the site's suitability for these and other species.

CEQA is also concerned with project impacts on riparian habitat, wildlife movement corridors, fish and wildlife habitat, and jurisdictional wetlands, as well as project compliance with special ordinances and state laws protecting regionally sensitive biotic resources, including approved habitat conservation plans. Therefore, this report addresses the relevance of each of these issues to eventual site development.

The impact analysis discussed in Section 3.0 of this report is based on the known and potential biotic resources of the study area as discussed in Section 2.0 of this report. The evaluation of resources of the site is largely based on biological and wetland delineation survey work conducted on the site by LOA during the period from July 2012 through May 2017, as well as on a June 2008 Biological Resources Analysis prepared by Olberding Environmental, Inc. (Olberding Report). Other important sources of information used in the preparation of this analysis included: (1) the *California Natural Diversity Data Base* (CDFW 2017); (2) the *Online Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2017); (3) current listings from Special Plants and Animals (CDFW 2017); (4) numerous planning documents and biological studies for projects in the area, some of which have been prepared by LOA; (5) manuals and references related to plants and animals of the region; (6) a June 2016 site meeting with Keith Hess/USACE; and (7) an August 26, 2015 site meeting with Marcia Grefsrud/CDFW and subsequent follow up emails.

A number of state and federally listed species, as well as other special status species (i.e., candidate species for listing and California Species of Special Concern) have been documented in the vicinity of the project site. These include, but are not limited to, animals such as the Callippe silverspot butterfly (*Speyeria callippe callippe*), California tiger salamander (*Ambystoma californiense*), burrowing owl (*Athene cunicularia*), and American badger (*Taxidea taxus*); and plants such as Congdon's tarplant (*Centomadia parryi* ssp. *congdonii*). This report evaluates the project site's suitability as habitat for these and other species; impacts that may occur to these resources as a result of the project; and, where potentially significant impacts are identified, includes mitigations to lessen such impacts on these resources to a less-than-significant level.

1.1 Project Description

The proposed project includes construction of 39 single family homes on lots averaging 26,000 s.f. (0.6 acres), with a minimum lot size of 17,500 s.f. (0.4 acres). The homes will be clustered on approximately 28 to 30 acres on the low, flat portion of the site, below the 25% slope line, while approximately 81 acres of open space on the more visible foothills will be preserved as the most prominent feature of the site. The conservation area acreage is proposed to be preserved in perpetuity via the establishment of in a deed restriction, conservation easement, or similar conservation mechanism, along with a habitat management plan. Pedestrian access from Alisal will enter through a small passive park surrounding an existing wetland area near the western boundary of the site, and then continue on a trail through an open space parcel that runs between the homes in that portion of the site. The trail then continues to the open space area on the eastern side of the site, ultimately connecting to the open space to the north of the site. In addition to the homes, trails and associated infrastructure, the project will include the stabilization of a portion of the slopes occurring to the east of the development and above the 25% slope line, approximately 4.25 acres.

The project proposal includes a General Plan Amendment and corresponding amendment to the Happy Valley Specific Plan (HVSP) which would:

a) change the MDR designation on the upper lots to Open Space, and
b) change the SRDR designation on the Flats area to LDR.

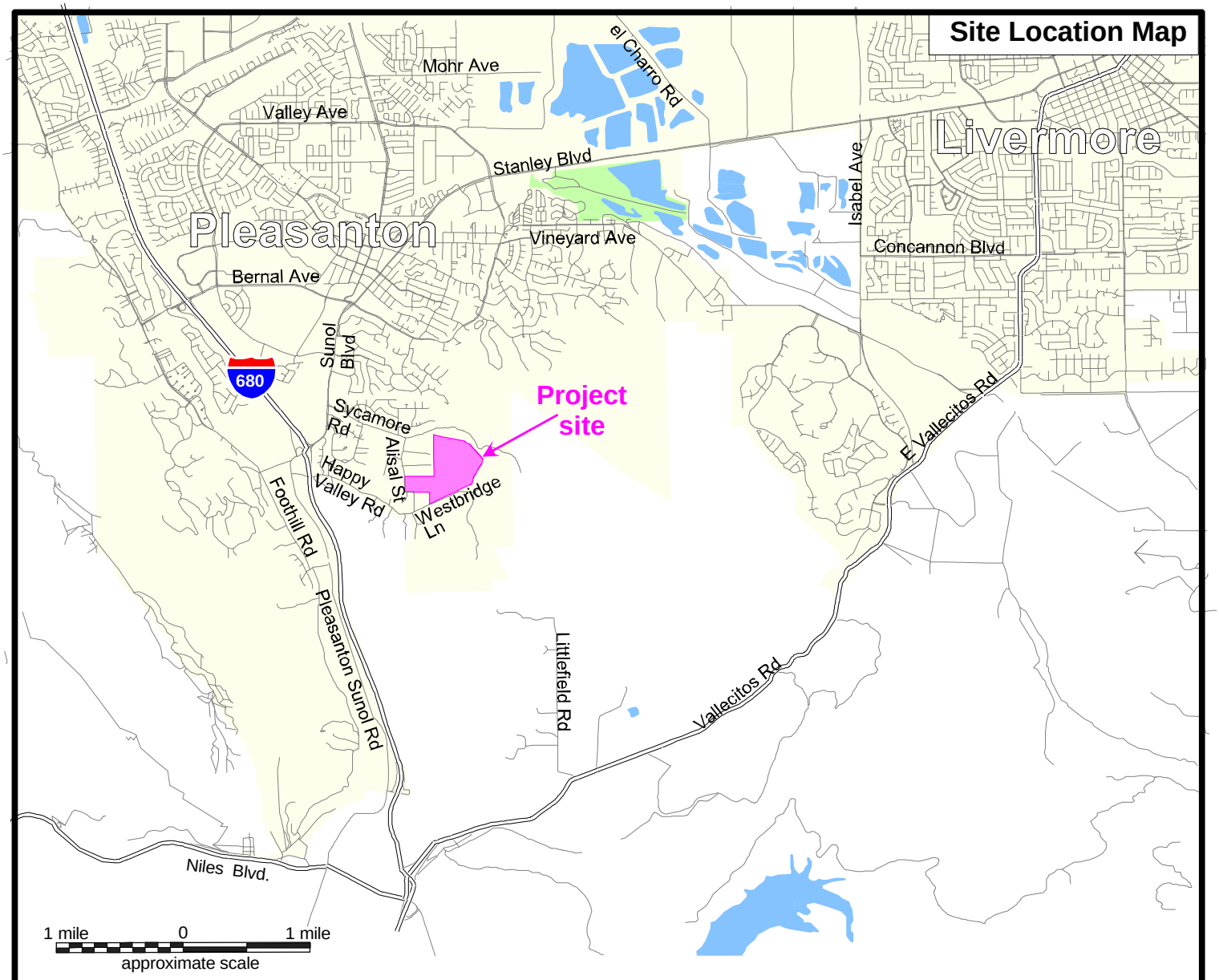
Coincident with these actions, the proposed zoning would also be changed to delete the 75 PUD-MDR lots from the hillside (rezoning to PD- Open Space), and a change in the zoning of the Spotorno Flats area from PUD-SRDR to PUD-LDR.

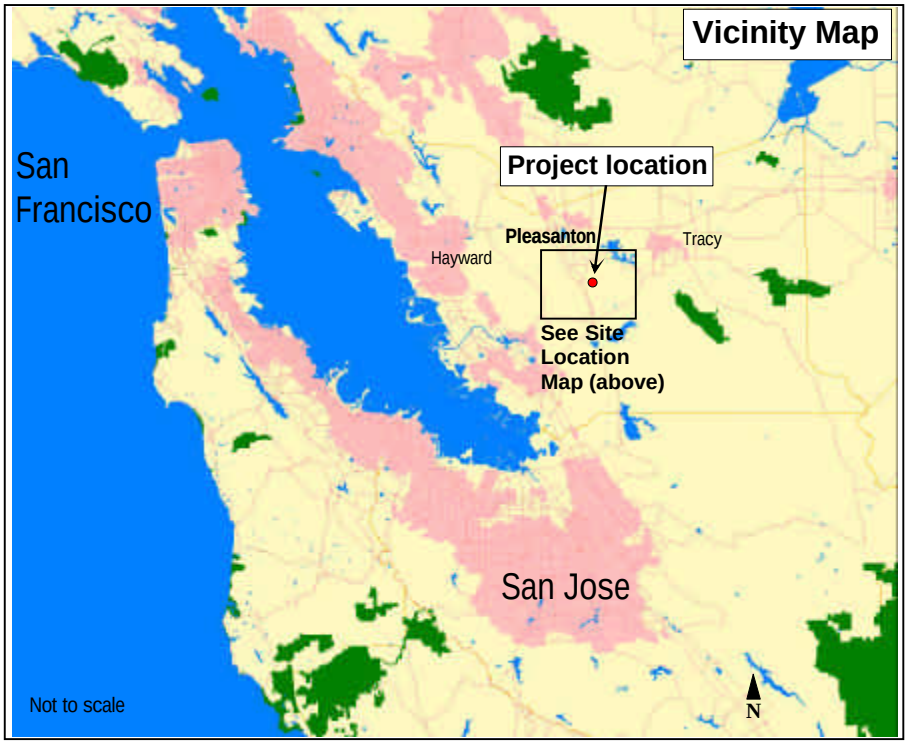
2.0 EXISTING CONDITIONS

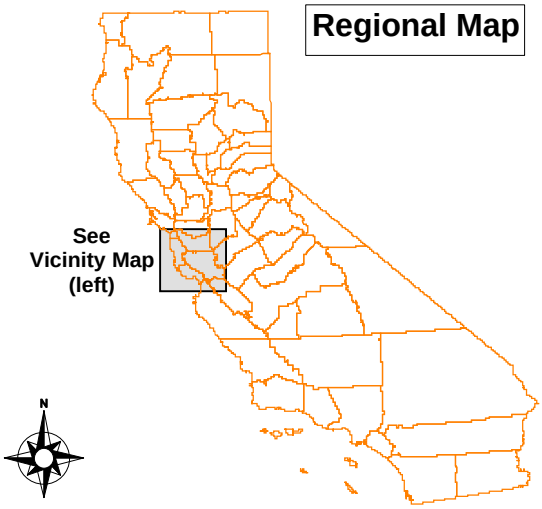
Regional Setting

The 111-acre Spotorno Ranch project site is located within the City of Pleasanton (Figure 1) in the Livermore 7.5" U.S. Geological Survey (USGS) quadrangle (Figure 2). The approximately 28 to 30-acre development area is bound by Alisal Street to the west and south, Westbridge Lane to the southeast, agricultural fields and residences to the north, and open rangelands to the east. The site is used primarily as agricultural lands for growing hay and as rangeland for cattle. Topographically, the western portion of the site is fairly level at approximately 380 feet (116 meters) with an increase in slope towards the eastern edge to approximately 480 feet (147 meters) National Geodetic Vertical Datum (NGVD). Surrounding land uses are primarily open space/agricultural (i.e. rangeland), residential, golf course, and major and minor roadways.

Four soil-mapping units have been identified on the site and these soils are described in greater detail in Table 1 and depicted in Figure 3. None of the soils of the site are considered hydric soils, i.e. soils that under appropriate hydrological conditions may support wetlands, however, hydric inclusions may occur. All of the soil types of the project site are considered well-drained. None of the soils of the site is a serpentine or alkaline soil, therefore, they would not be expected to support special status plant species that are endemic to serpentine or alkaline soils.



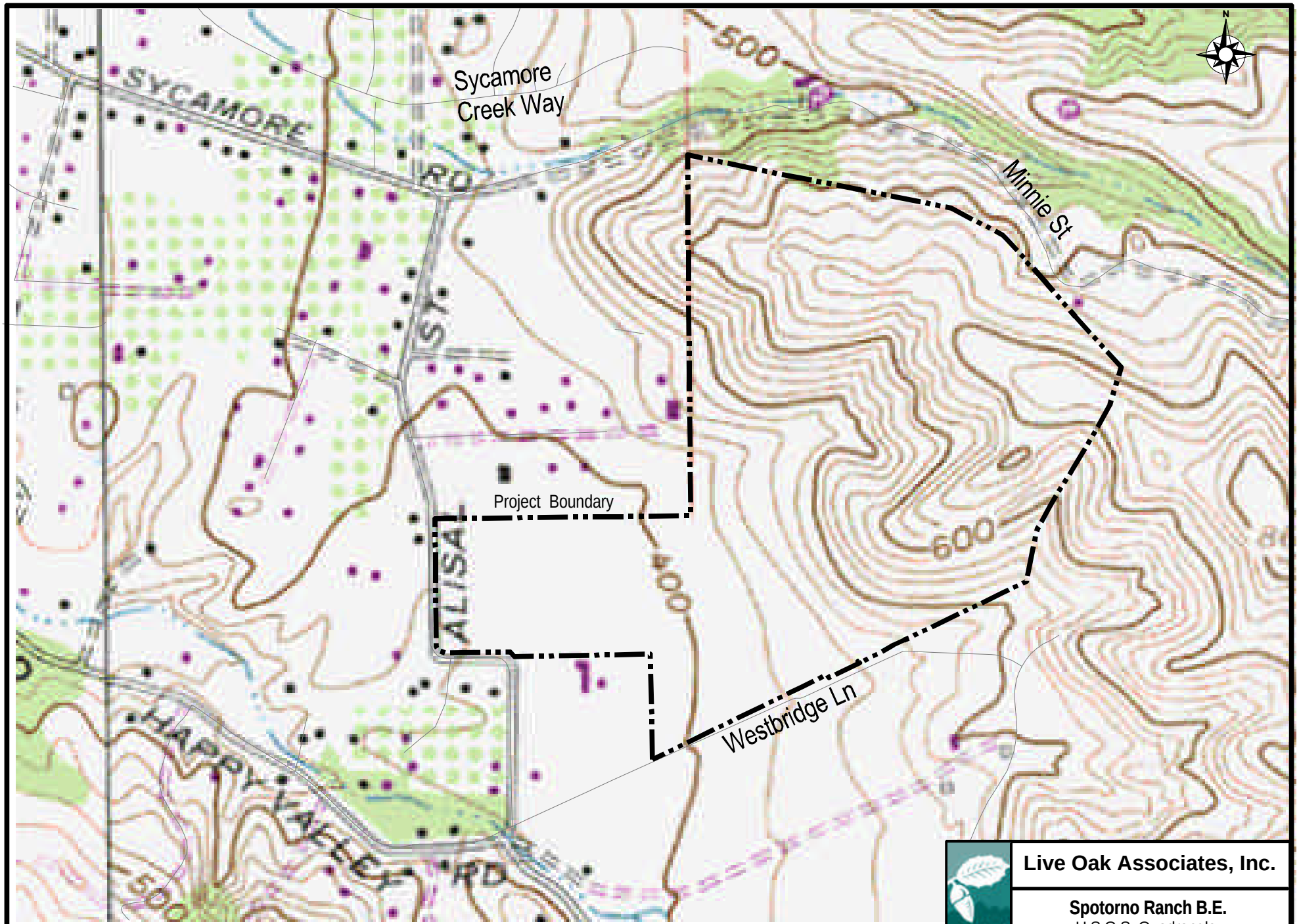




Live Oak Associates, Inc.

Spotorno Ranch B.E.
Site / Vicinity Map

Date	Project #	Figure #
4/4/2017	1656-04	1



1,000' 0 1,000 feet

approximate scale

From USGS
Livermore 7.5' Quadrangle 1980

Live Oak Associates, Inc.

Spotorno Ranch B.E.
U.S.G.S. Quadrangle

Date	Project #	Figure #
4/4/2017	**1656-04**	**2**

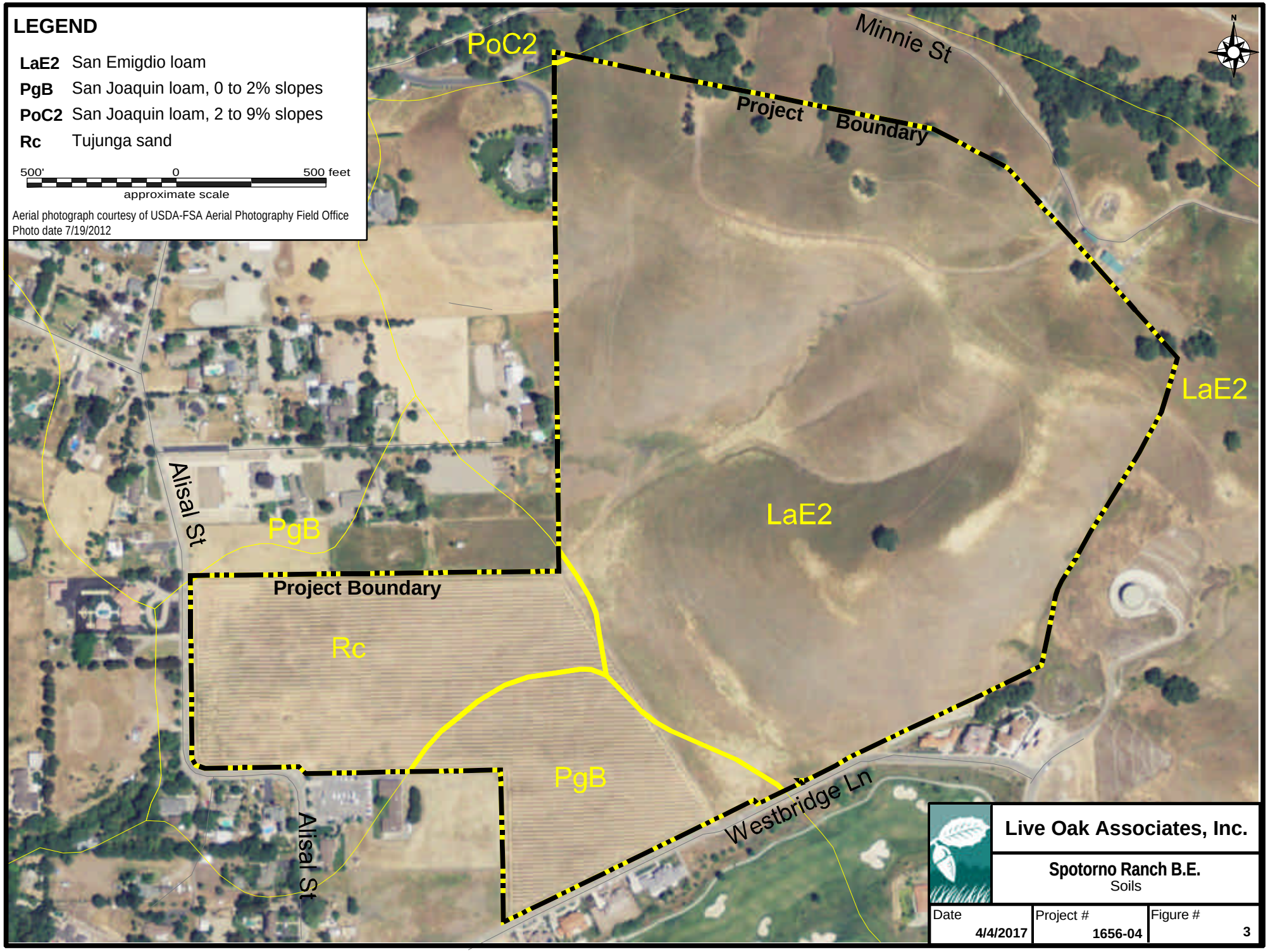

LEGEND
LaE2 San Emigdio loam
PgB San Joaquin loam, 0 to 2% slopes
PoC2 San Joaquin loam, 2 to 9% slopes
Rc Tujunga sand
500' 0 500 feet
approximate scale
Aerial photograph courtesy of USDA-FSA Aerial Photography Field Office
Photo date 7/19/2012
PoC2
Minnie St
Project Boundary
LaE2
LaE2
Alisal St
PgB
Project Boundary
Rc
PgB
Alisal St
Westbridge Ln
N
Live Oak Associates, Inc.
Spotorno Ranch B.E.
Soils
Date 4/4/2017
Project # 1656-04
Figure # 3

Table 1. Descriptions of soil mapping units of the study area (USDA NRCS Web Soil Survey).

Soil Series/Soil	Map Unit Symbol	Parent Material	Drainage Class	% Hydric Composition
SAN EMIGDIO SERIES San Emigdio Loam	LaE2	Sedimentary alluvium	Well-drained	0
SAN JOAQUIN SERIES San Joaquin loam, 0-2% slopes	PgB	alluvium derived from mixed but dominantly granitic rock sources	Well and moderately well-drained	0
San Joaquin loam, 2-9% slopes	PoC2	alluvium derived from mixed but dominantly granitic rock sources	Well and moderately well-drained	0
TUJUNGA SERIES Tujunga sand	Rc	alluvium from granitic sources	Somewhat excessively drained	0

http://soils.usda.gov/technical/classification/osd/index.html

The East Bay Area has a Mediterranean climate with warm to hot, dry summers and cool winters. Annual precipitation in the general vicinity of the site is highly variable from year to year, but average annual rainfall is approximately 16 inches, most of which falls between October and April. Stormwater runoff readily infiltrates the site's soils; but when field capacity has been reached, gravitational water either drains to an intermittent tributary of Sycamore Creek in the northern portion of the site, or drains to the existing wetlands in the lowest portion of the site near Alisal where it eventually flows into a roadside ditch along Alisal and into an underground culvert.

