

**BIOLOGICAL SITE ASSESSMENT –
BOTANICAL RESOURCES**

**MARINDA HEIGHTS PROJECT
FAIRFAX, MARIN COUNTY, CALIFORNIA**

Submitted to:

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LSA

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1.0 INTRODUCTION

LSA, Inc. (LSA) has conducted the first of three protocol-level rare plant surveys and has mapped the vegetation on the Marinda Heights project site north of Sir Francis Drake Boulevard in the City of Fairfax, Marin County. The purpose of the survey was to map vegetation types, including sensitive natural communities, and survey for the presence of special-status plant species. This report includes the following: (1) a summary of relevant federal and State regulations pertaining to plant species and vegetation communities; (2) a brief description of the proposed project; (3) a description of the methods used to conduct the survey; (4) a description of existing habitat conditions at the project site; and (5) an analysis of special-status plant species and vegetation potentially present or present in the project vicinity.

2.0 REGULATORY CONTEXT

This section provides a summary of federal and State laws, and/or local regulations that apply to the botanical resources that occur on the project site.

2.1 APPLICABLE FEDERAL LAWS AND REGULATIONS

2.1.1 Federal Endangered Species Act

The U.S. Fish and Wildlife Service (USFWS) has jurisdiction over species that are formally listed as threatened or endangered under the federal Endangered Species Act (ESA). An endangered plant species is one that is considered in danger of becoming extinct throughout all or a significant portion of its range. A threatened species is one that is likely to become endangered within the foreseeable future.

In addition to endangered and threatened species, which are legally protected under the federal ESA, the USFWS has a list of proposed and candidate species. Proposed species are those for which a proposed rule to list them as endangered or threatened has been published in the Federal Record. A candidate species is one for which the USFWS currently has enough information to support a proposal to list it as a threatened or endangered species. These latter species are not afforded legal protection under the federal ESA. Nonetheless, project-related impacts to federally listed, proposed, and candidate species or their habitats are considered “significant” by the California Environmental Quality Act (CEQA, discussed below).

2.2 APPLICABLE STATE LAWS AND REGULATIONS

2.2.1 California Endangered Species Act

The California Department of Fish and Wildlife (CDFW) has jurisdiction over State-listed threatened, rare, and endangered plant species under the California Endangered Species Act (CESA). In addition, its provisions protect species proposed for listing under the State Act.

2.2.2 Native Plant Protection Act

The Native Plant Protection Act (NPPA) of 1977 (California Fish and Game Code §§ 1900-1913) was created with the intent to “preserve, protect, and enhance rare and endangered plants in this State.” The NPPA is administered by CDFW. The California Fish and Game Commission has the authority to designate native plants as “endangered” or “rare” and to protect them from take. CDFW generally regards as rare many plant species included on CRPR 1A, 1B, 2A, and 2B of the California Native Plant Society (CNPS). Inventory of Rare and Endangered Vascular Plants of California. In addition, sometimes CRPR 3 and 4 plants are considered if the population has local significance in the area and is impacted by a project. Section 1913(b) of the California Fish and Game Code includes a specific provision to allow for the incidental removal of endangered or rare plant species, if not

otherwise salvaged by CDFW, within a right-of-way (ROW) to allow a public utility to fulfill its obligation to provide service to the public.

When the CESA was passed in 1984, it expanded on the original NPPA, enhanced legal protection for plants, and created the categories of “threatened” and “endangered” species to parallel the FESA. The CESA converted all rare animals to threatened species under the NPPA, but did not do so for rare plants, which resulted in three listing categories for plants in California: rare, threatened, and endangered. The NPPA remains part of the California Fish and Game Code and mitigation measures for impacts to rare plants are specified in an agreement between CDFW and a project proponent on a project-by-project basis.

2.2.3 CEQA

CEQA applies to “projects” that are proposed to be undertaken or those requiring approval by State or local government agencies. Projects are defined actions that have the potential to have physical impact on the environment. Under Section 15380 of CEQA, a species not included on any formal list “shall nevertheless be considered rare or endangered if the species can be shown by a local agency to meet the criteria” for listing. With sufficient documentation, a species could be shown to meet the definition of rare or endangered under CEQA and be considered a “de facto” endangered species.

2.3 APPLICABLE LOCAL LAWS AND REGULATIONS

This section highlights ordinances regulating biological resources that may be applicable to the project.

County of Marin. The Marin Countywide Plan includes sections that address the identification and protection of biological resources within the county. Specifically, the following policies and associated implementation programs from the Countywide Plan emphasize the conservation and enhancement of special-status species and their habitats, wetlands, riparian areas, and baylands: Policy Bio 1.1-1.9, 2.1-2.9, 3.1-3.2, 4.1-4.20, and 5.1-5.10. In addition, the County of Marin has established a protected tree classification for trees native to Marin that grow in non-agricultural areas under the County’s jurisdiction (Native Tree Preservation and Protection Ordinance No. 3342). Trees are defined at 6 or 10 inches diameter at breast height depending on the species. The County exempts the need for tree-removal permits when the removal has been specifically proposed and authorized as part of the final approval of a discretionary development permit.

The Native Tree Preservation and Protection Ordinance provides mitigation guidelines for tree removal, which includes (1) establishment and maintenance of replacement trees, (2) developing a management plan for oak woodlands, (3) removal of invasive non-native plant species, posting a bond to cover the cost of monitoring for the success of measures described above, and/or (4) payment of money in the amount of \$500.00 per tree removed to be deposited into the Tree Replacement Fund managed by the District for planting and maintenance of trees and other vegetation.

Town of Fairfax. The Town of Fairfax General Plan includes sections that address the identification and protection of biological resources within the Town of Fairfax. Specifically, the following policies

from the Town of Fairfax General Plan address the conservation and enhancement of open spaces, special-status species, and their habitats: Policy LU 1.1.1, 1.2.-1.2.4; Policy OS 1.2.1, 1.3.1, 1.4.1, 1.4.2, 1.4.5, 3.1.1, 3.2.2, 3.2.3; and Policy CON 5.2.1, 6.1.1, 6.1.2.

3.0 METHODS

3.1 DATABASE SEARCH AND LITERATURE REVIEW

Prior to conducting fieldwork, LSA searched the California Natural Diversity Database (CNDDDB) (CDFW 2016) for records of special-status plant species and sensitive habitat occurrences within 5 miles of the project site. LSA also reviewed the USFWS Critical Habitat Portal, current Google Earth (Google 2016) aerial images of the property the list of special-status species in Figure 5-1 of the Marin Countywide Plan, lists of flora and fauna observed on the project site (Dreskin 2008 and Dreskin & Keene 2008), and Environmental Impact Reports (EIR) from the project vicinity (Marin County Open Space District 2005).

3.2 VEGETATION MAPPING AND RARE PLANT SURVEYS

LSA botanists Tim Milliken and Sheryl Creer conducted the first round of rare plant surveys on August 10, 2016. Rare plant surveys will be conducted for a total of three rounds in order to maximize the likelihood of detecting rare plant occurrence and the second and third rare plant surveys will be conducted in spring 2017 during peak bloom. The first round of special-status plant surveys (and subsequent two surveys) was floristic in nature and was conducted in accordance with survey guidelines published by CNPS (2001), CDFW (2009), and USFWS (1996). All vascular plant species observed were recorded. Vegetation types within the project site were also classified and mapped to the alliance level according to second addition of A Manual of California Vegetation (Sawyer et al. 2008).