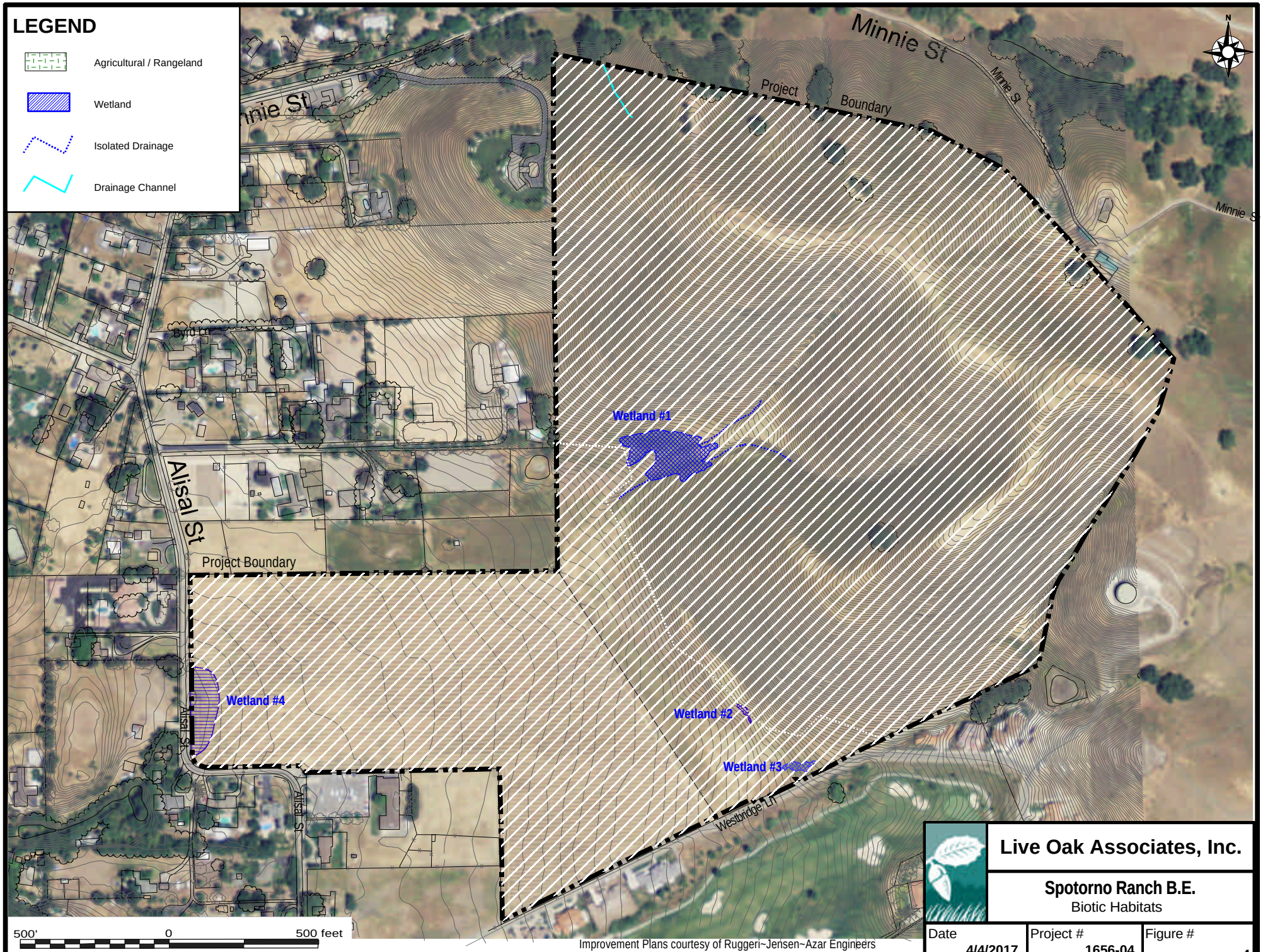
2.1 BIOTIC HABITATS/LAND USES

Biotic habitats and land uses identified on the site include Agricultural/Rangeland, Intermittent Drainage, and Seasonal Wetland (including both isolated and non-isolated wetlands) (Figure 4). These are described in greater detail below.

2.1.1 Agricultural/Rangeland

Agricultural/Rangeland is the largest biotic habitat of the site. The flatter portion of this habitat in the western portion of the site is used to grow hay. The hay is cut and raked, and then cattle are moved into this portion of the ranch to eat the cut hay. This portion of the site is disced on a regular basis. The upper eastern portion of this habitat is used only as rangeland. Vegetation does not appear to differ significantly between the Agricultural and Rangeland portions of this habitat. Vegetation of the Agricultural/Rangeland habitat includes wild oats (*Avena* sp.), soft chess (*Bromus hordeaceus*), red brome (*Bromus madritensis ssp. rubens*), Italian thistle (*Carduus pycnocephalus*), yellow star thistle (*Centaurea solstitialis*), bull thistle (*Cirsium vulgare*), bindweed (*Convolvulus arvensis*), dove weed (*Croton setigerus*), goldenbush (*Ericameria sp.*), filaree (*Erodium sp.*), bristly ox tongue (*Helminthotheca echioides*), tarweed (*Hemizonia sp.*), summer mustard (*Hirschfeldia incana*), barley (*Hordeum marinum*), willowleaf lettuce (*Lactuca saligna*), prickly lettuce (*Lactuca serriola*), bird's foot trefoil (*Lotus corniculatus*), curly dock (*Rumex crispus*), milk thistle (*Silybum marianum*), and purple salsify (*Tragopogon porrifolius*), to name a few.

In addition, an agricultural ditch exists along the northern site boundary that is approximately one to one and a half feet deep, and from one and a half to two feet wide. This ditch is fully vegetated with the same upland vegetation occurring in the rest of the Agricultural/Rangeland habitat with the addition of a small amount of sowthistle (*Sonchus asper*). The ditch does not appear to hold water for any length of time and appears to transport runoff from intermittent drainages of the site to a roadside ditch along Alisal Street which eventually is carried under Alisal Street via a culvert to a riparian area on the other side. This feature has been completely dry during all of LOA's site visits.


LEGEND
Agricultural / Rangeland
Wetland
Isolated Drainage
Drainage Channel
Minnie St
Project Boundary
Minnie St
Minnie St
Wetland #1
Alisal St
Project Boundary
Wetland #4
Alisal St
Alisal St
Wetland #2
Wetland #3
Westbridge Ln
N
500' 0 500 feet
approximate scale
Improvement Plans courtesy of Ruggeri~Jensen~Azar Engineers
Aerial photograph courtesy of USDA-FSA Aerial Photography Field Office
Live Oak Associates, Inc.
Spotorno Ranch B.E.
Biotic Habitats
Date 4/4/2017
Project # 1656-04
Figure # 4

During LOA's first survey in 2012, LOA ecologist Katrina Krakow observed a few individual Congdon's tar plants (*Centromadia parryi ssp. congdonii*) that were not in bloom and just emerging. Congdon's tarplant is a special status plant species and a focal species of the East Alameda County Conservation Strategy (EACCS). The plants were observed near the large wetland area (Wetland #4) adjacent to Alisal, as well as within a small area further east of an existing windmill in a location not associated with wetlands. This species has not been observed on the site in follow-up site visits in 2014, 2015, 2016 or 2017, although not all site visits occurred during this species' blooming season. A focused survey for this species is planned to be conducted in summer and fall 2017. This species will be discussed in greater detail later on in this report.

Wildlife observed in this habitat on the site during 2012 through 2017 surveys included reptiles such as the western fence lizard (*Sceloporus occidentalis occidentalis*), western yellow-bellied racer (*Coluber constrictor mormon*), and northern Pacific rattlesnake (*Crotalus oreganus oreganus*) (identified by remains of a shedded skin); birds including the turkey vulture (*Cathartes aura*), red-tailed hawk (*Buteo jamaicensis*), unidentified gull species, killdeer (*Charadrius vociferus*), northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), barn swallow (*Hirundo rustica*), western blue bird (*Sialia mexicana*), and house finch (*Carpodacus mexicanus*); and mammals including the Botta's pocket gopher (*Thomomys bottae*)(presence of burrows), and black-tailed deer (*Odocoileus hemionus columbianus*). Other mammals including California voles (*Microtus californicus*), domestic cats (*Felis catus*), and domestic dogs (*Canis familiaris*) are likely to occur on the site as well.

Medium-sized and larger mammals that have not been directly observed but which may occur on the site include cottontail (*Sylvilagus audubonii*), black-tailed hare (*Lepus californicus*), coyote (*Canis latrans*), native gray fox (*Urocyon cinereoargenteus*), American badger, striped skunk (*Mephitis mephitis*), Virginia opossum (*Didelphis virginiana*), raccoon (*Procyon lotor*), and introduced red fox (*Vulpes vulpes*).

2.1.2 Intermittent Drainage

Intermittent drainages occur within the proposed open space areas of the site, including a short reach of channel (205 linear feet) which is a tributary of Sycamore Creek in the northern portion

of the site, and three reaches of isolated intermittent drainages (totaling 692 linear feet) that occur in the central portion of the open space area. These channels have been observed to be completely dry during numerous site visits conducted between 2014 and 2017, and are either barren of vegetation or support primarily upland species such as wild oats, soft chess, bull thistle, bindweed, Bermuda grass (*Cynodon dactylon*), spike rush, Italian rye grass (*Festuca perennis*), summer mustard, barley, prickly lettuce, bird's foot trefoil, milk thistle, and clover (*Trifolium sp.*). Wildlife expected to occur in the adjacent grassland habitats would be expected use this habitat type as well.

2.1.3 Seasonal Wetland

Four seasonal wetlands occur on the site. Three of these wetlands, totaling 0.85 acres are isolated and occur on slopes within the open space areas of the site, at or above the 25% slope line. Slope stabilization occurring within the open space area will impact one of these wetlands (Wetland 2, totaling 0.02 acre). The fourth wetland (0.45 acres) occurs near the site's boundary near Alisal Street.

Hydrophytic species dominant in these seasonal wetland areas, along with their wetland indicators, included Mediterranean canary grass (*Phalaris arundinacea*) (FACW) and Mediterranean barley (*Hordeum marinum*) (FAC). Wetlands of the site have been completely dry during all site visits from 2014 through 2016. Wildlife expected to use the seasonal wetlands of the site would be similar to those described in adjacent habitats.

2.2 MOVEMENT CORRIDORS

Ecologists and conservation biologists have expended a great deal of energy since the early 1980's advocating the protection and restoration of landscape linkages among suitable habitat patches. Movement corridors or landscape linkages are usually linear habitats that connect two or more habitat patches (Harris and Gallager 1989), providing assumed benefits to the species by reducing inbreeding depression, and increasing the potential for recolonization of habitat patches. Some researchers have even demonstrated that poor quality corridors can still provide some benefit to the species that use them (Beier 1996).

Beier and Noss (1998) evaluated the claims of the efficacy of wildlife corridors of 32 scientific papers. In general, these authors believed that the utility of corridors was demonstrated in fewer than half of the reviewed papers, and they believed that study design played a role in whether or not given corridors were successful. Examples of well-designed studies supported the value of corridors. They believed, however, that connectivity questions make sense only in terms "of a particular focal species and landscape." For example, volant (flying) species are less affected by barriers then small, slow moving species such as frogs or snakes (Beier and Noss 1998). In addition, large mammals such as carnivores that can move long distances in a single night (e.g., cougars) are more capable of making use of poor quality or inhospitable terrain than species that move more slowly and can easily fall prey to various predators or that are less able to avoid traffic or other anthropogenic effects (Beier 1996). Therefore, it is reasonable to conclude that landscape linkages, even poor ones, can be and are useful, especially for terrestrial species.

Therefore, while the importance of landscape linkages is well demonstrated in the scientific literature, the cautionary note of Beier and Noss (1998) that consideration of context and ecological scale are also of critical importance in evaluating linkages.

Habitat corridors are vital to terrestrial animals for connectivity between core habitat areas (i.e., larger intact habitat areas where species make their living). Connections between two or more core habitat areas help ensure that genetic diversity is maintained, thereby diminishing the probability of inbreeding depression and geographic extinctions.

The quality of habitat within the corridors is important: "better" habitat consists of an area with a minimum of human interference (e.g., roads, homes, etc.) and is more desirable to more species than areas with sparse vegetation and high-density roads. Movement corridors in California are typically associated with valleys, rivers and creeks supporting riparian vegetation, and ridgelines. With increasing encroachment of humans on wildlife habitats, it has become important to establish and maintain linkages, or movement corridors, for animals to be able to access locations containing different biotic resources that are essential to maintaining their life cycles.

Healthy riparian areas (supporting structural diversity, i.e., understory species to saplings to mature riparian trees) have a high biological value as they not only support a rich and diverse

wildlife community but have also been shown to facilitate regional wildlife movement. Riparian areas can vary from tributaries winding through scrubland to densely vegetated riparian forests.

A riparian zone can be defined as an area that has a source of fresh water (e.g., rill, stream, river), a defined bank, and upland areas consisting of moist soils (e.g., wetter than would be expected simply due to seasonal precipitation). These areas support a characteristic suite of vegetative species, many of which are woody, that are adapted to moister soils. Such vegetation in the project region may include California buckeye (*Aesculus californica*), dogwood (*Cornus* sp.), California hazelnut (*Corylus cornuta* var. *californica*), elderberry (*Sambucus* sp.), Oregon ash (*Fraxinus latifolia*), walnut (*Juglans* sp.), California laurel (*Umbellularia californica*), toyon (*Heteromeles arbutifolia*), oaks (*Quercus* sp.), and willow (*Salix* sp.).

Beier and Loe (1992) noted five functions of corridors (rather than physical traits) that are relevant when conducting an analysis regarding the value of linkages. The following five functions should be used to evaluate the suitability of a given tract of land for use as a habitat corridor:

1.) Wide ranging mammals can migrate and find mates;
2.) Plants can propagate within the corridor and beyond;
3.) Genetic integrity can be maintained;
4.) Animals can use the corridor in response to environmental changes or a catastrophic event;
5.) Individuals can recolonize areas where local extinctions have occurred.

A corridor is "wide enough" when it meets these functions for the suite of animals in the area. It is important to note that landscape linkages are used differently by different species. For instance, medium to large mammals (or some bird species) may traverse a corridor in a matter of minutes or hours, while smaller mammals or other species may take a longer period of time to move through the same corridor (e.g., measured in days, weeks and even years). For example, an individual cougar may traverse the entire length of a long narrow corridor in an hour while travel of smaller species (such as rodent or rabbit species) may best be measured as gene flow within regional populations. These examples demonstrate that landscape linkages are not simply highways that animals use to move back and forth. While linkages may serve this purpose, they also allow for slower or more infrequent movement. Width and length must be considered in

evaluating the value of a landscape linkage. A long narrow corridor would most likely only be useful to wide ranging animals such as cougars and coyotes when moving between core habitat areas.

To the extent practicable, conservation of linkages should address the needs of "passage species" (those species that typically use a corridor for the primary purpose of moving from one intact area to another) *and* "corridor dwellers" (such as plants and some slow moving species such as amphibians and reptiles that require days or generations to move through the corridor).

While no detailed study of animal movements has been conducted for the study area, knowledge of the site, its habitats, and the ecology of the species potentially occurring onsite permits sufficient predictions about the types of movements occurring in the region and whether or not proposed development would constitute a significant impact to animal movements.

As noted in Section 2.1, a number of reptiles, birds, and mammals may use the project site as part of their home range and dispersal movements. Creeks and drainages are known to facilitate wildlife movement, however, the intermittent channels of the site occur within the open space area of the site and will not be impacted by the project. Further, these drainages are unlikely to provide significant movement habitat for wildlife as they do not support riparian vegetation and do not appear to provide a link between important habitats. For instance, with the exception of the drainage in the northernmost portion of the site which connects to Sycamore Creek, the other drainages originate within and dissipate into upland grassland habitat and are not connected to any other creeks or drainages.

2.3 SPECIAL STATUS PLANTS AND ANIMALS

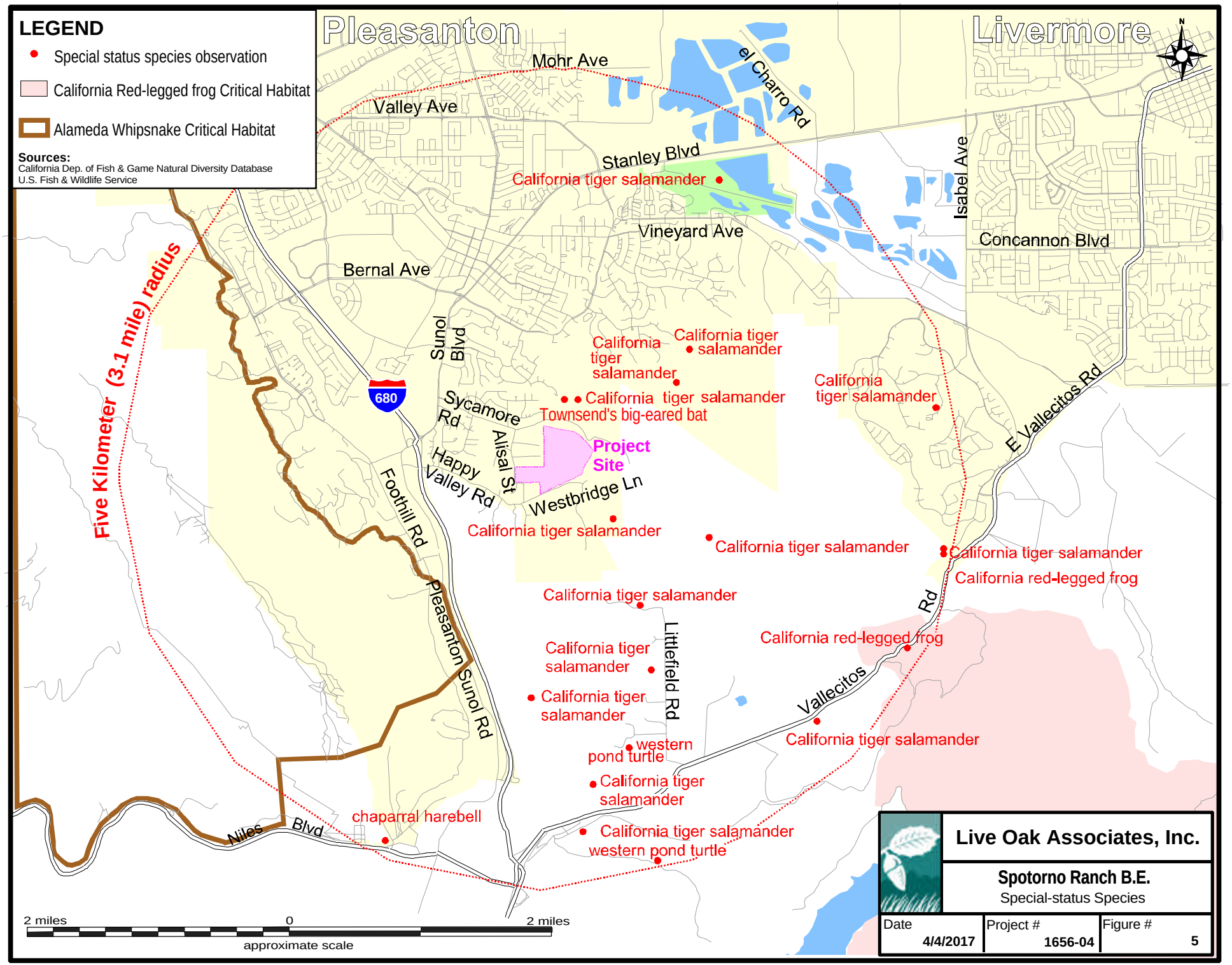
Several species of plants and animals within the state of California have low populations, limited distributions, or both. Such species may be considered "rare" and are vulnerable to extirpation as the state's human population grows and the habitats these species occupy are converted to agricultural and urban uses. As described more fully in Section 3.2, state and federal laws have provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting the diversity of plant and animal species native to the state. A sizable number of native plants and animals have been

formally designated as threatened or endangered under state and federal endangered species legislation, others have been designated as "candidates" for such listing, and still others have been designated as "species of special concern" by the CDFW. The California Native Plant Society (CNPS) has developed its own set of lists of native plants considered rare, threatened, or endangered (CNPS 2017). Collectively, these plants and animals are referred to as "special status species."

A number of special status plants and animals occur in the vicinity of the site (Figure 5). These species and their potential to occur in the study area are listed in Table 2 on the following pages. Sources of information for this table included *California's Wildlife, Volumes I, II, and III* (Zeiner et. al 1988), *California Natural Diversity Data Base* (CDFW 2017), *Endangered and Threatened Wildlife and Plants* (USFWS 2017), *State and Federally Listed Endangered and Threatened Animals of California* (CDFW 2017), and *The California Native Plant Society's Inventory of Rare and Endangered Vascular Plants of California* (CNPS 2017). This information was used to evaluate the potential for special status plant and animal species to occur onsite.

A search of published accounts for all relevant special status plant and animal species was conducted for the Livermore USGS 7.5" quadrangle in which the project site occurs and for the eight surrounding quadrangles (Diablo, Tassajara, Byron Hot Springs, Dublin, Altamont, Niles, La Costa Valley, and Mendenhall Springs) using the California Natural Diversity Data Base (CNDDB) Rarefind (CDFW 2017). These species and their potential to occur in the study area are summarized in Table 2 below. Figure 5 depicts documented occurrences of special status species within 3 miles of the site and Figure 6 depicts documented occurrences of San Joaquin kit fox within 10 miles of the site. All plant species listed as occurring in these quadrangles on CNPS Lists 1A, 1B, 2, or 4 were also reviewed.

Special status species with potential to occur on the project site itself or in the immediate surrounding vicinity are discussed further below.


LEGEND
Special status species observation
California Red-legged frog Critical Habitat
Alameda Whipsnake Critical Habitat
Sources:
California Dep. of Fish & Game Natural Diversity Database
U.S. Fish & Wildlife Service
Pleasanton
Livermore
Mohr Ave
Valley Ave
el Charro Rd
Stanley Blvd
California tiger salamander
Isabel Ave
Vineyard Ave
Concannon Blvd
Bernal Ave
Five Kilometer (3.1 mile) radius
Sunol Blvd
680
Sycamore Rd
Townsend's big-eared bat
Project Site
Alisal St
Happy Valley Rd
Foothill Rd
Westbridge Ln
E Vallecitos Rd
California red-legged frog
Pleasanton Sunol Rd
Littlefield Rd
Vallecitos Rd
western pond turtle
chaparral harebell
Niles Blvd
2 miles
0
2 miles
approximate scale
Live Oak Associates, Inc.
Spotorno Ranch B.E.
Special-status Species
Date 4/4/2017
Project # 1656-04
Figure # 5

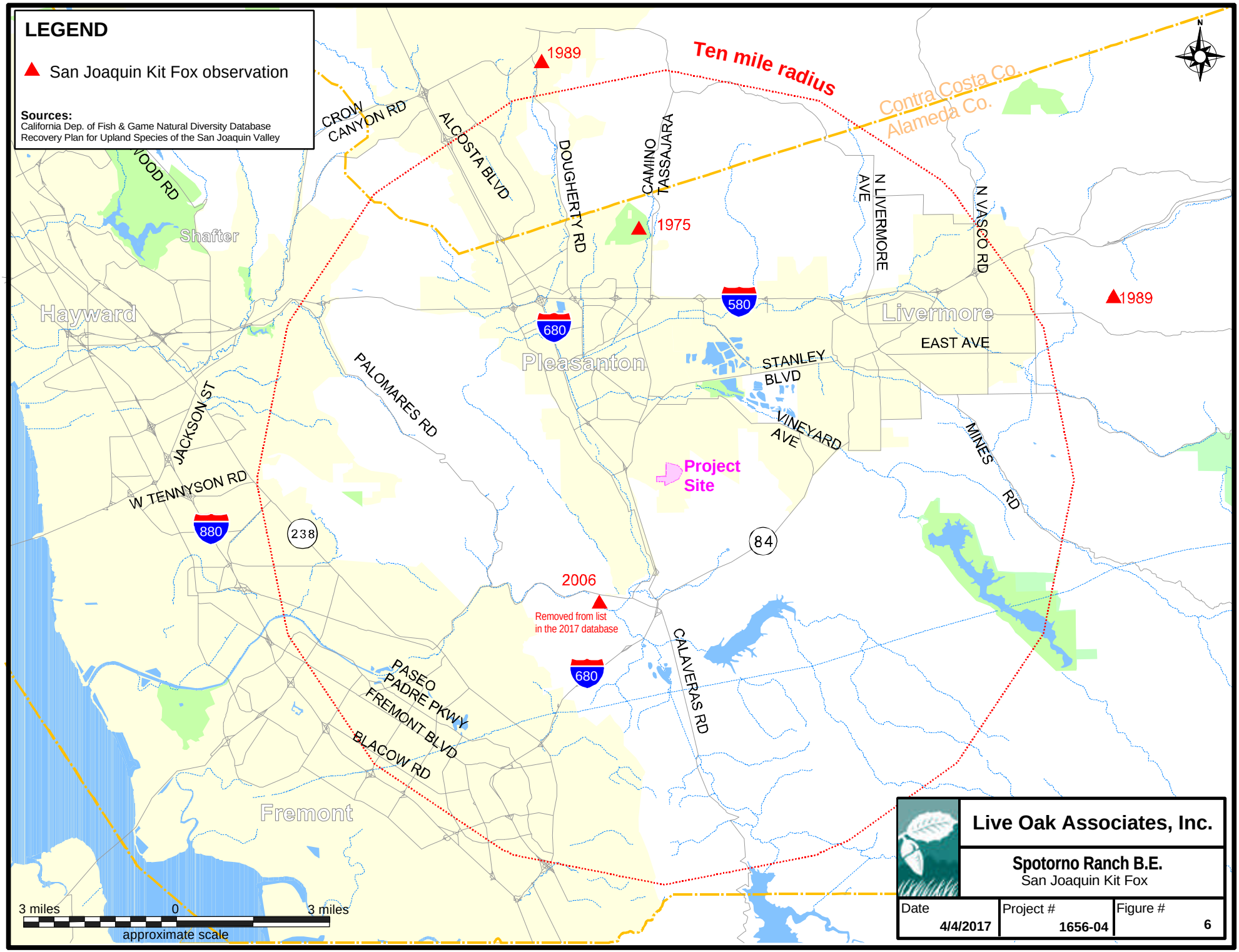

LEGEND
San Joaquin Kit Fox observation
Sources:
California Dep. of Fish & Game Natural Diversity Database
Recovery Plan for Upland Species of the San Joaquin Valley
1989
Ten mile radius
Contra Costa Co.
Alameda Co.
CROW CANYON RD
ALCOSTA BLVD
DOUGHERTY RD
CAMINO TASSAJARA
1975
N LIVERMORE AVE
N VASCO RD
1989
Shafter
Hayward
Livermore
680
580
EAST AVE
Pleasanton
STANLEY BLVD
PALOMARES RD
JACKSON ST
VINEYARD AVE
MINES RD
Project Site
W TENNYSON RD
880
238
84
2006
Removed from list in the 2017 database
680
CALAVERAS RD
PASEO PADRE PKWY
FREMONT BLVD
BLACOW RD
Fremont
3 miles
0
3 miles
approximate scale
N
Live Oak Associates, Inc.
Spotorno Ranch B.E.
San Joaquin Kit Fox
Date 4/4/2017
Project # 1656-04
Figure # 6

Table 2: Special status species that could occur in the project vicinity.
PLANTS (adapted from CDFW 2017 and CNPS 2017)
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Large-flowered Fiddleneck (*Amsinckia grandiflora*)	FE, CE, CNPS 1B	Habitat: Occurs in cismontane woodlands and valley and foothill grasslands. Elevation: 275-550 meters. Blooms: Annual herb; April-May.	**Absent.** The site supports grasslands that may provide suitable habitat for this species; however, this species occurs at much higher elevations than the site; there are no documented occurrences within three miles of the site; and the species was not observed during focused surveys in May 2017.
Palmate-bracted bird's-beak (*Choropyron palmatum*)	FE, CE CNPS 1B	Habitat: Occurs in saline/alkaline soils of seasonally flooded lowlands and basins, including chenopod scrub. Hemiparasitic on chenopod and saltmarsh species. Elevation: 1-155 meters. Blooms: May-October.	**Absent.** Suitable habitat is absent from the site. There are no documented occurrences within three miles of the site.
Livermore tarplant (*Deinandra bacigalupii*)	CCE CNPS 1B	Habitats: Occurs in alkaline soils in meadows and seeps. Elevation: 150-185 meters. Blooms: June-October.	**Unlikely.** The grasslands of the site provide marginal habitat for this species due to an absence of highly alkaline soils. There are no documented occurrences within three miles of the site. A rare plant survey will be conducted in summer and fall 2017.
California seablite (*Suaeda californica*)	FE, CNPS 1B	Habitat: Occurs in coastal salt marshes and swamps. Elevation: 0-15 meters. Blooms: July-October	**Absent.** Habitat for this species is absent from the site. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Slender silver moss (*Anomobryum julaceum*)	CNPS 2	Habitat: Occurs on damp rock and soil outcrops, usually on roadcuts, in broadleaf upland forest, lower montane coniferous forest, and north coast coniferous forest. Elevation: 100-1000 meters.	**Absent.** Habitat for this species is absent from the site. There are no documented occurrences within three miles of the site.
Mt. Diablo manzanita (*Arctostaphylos auriculata*)	CNPS 1B	Habitat: Occurs in chaparral habitats on sandstone. Elevation: 120-500 meters. Blooms: Evergreen shrub; January-March.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Contra Costa manzanita (*Arctostaphylos manzanita* ssp. *laevigata*)	CNPS 1B	Habitat: Occurs in rocky chaparral habitats. Elevation: 500-1100 meters. Blooms: Evergreen shrub; January-February.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Alkali milk-vetch (*Astragalus tener* var. *tener*)	CNPS 1B	Habitat: Occurs in alkaline soils within low-lying areas, playas, vernal pools and annual grasslands. Elevation: 1-60 meters. Blooms: Annual; March – June.	**Absent.** The grasslands and seasonal wetlands of the site provide only marginal habitat for this species due to an absence of highly alkaline soils and this species has not been observed in the vicinity since 1989. There are no documented occurrences within three miles of the site and this species was not observed during focused surveys conducted in May 2017.
Heartscale (*Atriplex cordulata*)	CNPS 1B	Habitat: Occurs in saline or alkaline soils of chenopod scrub, meadows and seeps, and sandy valley and foothill grassland. Elevation: 0-560 meters. Blooms: April-October.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Brittlescale (*Atriplex depressa*)	CNPS 1B	Habitat: Occurs on alkaline clay soils in chenopod scrub, meadows and seeps, playas, valley and foothill grasslands, and vernal pools. Elevation: 1-320 meters. Blooms: Annual herb; April-October.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Lesser saltscale (*Atriplex minuscula*)	CNPS 1B.1	Habitat: Occurs in alkaline and sandy soils in chenopod scrub, playas, and valley and foothill grasslands. Elevation: 15-200 meters Blooms: Annual herb; May-October.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Big-scale balsamroot (*Balsamorhiza macrolepis* var. *macrolepis*)	CNPS 1B	Habitat: Occurs in chaparral, cismontane woodland, valley and foothill grassland, sometimes on serpentine. Elevation: 90-1400 meters. Blooms: Perennial herb; March-June.	**Absent.** While grasslands of the site provide potentially suitable habitat for this species, soils of the site are not serpentine and this perennial plant would have been identified if present on the site during the 2012 through 2017 surveys, including a focused rare plant survey in May 2017. There are no documented occurrences within three miles of the site.
Big tarplant (*Blepharizonia plumosa*)	CNPS 1B	Habitat: Occurs in valley and foothill grasslands, usually on clay or clay-loam soils. Elevation: 30-505 meters. Blooms: Annual; July-October.	**Possible.** Potentially suitable habitat occurs within the grasslands of the site on clay-loam soils. Properly timed surveys would need to be conducted to determine its presence or absence from the site. A focused survey for this species is planned in summer and fall 2017. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Round-leaved filaree (*California macrophylla*)	CNPS 1B	Habitat: Occurs on clay soils in cismontane woodlands and valley and foothill grasslands. Elevation: 15-1200 meters. Blooms: Annual; March to May.	**Absent.** Potentially suitable habitat occurs within the grasslands of the site, however, the species was not detected during a focused survey conducted in May 2017 and it is presumed absent from the site. There are no documented occurrences within three miles of the site.
Mt. Diablo fairy-lantern (*Calochortus pulchellus*)	CNPS 1B	Habitat: Occurs on wooded or brushy slopoes within chaparral, cismontane woodland, riparian woodland, and valley and foothill grasslands. Elevation: 30-840 meters. Blooms: Bulb; April-June.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Chaparral harebell (*Campanula exigua*)	CNPR 1B	Habitat: Occurs in rocky chaparral, usually on serpentine. Elevation: 300-1250 meters. Blooms: Annual herb; May-November.	**Absent.** Habitat is absent on the site for this species. There is one documented occurrence of this species in the site's vicinity approximately three miles south of the site near Niles Blvd.
Congdon's tarplant (*Centromadia parryi ssp. congdonii*)	CNPS 1B	Habitat: Occurs on valley and foothill grasslands on alkaline soils. Elevation: 0-230 meters. Blooms: Annual herb; May-November.	**Possible.** The 2008 Olberding Report identified a population of Congdon's tarplant on the site and LOA identified three very small populations on the site during their July 9, 2012 site visit; however, this species has not been observed on the site during surveys conducted in 2014 through 2017. A focused survey for this species is planned in summer and fall 2017.
Hispid bird's-beak (*Chloropyron mollis* ssp. *hispidus*)	CNPS 1B	Habitats: Occurs in alkaline soils in meadows and seeps, playas, and valley and foothill grassland. Elevation: 1-155 meters. Blooms: Annual; June-September.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Santa Clara red ribbons (*Clarkia concinna* ssp. *automixa*)	CNPS 4	Habitats: Occurs in chaparral and cismontane woodland. Elevation: 90-1500 meters. Blooms: Annual; April-July.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Hospital Canyon larkspur (*Delphinium californicum* ssp. *interius*)	CNPS 1B	Habitat: Occurs in chaparral openings and mesic cismontane woodlands. Elevation: 230-1095 meters. Blooms: April-June.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Recurved larkspur (*Delphinium recurvatum*)	CNPS 1B	Habitats: Occurs on alkaline soils in chenopod scrub, cismontane woodland, and valley and foothill grassland. Elevation: 3-750 meters. Blooms: Perennial herb; March-June.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Mt. Diablo buckwheat (*Eriogonum truncatum*)	CNPS 1B	Habitats: Occurs on sandy soils in chaparral, coastal scrub, and valley and foothill grassland. Elevation: 3-350 meters. Blooms: Annual; April-December.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Jepson's coyote-thistle (*Eryngium jepsonii*)	CNPS 1B	Habitats: Occurs in valley and foothill grassland and vernal pools. Elevation: 3-300 meters. Blooms: Perennial herb; April-August.	**Absent.** Although the site provides some potential habitat for this species, this perennial would have been observed if present and it has never been observed. There are no documented occurrences within three miles of the site.
Spiny-sepaled button-celery (*Eryngium spinosepalum*)	CNPS 1B	Habitats: Occurs on and valley and foothill grassland and vernal pools. Elevation: 80-975 meters. Blooms: Annual/Perennial herb; April-June.	**Absent.** No vernal pools occur on the site and wetlands and drainages of the site provide only marginal habitat for this species. This species was not detected during focused rare plant surveys conducted in May 2017 and is presumed absent. There are no documented occurrences within three miles of the site.
Diamond-petaled California poppy (*Eschscholzia rhombipetala*)	CNPS 1B	Habitats: Occurs on alkaline and clay soils in valley and foothill grassland. Elevation: 0-975 meters. Blooms: Annual; March-April.	**Absent.** The grasslands of the site provide marginal habitat for this species due to an absence of highly alkaline soils or clay soils. If present, senescent remains of this species would have been observed during the May 2017 focused rare plant surveys and no poppy species were observed. There are no documented occurrences within three miles of the site.
San Joaquin spearscale (*Extriplex joaquinana*)	CNPS 1B	Habitat: Occurs in chenopod scrub, meadows and seeps, playas, and valley and foothill grasslands on alkaline soils. Elevation: 1-835 meters. Blooms: April-October.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Stinkbells (*Fritillaria agrestis*)	CNPS 4	Habitats: Occurs in chaparral, valley grassland, foothill woodland, wetland, and riparian habitats, and can be associated with serpentine soils. Elevation: 10-1555 meters. Blooms: Bulb; March-June.	**Absent.** Grasslands and seasonal wetlands of the site provide marginal habitat for this species; however, serpentine soils are absent from the site, and this species was not detected during focused rare plant surveys conducted in May 2017. There are no documented occurrences within three miles of the site.
Fragrant fritillary (*Fritillaria liliacea*)	CNPS 1B	Habitat: Occurs in coastal prairie, coastal scrub, and valley and foothill grasslands, often on serpentine soils Elevation: 3-410 meters. Blooms: February-April.	**Absent.** Grasslands of the study area are too heavily disturbed to provide habitat for this species and this species would have been observed if present on the development area during several surveys that occurred during its blooming season. There are no documented occurrences within three miles of the site.
Diablo helianthella (*Helianthella castanea*)	CNPS 1B	Habitats: Occurs in broadleaved upland forest, chaparral, cismontane woodland, coastal scrub, riparian woodland, and valley and foothill grassland. Elevation: 60-1300 meters. Blooms: Perennial herb; March-June.	**Absent.** While the grasslands of the site provide marginal habitat for this species, this perennial plant would have been identified if present on the site during the 2012 through 2017 LOA surveys, and it was not detected during the focused rare plant survey conducted in May 2017. There are no documented occurrences within three miles of the site.
Brewer's western flax (*Hesperolinon breweri*)	CNPS 1B	Habitats: Occurs in chaparral, cismontane woodland, and valley and foothill grassland, usually on serpentine. Elevation: 30-900 meters. Blooms: Annual; May-July.	**Unlikely.** While grasslands of the site provide marginal habitat for this species, serpentine soils are absent from the site, and this species has never been detected during surveys of the site from 2012 through 2017, including a focused rare plant survey in May 2017. There are no documented occurrences within three miles of the site.
Legenere (*Legenere limosa*)	CNPS 1B	Habitat: Occurs in vernal pools. Elevation: 1-880 meters. Blooms: Annual; April–June.	**Absent.** Seasonal wetlands of the site may provide marginal habitat for this species, however, this species was not detected during focused rare plant surveys conducted in May 2017 and is presumed absent from the site. There are no documented occurrences within three miles of the site.
Hall's bush mallow (*Malacothamnus hallii*)	CNPS 1B	Habitat: Occurs in chaparral, coastal scrub and riparian woodland habitats, occasionally on serpentine. Elevation: 10-760 meters. Blooms: Evergreen shrub; May - September.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Woodland woolly-threads (*Monolopia gracilens*)	CNPS 1B	Habitat: Occurs on sandy or rocky soils, sometimes on serpentine, in grassy openings within cismontane woodlands and coniferous forest. Elevation: Above 800 meters. Blooms: Annual; February - May.	**Absent.** Habitat is absent from the site for this species. This species has not been observed in the project vicinity since 1935. There are no documented occurrences within three miles of the site.
Shining navarretia (*Navarretia nigelliformis* ssp. *radians*)	CNPS 1B	Habitat: Occurs in cismontane woodlands, valley and foothill grasslands, and vernal pools. Elevation: 76-1000 meters. Blooms: Annual; May-July.	**Absent.** Grasslands and seasonal wetlands of the site provide potential habitat for this species, however, this species was not detected during focused rare plant surveys in May 2017 and is presumed absent. There are no documented occurrences within three miles of the site.
Prostrate vernal pool navarretia (*Navarretia prostrata*)	CNPS 1B	Habitat: Occurs in mesic alkaline areas within coastal scrub, meadows and seeps, valley and foothill grasslands, and vernal pools. Elevation: 15-1210 meters. Blooms: Annual; April-July.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Mt. Diablo phacelia (*Phacelia phacelioides*)	CNPS 1B	Habitat: Occurs in rocky chaparral and cismontane woodland. Elevation: 500-1370 meters. Blooms: Annual; April-July.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Hairless popcorn-flower (*Plagiobothrys glaber*)	CNPS 1A	Habitat: Occurs in coastal saltmarshes and in alkaline meadows and seeps. Elevation: 15-180 meters. Blooms: Annual; March - May.	**Absent.** Marginal habitat for this species is present within the seasonal wetlands of the site; however, highly alkaline soils are absent. This species was not detected during focused rare plant surveys conducted in May 2017 and is presumed absent. There are only two reported occurrences of this species in the project vicinity; one in Livermore in 1942 and one in Dublin in 2002, although the latter occurrence is not confirmed. There are no documented occurrences within three miles of the site.
Oregon polemonium (*Polemonium carneum*)	CNPS 2	Habitat: Occurs in coastal prairie, coastal scrub and lower montane coniferous forest. Elevation: 0-1830 meters. Blooms: Annual; March - May.	**Absent.** Habitat is absent from the site for this species. Species is only known from one occurrence in the project vicinity dating to 1932 near Castro Valley. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
California alkali grass (*Puccinellia simplex*)	CNPS 1B	Habitat: Occurs in alkaline, vernally mesic, sinks, flats, and lake margins within chenopod scrub, meadows and seeps, Valley and foothill grasslands, and vernal pools. Elevation:2-930 meters. Blooms: March-May.	**Unlikely.** Marginal habitat for this species is present within the seasonal wetlands of the site; however, highly alkaline soils are absent. There are no documented occurrences within three miles of the site.
Chaparral ragwort (*Senecio aphanactis*)	CNPS 2	Habitat: Occurs in drying alkaline flats within coastal scrub and cis montane woodland habitats. Elevation: 50-575 meters. Blooms: Annual; January – April.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Mt. Diablo jewel-flower (*Streptanthus hispidus*)	CNPS 1B	Habitat: Occurs on rocky outcrops in chaparral and valley and foothill grasslands. Elevation: 365-1200 meters. Blooms: Annual; March-June.	**Absent.** Habitat is absent from the site for this species. There are no documented occurrences within three miles of the site.
Slender-leaved pondweed (*Stuckenia filiformis*)	CNPS 2	Habitat: Occurs in shallow, clear waters within lakes and drainages. Elevation: 15-2310 meters. Blooms: Perennial.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.
Saline clover (*Trifolium depauperatum* var. *hydrophilum*)	CNPS 1B	Habitat: Occurs in marshes and swamps, valley and foothill grasslands on mesic or alkaline soils, and vernal pools. Elevation: 0-300 meters. Blooms: Annual; April–June.	**Absent.** Marginal habitat for this species is present within the seasonal wetlands of the site; however, highly alkaline soils are absent. This species was not detected during focused surveys conducted in May 2017 and is presumed absent. There are no documented occurrences within three miles of the site.
Caper-fruited tropidocarpum (*Tropidocarpum capparideum*)	CNPS 1A	Habitat: Occurs on alkaline soils of valley and foothill grassland. Elevation: 1-455 meters. Blooms: Annual; March-April.	**Unlikely**. Grasslands of the site provide marginal habitat for this species due to a lack of highly alkaline soils. Species was once believed extinct but a population was discovered at Fort Hunter Ligget in Monterey County in 2000; however, the species was last documented in the project site area in 1957. There are no documented occurrences within three miles of the site.
Coastal triquetrella (*Triquetrella californica*)	CNPS 1B	Habitat: Moss that occurs on soil in coastal bluff scrub and coastal scrub. Elevation: 10-100 meters.	**Absent.** Suitable habitat for this species is absent from the study area. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

PLANTS (adapted from CDFW 2017 and CNPS 2017)
Other special status plants listed by the CDFG and CNPS