Due to the historic California drought, special-status plant survey findings may underrepresent the total abundance and distribution of special-status plants. The combination of higher-than-normal temperatures and below-average precipitation resulted in earlier spring flowering, which can result in a reduction in the total number of individuals of any one observed species, and the total number of annual or bulbiferous perennial species that germinate in a given year.

3.3 DEFINITIONS

For the purposes of this assessment, special-status plant species are defined as follows:

- Species that are listed, formally proposed, or designated as candidates for listing as threatened or endangered under FESA;
- Species that are listed, or designated as candidates for listing, as rare, threatened, or endangered under CESA;
- Species that meet the definition of rare, threatened, or endangered under Section 15380 of the CEQA guidelines; or
- Species that are considered a taxa of special concern by local agencies.

Sensitive natural communities are defined as follows:

- Vegetation communities listed as sensitive in the CNDDDB; or
- Communities listed in the CDFW¹ Natural Communities List with a rarity rank of S1 (critically imperiled), S2 (imperiled), or S3 (vulnerable).

¹ Effective January 1, 2013, the California Department of Fish and Game (CDFG) was renamed the California Department of Fish and Wildlife (CDFW). References published under the CDFG name continue to be cited as published.

4.0 PROJECT DESCRIPTION

The proposed project involves the construction of ten residential lots on the site with associated infrastructure and landscaping. Residential lots will comprise 5 acres of the approximately 100-acre site, with the remaining acreage devoted to open space.

5.0 EXISTING CONDITIONS

5.1 SITE LOCATION AND LAND USE

The approximately 100-acre Marinda Heights project site is located in the town of Fairfax, northeast of Sir Francis Drake Boulevard. The site consists of Marin County Parcel Numbers 001-150-12, 001-251-31, and 001-160-09. The site is situated on the Northern boundary of the 7.5 minute USGS San Rafael, California quadrangle, centered at latitude 38.59 degrees North and longitude 122.35 degrees West. Figures 1 and 2 depict the regional vicinity and location of the project site, respectively. The site is accessible via a private road located at the end of Marinda Drive and another at the end of Ridgway Avenue. The properties surrounding the site are developed, with the exception of a property to the north and southeast. All surrounding properties are designated for single-residence land use with one school located to the east of the project site.

5.2 TOPOGRAPHY AND SOILS

The project site ranges in elevation from approximately 200 feet to 700 feet (61 meters to 213 meters) above mean sea level and is within the Fairfax Creek/San Anselmo Creek watershed. According to the National Hydrography Dataset maintained by the U.S. Geological Survey (USGS) and the National Wetlands Inventory maintained by the USFWS, there are no existing watercourses on the site (EPA, 2016 and USFWS, 2016b).

The soil on the site, as mapped by the NRCS, is predominantly of the association: Tocaloma-Saurin, extremely steep. A smaller portion of the project site is composed of the soil series: Xerorthents-Urban land complex, 0 to 9 percent slopes (UCD & NRCS, 2016). Both of these series are considered to be normally hydric (NRCS, 2015).

5.3 VEGETATION COMMUNITIES

The vegetation within the project site consists of woodlands, grasslands, and scrublands. No riparian vegetation is present. The biological resources include several high-quality native vegetation communities with a strong composition of native plant species. Detailed vegetation alliance descriptions are provided in Section 6.1 below.

5.4 WILDLIFE

Locally common wildlife species associated with woodlands, scrublands, and grassland vegetation communities occupy the site. Species observed and/or are expected to occur on the site include black-tailed deer (*Odocoileus hemionus*), striped skunk (*Mephitis mephitis*), northern raccoon (*Procyon lotor*), Virginia opossum (*Didelphis virginiana*), western fence lizard (*Sceloporus occidentalis*), red-tailed hawk (*Buteo jamaicensis*), white-crowned sparrow (*Zonotrichia leucophrys*), western scrub-jay (*Aphelocoma coerulescens*), and California towhee (*Pipilo crissalis*).

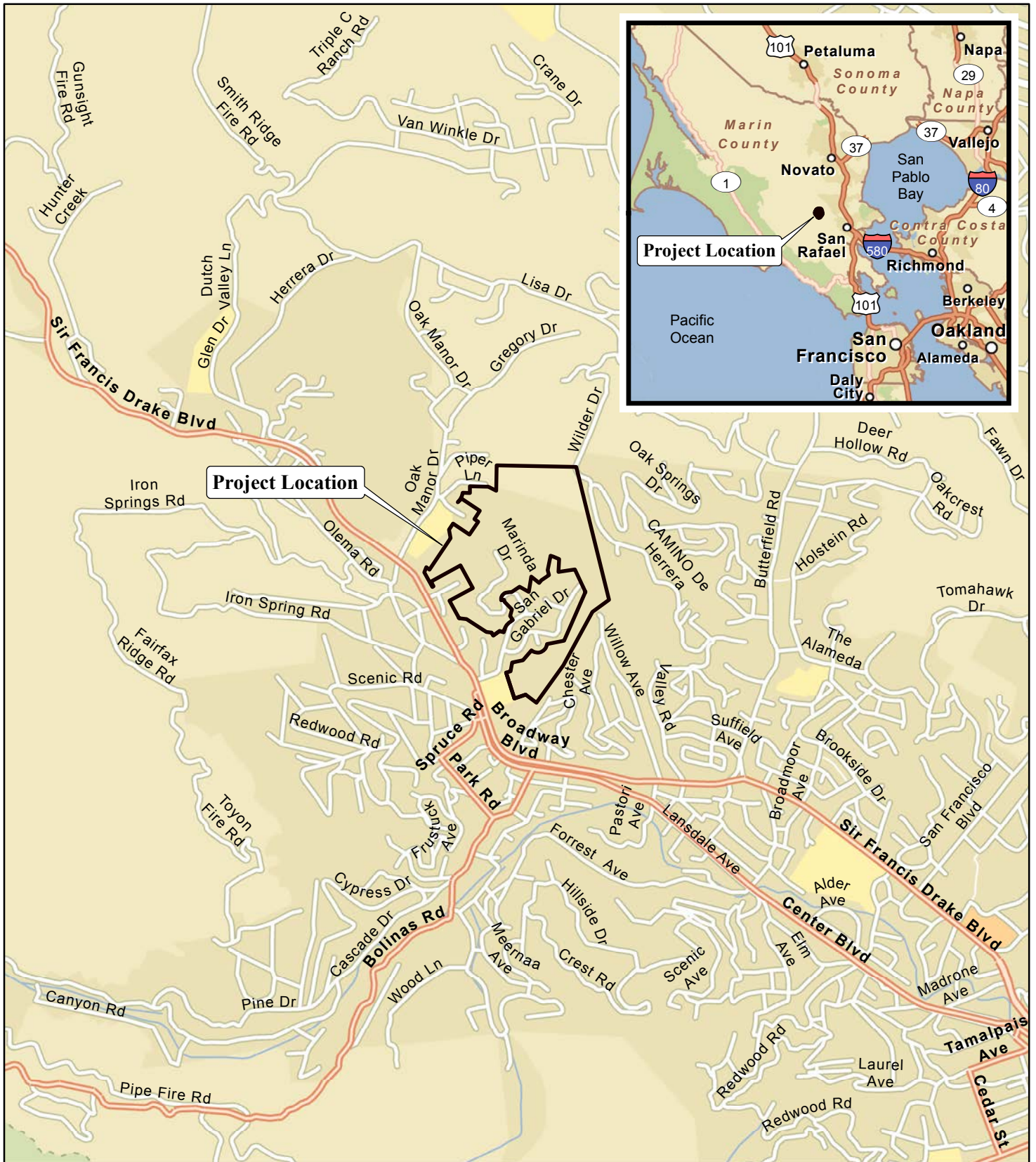
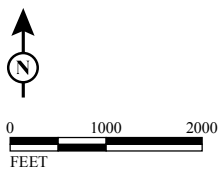