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Oval-leaved viburnum (*Viburnum ellipticum*)	CNPS 2	Habitat: Occurs in chaparral, cismontane woodland and lower montane coniferous forest. Elevation: 215-1400 meters. Blooms: Deciduous shrub; May-June.	**Absent.** Habitat is absent on the site for this species. There are no documented occurrences within three miles of the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Longhorn fairy shrimp (*Branchinecta longiantenna*)	FE	Occurs in ephemeral wetlands and vernal pools of California.	**Absent.** Although ephemeral wetlands are present on the site, vernal pools are absent. Longhorn fairy shrimp are presumed absent from the site as the site's wetlands do not hold surface water for very long, and when surface water is present, it is shallow and short-lived; additionally, the nearest recorded observation of LHFS is more than 3 miles from the site.
Vernal pool fairy shrimp (*Branchinecta lynchi*)	FT	Occurs in vernal pools of California.	**Absent.** Although ephemeral wetlands are present on the site, suitable habitat for vernal pool fairy shrimp in the form of vernal pools is absent. Vernal pool fairy shrimp are presumed absent from the site as the site's wetlands do not hold surface water for very long, and when surface water is present, it is shallow and short-lived; additionally, the nearest recorded observation of VPFS is more than 3 miles from the site.
Vernal pool tadpole shrimp (*Lepidurus packardi*)	FE	Occurs in vernal pools of California. Vernal pools and swales in the Sacramento Valley containing clear to highly turbid water.	**Absent.** Although ephemeral wetlands are present on the site, suitable habitat for vernal pool tadpole shrimp in the form of vernal pools is absent. Vernal pool tadpole shrimp are presumed absent from the site as the site's wetlands do not hold surface water for very long, and when surface water is present, it is shallow and short-lived; additionally, the nearest recorded observation of VPTS is more than 3 miles from the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Callippe silverspot butterfly (*Speyeria callippe callippe*)	FE	Native grasslands. Host plant is *Viola pedunculata*.	**Absent.** A survey for the larval host plant, *Viola pedunculata* was conducted on all areas of the site proposed for development or slope stabilization and a minimum 75-foot buffer in May 2017 and none were observed. These areas of the site also do not support significant populations of nectar plants for this species, therefore, these areas do not provide habitat for this species and it is presumed absent.
California tiger salamander (*Ambystoma californiense*)	FT, CT	Breeds in vernal pools and stock ponds of central California; adults aestivate in grassland habitats adjacent to the breeding sites.	**Possible.** No suitable breeding habitat is on the site for the species; however, this species has been documented breeding in wetlands and ponds of the adjacent golf course property within their East Side Conservation Area, and there are five breeding ponds reported in the CNDDB that are within 1.2 miles from the site (one of which has been extirpated as a breeding site due to an earthen dam failure. Therefore, although no breeding habitat exists on the site, it is possible that CTS that breed in the vicinity estivate on the site.
California red-legged Frog (*Rana aurora draytonii*)	FT, CSC	Rivers, creeks and stock ponds of the Sierra foothills and coast range, preferring pools with overhanging vegetation.	**Unlikely**. Dr. Mark Jennings, a USFWS-approved specialist in amphibian survey and habitat evaluation, conducted a focused habitat assessment for CRLF in 2004 for Olberding and found the site to be unsuitable for CRLF. Dr Jennings conducted a follow up herpetological survey on the Spotorno site in January 2015 at LOA's request and confirmed that existing site conditions had not changed and that the site provides no breeding habitat for this species. The nearest documented occurrence in the CNDDB is approximately three miles southeast of the site and CRLF critical habitat is more than two and a half miles to the southeast of the site, however, Marcia Grefsrud/CDFW has indicated that CRLF have been detected in a pond on the adjacent golf course site. The upland grasslands of the project site appear to provide poor foraging and movement habitat for this species and it appears unlikely they would occur on the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Alameda whipsnake (*Masticophis lateralis euryxanthus*)	FT, CT	Ranges from the inner coast range in western and central Contra Costa and Alameda counties. Found in rock outcroppings and talus pilings, scrub communities, grasslands, oak, and oak/bay woodlands.	**Absent.** No suitable habitat occurs on site for the Alameda whipsnake.
White-tailed kite (*Elanus caeruleus*)	CP, CSC	Open grasslands and agricultural areas throughout central California.	**Present.** White-tailed kites have been observed on neighboring properties. Suitable nesting habitat does not occur on the site, however, foraging habitat is abundant on the site.
Swainson's hawk (nesting) (*Buteo swainsoni*)	CT	Breeds in stands with few trees in juniper-sage flats, riparian areas, and in oak savannah. Requires adjacent suitable foraging areas such as grasslands or alfalfa fields supporting rodent populations.	**Unlikely.** Breeding habitat is absent and although potentially suitable foraging habitat is available throughout the project area; there are no documented occurrences of this species within a three-mile radius of the site.
Bald eagle (nesting & nonbreeding/wintering) (*Haliaeetus leucocephalus*)	CP	Breeding habitat is usually within 4 km of a water source in a tall tree or cliffs; roosting in large numbers in winter is common.	**Absent.** No suitable habitat occurs on site for the bald eagle. There are no documented occurrences of this species within a three-mile radius of the site.
American peregrine falcon (*Falco peregrinus anatum*)	FE, CE	Nests and roosts on protected ledges of high cliffs, usually adjacent to lakes, rivers, or marshes that support large populations of other bird species.	**Unlikely.** No Peregrine Falcons were observed on site, and no suitable breeding habitat occurs on site, however, this species may be a rare migrant or transient on the site. There are no documented occurrences of this species within a three-mile radius of the site.
Least Bell's vireo (*Vireo bellii pusillus*)	FE, CE	Summer resident of cottonwood-willow forests, oak woodlands, shrubby thickets, and dry washes with willow thickets at the edges. Breeds in southern California.	**Absent.** No suitable habitat occurs on the site. There are no documented occurrences of this species within a three-mile radius of the site.
Tricolored blackbird (*Agelaius tricolor*)	CCE, CSC	Breeds near fresh water in dense emergent vegetation.	**Absent.** Suitable habitat is absent from the site for the tricolored blackbird; although they may move through the site when migrating. There are no documented occurrences of this species within a three-mile radius of the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
Species Listed as Threatened or Endangered under the State and/or Federal Endangered Species Acts

Common and scientific names	Status	General habitat description	*Occurrence in the study area
San Joaquin kit fox (*Vulpes macrotis mutica*)	FE, CT	Frequents desert alkali scrub and annual grasslands and may forage in adjacent agricultural habitats. Utilizes enlarged (4 to 10 inches in diameter) ground squirrel burrows as denning habitat.	**Absent.** No San Joaquin kit fox burrows or sign have ever been observed on the site. Although two sightings within a 10-mile radius were once recorded in the CNDDB, supposedly observed in the period between 1972 and 1975, these sightings have now been removed from the CNDDB, likely because it is believed these sightings were other canid species and were misidentified as SJKF, as they are outside the currently accepted range for the species and no additional recent sightings have been reported in the vicinity since that time. Due to the lack of documented occurrences in the project vicinity and the project site being outside the currently accepted range for the species, kit foxes are presumed absent from the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
California Species of Special Concern and Protected Species

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Foothill yellow-legged frog (*Rana boylii*)	CSC	Found primarily in swiftly flowing creeks.	**Absent.** Suitable habitat is completely lacking on the site for this species. There are no documented occurrences of this species within a three-mile radius of the site.
Western spadefoot (*Spea hammondii*)	CSC	Primarily occurs in grasslands, but also occurs in valley and foothill hardwood woodlands. Requires vernal pools or other temporary wetlands for breeding.	**Absent.** Vernal pools required for breeding are absent from the study area, and wetlands onsite do not hold enough water for long enough to provide breeding habitat for this species. The nearest record is more than 3 miles from the site. There are no documented occurrences of this species within a three-mile radius of the site.
Western pond turtle (*Actinemys marmorata*)	CSC	Intermittent and permanent waterways including streams, marshes, rivers, ponds and lakes. Open slow-moving water of rivers and creeks of central California with rocks and logs for basking.	**Absent.** Suitable breeding habitat is absent from the site, and the nearest recorded observance of the WPT is approximately 2 miles to the south of the site. Additionally, the WPT was not observed on the neighboring property during special-status herp surveys in 2000 or 2002, or during other surveys conducted since the early 1990's.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
California Species of Special Concern and Protected Species

Common and scientific names	Status	General habitat description	*Occurrence in the study area
California horned lizard (*Phrynosoma coronatum frontale*)	CSC	Exposed gravelly-sandy substrate with scattered shrubs, clearings in riparian woodlands, dry uniform chamise chaparral, annual grasslands with seepweed or saltbrush.	**Absent.** There are no areas of suitable habitat large enough to support this species on site. There are no documented occurrences of this species within a three-mile radius of the site.
San Joaquin whipsnake (*Masticophis flagellum ruddocki*)	CSC	Open, dry habitats with little or no tree cover. Found in valley grasslands and saltbush scrub in the San Joaquin Valley.	**Absent.** The site is outside of the range for San Joaquin whipsnake. There are no documented occurrences of this species within a three-mile radius of the site.
Golden eagle (*Aquila chrysaetos*)	CSC	Typically frequents rolling foothills, mountain areas, sage-juniper flats and desert.	**Possible.** Nesting habitat is absent from the site, however, eagles have been documented nesting approximately 3.6 miles to the south east of the site in the foothills above San Antonio Reservoir, and therefore, it is possible that this species forages on the site.
Northern harrier (*Circus cyaneus*)	CSC	Frequents meadows, grasslands, open rangelands, freshwater emergent wetlands; uncommon in wooded habitats.	**Possible.** No northern harriers have been observed foraging on the site and there are no documented occurrences of this species within a three-mile radius of the site; however, potential nesting and foraging habitat occur on site.
Burrowing owl (*Athene cunicularia*)	CSC	Found in open, dry grasslands, deserts and ruderal areas. Requires suitable burrows. This species is often associated with California ground squirrels.	**Possible.** Suitable habitat (i.e., ground squirrel burrows) for the BUOW is currently absent from the site due to a lack of ground squirrel burrows. However, should ground squirrels colonize the site from adjacent properties, burrowing owls could also colonize the site prior to development.
Loggerhead shrike (nesting) (*Lanius ludovicianus*)	CSC	Frequents open habitats with sparse shrubs and trees, other suitable perches, bare ground, and low herbaceous cover. Nests in tall shrubs and dense trees. Forages in grasslands, marshes, and ruderal habitats. Can often be found in cropland.	**Possible.** Suitable nesting habitat for the loggerhead shrike is absent from the site, however, foraging habitat is present on the site.
Alameda song sparrow (*Melospiza melodia pusillula*)	CSC	Found in tidal salt marsh habitat with exposed ground for foraging with no more than 2-5 cm between bases of plants. Current range is generally only along the San Francisco Bay.	**Absent.** Habitat for this species is absent from the project area. There are no documented occurrences of this species within a three-mile radius of the site.

Table 2: Special status species that could occur in the project vicinity.

ANIMALS (adapted from CDFW 2017 and USFWS 2017)
California Species of Special Concern and Protected Species

Common and scientific names	Status	General habitat description	*Occurrence in the study area
Grasshopper sparrow (*Ammodramus savannarum*)	CSC	Occurs in California during spring and summer in open grasslands with scattered shrubs.	**Possible.** The site supports suitable nesting and foraging habitat for this species. There are no documented occurrences of this species within a three-mile radius of the site.
Townsend's big-eared bat (*Corynorhinus townsendii*)	CSC	Primarily a cave-dwelling bat that may also roost in buildings. Occurs in a variety of habitats.	**Possible.** The site does not provide suitable roosting habitat for the Townsend's big-eared bat, but the species may forage over the site. There is a documented CNDDB occurrence of this species approximately ¼ mile north of the site.
Pallid bat (*Antrozous pallidus*)	CSC	Grasslands, chaparral, woodlands, and forests of California; most common in dry rocky open areas providing roosting opportunities.	**Possible.** The site does not provide suitable roosting habitat for the pallid bat, but the species may forage over the site. There are no documented occurrences of this species within a three-mile radius of the site.
San Francisco dusky-footed woodrat (*Neotoma fuscipes annectens*)	CSC	Found in hardwood forests, oak riparian and shrub habitats.	**Absent.** Riparian and woodland habitat is absent from the site. There are no documented occurrences of this species within a three-mile radius of the site.
American badger (*Taxidea taxus*)	CSC	Found in drier open stages of most shrub, forest and herbaceous habitats with friable soils, specifically grassland environments. Natal dens occur on slopes.	**Possible.** Although no burrows were observed on the site, it is possible this species may establish burrows on the site should they be present in the neighboring rangeland. There are no documented occurrences of this species within a three-mile radius of the site.

***Explanation of Occurrence Designations and Status Codes**

Present: Species observed on the sites at time of field surveys or during recent past.
Likely: Species not observed on the site, but it may reasonably be expected to occur there on a regular basis.
Possible: Species not observed on the sites, but it could occur there from time to time.
Unlikely: Species not observed on the sites, and would not be expected to occur there except, perhaps, as a transient.
Absent: Species not observed on the sites, and precluded from occurring there because habitat requirements not met.

STATUS CODES

FE	Federally Endangered
FT	Federally Threatened
FPE	Federally Endangered (Proposed)
FC	Federal Candidate

CE	California Endangered
CT	California Threatened
CR	California Rare
CP	California Protected
CSC	California Species of Special Concern
CCE	California Candidate Endangered

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

Most of the special status plant and animal species listed in Table 2 are either presumed absent from or unlikely to occur on the site due to a lack of suitable habitat, or existence of very marginal habitat; while others would be considered to occur only rarely or occasionally on the site to forage. Sufficient information exists to evaluate the potential impacts the project may or may not have on these latter species. However, several species warrant a more in-depth discussion due to their potential to occur on the site and/or their legal status. These latter species include the Callippe silverspot butterfly, California tiger salamander (CTS), burrowing owl (BUOW), and American badger. These latter species are discussed in greater detail below.

Callippe Silverspot Butterfly (*Speyeria callippe callippe*). Federal listing status: Endangered; State listing status: None.

The Callippe Silverspot butterfly (*Speyeria callippe callippe*: Lepidoptera: Nymphalidae) was recognized as an endangered species in 1997 (U.S. Fish & Wildlife Service [USFWS] 1997). Although there are numerous subspecies within this widely distributed species, only the subspecies *S. callippe callippe* is protected under federal law.

Like many of the described subspecies of this silverspot species, *Speyeria callippe callippe* exhibits considerable phenotypic variation in its color, wing markings (maculations), and the amount of black scaling. Individuals of *S. callippe callippe* exhibit the following features:

a) dorsal forewings with thick, dark veins in males and prominent black maculations;

b) dorsal wings with pale yellow-orange ground color with an extensive black, sooty-appearing suffusion in the basal area of the forewings and hindwings;

c) ventral forewings with extensive reddish color in males;

d) ventral hindwings with a brown disc covered with yellow suffusion.

A closely related subspecies, *S. callippe comstocki,* differs from typical *S. callippe callippe* by exhibiting a reduced basal suffusion of black, sooty-appearing scales on the dorsal wings, mostly yellow color on the ventral forewings of males, and a mostly yellow disc. A few subspecies lack the silver spots that give this species its common name. Both subspecies of *Speyeria callippe*

callippe and *comstocki* occur in the San Francisco Bay area. The most recent five-year review for the species released by USFWS (2009) indicates that the two populations occurring in the project region have not yet been taxonomically verified as the rare subspecies, and as of the 2009 review, the USFWS only recognizes two populations of the rare subspecies: a San Bruno Mountain population and a Cordelia Hills population.

Due to the high degree of variation exhibited by individuals within a particular population, as well as geographic variation among populations, the limits of the variation have not been well defined and correlated with the subspecific taxonomic categories. As a result, it is often difficult to identify individual specimens and even populations to the subspecific level without examining a long series of specimens to determine which characteristics are prevalent in a particular population. Even then, some populations tend to exhibit more intermediate characteristics. Since wing colors and maculations may fade with age and scales are lost with age, this further complicates making taxonomic decisions at the subspecific level.

Life History and Ecology. The Callippe silverspot (*Speyeria callippe callippe*) is endemic to the San Francisco Bay area. It occurs on hilly terrain within both grazed and ungrazed grassland habitat where its larval host plant, johnny jump-up (*Viola pedunculata)* grows. The host plant is typically associated with clay soils. Although the larval host plant is perennial, the above ground growth dies back annually so it can typically only be distinguished during the spring and early summer flowering season. Adult butterflies will visit the margins of oak woodlands and riparian areas in search of nectar, rock outcrops, as well as disturbed areas if favored nectar plants grow there.

The four primary habitat requirements of the Callippe silverspot are:

a) coastal grasslands supporting its larval food plants;

b) hilltops for mate location;

c) nectar plants in the grasslands or nearby oak woodlands, riparian areas, rock outcrops, or disturbed areas; and

d) shelter from on-shore coastal winds.

As the butterfly is known to be able to fly significant distances (up to a mile), these habitat requirements can be somewhat spread out and still support a silverspot population.

The silverspot butterflies produce just one generation each year. The four stages in a butterfly's life cycle include egg, larva (i.e., caterpillar), pupa, and adult. Larvae newly emerged from eggs immediately search out suitable hiding places such as under a rock where they enter a physiological resting stage, referred to as diapause, to survive the dry season and await the next rainy season when the larval food plant, Viola, sprouts new foliage and becomes edible, typically in late January to early February. Many of the young die during diapause. Surviving larvae will continue to periodically feed during the next four months, after which they will pupate and transform into adult butterflies.

The adult flight season typically begins in mid-May and ends in mid-July, although actual starting and ending times can vary by a few weeks from year-to-year and in different locations depending upon seasonal and microclimate weather variations. The average adult life span has been shown through a capture/recapture study to be about 5-7 days, but individuals have lived in a lab environment for as long as two weeks.

Because of the length of the flight season, adults may forage on nectar from the flowers of several different plant species as these plants flower at different times during the flight season. Preferred nectar species include native species such as bee balm (*Monardella* spp.) and California buckeye (*Aesculus californica*), but also include non-native (and often invasive) species such as *Silybum marianum, Carduus pycnocephalus,* and *Cirsium vulgare*. Because *Silybum* blooms earlier than the other species, it is utilized earliest in the flight season, while *Aesculus* is used during the middle, and *Monardella* is used towards the end of the season. While these latter species are the preferred nectar plants for the silverspot, the butterfly will utilize nectar from other plant species depending upon their availability at a particular location. Varied topography within the butterfly's habitat tends to extend the blooming season of individual nectar plant species and therefore increase the value of such habitat for the butterfly.

Areas where the larval and adult food plants grow do not always coincide with areas where mate location and other behaviors occur. For instance, adults tend to search for mates by congregating on hilltops ("hilltopping"). Adult males will also patrol breeding habitat in search of newly emerged females. Females, on the other hand, tend to spend more time in non-flight activities such as basking and perching.

Source: Arnold, Richard A. 2008.

Occurrence on the Site. A focused survey for the Callippe silverspot butterfly larval host plant, viola, was conducted on the proposed development areas, slope stabilization areas and a minimum 75-foot buffer in May 2017 and the larval host species was not detected. Additionally, these areas of the site do not support significant populations of nectar plants for this species. Therefore, we have concluded that habitat for the butterfly is absent from the site and the project will not impact habitat or individuals of this species.

California Tiger Salamander (*Ambystoma californiense*). Federal Listing Status: Threatened; State Listing Status: Threatened.

Life History and Ecology. The California tiger salamander (CTS) is a large terrestrial salamander, with adults attaining a total length of over 8 inches (203 millimeters) [Stebbins 1951]. Dorsally, the background color appears to be jet black, and normally with an overlain pattern of white or yellow spots, or bars (Stebbins 1985; Petranka 1998). Adult California tiger salamanders breed from late November through February, following the onset of winter rains (Storer 1925; Barry and Shaffer 1994). Both males and females travel up to 1 mile (1.6 km) or more during nocturnal breeding migrations from subterranean refuge, or aestivation, sites (i.e., small mammal burrows) to egg deposition sites in long-lasting, rain-filled vernal pools (Twitty 1941; Loredo et al. 1961; Andersen 1968; Austin and Shaffer 1992).

Embryos of California tiger salamanders hatch in approximately 14-28 days after being laid and the resulting gilled, aquatic larvae [0.41-0.43 inches (10.5-11 mm) in length] require a minimum of about 10-12 weeks to complete development through metamorphosis (Storer 1925; Twitty 1941). Following metamorphosis (normally from early May through July), juveniles emigrate en masse at night into small mammal burrows or deep cracks in the soil, which they use as refugia during the hot summer and fall months (Shaffer et al. 1993; Loredo et al. 1996).

Anecdotal evidence indicates that salamanders have a high degree of site fidelity to their breeding ponds and also to the small mammal burrows they use for refugia (Shaffer et al. 1993). Sites used for reproduction are typically natural pools that fill with rainwater and artificial stock ponds; however, salamanders have also been observed to breed in springs, wells, artificial reservoirs, quarry ponds, man-made canals, and rarely, in the slack waters of oxbows in small- to medium-sized streams. Such sites may, or may not contain dense amounts of aquatic and streamside vegetation. The highest numbers of larvae appear to occur in aquatic habitats that are largely devoid of any vegetation and contain very turbid water. Salamanders may also turn up in certain man-made structures (e.g. wet basements, wells, swimming pools, underground pipes, and septic tank drains), sometimes many years after their local breeding site has been destroyed by urbanization (Storer 1925; Pickwell 1947).

Juvenile and adult salamanders typically use the burrows of California ground squirrels and pocket gophers as underground refugia (Storer 1925; Jennings and Hayes 1994; Jennings 1996; Loredo et a1. 1996) but may use a variety of burrows including cracks within the soil that may extend up to 15 feet (4.6 m) deep from the soil surface (Jennings, unpub. data). Juvenile and adult salamanders are especially common in situations where piles of concrete, rock, or other rubble are mixed with dirt and are located near breeding sites (Jennings, unpub. data). Findings from the limited research on the species suggest that 95% of a CTS population estivates within 2,000 feet of a breeding pond and that 99% of the breeding population estivates within 0.7 miles of a breeding pond; however, the USFWS considers suitable habitat within 1.3 miles of a known breeding pool to constitute potential upland habitat for the salamander.

Occurrence on the Site. There is no suitable breeding habitat for CTS on the site as seasonal wetlands of the site lack a suitable hydrologic regime for this species. According to Marcia Grefsrud/CDFW, however, ponds and wetlands on conservation areas to the east and south of the adjacent Callippe Golf Course property support CTS breeding in ponds, wetlands and at least one seep. The closest of these breeding sites is a pond occurring 0.31 miles east of the proposed development area of Spotorno Ranch. Therefore, it is possible that CTS estivate on the Spotorno project site.

Burrowing Owl (*Athene cunicularia*). Federal Listing Status: None; State Listing Status: Species of Concern.

The burrowing owl is considered a California species of special concern. This decision was based on the fact that the burrowing owl's population levels were decreasing due to habitat destruction, roadside nesting (vulnerability to human interference) and indirectly as a result of ground squirrel poisoning.

The burrowing owl is a small, long-legged, semi-fossarial bird that averages a height of 9.5 inches, has an average wingspan of 23 inches, and weighs an average of 5.25 ounces. Burrowing owls are unique, as they are the only owl that regularly lives and breeds in underground nests. In California, these birds typically occur in the Central and Imperial Valleys, primarily utilizing ground squirrel burrows (or the burrows of other animals, e.g., badgers, prairie dogs and kangaroo rats) found in grasslands, open shrub lands, deserts, and to a lesser extent, grazing and agricultural lands. Burrowing owls in this region are typically found in lower elevations, and have strong site fidelity. Pairs have been known to return to the same area year after year, and some pairs are known to utilize the same burrow as the previous year.

Life History. Burrowing owls feed on various small mammals including deer mice, voles, and rats. They also prey on various invertebrates including crickets, beetles, grasshoppers, spiders, centipedes, scorpions and crayfish. Peak hunting periods occur around dusk and dawn.

The breeding season for the burrowing owl runs from February to August, with a peak between April and July. Clutch size varies from six to 12 eggs, with an average of seven to nine eggs. Females generally produce only one clutch per year. The female incubates the eggs for a month, while the male provides her food. The male continues to provide food during the brooding period. The young remain in their burrow for approximately two weeks after hatching, and become fully independent of their parents between eight to ten weeks of age. Burrowing owls are a fairly short-lived species, with an average life expectancy of 4.8 years. The oldest known wild burrowing owl was eight years and eight months old at the time of its death.

Burrowing owls are subject to predation by larger mammals (e.g., feral cats, bobcats, fox and coyotes). They are also susceptible to anthropogenic effects such as collisions with automobiles, and destruction or disruption of their nests, especially during the breeding season. The

burrowing owl may also be affected by ground squirrel eradication efforts. Burrowing owl numbers have been in decline over the past 30 to 40 years, in California. The decline in numbers is due mainly to habitat destruction by way of development and agricultural practices.

Occurrence on the Site. Suitable habitat roosting and breeding habitat, in the form of ground squirrels and their burrows, currently appears to be absent from the proposed development area of the site and no occurrences of this species are documented in CNDDB within a three-mile radius of the site. However, should ground squirrels colonize the site from neighboring properties in the future, there is potential for the burrowing owl to roost and nest on the site in the future prior to site development.

American Badger (*Taxidea taxus)*. Federal Listing Status: None; State Listing Status: Species of Special Concern.