FIGURE 1

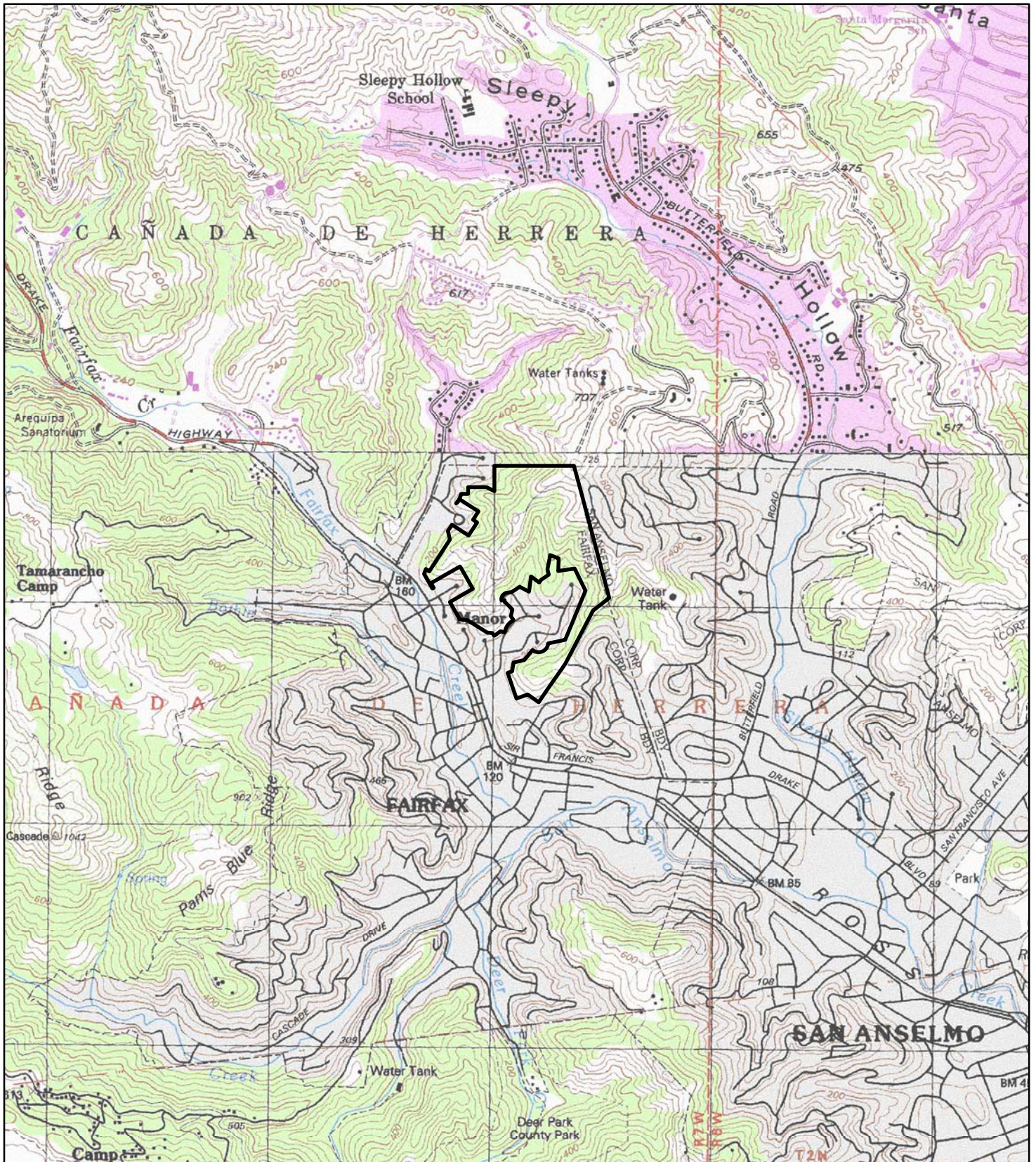
LSA



SOURCE: ESRI StreetMap North America (2012).

F:\MRN1601\GIS\Maps\Figure 1_Regional Project Location Map.mxd (9/12/2016)

Marinda Heights
Marin County, California
Regional Project Location Map



LSA

LEGEND

 Project Boundary

FIGURE 2



0 1000 2000
FEET

SOURCE: USGS 7.5-minute Topo Quads: *Oakland West, Calif.* (1980) and *Oakland East, Calif.* (1980).

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*Marinda Heights
Marin County, California*

Project Location Map

6.0 RESULTS

6.1 VEGETATION COMMUNITIES

A total of six vegetation communities were identified within the project site as depicted on Figure 3 and quantified in Table A. The vegetation types on the project site include annual grassland, disturbed annual grassland, chamise chaparral, California bay forest, Eucalyptus groves, and coast live oak woodland. The developed areas on the project site include a network of cleared trails and a few dirt roads. Complete descriptions of each vegetation alliance are provided in the sections below.

Table A: Vegetation Communities Observed within the Project Site

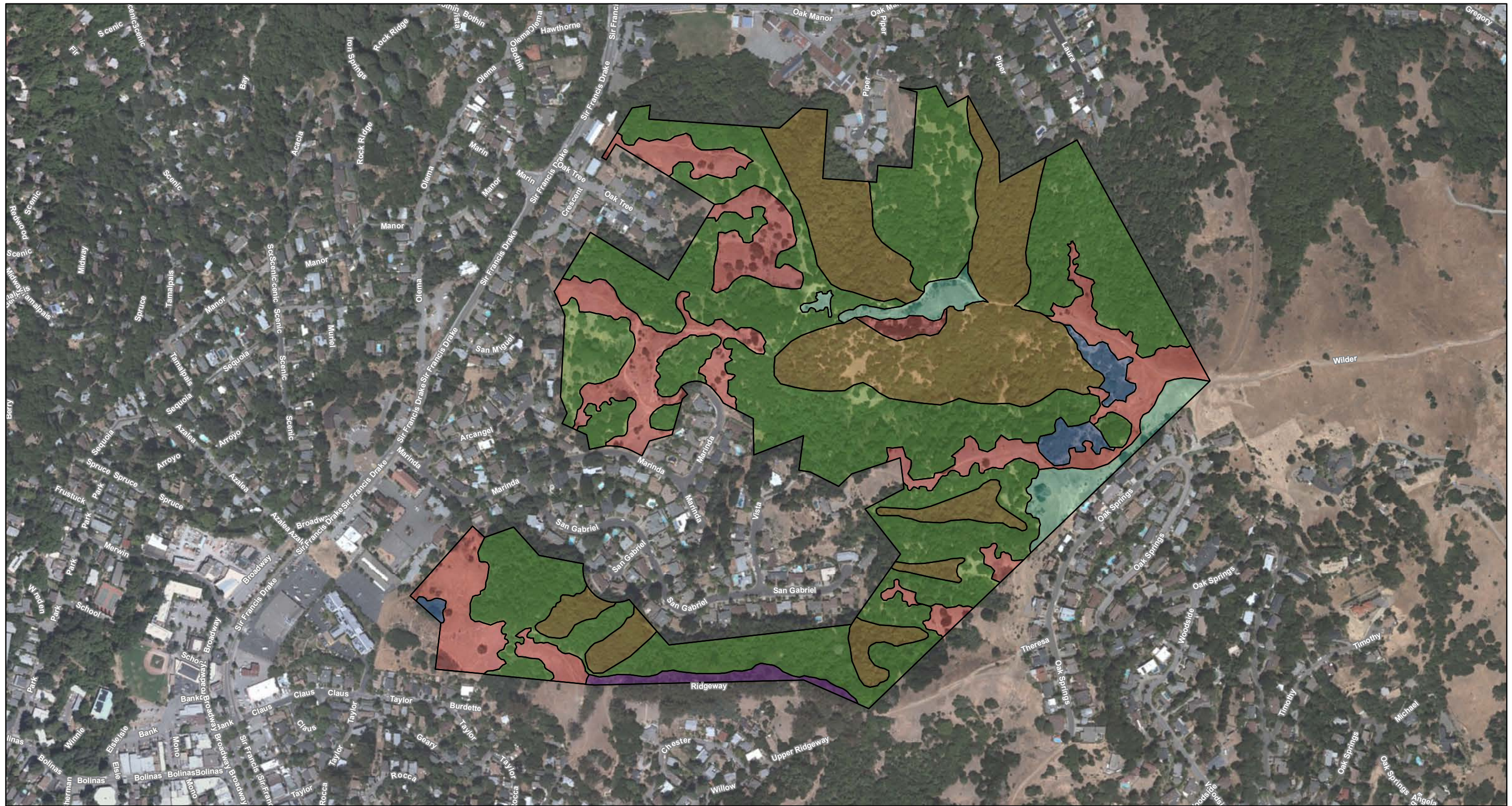
General Habitat Type	Vegetation Alliance	Area (acres)
Forests and Woodlands	California Bay Forest (<i>Umbellularia californica</i> Forest)*	22.7
	Coast Live Oak Woodland (<i>Quercus agrifolia</i> Woodland)	53.0
	Eucalyptus Groves (<i>Eucalyptus</i> sp. Semi-Natural Woodland Stands)	1.1
Shrublands	Chamise Chaparral (<i>Adenostoma fasciculatum</i> Shrubland)	1.8
Herbaceous Vegetation	Annual Grassland ²	17.7
	Annual Grassland-Disturbed	3.8
TOTAL		100.1

*CDFW sensitive natural community

6.1.1 California Bay Forest (*Umbellularia californica* Forest Alliance)

California bay forest covers approximately 22.7 acres within the project site and the dominant species within this alliance is California bay. This alliance can also include a variety of other tree species in the canopy layer. Within the project site, other tree species found in the California bay forest include coast live oak (*Quercus agrifolia* var. *agrifolia*), Pacific madrone (*Arbutus menziesii*), and big-leaf maple (*Acer macrophyllum*). Common species in the understory are sticky monkey flower (*Mimulus aurantiacus*), coyote brush (*Baccharis pilularis* ssp. *consanguinea*), and chamise (*Adenostoma fasciculatum*). The herbaceous component of the understory varies from sparse to complete cover. Within the project site, large areas of the understory consist of fallen oak leaves. This forest alliance

² Grasslands were not identified to a specific alliance or association due to the late season timing of the survey. Additional details are provided in Section 6.1.5: Annual Grassland and Disturbed Annual Grassland.



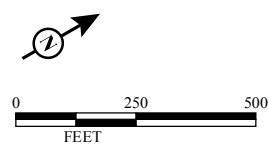
LSA

Legend

Project Boundary - 100.1 ac.

Vegetation Cover

- Annual Grassland - 17.7 ac.
- Annual Grassland - Disturbed - 3.8 ac.
- California Bay Forest - 22.7 ac.
- Coast Live Oak Woodland - 53.0 ac.
- Chemise Chaparral - 1.8 ac.
- Eucalyptus Grove - 1.1 ac.



SOURCE: ESRI Aerial Basemap

F:\MRN1601\GIS\Maps\Figure 3_ Vegetation Cover.mxd (9/13/2016)

FIGURE 3

*Marinda Heights
Marin County, California
Vegetation Cover*

predominantly occurs on steep, north-facing slopes. Wildlife species typically associated with California bay forest include several bird species, such as California towhee, spotted towhee, California thrasher, Bewick's wren, and western scrub-jay. This habitat also provides cover and forage for mammal species, including California ground squirrel and mule deer. Gopher snake and western fence lizard are also commonly found in this habitat. The California bay forest alliance and all of its associations are considered sensitive natural communities by CDFW (CDFW 2016, Sawyer et al. 2008).

6.1.2 Coast Live Oak Woodland (*Quercus agrifolia* Woodland Alliance)

The Coast Live Oak Woodland Alliance covers 53.0 acres and is the most dominant vegetation type within the project site. This alliance is dominated by coast live oak with a variety of co-dominant or co-occurring species (e.g. big-leaf maple, madrone, etc.), with the composition of these species varying depending upon the specific vegetation association. Within the project site, chamise chaparral borders the coast live oak woodlands where it transitions to grassland. Other tree species that occur in smaller numbers in this alliance include California bay and California buckeye (*Aesculus californica*). The understory is similar to the understory of the California bay forest alliance; mostly herbaceous or bare, but poison oak (*Toxicodendron diversilobum*) is dominant where a shrub layer is present. Coast live oak woodlands provide habitat for a variety of wildlife species, such as quail, wild turkey, squirrels, and southern mule deer. One of the associations within this vegetation alliance, the coast live oak-valley oak association (*Quercus agrifolia-Quercus lobata* association), is considered a sensitive natural community by CDFW. The coast live oak woodlands will need to be re-visited in spring 2017 and further described in order to determine if this sensitive vegetation association is present within the alliance.

6.1.3 Eucalyptus Groves (*Eucalyptus* sp. Semi-Natural Woodland Stands)

This alliance covers 1.1 acres within the project site. Eucalyptus groves are usually dominated by several species of eucalyptus, which are native to Australia and are considered an invasive species because of their rapid growth rate and broad cover. These trees were historically planted as windbreaks and for aesthetic/horticultural purposes around houses and other developed areas. Many eucalyptus species have become naturalized, including in riparian areas. The understory within well-established groves of eucalyptus is usually very sparse due to the closed canopy and the allelopathic³ nature of the leaf litter. Within the project site, there is one stand of blue gum (*Eucalyptus globulus*) mixed with Monterey cypress (*Hesperocyparis macrocarpa*). This stand is located at the southeastern portion of the project, along Ridgeway, and was most likely planted as a screen and windbreak for the residential area immediately downslope and southeast of the grove. The understory is sparse with scattered French broom (*Genista monspessulana*) throughout. As a wildlife habitat, these woodlands provide nesting sites for a variety of raptors. During winter migrations, a variety of warblers may be found feeding on the insects that are attracted to eucalyptus flowers. The sparse understory, however, offers limited wildlife habitat.