The American badger is considered a California species of special concern. This decision was based on the fact that the badger's population levels were decreasing, mainly as a result of the conversion of open grassland habitats to agriculture and urban uses, trapping for fur, poisoning, and indirect poisoning as a result of consuming poisoned rodents. Rodents are the main food source for the badger.

The American badger measures 520 to 875 mm (20 to 34 inches) from head to tail, with the tail making up only about 1/5 of this length. Badgers weigh between 4 and 12 kg (approximately 9 to 26 pounds). The badger has a flattened body with short, stocky legs, and feet with strong claws that are up to 4-inches long. The fur on the back and flanks of the badger varies from brownish gray to a reddish color, with a buff colored underside. The face of the badger is distinct with several black patches on either side of its long snout. A white dorsal stripe extends back over the head from the nose. In northern populations, the dorsal stripe ends near the shoulders, while in southern populations it continues over the back to the rump. Male badgers are significantly larger than the females (Kurta, 1995; Long, 1999). Badgers are primarily solitary, coming together only for breeding purposes. Badgers are generally found throughout California's arid grasslands and scrublands with friable soils from sea level to 12,000 feet, except in the northern North Coast area (Grinnell et al, 1937). Badgers are primarily nocturnal and are rarely seen during the day.

Life History. The main food source for badgers is ground squirrels and pocket gophers; however, they also are known to feed on a variety of other small- to medium-sized mammals including deer mice, voles, and rats; on plant roots; on reptiles and their eggs; and on birds and their eggs. Badgers are opportunistic foragers and their food sources shift seasonally with availability.

Badgers generally breed in late summer or early fall, experiencing a delayed implantation. Although the badger female is technically pregnant for seven months, actual gestation takes 6 weeks. Most cubs (pups or kits) are born in March or April and litter size ranges from 1 to 5 with an average of 3 (Long 1973). Females can breed as young as 4 to 6 months of age; however, their first litter usually occurs after one year of age. Males do not usually breed until after their second year. Badger cubs are born blind, furred and helpless (ibid). Their eyes open between 4 and 6 weeks of age, and they are nursed for approximately 2 months. After 2 months of age the mother starts supplementing their diet with solid food, usually small rodents. Most young disperse shortly after weaning, while some remain in their natal area until the next breeding season. They may roam up to 100 km (62 miles) to find their own home range. The average life of badgers in the wild is between 8 and 12 years.

The home range size for badgers varies by sex, season and prey base, with males having larger home ranges than females. One study indicated males had an average home range of 2,100 acres, while one radio collared female had a home range of 1,790 acres in summer, 131 acres in fall, and only 5 acres during the winter (Sargeant and Warner 1972). Another study indicated a home range size between 667 and 1,550 acres for both sexes (Lindzey 1978).

Badgers often hunt for prey by digging into fossorial mammal burrows. Coyotes have been known to follow badgers to take advantage of an easy meal as rodents are flushed from their burrows. Badgers may enlarge hunting burrows for sleeping and protection from weather. During the summer months, they dig new resting burrows nearly every day; these burrows are usually only a few feet deep. Their natal dens are more permanent and may be as much as 30 feet long and 10 feet deep (Banfield 1974).

Badgers are ferocious animals and have few natural predators, though they can be preyed upon by bear (*Ursus americanus*), bobcat, and cougar. As discussed above, the main threat to badgers comes from anthropogenic effects.

Occurrence on the site. No potential badger dens have been observed on the proposed development area, and the site currently appears to lack a suitable prey base for this species due to a lack of ground squirrels and other small mammal prey. Additionally, there have been no documented occurrences in the CNDDB of badgers within a three-mile radius. However, it is possible that badgers occur on the site from time to time to forage or during movements between habitats to the north, east and south of the site. It is also possible that should ground squirrels from surrounding areas colonize the site in the future, badgers may also forage more frequently on the development area and establish dens there.

2.4 JURISDICTIONAL WATERS

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

Two wetland delineations have been conducted on the site, one by Olberding in 2008 which was subsequently verified by USACE, and one by LOA in January and April 2015. The second delineation was conducted due to the expiration of the Jurisdictional Determination (JD) for the prior delineation and because it appeared that the condition of wetlands on the site had changed since the 2008 delineation. A site verification visit was conducted with Keith Hess/USACE on June 30, 2016, however, although a new JD is forthcoming, at the time of the preparation of this report, it had not yet been issued by USACE.

LEGEND

Areas meeting the technical criteria of Jurisdictional Waters or Waters of the U.S.

- Isolated Seasonal Wetlands (36,983 SF, 0.85 Acres)
- Seasonal Wetland (19,644 SF, 0.45 Acres)
- Seasonal Drainage (205 SF, 205 LF)
- Isolated Drainage (1,423 SF, 691 LF)

Other Features

- Project Boundary (112 Acres)
- SP1 — Sample Point and Number

500' 0 500 feet

Approximate Scale

Aerial photograph courtesy of USDA-FSA Aerial Photography Field Office
Photo date 7/19/2012

N

Project Boundary

Minnie St

Drainage 1
205 SF, 205 LF

Isolated Seasonal Wetland 1
33,903 SF, 0.78 Ac.

SP4

SP3

Isolated Drainage 2
408 SF, 262 LF

Isolated Drainage 1a
752 SF, 302 LF

Isolated Drainage 1b
263 SF, 127 LF

Isolated Seasonal Wetland 2
791 SF, 0.02 Ac.

Isolated Seasonal Wetland 3
2,289 SF, 0.05 Ac.

SP2

Seasonal Wetland 4
19,644 SF, 0.45 Ac.

SP1

Alisal St

Project Boundary

Alisal St

Westbridge Ln

Live Oak Associates, Inc.

Spotorno Ranch B.E.
Potential Waters of the U.S.

Date	Project #	Figure #
4/4/2017	1656-04	7

The LOA delineation determined that there are four seasonal wetlands and four intermittent drainage channels on the site (Figure 7). Only Seasonal Wetland 4 in the western portion of the site near Alisal Street (0.45 acres) and Drainage 1 (205 linear feet) in the northern portion of the site which is a tributary to Sycamore Creek appear to be hydrologically connected to other waters of the U.S. and therefore would be considered jurisdictional by USACE. The other hydrologic features appear to be isolated and therefore not considered jurisdictional by USACE, however, all the wetlands and channels of the site, whether they are isolated or not, would be considered jurisdictional by the RWQCB. The on-site channels would also be considered jurisdictional by CDFW to the top of the bank.

Most of the drainages and wetlands of the site occur in areas proposed as open space and will not be impacted by the project; however, Isolated Wetland 2 (0.02 acre) occurs in an area proposed for bank stabilization and we understand that Seasonal Wetland 4 will likely be temporarily impacted as a result of trenching for a pipeline to convey stormwater from a proposed onsite detention basin and that possibly a small area of the wetland could also be permanently impacted by construction of an emergency vehicle access road, as the designs and locations of these latter project elements were not yet clearly defined at the time of preparation of this report. We would estimate that trenching for the stormwater pipeline and the EVA would result in less than 0.02 acre of temporary disturbance and 0.1 acre of permanent disturbance, respectively.

3.0 IMPACTS AND MITIGATIONS

3.1 SIGNIFICANCE CRITERIA

General plans, area plans, and specific projects are subject to the provisions of the California Environmental Quality Act (CEQA). The purpose of CEQA is to assess the impacts of proposed projects on the environment before they are constructed. For example, site development may require the removal of some or all of its existing vegetation. Animals associated with this vegetation could be destroyed or displaced. Animals adapted to humans, roads, buildings, pets, etc. could potentially replace those species formerly occurring on a site. Plants and animals that are state and/or federally listed as threatened or endangered may be destroyed or displaced. Sensitive habitats such as wetlands and riparian woodlands may be altered or destroyed. These impacts may be considered significant or not. According to *Guide to the California Environmental Quality Act*, "Significant effect on the environment" is interpreted 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 historic or aesthetic interest. Specific project impacts to biological resources may be considered "significant" if they will:

- have a substantial adverse effect, the directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Wildlife or U.S. Fish and Wildlife Service;

- have a substantial adverse effect on 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 site;

- reduce substantially the habitat of a fish or wildlife species, including causing a fish or wildlife population to drop below self-sustaining levels or threaten to eliminate an animal community;

- 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, or other approved local, regional, or state habitat conservation plan.

Furthermore, CEQA Guidelines Section 15065 states that a project may trigger the requirement to make a "mandatory findings of significance" if "the project has the potential to subsequently degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range on an endangered, rare or threatened species, or eliminate important examples of the major periods of California history or prehistory."

3.2 RELEVANT GOALS, POLICIES, AND LAWS

3.2.1 Threatened and Endangered Species

State and federal "endangered species" legislation has provided the California Department of Fish and Wildlife (CDFW) and the U.S. Fish and Wildlife Service (USFWS) with a mechanism for conserving and protecting plant and animal species of limited distribution and/or low or declining populations. Species listed as threatened or endangered under provisions of the state and federal endangered species acts, candidate species for such listing, state species of special concern, and some plants listed as endangered by the California Native Plant Society are collectively referred to as "species of special status." Permits may be required from both the CDFW and USFWS if activities associated with a proposed project will result in the "take" of a

listed species. "Take" is defined by the state of California as "to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture or kill" (California Fish and Wildlife Code, Section 86). "Take" is more broadly defined by the federal Endangered Species Act to include "harm" (16 USC, Section 1532(19), 50 CFR, Section 17.3). Furthermore, the CDFW and the USFWS are responding agencies under the California Environmental Quality Act (CEQA). Both agencies review CEQA documents in order to determine the adequacy of their treatment of endangered species issues and to make project-specific recommendations for their conservation.

3.2.2 Migratory Birds

State and federal laws also protect most birds. The Federal Migratory Bird Treaty Act (16 U.S.C., scc. 703, Supp. I, 1989) prohibits killing, possessing, or trading in migratory birds, except in accordance with regulations prescribed by the Secretary of the Interior. This act encompasses whole birds, parts of birds, and bird nests and eggs.

3.2.3 Birds of Prey

Birds of prey are also protected in California under provisions of the State Fish and Wildlife Code, Section 3503.5, which states that it is "unlawful to take, possess, or destroy any birds in the order Falconiformes or Strigiformes (birds of prey) or to take, possess, or destroy the nest or eggs of any such bird except as otherwise provided by this code or any regulation adopted pursuant thereto." Construction disturbance during the breeding season could result in the incidental loss of fertile eggs or nestlings, or otherwise lead to nest abandonment. Disturbance that causes nest abandonment and/or loss of reproductive effort is considered "taking" by the CDFW.

3.2.4 The Bald and Golden Eagle Protection Act

The Bald Eagle Protection Act of 1940 (16 U.S.C. 668, enacted by 54 Stat. 250) protects bald and golden eagles by prohibiting the taking, possession, and commerce of such birds and establishes civil penalties for violation of this Act. Take of bald and golden eagles is defined as follows: "disturb means to agitate or bother a bald or golden eagle to a degree that causes, or is likely to cause, based on the best scientific information available, (1) injury to an eagle, (2) a decrease in its productivity, by substantially interfering with normal breeding, feeding, or

sheltering behavior, or (3) nest abandonment, by substantially interfering with normal breeding, feeding, or sheltering behavior'' (72 FR 31132; 50 CFR 22.3).

3.2.5 Bats

Section 2000 and 4150 of the California Fish and Wildlife Code states that it unlawful to take or possess a number of species, including bats, without a license or permit as required by Section 3007. Additionally, Title 14 of the California Code of Regulations states it is unlawful to harass, herd, or drive a number of species, including bats. To harass is defined as "an intentional act which disrupts an animal's normal behavior patterns, which includes, but is not limited to, breeding, feeding or sheltering".

3.2.6 Wetlands and Other Jurisdictional Waters

Natural drainage channels and adjacent wetlands may be considered "Waters of the United States" (hereafter referred to as "jurisdictional waters") subject to the jurisdiction of the U.S. Army Corps of Engineers (USACE). The extent of jurisdiction has been defined in the Code of Federal Regulations but has also been subject to interpretation of the federal courts. Jurisdictional waters generally include:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands:
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a)(1)-(4) (i.e. the bulleted items above).

As recently determined by the United States Supreme Court in *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (the SWANCC decision), channels and wetlands isolated from other jurisdictional waters cannot be considered jurisdictional on the basis of their use, hypothetical or observed, by migratory birds. However, the U.S Supreme Court decisions *Rapanos v. United States* and *Carabell v. U.S. Army Corps of Engineers* impose a "significant nexus" test for federal jurisdiction over wetlands. In June 2007, the USACE and Environmental Protection Agency (EPA) established guidelines for applying the significant nexus standard. This standard includes 1) a case-by-case analysis of the flow characteristics and functions of the tributary or wetland to determine if they significantly affect the chemical, physical, and biological integrity of downstream navigable waters and 2) consideration of hydrologic and ecologic factors (EPA and USACE 2007).

The USACE regulates the filling or grading of such waters under the authority of Section 404 of the Clean Water Act. The extent of jurisdiction within drainage channels is defined by “ordinary high water marks” on opposing channel banks. Wetlands are habitats with soils that are intermittently or permanently saturated, or inundated. The resulting anaerobic conditions select for plant species known as hydrophytes that show a high degree of fidelity to such soils. Wetlands are identified by the presence of hydrophytic vegetation, hydric soils (soils saturated intermittently or permanently saturated by water), and wetland hydrology according to methodologies outlined in the 1987 Corps of Engineers Wetlands Delineation Manual (USACE 1987).

All activities that involve the discharge of fill into jurisdictional waters are subject to the permit requirements of the USACE (Wetland Training Institute, Inc. 1991). Such permits are typically issued on the condition that the applicant agrees to provide mitigation that result in no net loss of wetland functions or values. No permit can be issued until the Regional Water Quality Control Board (RWQCB) issues a certification (or waiver of such certification) that the proposed activity will meet state water quality standards. The filling of isolated wetlands, over which the USACE has disclaimed jurisdiction under the SWANCC decision, is regulated by the RWQCB. It is unlawful to fill isolated wetlands without filing a Notice of Intent with the RWQCB. The RWQCB is also responsible for enforcing National Pollution Discharge Elimination System

(NPDES) permits, including the General Construction Activity Storm Water Permit. All projects requiring federal money must also comply with Executive Order 11990 (Protection of Wetlands).

The California Department of Fish and Wildlife (CDFW) has jurisdiction over the bed and bank of natural drainages according to provisions of Section 1601 and 1602 of the California Fish and Game Code (2003). Activities that would disturb these drainages are regulated by the CDFW via a Streambed Alteration Agreement. Such an agreement typically stipulates that certain measures will be implemented which protect the habitat values of the drainage in question.

3.2.7 Local Ordinances, Policies, and Habitat Conservation Plans

East Alameda County Conservation Strategy

The East Alameda County Conservation Strategy of 2010 provides "context and guidance to project applicants, local jurisdictions with permit authority, and resource agencies in determining the potential impacts of a project and the level and type of mitigation necessary to offset those impacts". This document suggests a standard mitigation ratio of 3:1, which may vary depending on the type of habitat lost and the type of Conservation Zone the project is within.

City of Pleasanton General Plan (2009)

The City of Pleasanton has a General Plan that was adopted in 2009. Among other policies, this plan includes policies on heritage tree preservation and grading cessation when historic artifacts are found. All General Plan policies should be followed.

City of Pleasanton Municipal Code – Tree Preservation

Heritage trees are illegal to remove without the appropriate permit. Chapter 17.16 of the City's municipal code defines a Heritage tree as:

1. "Any single-trunked tree with a circumference of 55 inches or more measured four and one-half feet above ground level;
2. Any multi-trunked tree of which the two largest trunks have a circumference of 55 inches or more measured four and one-half feet above ground level;
3. Any tree 35 feet or more in height;
4. Any tree of particular historical significance specifically designated by official action;

5. A stand of trees, the nature of which makes each dependent upon the other for survival or the area's natural beauty."

However, the municipal code also states that the definition of a Heritage Tree "…shall not apply to fruit or nut trees when part of an orchard, the produce of which is used for commercial purposes (Ord. 1737 § 1, 1998)". Removal of Heritage Trees requires a permit from the City.

Creek setback

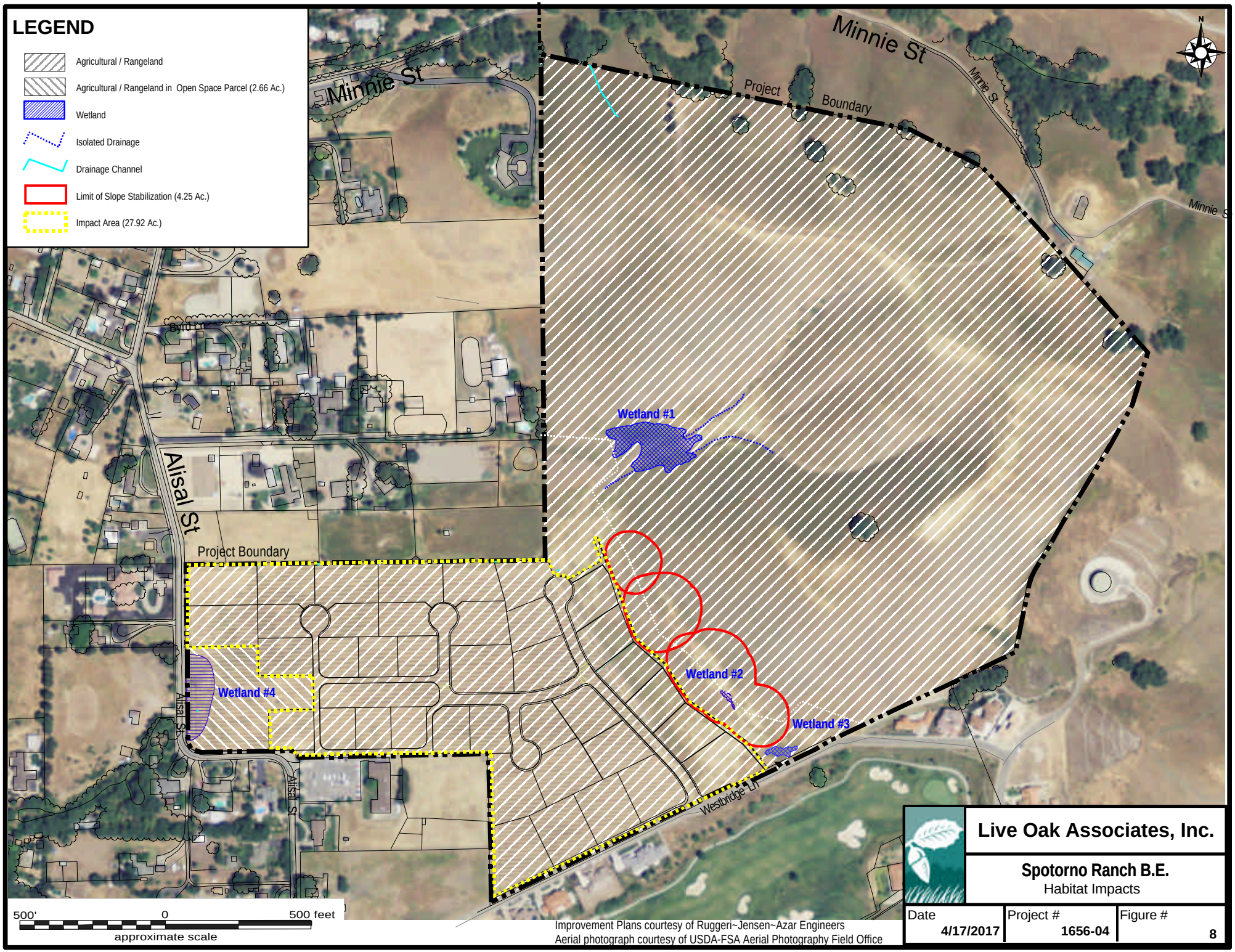
The City of Pleasanton determines appropriate creek setbacks on a case by case basis. Required setbacks from a creek will be established by the City of Pleasanton and will be guided by the geological stability and habitat significance of a creek to the City.

HCPs/NCCPs

No known habitat conservation plans are in effect for this property.

3.3 ENVIRONMENTAL IMPACT/MITIGATION

Figure 8 depicts the Spotorno Ranch site plan overlaid on habitats of the site. The project will result in permanent impacts to approximately 28 to 30 acres of primarily grasslands used for hay production as a result of the development of the homes and associated infrastructure. The additional slope stabilization will result in impacts to approximately 4.25 acres, including 0.02 acres of seasonal wetlands. Although no specifics plans were available at the time of the preparation of this document, and details are not provided on Figure 8, there will be some additional impacts as a result of the project occurring in the common parcel along Alisal Street. These project elements will include trenching for the installation of a pipeline to convey stormwater from a proposed detention pond to an existing culvert near Alisal Street as well as construction of an emergency vehicle access road (EVA). Alignments for these latter two elements are still being determined, but potentially these project elements could impact the large seasonal wetland (Wetland 4) occurring within the common parcel. Potential impacts are discussed in greater detail below.


LEGEND
Agricultural / Rangeland
Agricultural / Rangeland in Open Space Parcel (2.66 Ac.)
Wetland
Isolated Drainage
Drainage Channel
Limit of Slope Stabilization (4.25 Ac.)
Impact Area (27.92 Ac.)
Minnie St
Project Boundary
Alisal St
Wetland #1
Wetland #2
Wetland #3
Wetland #4
Westbridge Ln
N
500' 0 500 feet
approximate scale
Improvement Plans courtesy of Ruggeri~Jensen~Azar Engineers
Aerial photograph courtesy of USDA-FSA Aerial Photography Field Office
Live Oak Associates, Inc.
Spotorno Ranch B.E.
Habitat Impacts
Date 4/17/2017
Project # 1656-04
Figure # 8

3.3.1 Conflict with an Adopted Habitat Conservation Plan

Potential Impact. There are no adopted Habitat Conservation Plans that cover the site (however, see Section 3.3.14 regarding the East Alameda County Conservation Strategy).

Mitigation. None required.

3.3.2 Potential Impacts to California Tiger Salamander Habitat and Individuals

Potential Impact. Although breeding habitat is absent from the site, there are five breeding ponds reported in the CNDDB that are within 1.2 miles from the site. One of these latter ponds has been extirpated as a breeding site due to an earthen dam failure. Breeding ponds exist to the southeast and north of the site, and the Olberding 2008 report includes two additional sightings: a 2006 sighting of two adults in a seep in the northern portion of the East Side Conservation Area within the Callippe Golf Course and a 1999 sighting in a neighbor's pond which is located to the north of the present site boundaries. Additionally, Marcia Grefsrud/CDFW has indicated that there have been more recent observances of breeding CTS in a pond, wetland and seep located within the East Side Conservation Area, with the closest observance being within 0.31 miles of the proposed development and slope stabilization areas of the Spotorno Ranch development site.