³ Allelopathy is a biological phenomenon that is characteristic of some plants. An allelopathic plant produces chemicals that can have a negative or positive result on neighboring organisms, including other plants.

6.1.4 Chamise Chaparral (*Adenostoma fasciculatum* Shrubland Alliance)

This alliance covers 1.8 acres within the project site. Co-occurring shrubs can include a variety of species. Within the project site, these species include California sagebrush (*Artemisia californica*) common manzanita (*Arctostaphylos manzanita* subsp. *manzanita*), toyon (*Heteromeles arbutifolia*), California honeysuckle (*Lonicera hispidula*), sticky monkey flower, and poison oak. This community is often associated with soils that are shallow and dry, and often on xeric slopes and ridges. Within the project site, there is a small amount of chamise chaparral on the fringes of coast live oak woodland that transitions to annual grassland. Wildlife species typically associated with this alliance are similar to those found in California bay forest. Some associations within this vegetation alliance (e.g., chamise chaparral-common manzanita [*Adenostoma fasciculatum* - *Arctostaphylos manzanita*], etc.) are considered sensitive natural communities by CDFW. The chamise chaparral will need to be re-visited in spring 2017 and further described in order to determine if any sensitive vegetation associations are present within the mapped alliance.

6.1.5 Annual Grassland and Disturbed Annual Grassland

This vegetation community is a broad characterization of approximately 17.7 acres of grassland and an additional 3.8 acres of disturbed grassland within the project site. Due to the late-season timing of the field visit and the state of senescence of the grass species, it was difficult to ascertain which species of grass were present and/or dominant. These areas will be re-visited twice in spring 2017 and further refined in order to define the specific vegetation alliance(s) and/or association(s) present. Within the project site, the grasslands are concentrated at the edges of the coast live oak woodlands and chamise chaparral. An area of the grasslands in the northeast portion of the project site has been mowed, most likely for fire safety for the adjacent residential area. Non-native grass species observed include wild oat (*Avena fatua*), ripgut grass (*Bromus diandrus*), and hedgehog dogtail (*Cynosurus echinatus*). Native species observed include Junegrass (*Koeleria macrantha*) and purple needlegrass (*Stipa pulchra*). The on-site grassland is too patchy and small in total area to attract wildlife species typical of grasslands that are more extensive; however, chaparral species, such as California quail and spotted towhee, often forage on the ground in grassland along chaparral edges. Once these areas have been revisited and classified in spring 2017, a determination can be made as to the presence or absence of vegetation alliances and associations that are considered sensitive natural communities (e.g., purple needle grass grassland [*Stipa pulchra* herbaceous alliance]).

6.2 SENSITIVE NATURAL COMMUNITIES

CNDDDB species occurrences and critical habitat within 5 miles of the project site are depicted in Figures 4A, 4B, 4C, and 4D. One community—California bay forest—considered sensitive by CDFW was identified as present within the project site. As previously discussed in Section 6.1, the following vegetation alliances have associations that are considered sensitive that could potentially occur within the project site:

- coast live oak woodland
- chamise chaparral
- annual grassland and disturbed annual grassland

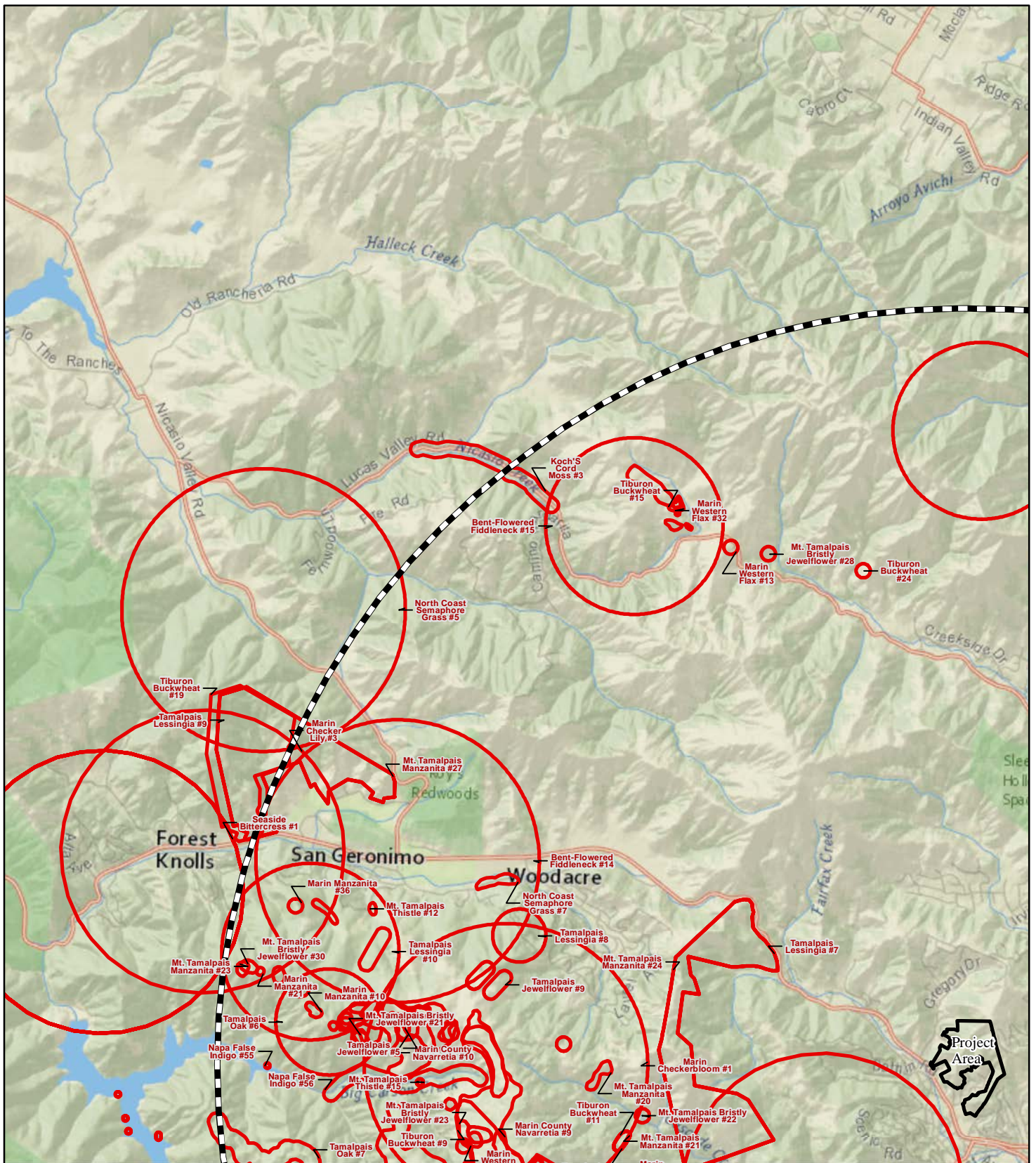





FIGURE 4A

LSA


Legend

-  Project Area
-  5-mile Buffer of Project Area

 CNDDDB Occurrences - Plants

 CNDDDB Sensitive Vegetation Communities

 Northern Coastal Salt Marsh

 Serpentine Bunchgrass



0 3834.978070175 7669.95614035
FEET

SOURCE: CDFW CNDDB (07/31/2016).

Marinda Heights
Marin County, California
CNDDDB Species Occurrences and Sensitive Vegetation Communities within Five Miles

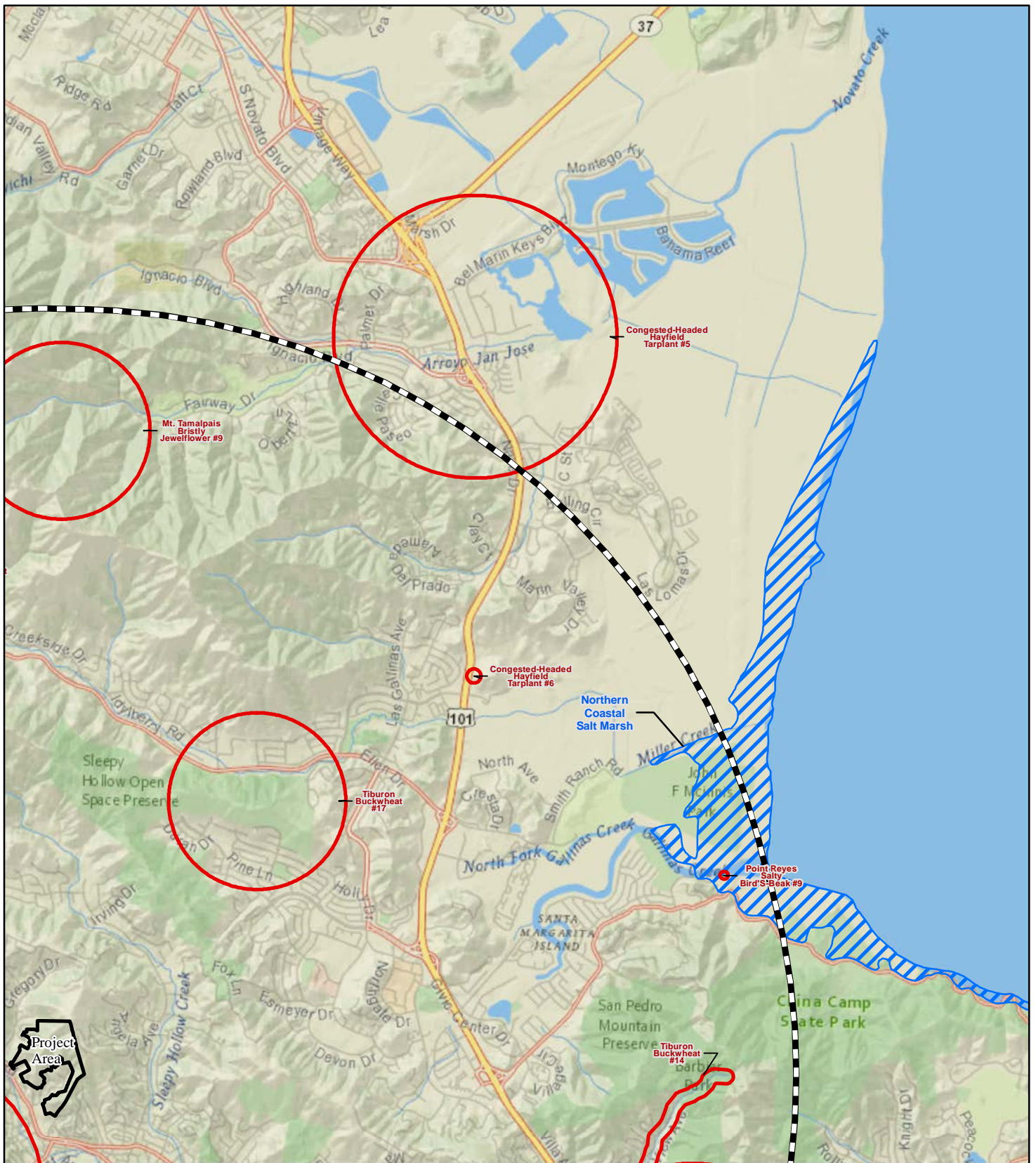


FIGURE 4B

LSA

Legend

Project Area

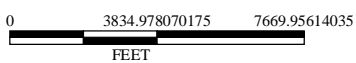
5-mile Buffer of Project Area

CNDDDB Occurrences - Plants

CNDDDB Sensitive Vegetation Communities

Northern Coastal Salt Marsh

Serpentine Bunchgrass



SOURCE: CDFW CNDDB (07/31/2016).

CNDDDB Species Occurrences and Sensitive Vegetation Communities within Five Miles