Dr. Mark Jennings completed surveys of the site in 2012 and 2015 to assess the suitability of the site to support habitat for California tiger salamanders. He examined the project site, as well as potential aquatic habitats in the surrounding vicinity (where accessible). He determined that none of the seasonal wetlands on the site supported appropriate hydrology to provide breeding habitat for CTS, and he also observed that a former aquatic pond adjacent to the site (on private property) no longer exists; and that former California tiger salamander breeding habitat on adjacent Lund Ranch had been eliminated for at least 8 years as of his 2015 survey.

Additionally, according to the owner Al Spotorno, he and family members have conducted California ground squirrel (*Spermophilus beecheyi*) control for decades to keep livestock from potentially stepping in burrows and injuring themselves; and the fields on his property are disked to grow hay and legumes, upon which livestock are turned out to feed, on an annual basis. As a

result, Dr. Jennings observed no ground squirrel burrows on the Spotorno project area. However, it was observed that the neighboring property to the north of the site does continue to have ground squirrels and ground squirrel burrows present. Dr. Jennings also noted the presence of some clusters of Botta pocket gopher (*Thomomys bottae*) burrows, as well as large cracks in the clay soils of the site that could provide some refuge for estivating CTS, should they occur on the site. Therefore, although no breeding habitat exists on the Spotorno site, it is possible that CTS estivate on the site.

The project would result in development of approximately 28 to 30 acres of areas that provide the least suitable estivation habitat for CTS due to ongoing hay production and ground squirrel abatement practices, while preserving via a deed restriction, conservation easement, or similar conservation mechanism, approximately 81 acres of grasslands that are used as rangeland. These latter areas are significantly less disturbed, and are immediately adjacent to properties known to support breeding CTS. The preservation of approximately 81 acres of open space with a deed restriction, conservation easement, or similar conservation mechanism, which provides more suitable CTS estivation habitat will compensate for the loss of approximately 28 to 30 acres of marginal estivation habitat, therefore the project as currently proposed will result in a less-than-significant impact on upland habitat for CTS.

Although the development area is considered marginal estivation habitat, should CTS estivate on the development area during project construction, individual CTS could be harmed or killed by project construction activities and this would be considered a significant impact. Mitigations to lessen impacts to individual CTS to a less-than-significant level are provided below.

Mitigation. Typically, mitigations to reduce impacts to CTS individuals would take the form of avoidance, minimization and compensatory measures.

Avoidance and Minimization Measures. To avoid and minimize impacts to CTS individuals, the following measures will be followed:

- Prior to the start of construction, a qualified biologist will train all construction personnel regarding habitat sensitivity, identification of special status species potentially occurring on the site, and required practices.

- Pre-construction surveys will be conducted to ensure that CTS are absent from the construction area. If CTS are present, they should be relocated by a qualified biologist.
- The construction zone should be cleared, and silt fencing should be erected and maintained around construction zones to prevent CTS from moving into these areas.
- A biological monitor will be present onsite during particular times of construction to ensure no CTS are harmed, injured, or killed during project buildout.
- To minimize harm or mortality to individual CTS during migration movements, a maximum speed limit of 10 mph for vehicle traffic on the project site during both construction and operation phases will be enforced.

Additional avoidance and minimization measures to ensure that no individual CTS are harmed or killed by the project are included in Appendix A. CTS is considered a focal species of the EACCS and general and species-specific avoidance and minimization measures included in the EACCS Biological Opinion which also will be implemented are included in Appendix B.

Compensation. The project description already includes the preservation of approximately 81 acres of open space that will be preserved with a deed restriction, conservation easement, or similar conservation mechanism which provides better quality potential estivation habitat for CTS than the 28 to 30 acres of marginal estivation habitat that will be impact. These preserved lands along with a Habitat Management Plan, would result in a less than significant impact for loss of CTS upland habitat. A Habitat Management Plan will be developed for the preserved land by a qualified biologist to benefit CTS and other grassland species that may occur there such as the burrowing owl and American badger. Therefore, we believe the project as currently proposed would result in a less than significant impact on upland habitat for CTS.

Regulatory issues. In addition to implementing avoidance, minimization and compensation measures for CTS under CEQA, as described above, the applicant would need to comply with provisions of the federal and state Endangered Species Acts and may need to seek take authorization from both the USFWS and CDFW for project-related losses as required by law. To obtain a federal take permit, consultation with the U.S. Fish and Wildlife Service may need to be initiated either through a federal nexus (i.e., Section 7 consultation through the USACE) or through the HCP process (i.e., Section 10 consultation).

3.3.3 Potential Impacts to California Red-Legged Frog Habitat and Individuals

Potential Impact. The project site provides no breeding habitat for this species, and although CRLF have been detected in ponds on the adjacent golf course property, it is considered unlikely that this species would occur in the upland habitats of the project site to forage or move between other suitable habitats. Therefore, the project is expected to have a less-than-significant impact on this species.

Mitigation. None required.

3.3.4 Potential Impacts to Burrowing Owls

Impact. Currently, the development area and slope stabilization areas provide no habitat for BUOW due to a lack of ground squirrels and ground squirrel burrows. However, ground squirrels have been observed to occur on adjacent properties, and should they colonize the site in the future prior to project development, potentially BUOW could also colonize the site. Should BUOW nest or roost on the site in the future, project activities could result in a loss of habitat for this species and in impacts to individual owls. Construction activities that adversely affect the nesting success of BUOW or that result in mortality of individual owls that are nesting or roosting on the site would constitute a violation of state and federal laws and would be considered a significant impact under CEQA.

Mitigation Measure. Implementation of the following measures would reduce impacts to BUOW habitat and to individual BUOW to a less-than-significant level. These measures would also be consistent with the goals and objectives of the EACCS. BUOW is considered a focal species of the EACCS and general and species-specific avoidance and minimization measures included in the EACCS Biological Opinion which also will be implemented are included in Appendix B. The project proposes the preservation of approximately 81 acres of grasslands as open space to be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar conservation mechanism, with a habitat management plan and this will compensate for the permanent loss of approximately 28 to 30 acres of BUOW foraging and potential future BUOW roosting and nesting habitat.

To avoid impacts to active burrowing owl nests, a qualified biologist should conduct pre-construction surveys for burrowing owls within the construction footprint and within 250 ft. of the footprint no more than 30 days prior to the onset of ground disturbance. These surveys should be conducted in a manner consistent with accepted burrowing owl survey protocols. If pre-construction surveys determine that burrowing owls occupy the site during the non-breeding season (September 1 through January 31), then a passive relocation effort (e.g., blocking burrows with one-way doors and leaving them in place for a minimum of three days) may be necessary to ensure that the owls are not harmed or injured during construction. Once it has been determined that owls have vacated the site, the burrows can be collapsed, and ground disturbance can proceed. If burrowing owls are detected within the construction footprint or immediately adjacent lands (i.e., within 250 feet of the footprint) during the breeding season (February 1 through August 31), a construction-free buffer of 250 ft. should be established around all active owl nests. The buffer area should be enclosed with temporary fencing, and construction equipment and workers should not enter the enclosed setback areas. Buffers should remain in place for the duration of the breeding season or until it has been confirmed by a qualified biologist that all chicks have fledged and are independent of their parents. After the breeding season, passive relocation of any remaining owls may take place as described above.

3.3.5 Potential Impacts to Callippe Silverspot Butterflies

Potential Impact. A focused survey for the Callippe silverspot butterfly larval host plant, viola, was conducted on the proposed development area, slope stabilization areas and a minimum 75-foot buffer and none were detected. Further, these areas of the site do not support significant populations of nectar plants for the butterfly. Therefore, habitat for this species is considered absent from all areas that are proposed to be impacted by the project and the project is expected to have no impact on this species or its habitat.

Mitigation. None required.

3.3.6 Disturbance to Nesting Raptors and Nesting Migratory Birds

Potential Impact. Although no trees occur within the areas that will be impacted by the project or by slope stabilization activities, and therefore, the project would not be expected to result in impacts to tree-nesting raptors or other tree-nesting birds, the grassland habitats of the site

provide potential nesting habitat for two special status bird species (northern harrier and grasshopper sparrow) and potentially for non-special status migratory birds that nest on the ground. Project activities including noise, ground disturbance and vegetation removal that commence during the nesting season (February 1 through August 31) could result in nest abandonment by adult birds and result in mortality to their unfledged young. This would constitute a violation of state and federal law and would be considered a significant impact under CEQA.

Mitigation Measure. Implementation of the following mitigation measures would reduce impacts to nesting birds to a less-than-significant level.

To the maximum extent practicable, vegetation planned for removal should be removed during the non-breeding season, i.e. removed during the period from September 1st through January 31st. If it is not possible to avoid vegetation removal or other disturbances during the breeding season (February 1 through August 31), then a qualified biologist will conduct a pre-construction survey for ground-nesting raptors and migratory birds in all potential nesting habitat within the development and bank stabilization impact areas and within 250 ft. of these areas. This survey should be conducted no more than 14 days prior to the initiation of demolition/construction activities during the early part of the breeding season (February through April) and no more than 30 days prior to the initiation of these activities during the latter part of the breeding season (May through August). If nesting raptors or migratory birds are detected on the site during the survey, a suitable construction-free buffer will be established around all active nests. The precise dimension of the buffer (up to 250 ft.) would be determined by the qualified biologist at that time and may vary depending on location and species. Buffers will remain in place for the duration of the breeding season or until it has been confirmed by the qualified biologist that all chicks have fledged and are independent of their parents. Pre-construction surveys during the non-breeding season are not necessary (with the exception of pre-constructions surveys for burrowing owls, see *Impact 3.3.4*, above), as adult birds would be expected to abandon their roosts during project implementation activities and therefore, would not be expected to be harmed or killed.

Implementation of the above measures would reduce impacts to ground-nesting raptors and other ground-nesting birds to a less-than-significant level.

3.3.7 Potential Impacts to American Badgers

Impact. Areas that would be impacted by the project currently provide very marginal habitat for badgers due to the lack of a significant small mammal prey base (as a result of longterm abatement of ground squirrels and other small mammals on the site) and no badgers or potential badger dens have been observed in these areas. However, should conditions change on the site in the future prior to project implementation, badgers potentially could occur on the site and establish dens. The project already includes the preservation of approximately 81 acres of open space with a habitat management plan that provides potential foraging, denning and breeding habitat for this species which would more than compensate for a loss of approximately 28 to 30 acres of such potential habitat and result in a less than significant impact on badger habitat. However, should badgers occur on the site during project implementation, this may result in harm or mortality to individual badgers, and this would be considered a significant impact under CEQA.

Mitigation. Implementation of the following mitigation measures would reduce impacts to individual American badgers to a less-than-significant level.

Avoidance. Pre-construction surveys that will be conducted for burrowing owls will also be used to determine the presence or absence of badgers in the development and slope stabilization footprint, as well as within 300 feet of these areas.

If an active badger den is identified during pre-construction surveys within or immediately adjacent to any impacted areas, a construction-free buffer of up to 300 ft. (or distance specified by the resource agencies, i.e., CDFW) will be established around the den. Because badgers are known to use multiple burrows in a breeding burrow complex, a biological monitor should be present on the site during project development activities to ensure the buffer is adequate to avoid direct impact to individuals or den abandonment. The monitor would be necessary on the site until it is determined that young are of an independent age and project development activities would not harm individual badgers.

Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated, and ground disturbance can proceed.

American badger is considered a focal species of the EACCS and general and species-specific avoidance and minimization measures included in the EACCS Biological Opinion which also will be implemented are included in Appendix B.

The above mitigation measures will lessen potential impacts to badgers to a less-than-significant level.

3.3.8 Potential Impact to Special Status Plant Species

Potential Impact. Of the special status plant species potentially occurring in the region (Table 2, Figure 5), most are considered absent from, or unlikely to occur on, the site due to a lack of suitable habitat such as vernal pools, and serpentine or alkaline soils, or because the site provides only marginal habitat for these species and they have never been observed in the project vicinity or have not been observed for many decades. Additionally, a focused rare plant survey conducted in May 2017 during the blooming season for several rare plant species having potential to occur on the site was able to rule out their presence on the site. One special status species has been observed to be present on the site in the past by both LOA (in 2012) and by Olberding. This latter species is Congdon's tarplant (CRPR 1B) (annual species; blooms June-November). Although three small populations were observed on the site by LOA in 2012, it has not been detected on the site during subsequent surveys conducted in 2014 through 2017, although not all of these surveys were conducted during its blooming period. Potential habitat for one other special status plant species, big tarplant (CRPR 1B) (annual species; blooms July-October), is also present on the site. Focused rare plant surveys in summer and fall 2017 are planned to determine whether either of these latter two species is present within areas of the site that will be disturbed as a result of development or slope stabilization. If the project would result in the loss of a significant portion of the regional population of any special status plant species, impacts may be considered significant under CEQA.

Mitigation. Should the botanical surveys confirm that special status plants are absent from the impacted areas of the site, then no mitigation would be required. If populations of these species are present, and if it is determined by a qualified botanist or plant ecologist that project impacts to these species are significant under CEQA, then the following mitigations will be implemented which will reduce impacts to a less-than-significant level.

Avoidance. In consultation with a botanist or plant ecologist, and to the maximum extent feasible, the project will be designed to avoid substantial direct and indirect impacts (e.g. the establishment of an appropriate sized buffer) to these species.

***Compensation*.** If the project cannot be designed to avoid significant impacts to special status plant populations, then the following compensatory measures will be implemented.

Onsite Preservation. The onsite proposed open space area should be surveyed during the appropriate blooming season to determine whether populations of the species being significantly impacted by the project are also present within areas that will be preserved. If populations of the species are present on the preservation area, it should be determined by a qualified botanist or plant ecologist whether these populations to be preserved would adequately compensate, or partially compensate, for lost populations on the project site. If it is determined that preserved populations would completely compensate for impacted populations, then no further compensation would be required. However, if it is determined that populations of the impacted species are absent from the site, or that they are present but their preservation would only partially mitigate for lost populations, then additional mitigation measures described below will be implemented..

*Development of a Site Restoration Plan***.** If the project cannot be designed to avoid significant impacts to special status plants (as discussed above) and the preservation area does not support adequate populations of the impacted species to compensate for project impacts, then a Site Restoration Plan must be developed for the significantly impacted species by a qualified botanist or plant ecologist and approved by the City prior to the start of project development. The objective of this mitigation measure would be to replace the special status plants and habitat lost during project implementation. The proposed restoration program should be monitored for a period of five years from the date of site grading. The restoration plan should contain at a minimum the following:

- Identification of appropriate locations on the conservation area as determined by the botanist or plant ecologist (i.e., areas with suitable soils, aspect, hydrology, etc.) to restore lost plant populations.

- A description of the propagation and planting techniques to be employed in the restoration effort. Perennial plants to be impacted by site grading should be salvaged and raised in a greenhouse for eventual transplanting within the restoration areas. Annual plants can best be established by collecting seeds of onsite plants prior to project implementation and then directly seeding into suitable habitat on the conservation area.
- A timetable for implementation of the restoration plan.
- A monitoring plan and performance criteria.
- A description of remedial measures to be performed in the event that initial restoration measures are unsuccessful in meeting the performance criteria.
- A description of site maintenance activities to follow restoration activities. These may include weed control, irrigation, and control of herbivory by livestock and wildlife.

*Off-site Mitigation***.** If an onsite restoration plan is not feasible, mitigation for impacted special status plant species could be accommodated through restoration or preservation at an off-site location. Any off-site restoration plan would be subject to the same minimum requirements as indicated above for an onsite restoration plan.

If off-site preservation is the mitigation alternative chosen, then the mitigation site must be confirmed to support populations of the impacted species and must be preserved in perpetuity via deed restriction, establishment of a conservation easement, or similar preservation mechanism. A qualified botanist or plant ecologist should prepare a Preservation Plan for the site containing, at a minimum, the following elements:

- A monitoring plan and performance criteria for the preserved plant population.
- A description of remedial measures to be performed in the event that performance criteria are not met.
- A description of maintenance activities to be conducted on the site including weed control, trash removal, irrigation, and control of herbivory by livestock and wildlife.

The project proponent will be responsible for funding the development and implementation of any onsite or off-site Preservation Plan.

It should be noted that the Congdon's tarplant is a focal species under the EACCS and the EACCS includes a standardized mitigation ration for this species of 5:1. General and species-specific avoidance and minimization measures included in the EACCS Biological Opinion which also will be implemented are included in Appendix B.

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

Potential Impact. Two wetland delineations have been conducted on the site, one by Olberding in 2008 which was subsequently verified by USACE, and one by LOA in January and April 2015. The second delineation was conducted due to the expiration of the Jurisdictional Determination (JD) for the prior delineation and because it appeared that the condition of wetlands on the site had changed since the 2008 delineation. A site verification visit was conducted with Keith Hess/USACE on June 30, 2016, however, although a new JD is forthcoming, at the time of the preparation of this report, it had not yet been issued by USACE. None the less, the final map submitted to USACE for verification arose from findings from the verification site visit and therefore will be the map on which the JD is expected to be issued.

The LOA delineation determined that there are four seasonal wetlands and four drainage channels on the site. Only Seasonal Wetland 4 in the western portion of the site near Alisal Street (0.45 acres) and Drainage 1 (205 linear feet) in the northern portion of the site which is a tributary to Sycamore Creek appear to be hydrologically connected other waters of the U.S. and therefore would be considered jurisdictional by USACE. The other hydrologic features appear to be isolated and therefore not considered jurisdictional by USACE, however, all the wetlands and channels of the site, whether they are isolated or not, would be considered jurisdictional by the RWQCB. For channels, the RWQCB's jurisdiction has recently been expanded to include the bed and bank of the channel. The on-site channels would also be considered jurisdictional by CDFW to the top of the bank.

The project will preserve most of the wetlands (totaling 1.28 acres) and all of the drainages (totaling 896 linear feet) occurring on the site. Slope stabilization will result in permanent impacts to Seasonal Wetland 2 (0.02 acres). This is a small wetland that is dominated by non-native wetland species such as canary grass, and which provides no additional ecological

functions and values over the surrounding upland habitat. In addition to the impacts to Seasonal Wetland 2, there will be temporary impacts to Seasonal Wetland 4 as a result of trenching for a pipeline to convey stormwater from a proposed onsite detention basin. Additionally, there is the potential for minor permanent impacts to Seasonal Wetland 4 as a result of the construction of an emergency vehicle access road (EVA). Plans for both the EVA and stormwater pipeline alignments have not yet been finalized as of the preparation of this report, but based on conversations with the project proponent and the project's civil engineer, we would expect that total temporary and permanent impacts to Seasonal Wetland 4 would be less than 0.05 acres.

The loss of 0.02 acres of marginal isolated wetland habitat (Seasonal Wetland 2) and temporary and permanent impacts totalling 0.05 acre or less of Seasonal Wetland 4, especially in light of the preservation of 1.28 acres of better quality wetland habitat within the open space areas of the site, would be considered a less-than-significant impact under CEQA.

Mitigation. None required.

Regulatory issues. While temporary and permanent impacts to less than 0.1 acre of marginal seasonal wetland habitats as a result of the project would be considered less-than-significant under CEQA, the applicant will need to comply with all state and federal regulations related to construction work that will impact aquatic habitats occurring on the site. The applicant may be required to obtain a Section 404 Clean Water Act Nationwide permit from the USACE and a Section 401 Water Quality Certification from the RWQCB prior to impacting any jurisdictional waters. As no channels will be impacted by the project, the applicant will not need to obtain a Section 1600 Streambed Alteration Agreement from the CDFW.

3.3.10 Potential Impacts to Special Status Animal Species

Impact. In addition to CTS, BUOW, and American badger, the project site provides potential habitat for several other special status animals that occur, or once occurred, in the project region (Table 2, Figure 5).

The site provides potential foraging habitat, but no breeding habitat, for four special status birds (white-tailed kite, Swainson's hawk, golden eagle, and loggerhead shrike) and two special status bat species (Townsend's big-eared bat and pallid bat). As already indicated above, the site

provides potential nesting and foraging habitat for another two bird species (northern harrier and grasshopper sparrow) which nest on the ground within grassland habitats. Mitigations to ensure that the project does not result in nest abandonment and mortality for these latter two species has already been provided.

All other special status species known to occur in the project region are considered absent from or unlikely to occur on the project site or its immediate vicinity due to the lack of suitable habitat.

The loss of breeding, roosting and foraging habitat for special status animals would be a less-than-significant impact of the project, given that project proposes to preserve approximately 81 acres of this habitat onsite and given that this habitat would remain regionally abundant.

Mitigation. None required.

3.3.11 Loss of Habitat for Non-special Status Native Wildlife

Potential Impact. The habitats of the proposed project site are likely to comprise only a portion of most native wildlife's entire home range or territory. As such, some species may disperse through the site, but most wildlife presently using the site do so as part of their normal movements for foraging, mating, and caring for young. Wildlife species presently occupying the site would be displaced or lost from the proposed development areas. The permanent loss of approximately 28 to 30 acres of grassland habitats on the site would be considered a less-than-significant impact of the project given that approximately 81 acres of such habitat will be preserved on the site and as this habitat remains regionally abundant.

Mitigation. None required.

3.3.12 Interference with the Movement of Native Wildlife

Potential Impacts. The project is unlikely to result in a significant impact to the movements of native wildlife. The proposed development area is surrounded by existing development on three sides and would not represent a movement corridor between adjacent habitats for native species. Therefore, impacts to wildlife movements are considered less-than-significant under CEQA.

Mitigation. None required.

3.3.13 Conflict with Local Policies or Ordinances

Potential Impact. The project is within Zone 11 of the study area of the East Alameda County Conservation Strategy for which a Programmatic Biological Opinion has been prepared (USFWS 2012) in which the project must follow guidelines for the Congdon's tarplant, CTS, western burrowing owl, and American badger as these species have the potential to occur onsite and are considered focal species of the EACCS. The project includes the preservation of approximately 81 acres of habitat. Although the preservation of approximately 81 acres is short of the EACCS' general land preservation ratio of 3:1 preservation:loss, it should be noted that the project proposes to preserve the highest quality habitat occurring on the site while proposing to develop areas of the site that have been used for hay production, and which provide lower quality habitat. Additionally, mitigation measures identified in this document will help to achieve goals and objectives defined in section 3.5 of the Conservation Strategy (ICF 2010). Lastly, the project will implement general and specific minimization measures from the EACCS Biological Opinion (USFWS 2012) for focal species potentially occurring on the site. These measures are provided in Appendix B.

There are no other local policies or ordinances pertaining to biological resources that would pertain to this project, as, for instance, the project does not propose the removal of any trees or development in the vicinity of any creeks, therefore, local tree ordinances and creek setback policies would not pertain to this project.

Mitigation. None required.