Marinda Heights
Marin County, California

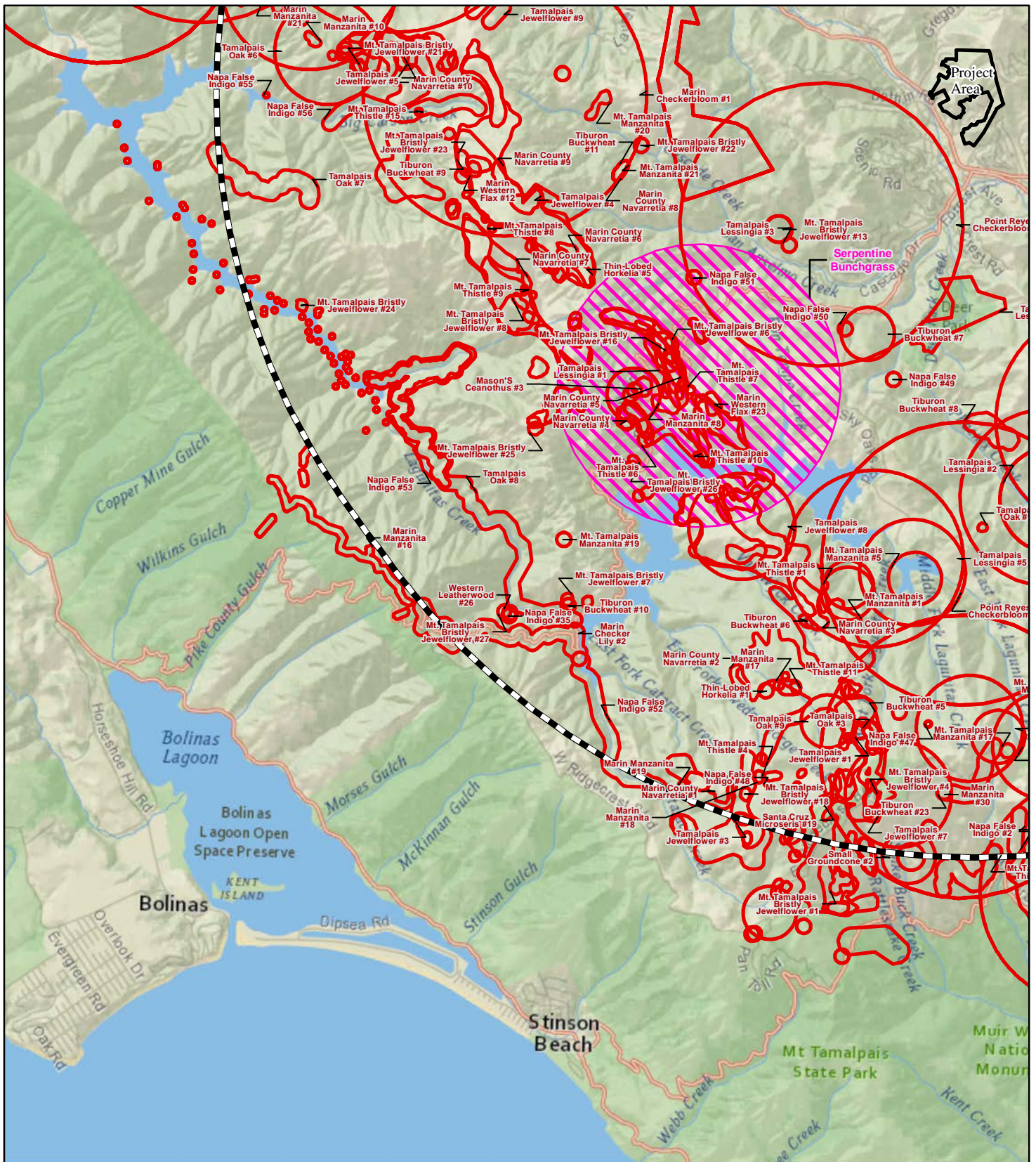


FIGURE 4C

LSA

Legend

- Project Area
- 5-mile Buffer of Project Area

CNDDDB Occurrences - Plants

CNDDDB Sensitive Vegetation Communities

Northern Coastal Salt Marsh

Serpentine Bunchgrass



0 3834.978070175 7669.95614035
FEET

SOURCE: CDFW CNDDB (07/31/2016).

CNDDB Species Occurrences and Sensitive Vegetation Communities within Five Miles

Marinda Heights
Marin County, California

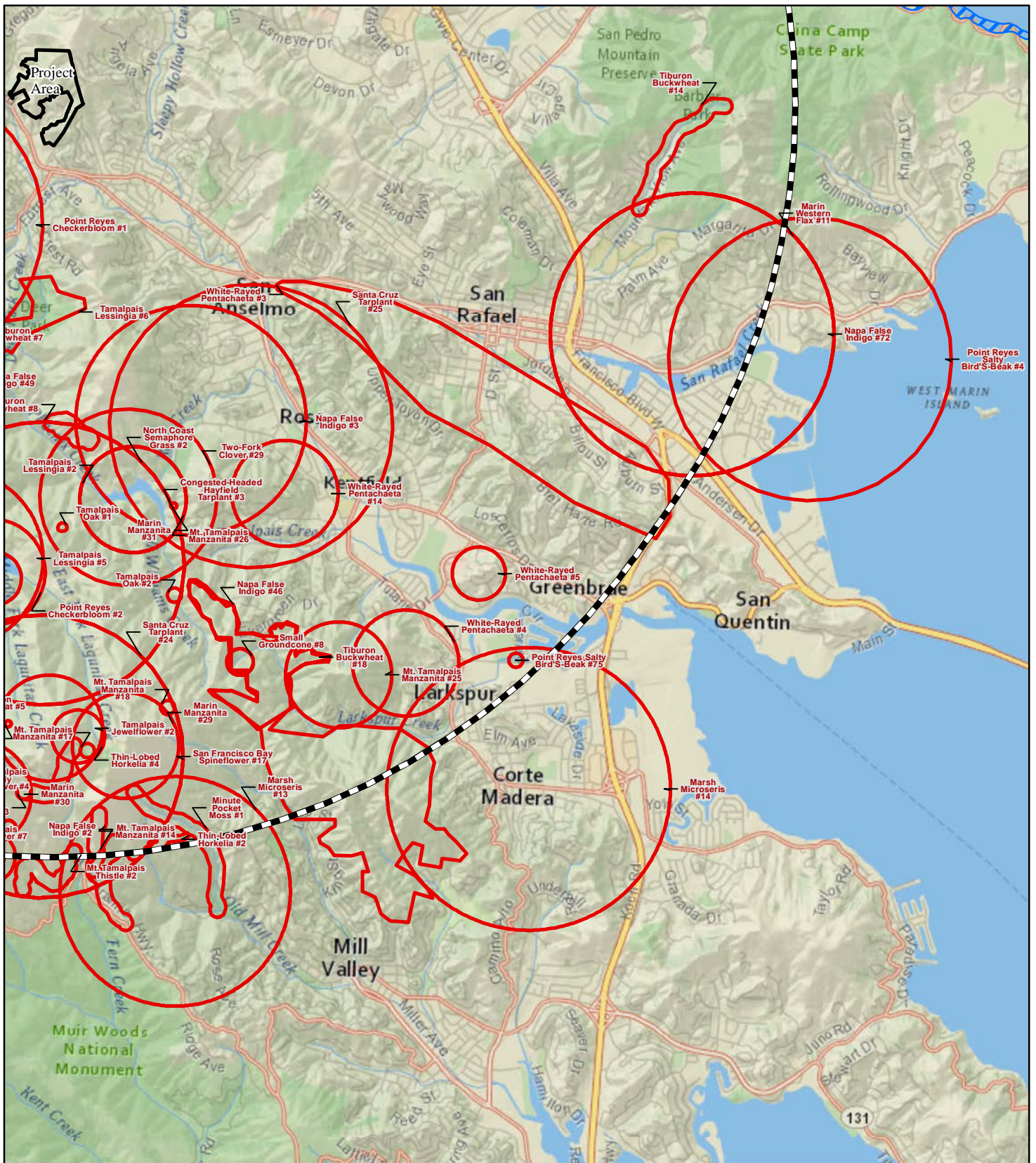





FIGURE 4D

LSA


Legend

-  Project Area
-  5-mile Buffer of Project Area

 CNDDDB Occurrences - Plants

 CNDDDB Sensitive Vegetation Communities

 Northern Coastal Salt Marsh

 Serpentine Bunchgrass



0 3834.978070175 7669.95614035
FEET

SOURCE: CDFW CNDDB (07/31/2016).

CNDDDB Species Occurrences and Sensitive Vegetation Communities within Five Miles

Marinda Heights
Marin County, California

As of the first field visit in August 2016, the vegetation communities within the project site have been identified and mapped to the alliance level. In order to determine if there is potential additional sensitive vegetation on site, the three previously listed vegetation alliances will need to be further refined and mapped to the association level. Therefore, there is potential for additional acreage of sensitive natural communities to be identified after the second and third field surveys are completed in spring 2017.

6.3 SPECIAL-STATUS PLANT SPECIES

Based on the results of the literature review, LSA developed a list of 31 special-status species that occur or may occur in the project area (see Table B). Of these 31 species, 16 were determined to have no potential to occur due to a lack of suitable habitat within the project site (e.g., serpentine seeps, coastal prairie, etc.). The remaining 15 species have been recorded within 5 miles of the project area and could potentially occur within the project site based on the presence of suitable habitat. No special-status plant species were detected during the first round of rare plant surveys conducted in August 2016. However, many of these species are annuals that are not readily identifiable outside of their documented blooming period. The protocol-level rare plant survey will be considered complete when the second and third rare plant surveys are conducted in spring 2017 during peak bloom. After the second and third surveys, the potential for these 15 species will be revised according to survey results. A complete list of all plant species observed during the first round of field surveys is included in Table C.

Table B: Special-Status Plant Species Evaluated

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Bryophytes			
<i>Fissidens pauperculus</i> Minute pocket-moss	--/--/1B.2	This species occurs in north coast coniferous forest soils below 3,400 feet in elevation.	There is no suitable habitat present within the project site. The only CNDDDB occurrence of minute pocket-moss within 5 miles of the project was last documented in 1949 and is approximately 4.5 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.
<i>Entosthodon kochii</i> Koch's cord-moss	--/--/1B.3	This species grows in soil in cismontane woodland from 591 to 3,280 feet in elevation.	Potential habitat occurs in coast live oak woodlands within the project site. There is one documented CNDDDB occurrence of Koch's cord-moss within 5 miles of the project site. The closet occurrence is approximately 4.6 miles away and is undated. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.