3.3.14 Degradation of Water Quality in Seasonal Creeks, Reservoirs and Downstream Waters

Potential Impact. The development of the site will require grading, excavation, and vegetation removal, thereby resulting in the project site becoming vulnerable to sheet, rill or gully erosion. Eroded soil is generally carried as sediment in surface runoff to be deposited in natural creek/river beds, canals, and adjacent wetlands.

To avoid or minimize sedimentation to offsite waters, the will be required to develop an erosion control plan. The applicant must also comply with standard erosion control measures that employ best management practices (BMPs), develop a SWPPP per State Water Quality Control Board

Stormwater Permit, and conform with the City's stormwater and grading requirements. If the applicant abides by the above requirements and obtains the required permits prior to starting the project, impacts to downstream waters from erosion and polluted stormwater runoff will be reduced to a less than significant level.

During project operation phase, runoff from the site will be detained in a detention basin in the western portion of the site, which will then drain via a pipe to existing stormwater pipelines located off-site to the west.

Mitigation. The applicant must comply with the provisions of a City grading permit, including standard erosion control measures that employ best management practices (BMPs). Projects involving the grading of large tracts of land must also be in compliance with provisions of a General Construction permit (a type of NPDES permit) available from the California Regional Water Quality Control Board. Compliance with the above permits should result in no impact to water quality in seasonal creeks, reservoirs, and downstream waters from the proposed project.

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APPENDIX A: MINIMIZATION MEASURES FOR CALIFORNIA TIGER SALAMANDER

The following measures will minimize direct and indirect impacts to California tiger salamanders.

- Prior to the start of construction, a qualified biologist will train all project staff regarding habitat sensitivity, identification of special status species, and required practices. The training shall include the general measures that are being implemented to conserve these species as they relate to the project, the penalties for non-compliance, and the boundaries of the project area. A fact sheet or other supporting materials containing this information should be prepared and distributed. Upon completion of training, employees will sign a form stating that they attended the training and understand all the conservation and protection measures.

- A qualified biologist will survey the project site prior to, and be present to monitor, construction activities during any initial ground disturbance or vegetation clearing or other periods during construction, as necessary. The biologist will capture and relocate any California tiger salamanders that are discovered during the surveys or construction monitoring. Any individuals that are captured should be held for the minimum amount of time necessary to release them to suitable habitat outside of the work area.

- A qualified biologist will stake and flag exclusion zones around all known locations of CTS breeding and upland refugia areas in the construction zone. These areas will be avoided during construction activities to the maximum extent practicable. All construction areas will be flagged, and all activity will be confined to these areas.

- If a CTS is encountered during construction work, activities will cease until the animal is removed and relocated by a qualified biologist.

- Construction activities should be limited to the period from May 1 through October 31.

- Permanent and temporary construction disturbances and other types of project-related disturbances to CTS habitat shall be minimized to the maximum extent practicable and confined to the project site. To minimize temporary disturbances, all project-related vehicle traffic shall be restricted to established roads, construction areas, designated cross-country routes, and other designated areas. These areas also should be included in preconstruction surveys and, to the maximum extent possible, should be established in locations disturbed by previous activities to prevent further adverse effects. Sensitive habitat areas shall be delineated with high visibility flagging or fencing to prevent encroachment of construction personnel and equipment into any sensitive areas during project work activities. At no time shall equipment or personnel be allowed to adversely affect areas outside the project site without authorization from the Service.

- Because dusk and dawn are often the times when CTS are most actively foraging and dispersing, all construction activities should cease one half hour before sunset and should not begin prior to one half hour before sunrise.

- No canine or feline pets or firearms (except for federal, state, or local law enforcement officers and security personnel) shall be permitted at the project site to avoid harassment, killing, or injuring of CTS.

- A representative shall be appointed by the applicant who will be the contact source for any employee or contractor who might inadvertently kill or injure a CTS or who finds a dead, injured or entrapped individual. The representative shall be identified during the tailgate/training session. The representative's name and telephone number shall be provided to the Service prior to the initiation of ground disturbance activities.

- Tightly woven fiber netting or similar material shall be used for erosion control or other purposes at the project site to ensure that CTS do not get trapped.

- A litter control program shall be instituted at the entire project site. All construction personnel should ensure that food scraps, paper wrappers, food containers, cans, bottles, and other trash from the project area are deposited in covered or closed trash containers. The trash containers should be removed from the project area at the end of each working day.

APPENDIX B: ADDITIONAL MINIMIZATION AND MITIGATION MEASURES FROM THE BIOLOGICAL OPINION FOR THE EAST ALAMEDA COUNTY CONSERVATION STRATEGY

Table 3-2. General Avoidance and Minimization Measures to Reduce Effects on Focal Species

AMM Code	Avoidance and Minimization Measure
GEN-01	Employees and contractors performing construction activities will receive environmental sensitivity training. Training will include review of environmental laws and Avoidance and Minimization Measures (AMMs) that must be followed by all personnel to reduce or avoid effects on covered species during construction activities.
GEN-02	Environmental tailboard trainings will take place on an as-needed basis in the field. The environmental tailboard trainings will include a brief review of the biology of the covered species and guidelines that must be followed by all personnel to reduce or avoid negative effects to these species during construction activities. Directors, Managers, Superintendents, and the crew foremen and forewomen will be responsible for ensuring that crewmembers comply with the guidelines.
GEN-03	Contracts with contractors, construction management firms, and subcontractors will obligate all contractors to comply with these requirements, AMMs.
GEN-04	The following will not be allowed at or near work sites for covered activities: trash dumping, firearms, open fires (such as barbecues) not required by the activity, hunting, and pets (except for safety in remote locations).
GEN-05	Vehicles and equipment will be parked on pavement, existing roads, and previously disturbed areas to the extent practicable.
GEN-06	Off-road vehicle travel will be minimized.
GEN-07	Vehicles will not exceed a speed limit of 15 mph on unpaved roads within natural land-cover types, or during off-road travel.
GEN-08	Vehicles or equipment will not be refueled within 100 feet of a wetland, stream, or other waterway unless a bermed and lined refueling area is constructed.
GEN-09	Vehicles shall be washed only at approved areas. No washing of vehicles shall occur at job sites.
GEN-10	To discourage the introduction and establishment of invasive plant species, seed mixtures/straw used within natural vegetation will be either rice straw or weed-free straw.
GEN-11	Pipes, culverts and similar materials greater than four inches in diameter, will be stored so as to prevent covered wildlife species from using these as temporary refuges, and these materials will be inspected each morning for the presence of animals prior to being moved.
GEN-12	Erosion control measures will be implemented to reduce sedimentation in wetland habitat occupied by covered animal and plant species when activities are the source of potential erosion problems. Plastic mono-filament netting (erosion control matting) or similar material containing netting shall not be used at the project. Acceptable substitutes include coconut coir matting or tackified hydroseeding compounds.
GEN-13	Stockpiling of material will occur such that direct effects to covered species are avoided. Stockpiling of material in riparian areas will occur outside of the top of bank, and preferably outside of the outer riparian dripline and will not exceed 30 days.
GEN-14	Grading will be restricted to the minimum area necessary.
GEN-15	Prior to ground disturbing activities in sensitive habitats, project construction boundaries and access areas will be flagged and temporarily fenced during construction to reduce the potential for vehicles and equipment to stray into adjacent habitats.
GEN-16	Significant earth moving-activities will not be conducted in riparian areas within 24 hours of predicted storms or after major storms (defined as 1-inch of rain or more).
GEN-17	Trenches will be backfilled as soon as possible. Open trenches will be searched each day prior to construction to ensure no covered species are trapped. Earthen escape ramps will be installed at intervals prescribed by a qualified biologist.

Table 3-3. Species-Specific AMMs

Species AMM	Species	Habitat	Avoidance and Minimization Measure
INV-1	Vernal pool fairy shrimp, longhorn fairy shrimp	Vernal pools/clay flats, alkaline pools/rock outcrops/sandstone pools	• A qualified biological monitor will be present if work is conducted outside of designated work corridors or off of existing access roads. • If vernal pools, clay flats, alkaline pools, ephemeral stock tanks, or sandstone pools, or roadside ditches are present, a qualified biologist will stake and flag an exclusion zone prior to construction activities. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). The exclusion zone will encompass the maximum practicable distance from the worksite and at least 250 feet from the aquatic feature wet or dry. • Work will be avoided after the first significant rain until June 1, or until pools remain dry for 72 hours. • No herbicide will be applied within 100 feet of exclusion zones, except when applied to cut stumps or frilled stems or injected into stems. No broadcast applications will be applied. • Avoid modifying or changing the hydrology of the habitat.
INV-2	Callippe silverspot butterfly	Grassland with host/nectar plants present	• No herbicide will be applied within 100 feet of host plant populations. Spot application to cut stumps, frilled stems, or injected into stems are acceptable. No broadcast applications will be applied. • Cut trees that are removed in the vicinity of host plants will be hand carried rather than dragged to disposal areas. • Avoid or minimize the removal of host plant, Johnny jump-up (*Viola pedunculata*) • Avoid work in suitable habitat during the flight and mating season (mid-May to mid-July); establish a minimum 50-foot buffer around host plants.
AMPH-1	<u>Amphibians</u> California tiger salamander California red-legged frog Foothill yellow-legged frog	Streams, wetlands, ponds, vernal pools	• If aquatic habitat is present, a qualified biologist will stake and flag an exclusion zone prior to activities. The exclusion zone will be fenced with orange construction zone and erosion control fencing (to be installed by construction crew). The exclusion zone will encompass the maximum practicable distance from the work site and at least 500 feet from the aquatic feature wet or dry.
AMPH-2	<u>Amphibians</u> California tiger salamander California red-legged frog Foothill yellow-legged frog	Riparian habitat and grasslands within 2-miles of aquatic habitat.	• A qualified biologist will conduct preconstruction surveys prior to activities define a time for the surveys (before ground breaking). If individuals are found, work will not begin until they are moved out of the construction zone to a USFWS/CDFG approved relocation site. • A Service-approved biologist should be present for initial ground disturbing activities. • If the work site is within the typical dispersal distance (contact USFWS/CDFG for

Species AMM	Species	Habitat	Avoidance and Minimization Measure
			latest research on this distance for species of interest) of potential breeding habitat, barrier fencing will be constructed around the worksite to prevent amphibians from entering the work area. Barrier fencing will be removed within 72 hours of completion of work. • No monofilament plastic will be used for erosion control. • Construction personnel will inspect open trenches in the morning and evening for trapped amphibians. • A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or Service approved under an active biological opinion, will be contracted to trap and to move amphibians to nearby suitable habitat if amphibians are found inside fenced area. • Work will be avoided within suitable habitat from October 15 (or the first measurable fall rain of 1" or greater, to May 1.
REPT-1	Alameda whipsnake	Chaparral, scrub, grassland, riparian, oak woodland	• No monofilament plastic will be used for erosion control • Barrier fencing may be used to exclude focal reptiles. Barrier fencing will be removed within 72 hours of completion of work. • Construction crews or on-site biological monitor will inspect open trenches in the morning and evening for trapped reptiles. • Ground disturbance in suitable habitat will be minimized. • A USFWS and CDFG-approved biological monitor will be present for all ground disturbing activities in suitable habitat. • A qualified biologist possessing a valid ESA Section 10(a)(1)(A) permit or Service approved under an active biological opinion, and approved by CDFG will be contracted to trap and to move reptiles to nearby suitable habitat if listed reptiles are found inside fenced area.
BIRD-1	Golden eagle	Cliffs and large trees surrounded by open grassland.	• If an active nest is identified near a proposed work area work will be conducted outside of the nesting season (February 1 to September 1). • If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a no-activity zone will be established by a qualified biologist. The no-activity zone will be large enough to avoid nest abandonment and will at a minimum be 250-feet radius from the nest. • If an effective no-activity zone cannot be established in either case, an experienced golden eagle biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the eagles, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the eagles.

Species AMM	Species	Habitat	Avoidance and Minimization Measure
BIRD-2	Burrowing owl	Grasslands or ruderal areas with burrows	• If an active nest is identified near a proposed work area work will be conducted outside of the nesting season (March 15 to September 1). • If an active nest is identified near a proposed work area and work cannot be conducted outside of the nesting season, a no-activity zone will be established by a qualified biologist. The no-activity zone will be large enough to avoid nest abandonment and will at a minimum be 250-feet radius from the nest. • If burrowing owls are present at the site during the non-breeding period, a qualified biologist will establish a no-activity zone of at least 150 feet. • If an effective no-activity zone cannot be established in either case, an experienced burrowing owl biologist will develop a site-specific plan (i.e., a plan that considers the type and extent of the proposed activity, the duration and timing of the activity, the sensitivity and habituation of the owls, and the dissimilarity of the proposed activity with background activities) to minimize the potential to affect the reproductive success of the owls.
BIRD-3	Tricolored blackbird	Wetlands, ponds with emergent vegetation	• If an active nest colony is identified near a proposed work area work will be conducted outside of the nesting season (March 15 to September 1).
MAMM-1	San Joaquin kit fox, (American badger)	Grassland, generally with ground squirrel burrows	• If potential dens are present, their disturbance and destruction will be avoided. • If potential dens are located within the proposed work area and cannot be avoided during construction, qualified biologist will determine if the dens are occupied or were recently occupied using methodology coordinated with the USFWS and CDFG. If unoccupied, the qualified biologist will collapse these dens by hand in accordance with USFWS procedures (U.S. Fish and Wildlife Service 1999). • Exclusion zones will be implemented following USFWS procedures (U.S. Fish and Wildlife Service 1999) or the latest USFWS procedures available at the time. The radius of these zones will follow current standards or will be as follows: Potential Den—50 feet; Known Den—100 feet; Natal or Pupping Den—to be determined on a case-by-case basis in coordination with USFWS and CDFG. • Pipes will be capped and trenches will contain exit ramps to avoid direct mortality while construction areas is active.
FISH-1	Central California coast steelhead	Stream habitats	• If any life stage of any listed species may be present during in-water activities or substantial disturbance, capture, handling, exclusion, salvage, and relocation will be considered for the listed species. A take permit from NMFS would be required for this unless it is for emergency, then DFG. • With the exception of streams identified by NMFS, and CDFG as not supporting spawning habitat, conduct all in-water activities outside the spawning and incubation season for listed fish species or to periods identified in cooperation with NMFS, and CDFG to accommodate site-specific conditions.

Species AMM	Species	Habitat	Avoidance and Minimization Measure
			• Preserve stream width, depth, velocity, and slope that provide upstream and downstream passage of adult and juvenile salmonid fish according to NMFS and CDFG guidelines and criteria or as developed in cooperation with NMFS and CDFG to accommodate site-specific conditions. • Remove the minimum amount of wood, sediment and gravel, and other natural debris necessary to maintain and protect culvert and bridge function, ensure suitable fish passage conditions, and minimize disturbance of the streambed, using hand tools where feasible. • Instream woody material (IWM) subject to damage or removal shall be retained and replaced on site after project completion or used for other mitigation/restoration projects near the project site where feasible. • Minimize disturbed areas by locating temporary work areas to avoid patches of native aquatic vegetation, substantial large woody debris, and spawning gravel. • Where spawning gravel removal is temporary to support construction activities, replace spawning gravel to approximate the pre-construction conditions and using gravel removed from the site. • Gravel and LWD excavated from the channel that is temporarily stockpiled for reuse in the channel will be stored in a manner that prevents mixing with stream flows. • For diversion from streams, rivers, and other water bodies, any water intake structure shall be installed, operated, and maintained in accordance with NMFS, and DFG criteria for the species and life stages of concern or as developed in cooperation with NMFS, USFWS, and DFG to accommodate site-specific conditions. • Avoid extending existing areas of stream bank rock slope protection (RSP) or other bank protection (e.g., sheet piles) and limit the extent of bank and channel armoring to the minimum necessary to protect essential infrastructure. • Where rock slope protection (RSP) is necessary, incorporate native riparian vegetation and/or LWD in RSP. • Stream flow through new and replacement culverts, bridges, and over stream gradient control structures must meet the velocity depth, and other passage criteria for salmonid streams as described by NMFS and DFG guidelines or as developed in cooperation with NMFS and DFG to accommodate site-specific conditions. • Pile driving shall be conducted outside of the stream channel whenever feasible or practical. • Drive piles with a vibratory hammer when feasible. • For drop or hydraulic hammers, use the smallest pile driver and the minimum force necessary to complete the work – set the hammer drop height to the minimum necessary to drive the pile. • Where listed species cannot be captured, handled, excluded, or relocated (e.g.,

Species AMM	Species	Habitat	Avoidance and Minimization Measure
			salmonid redd), avoid or delay actions that could injure or kill individual organism until the species leaves the affected area or the organism reaches a stage that can be captured, handled, excluded, or relocated . This activity would need to be coordinated with NMFS and the biologist conducting the work would need a take permit. • Within occupied habitat, capture, handling, exclusion, and relocation activities shall be completed no earlier than 48 hours before construction begins to minimize the probability that listed species will recolonize the affected areas. This activity would need to be coordinated with NMFS and the biologist conducting the work would need a take permit. • Within temporarily drained stream channel areas, salvage activities shall be initiated before or at the same time as stream area draining and completed within a time frame necessary to avoid injury and mortality of listed species. This activity would need to be coordinated with NMFS and the biologist conducting the work would need a take permit.

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Roseville, CA 95661

SUBJECT: Results of the June 2018 special status plant survey conducted on the Spotorno Ranch project site, located in the City of Pleasanton, Alameda County, California (PN 1656-05).

Dear Mike:

Live Oak Associates, Inc. (LOA) conducted a second focused survey for rare plants within areas proposed for residential development and landslide repair, including a 75-foot buffer, on the approximately Spotorno Ranch project site. The project site is located east of Alisal Street in the City of Pleasanton, Alameda County, California. The survey was conducted by LOA plant and wetland ecologist, Pamela Peterson on June 26, 2018.

Introduction

Based on prior reconnaissance-level surveys conducted on the site by LOA ecologists Pamela Peterson and Katrina Krakow and a review of the California Natural Diversity Database (CNDDB) for preparation of a Biological Evaluation for CEQA, it was determined that the site had the potential to support the larval host plant for the federally-listed Callippe silverspot butterfly, i.e. viola (*Viola pedunculata*), as well as the potential to support four special status plant species: Congdon's tarplant (CRPR 1B) (annual species; blooms June-November), big tarplant (CRPR 1B) (annual species; blooms July-October), round-leaved filaree (CRPR 1B) (annual species; blooms March-May), and shining navarretia (CRPR 1B) (annual species; blooms May-July). Prior surveys of the site by Olberding and by LOA in 2014 did find one of these species, Congdon's tarplant, present on the site in small numbers in the western portion of the site, although surveys completed in the last two to three years have failed to detect this species. There are no CNDDB-documented occurrences of any of the four special status plant species within a three-mile radius of the site. None of the plant species is federally- or state-listed as endangered or threatened, however, but all of these species occur on CNPS List 1B ("Plants Rare, Threatened, or Endangered in California and elsewhere"). Project impacts to any of these species, if present, may be considered potentially significant under CEQA.

Methods

The June 2018 survey was timed to coincide with the blooming season for Congdon's tarplant and shining navarretia.

Ms. Peterson surveyed all areas of the project site occurring within the proposed limits of grading and/or landslide repairs, and a minimum 75-foot buffer of these areas, in all areas that provided suitable habitat for these species. The surveys were conducted on foot in such a way as to achieve 100% visual coverage of the site and to conform to the California Department of Fish and Wildlife's (CDFW) 2009 Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Natural Communities.

All plant species encountered were identified to the taxonomic level necessary to determine whether it was a special status plant species using The Jepson Manual Second Edition (Baldwin et. al. 2012).

Findings/Conclusions

Appendix A provides a list of all vascular plant species that have thus far been encountered during site surveys.

During the June 2018 survey, grasses on the site were extremely dense and dominated by wild oats (Avena sp.). Grasses were mostly senescent, and plant diversity in all areas of the site surveyed was extremely low, and made up almost exclusively of non-native species, including wild oats (*Avena barbata* and *A. fatua*), wild-rye (*Festuca perennis*), field bindweed (*Convolvolus arvensis*), black mustard (*Brassica nigra*) and curly dock (*Rumex crispus*).

Findings from the survey were negative for the occurrence of Congdon's tarplant and shining navarretia. Therefore, the project is expected to result in no impacts to these two species. A prior survey in May 2018 ruled out the occurrence of all other special status plant species having potential to occur on the site except for big tarplant. A third and final late summer or fall survey will be required to ruleout the occurrence of this latter species on the site.

Please feel free to contact me at if you have any questions or concerns regarding our findings.

Sincerely,

Pamela E. Peterson
Senior Project Manager
Plant and Wetland Ecologist
408-281-5884

APPENDIX A: VASCULAR PLANTS OF THE STUDY AREA

The plant species listed below were observed on the Spotorno Ranch property during rare plant surveys conducted by Live Oak Associates on May 22, 2017 and June 26, 2018. The U.S. Army Corps of Engineers' wetland indicator status of each plant is provided following its common name.

OBL - Obligate
FACW - Facultative Wetland
FAC - Facultative
FACU - Facultative Upland
UPL - Upland

APIACEAE – Carrot Family		
*Anthriscus caucalis**	Bur-chervil	UPL
*Torilis arvensis**	Field hedge parsley	UPL
ASTERACEAE - Sunflower Family		
*Carduus pycnocephalus**	Italian thistle	UPL
*Centaurea solstitialis**	Yellow star-thistle	UPL
*Cirsium vulgare**	Bull thistle	FACU
*Cynara cardunculus**	Cardoon	UPL
*Helminthotheca echioides**	Bristly ox-tongue	FACU
*Hypochaeris radicata**	Rough cat's-ear	FACU
*Lactuca saligna**	Willowleaf lettuce	UPL
*Lactuca serriola**	Prickly lettuce	FACU
*Silybum marianum**	Milk thistle	UPL
*Sonchus asper**	Sow-thistle	FAC
*Taraxacum officinale**	Common dandelion	FACU
*Tragopogon sp.**	Salsify	UPL
BRASSICACEAE – Mustard Family		
*Brassica nigra**	Mustard	UPL
Lepidium nitidum	Common peppergrass	FAC
CARYOPHYLLACEAE – Pink Family		
*Cerastium fontanum**	Mouse ear chickweed	FACU
CONVOLVULACEAE – Morning-Glory Family		
*Convolvulus arvensis**	Field bindweed	UPL
CYPERACEAE – Sedge Family		
Eleocharis macrostachya	Spikerush	OBL
EUPHORBIACEAE – Spurge Family		

Croton setiger	Doveweed	UPL
FABACEAE – Legume Family		
*Lotus corniculatus**	Birdfoot trefoil	FAC
*Medicago polymorpha**	Burclover	FACU
*Trifolium hirtum**	Rose clover	UPL
Vicia sativa ssp. *sativa**	Spring vetch	FACU
GERANIACEAE – Geranium Family		
*Erodium cicutarium**	Redstem filaree	UPL
*Geranium dissectum**	Wild geranium	UPL
JUNCACEAE – Rush Family		
Juncus sp.	Rush	FACW-OBL
Juncus xiphioides	Iris-leaved rush	OBL
LYTHRACEAE – Loosestrife Family		
*Lythrum hyssopifolia**	Hyssop loosestrife	OBL
MYRSINACEAE – Myrsine Family		
*Lysimachia arvensis**	Scarlet pimpernel	FAC
PLANTAGINACEAE – Plantain Family		
*Plantago lanceolata**	English plantain	FAC
POACEAE - Grass Family		
*Aegilops triuncialis**	Barbed goatgrass	UPL
*Briza minor**	Small quaking grass	FAC
*Bromus diandrus**	Ripgut brome	UPL
*Bromus hordeaceus**	Soft chess	FACU
Elymus triticoides	Creeping wild-rye	FAC
*Festuca perennis**	Italian ryegrass	FAC
Hordeum brachyantherum	Meadow barley	FACW
*Hordeum murinum**	Foxtail barley	FACU
Hordeum marinum ssp. *leporinum**	Mediterranean barley	FAC
*Phalaris paradoxa**	Hood canarygrass	FAC
*Polypogon monspeliensis**	Rabbitsfoot grass	FACW
POLYGONACEAE – Knotweed Family		
*Rumex acetosella**	Common sheep sorrel	FACU
*Rumex crispus**	Curly dock	FAC
RUBIACEAE – Madder Family		
*Galium aparine**	Goose grass	FACU

* Introduced non-native species

DEPARTMENT OF THE ARMY
SAN FRANCISCO DISTRICT, U.S. ARMY CORPS OF ENGINEERS
1455 MARKET STREET, 16TH FLOOR
SAN FRANCISCO, CALIFORNIA 94103-1398

DEC - 1 2017

Regulatory Division (1145b)

Subject: File Number 2004-291440S

Ms. Pamela Peterson
Live Oak Associates, Inc.
6840 Via del Oro, Suite 220
San Jose, California, 95119

Dear Ms. Peterson:

This correspondence is in reference to your submittal of May 18, 2015, on behalf of Mr. Mike O'Hara, requesting an approved jurisdictional determination of the extent of navigable waters of the United States and waters of the United States occurring on an approximately 111 acre site located adjacent to Alisal Street, within the southwestern portion of the City of Pleasanton, in Alameda County, California.

All proposed discharges of dredged or fill material occurring below the plane of ordinary high water in non-tidal waters of the United States; or below the high tide line in tidal waters of the United States; and within the lateral extent of wetlands adjacent to these waters, typically require Department of the Army authorization and the issuance of a permit under Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*). Waters of the United States generally include the territorial seas; all traditional navigable waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including waters subject to the ebb and flow of the tide; wetlands adjacent to traditional navigable waters; non-navigable tributaries of traditional navigable waters that are relatively permanent, where the tributaries typically flow year-round or have continuous flow at least seasonally; and wetlands directly abutting such tributaries. Where a case-specific analysis determines the existence of a "significant nexus" effect with a traditional navigable water, waters of the United States may also include non-navigable tributaries that are not relatively permanent; wetlands adjacent to non-navigable tributaries that are not relatively permanent; wetlands adjacent to but not directly abutting a relatively permanent non-navigable tributary; and certain ephemeral streams in the arid West.

All proposed structures and work, including excavation, dredging, and discharges of dredged or fill material, occurring below the plane of mean high water in tidal waters of the United States; in former diked baylands currently below mean high water; outside the limits of mean high water but affecting the navigable capacity of tidal waters; or below the plane of ordinary high water in non-tidal waters designated as navigable waters of the United States, typically require Department of the Army authorization and the issuance of a permit under Section 10 of the Rivers and Harbors Act of 1899, as amended (33 U.S.C. § 403 *et seq.*).

Navigable waters of the United States generally include all waters subject to the ebb and flow of the tide; and/or all waters presently used, or have been used in the past, or may be susceptible for future use to transport interstate or foreign commerce.

The enclosed delineation map entitled, "Approved Jurisdictional Determination, USACE File # 2004-291440S, Sportorno Project," in sheets 1 and 2, and date certified November 16, 2017 accurately depicts the extent and location of wetlands and other waters of the United States, within the boundary area of the site that are subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. This approved jurisdictional determination is based on the current conditions of the site, as verified during a field investigation of June 30, 2016, a review of available digital photographic imagery, a review of the previous jurisdictional determination (November, 24, 2004), and a review of other data included in your submittal. This approved jurisdictional determination will expire in five years from the date of this letter, unless new information or a change in field conditions warrants a revision to the delineation map prior to the expiration date. The basis for this approved jurisdictional determination is explained in the enclosed *Approved Jurisdictional Determination Form.* This approved jurisdictional determination is presumed to be consistent with the official interagency guidance of June 5, 2007, interpreting the Supreme Court decision, *Rapanos v. United States*, 126 S. Ct. 2208 (2006).

The enclosed delineation map further depicts the extent and location of wetlands and other waters of the United States within the boundary area of the site that are **not** subject to U.S. Army Corps of Engineers' regulatory authority under Section 404 of the Clean Water Act. These particular intrastate water bodies are considered to be isolated with no apparent connection to interstate or foreign commerce. This approved jurisdictional determination is presumed to be consistent with the U.S. Supreme Court decision of January 9, 2001, concerning the *Solid Waste Agency of Northern Cook County v. United States Corps of Engineers*, 531 U.S. 159 (2001) ("SWANCC"). In the SWANCC decision, the Court invalidated, at least, portions of the Migratory Bird Rule as a sole nexus to the Commerce Clause, and ruled that the U.S. Army Corps of Engineers had exceeded its statutory authority in exerting jurisdiction over non-navigable isolated, intrastate waters that did not provide some other interstate or foreign commerce use (33 C.F.R § 328.(a)(3)). These delineated wetlands and other waters, however, may be considered as "waters of the State," and, therefore, subject to regulation by the California Regional Water Quality Control Board, Central Coast Region, under the Porter-Cologne Water Quality Control Act, as amended (California Water Code § 1300 *et seq.*).

You are advised that the approved jurisdictional determination may be appealed through the U.S. Army Corps of Engineers' *Administrative Appeal Process*, as described in 33 C.F.R. Part 331 (65 Fed. Reg. 16,486; Mar. 28, 2000), and outlined in the enclosed flowchart and *Notification of Administrative Appeal Options, Process, and Request for Appeal* (NAO-RFA) Form. If you do not intend to accept the approved jurisdictional determination, you may elect to provide new information to this office for reconsideration of this decision. If you do not provide

new information to this office, you may elect to submit a completed NAO-RFA Form to the Division Engineer to initiate the appeal process; the completed NAO-RFA Form must be submitted directly to the Appeal Review Officer at the address specified on the NAO-RFA Form. You will relinquish all rights to a review or an appeal, unless this office or the Division Engineer receives new information or a completed NAO-RFA Form within 60 days of the date on the NAO-RFA Form. If you intend to accept the approved jurisdictional determination, you do not need to take any further action associated with the Administrative Appeal Process.

You may refer any questions on this matter to Keith Hess of my Regulatory staff by telephone at (415) 503-6765 or by e-mail at Keith.d.hess@usace.army.mil. All correspondence should be addressed to the Regulatory Division, South Branch, referencing the file number at the head of this letter.

The San Francisco District is committed to improving service to our customers. My Regulatory staff seeks to achieve the goals of the Regulatory Program in an efficient and cooperative manner, while preserving and protecting our nation's aquatic resources. If you would like to provide comments on our Regulatory Program, please complete the Customer Service Survey Form available on our website: http://www.spn.usace.army.mil/Missions/Regulatory.aspx.

Sincerely,

for Rick Bottoms, Ph.D.
Chief, Regulatory Division

Enclosures

Copy Furnished (w/enclosures):

Tim Lewis Communities, Sam Ramon, CA (Attn. Mr. Mike O'Hara)

Copy Furnished (w/enclosure 1 only):

CA RWQCB, Oakland, CA

Copy Furnished (w/out enclosures):

US EPA, San Francisco, CA (Attn. Jennifer Siu)

Site Location Map

Study Area

U.S. Army
Corps of Engineers
San Francisco District
Regulatory Division

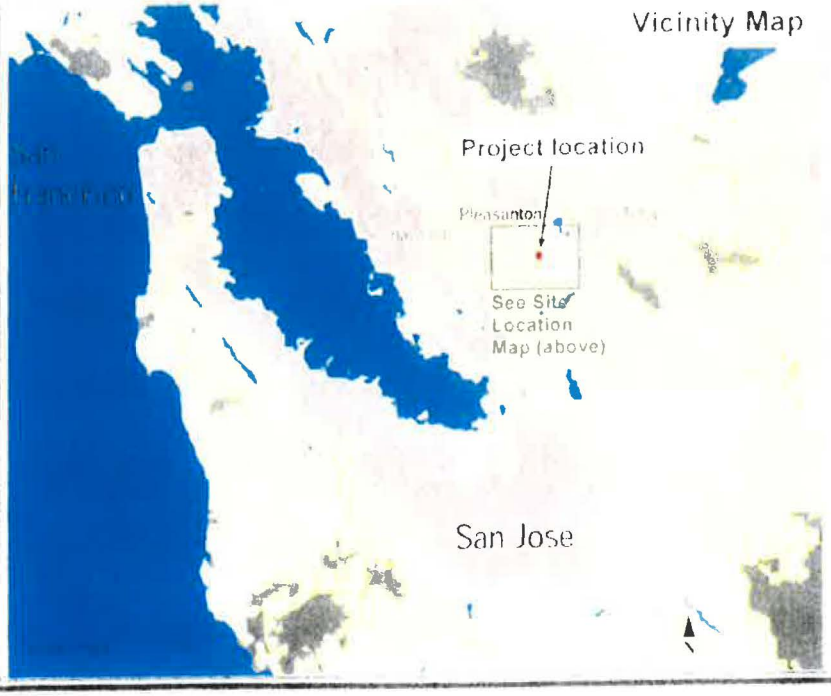
Approved Jurisdictional Determination
USACE File # 2004-291440S
Spotorno Project
Pleasanton, Alameda County, California

Vicnity & Study Area Map

Sheet 1 of 2

Date: November 16, 2017

Vicinity Map



Regional Map

Live Oak Associates, Inc.

Spotorno Ranch

4.3.2015 | 1555.03

LEGEND

Areas meeting the technical criteria of Jurisdictional Waters or Waters of the U.S.

U.S. Army Corps of Engineers San Francisco District Regulatory Division

Approved Jurisdictional Determination
USACE File # 2004-291440S
Spotorno Project
Pleasanton, Alameda County, California

OHWM width in feet

Non-Jurisdictional waters

Isolated Non-jurisdictional Wetland

Seasonal Wetland

Area below ordinary high water mark (OHWM) and seasonal wetland are Jurisdictional waters of the U.S. pursuant to Section 404 of the Clean Water Act of 1972

Sheet 2 of 2

Date: November 16, 2017

SP1 Sample Point and Number

500' 0 500 feet

Approximate Scale

Aerial photograph courtesy of USDA-FSA Aerial Photography Field Office
Photo date 7/19/2012

Project Boundary

Minnie St

Drainage 1
205 SF, 205 LF

Isolated Seasonal Wetland 1
33,903 SF, 0.78 Ac.

Isolated Drainage 2
408 SF, 262 LF

SP4

SP3

Isolated Drainage 1a
752 SF, 302 LF

Isolated Drainage 1b
263 SF, 127 LF

Isolated Seasonal Wetland 2
791 SF, 0.02 Ac.

Isolated Seasonal Wetland 3
2,289 SF, 0.05 Ac.

Westbridge Ln

SP2

Seasonal Wetland 4
19,644 SF, 0.45 Ac.

SP1

Atlsal St

Project Boundary

Atlsal St

Live Oak Associates, Inc.		
Spotorno Ranch Potential Waters of the U.S.		
Date **8/30/2016**	Project # **1656-03**	Figure # **4**

APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): November 16, 2017

B. DISTRICT OFFICE: San Francisco District **FILE NUMBER:** 2013-00387S
File Name: Sportano Project
Waterbody Name: Un-named tributary

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: California County/parish/borough: Alameda Co. City: Pleasanton
Center coordinates of site: (lat/long (in degree decimal format)): Lat: 37.637505 N Long: 121.864260 W
Pick List (lat/long (in degree decimal format)): Lat: Pick Long: Pick
Pick List (lat/long (in degree decimal format)): Lat: Pick Long: Pick
Universal Transverse Mercator: 11
Name of nearest waterbody: Arroyo de la Laguna
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Alameda Creek
Name of watershed or Hydrologic Unit Code (HUC):
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☐ Office (Desk) Determination. Date:
☒ Field Determination. Date(s): June 30, 2016

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There are no *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. ***Explain:***

B. CWA SECTION 404 DETERMINATION OF JURISDICTION

There are and are not *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. Waters of the U.S:

a. Indicate presence of waters of U.S. in review area (check all that apply): [1]

☐ TNWs, including territorial seas
☐ Wetlands adjacent to TNWs
☒ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
☐ Non-RPWs that flow directly or indirectly into TNWs
☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
☐ Impoundments of jurisdictional waters
☒ Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area
Non-wetland waters: 205 linear feet: width (ft) and/or 0.004 acres. (other comments:)
Wetlands: 0.45 acres. (other comments:)

c. Limits (boundaries) of jurisdiction based on: Established by OHWM
Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):[3]

☒ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. ***Explain:*** Drainages 1a, 1b, 2 and Seasonal wetlands 1, 2, and 3 are isolated and have no significant nexus with un-named tributaries to Arroyo de la Laguna. Both features are more than 1,700 feet east of the closest un-named tributary at the nearest point. Topography precludes significant nexus with respect to potential runoff.

SECTION III: CWA ANALYSIS

A TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW
Identify TNW:
Summarize rationale supporting determination that waterbody is a TNW:

2. Wetland adjacent to TNW
Summarize rationale supporting conclusion that wetland is "adjacent":

B CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:
Watershed size: Pick List
Drainage area: Pick List
Average annual rainfall: inches
Average annual snowfall: inches

(ii) Physical Characteristics:

a. Relationship with TNW:
☐ Tributary flows directly into TNW
☐ Tributary flows through Pick List tributaries before entering TNW

Project waters are Pick List river miles from TNW.
Project waters are Pick List river miles from RPW.
Project waters are Pick List aerial (straight) miles from TWN.
Project waters are Pick List aerial (straight) miles from RPW.
Project waters cross or serve as a state boundary. ***Explain:***

Identify flow route to TNW[5]:
Tributary stream order, if known:

[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.
[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

☐ Habitat for:

- ☐ Federally Listed species. ***Explain findings***:
- ☐ Fish/spawn areas. ***Explain findings***:
- ☐ Other environmentally-sensitive species. ***Explain findings***:
- ☐ Aquatic/wildlife diversity. ***Explain findings***:

3. **Characteristics of all wetlands adjacent to the tributary (if any)**

(i) All wetland(s) being considered in the cumulative analysis: 1

(ii) Approximately (0.45) acres in total are being considered in the cumulative analysis.

(iii) For each wetland associated with the reach or waterbody being analyzed in this form, specify the following:

Number/Name[8]	Directly abuts (Yes/No)	Size	Number/Name	Directly abuts (Yes/No)	Size
	Pick	acres		Pick	acres
	Pick	acres		Pick	acres
	Pick	acres		Pick	acres
	Pick	acres		Pick	acres
	Pick	acres		Pick	acres
	Pick	acres		Pick	acres

(iv) Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** ***Explain*** findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D

[8] In the Number/Name column, add the number and/or name that you have given the wetland being referred to in the table. Example, you are referring to a wetland on your wetland delineation map number 6, that you call wetland No.3 on a reach you refer to as Putah Creek. For this wetland you would add to the table in the Number/Name column, something like the following: (No. 3, Putah Ck., Map # 6).

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** ***Explain*** findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

3 **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** ***Explain*** findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

☐ 1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:

- ☐ TNWs: linear feet width (ft), and/or acres.
- ☐ Wetlands adjacent to TNWs: acres.

☒ 2. **RPWs that flow directly or indirectly into TNWs.**

- ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial:
- ☒ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: Drainage 1 has suffcient seasonal flow to have formed bed and bank with OHWM. The un-named tributary is tributary to an un-named blue line creek that is tributary to Arroyo de la Laguna, which is tributary to Alameda Creek with well defined banks and sparse riparian vegetation. Adjacent to the subject area the un-named tributary is mapped as R4SBC (riverine intermittent streambed, seasonally flooded) on NWI maps.

Provide estimates for jurisdictional waters in the review area (***check all that apply***)

- ☒ Tributary waters: 205 linear feet1' width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters:

☐ 3. **Non-RPWs[9] that flow directly or indirectly into TNWs.**

- ☐ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

Provide estimates for jurisdictional waters within the review area (***check all that apply***):

- ☐ Tributary waters: linear feet ' width (ft).
- ☐ Other non-wetland waters: acres.
  - Identify type(s) of waters: .

☒ 4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**

- ☒ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
  - ☒ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in **Section III.D.2**, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetland A is directly next to a culvert that flows under Alisal Road and directly to the unnamed creek.
  - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in **Section III.B** and rationale in **Section III.D.2**, above. Provide rationale indicating that wetland is directly abutting an RPW:

Provide acreage estimates for jurisdictional wetlands in the review area: 0.45 acres.

☐ 5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**

[9] See Footnote # 3.

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: Mr. Mike O'Hara	File No. 2004-291140S	Date: November 16 2017
Attached is:		See Section below
	INITIAL PROFFERED PERMIT (Standard Permit or Letter of permission)	A
	PROFFERED PERMIT (Standard Permit or Letter of permission)	B
	PERMIT DENIAL	C
✓	APPROVED JURISDICTIONAL DETERMINATION	D
	PRELIMINARY JURISDICTIONAL DETERMINATION	E

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://usace.army.mil/inet/functions/cw/cecwo/reg or Corps regulations at 33 CFR Part 331.

A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT ENGINEER for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this Notice and return the Notice to the DISTRICT ENGINEER. Your objections must be received by the DISTRICT ENGINEER within 60 days of the date of this Notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your NOTICE, the DISTRICT ENGINEER will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the DISTRICT ENGINEER will send you a proffered permit for your reconsideration, as indicated in Section B below.

B: PROFFERED PERMIT: You may accept or appeal the permit

- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the DISTRICT ENGINEER for final authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this NOTICE and sending the NOTICE to the DIVISION ENGINEER. This Notice must be received by the DIVISION ENGINEER within 60 days of the date of this Notice.

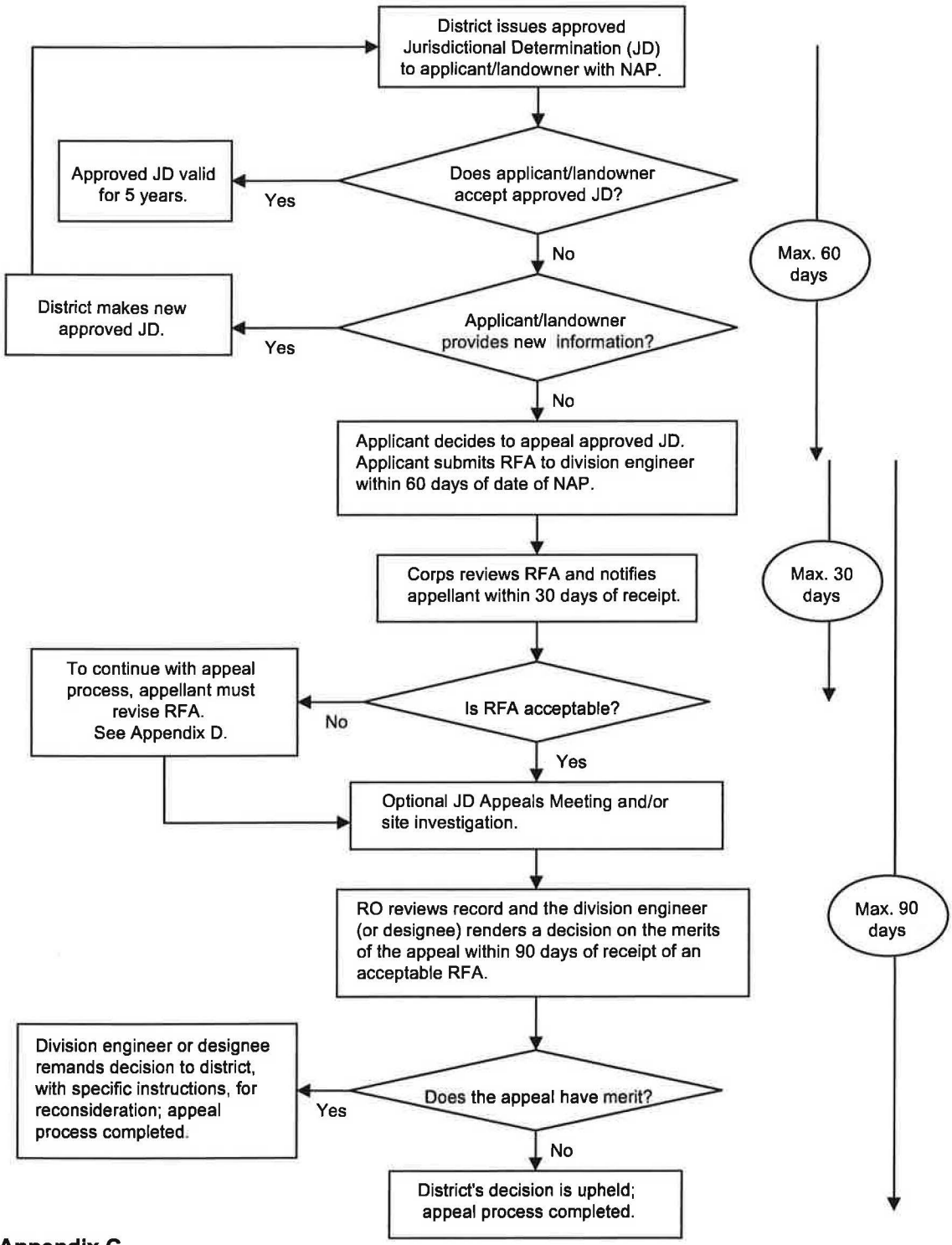
C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this Notice sending the Notice to the DIVISION ENGINEER. This Notice must be received by the DVISION ENGINEER within 60 days of the date of this Notice.

D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.

- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date of this Notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative Appeal Process by completing Section II of this Notice and sending the Notice to the DIVISION ENGINEER. This Notice must be received by the DIVISION ENGINEER within 60 days of the date of this Notice.

E: PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary JD. The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the Corps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the JD.

Administrative Appeal Process for Approved Jurisdictional Determinations



Appendix C