¹ Explanation of federal and State listing codes:

Federal

- FE = Federally Endangered
- FT = Federally Threatened

State

- SE = State Endangered
- ST = State Threatened
- SFP = State Fully Protected
- SSC = California Species of Concern
- CST = Candidate for State Listed Threatened

California Rare Plant Rank

- 1A = Presumed extinct in California
- 1B = Rare or Endangered in California and elsewhere
- 2A = Plants Presumed Extirpated in California, But Common Elsewhere
- 2B = Plants Rare, Threatened, or Endangered in California, but more common elsewhere

California Rare Plant Threat Codes:

- .1 = Seriously Endangered in California (>80% of occurrences Threatened/high degree and immediacy of threat)
- .2 = Fairly Endangered in California (20-80% of occurrences Threatened)
- .3 = Not very Endangered in California (<20% of occurrences Threatened or no current threats known)

Note: CNPS List 1A and some List 3 plant species lacking any threat information receive no threat code extension.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Angiosperms – Dicots			
Asteraceae (Compositae) – Sunflower Family			
<i>Cirsium hydrophilum</i> var. <i>vaseyi</i> Mt. Tamalpais thistle	--/--/1B.2	This perennial herb occurs in serpentine seeps in broadleaved upland forest, chaparral, and meadows from 787 to 2,034 feet in elevation. The blooming period for this species is May-August.	There is no serpentine habitat present within the project site. There are 11 documented occurrences of Mt. Tamalpais thistle in CNDDDB within 5 miles of the project site. The closest occurrence was documented in 2008 and is approximately 2.5 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
<i>Hemizonia congesta</i> ssp. <i>congesta</i> Pale yellow hayfield tarplant	--/--/1B.2	This annual herb occurs in valley and foothill grassland, sometimes on roadsides, from 66 to 1,837 feet in elevation. The blooming period for this species is April-November.	Potential habitat occurs in the grasslands within the project site. There are three documented CNDDDB occurrences of pale yellow hayfield tarplant within 5 miles of the project site. The closest occurrence was documented in 1947 and is approximately 1.9 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.
<i>Holocarpha macradenia</i> Santa Cruz tarplant	FT/SE/1B.1	This annual herb occurs on sandy or sandy-clay soils in coastal scrub, coastal prairie, and valley and foothill grassland, from 32 to 722 feet in elevation. The blooming period for this species is June-October.	Potential habitat occurs in grassland. There are two documented CNDDDB occurrences of Santa Cruz Tarplant within 5 miles of the project site. However, both of these occurrences are presumed extirpated. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.
<i>Lessingia micradenia</i> var. <i>micradenia</i> Tamalpais lessingia	--/--/1B.2	This annual herb occurs on roadsides and in chaparral and valley and foothill grassland, typically in serpentine soils from 328 to 1,640 feet in elevation. The blooming period for this species is June-October.	Potential habitat occurs in grassland and chamise chaparral. However, there are no serpentine soils on site. There are nine documented CNDDDB occurrences of Tamalpais lessingia within 5 miles of the project site. The closest occurrence was documented in 2013 and is approximately 1 mile away. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
<i>Microseris paludosa</i> Marsh silverpuffs	--/--/1B.2	This perennial herb occurs in closed-cone coniferous forest, cismontane woodland, coastal scrub, and valley and foothill grassland, from sea level to 1,600 feet in elevation. The blooming period for this species is April-July.	Potential habitat occurs in coast live oak woodland and grassland. There are two documented CNDDDB occurrences of marsh silverpuffs within 5 miles of the project site. The closest occurrence was last documented in 1944 and is approximately 4.5 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.
<i>Pentachaeta bellidiflora</i> White-rayed pentachaeta	--/--/1B.1	This annual herb occurs in cismontane woodland and valley and foothill grassland, often in serpentine soils, from 115 to 2,034 feet in elevation. The blooming period for this species is March-May.	Potential habitat occurs in grassland and coast live oak woodland. There are four documented CNDDDB occurrences of white-rayed pentachaeta within 5 miles of the project site, three of which are presumed extirpated. The one extant occurrence was last documented in 1912 and is approximately 2.5 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.
<i>Stebbinsoseris decipiens</i> Santa Cruz silverpuffs	--/--/1B.2	This annual herb occurs in open areas in broadleafed upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, and valley and foothill grassland, between sea level and 1,600 feet in elevation. The blooming period for this species is April-May.	Potential habitat occurs in grassland, chamise chaparral, and coast live oak woodland. There is one documented CNDDDB occurrence of Santa Cruz silverpuffs within 5 miles of the project site. This occurrence was last documented in 2002 and is approximately 4.5 miles away. Santa Cruz silverpuffs was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Boraginaceae – Borage Family			
<i>Amsinckia lunaris</i> Bent-flowered fiddleneck	--/--/1B.2	This annual herb occurs in coastal bluff scrub, cismontane woodland, and valley and foothill grassland below 1,650 feet in elevation. The blooming period for this species is March-June.	Potential habitat occurs in grassland and coast live oak woodland. There are two documented CNDDDB occurrences of bent-flowered fiddleneck within 5 miles of the project site. The closest occurrence was last documented in 1927 and is approximately 3.0 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.
Brassicaceae (Cruciferae) – Mustard Family			
<i>Cardamine angulata</i> Seaside bitter-cress	--/--/2B.1	This perennial herb occurs in wet areas and streambanks in lower montane coniferous forest and North Coast coniferous forest from 213 to 3,002 feet in elevation. The blooming period for this species is January-July.	There is no suitable habitat present within the project site. There is one documented occurrence of Seaside bitter-cress in CNDDDB within 5 miles of the project site. This occurrence was last documented in 1915 and is approximately 4.9 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
<i>Streptanthus batrachopus</i> Tamalpais jewelflower	--/--/1B.3	This annual herb occurs on serpentine soils in closed-cone coniferous forest and chaparral from 1,000 to 2,132 feet in elevation. The blooming period for this species is April-July.	There is no serpentine habitat present within the project site. There are eight documented occurrences of Tamalpais jewelflower in CNDDDB within 5 miles of the project site. The closet occurrence was last documented in 1958 and is approximately 2.7 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
<p><i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> Mount Tamalpais bristly jewelflower</p>	<p>--/--/1B.2</p>	<p>This annual species occurs in serpentine soils in chaparral and valley and foothill grassland from 650 to 2,635 feet in elevation. The blooming period for this species is May-August.</p>	<p>There is no serpentine habitat present within the project site. There are 18 documented occurrences of Mount Tamalpais bristly jewelflower in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1986 and is approximately 1.3 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.</p>
Ericaceae – Heath Family			
<p><i>Arctostaphylos montana</i> ssp. <i>montana</i> Mt. Tamalpais manzanita</p>	<p>--/--/1B.3</p>	<p>This perennial evergreen shrub occurs in chaparral, valley and foothill grassland, typically in rocky, serpentine soils from 525 to 2,493 feet in elevation. The blooming period for this species is February-April.</p>	<p>There is no serpentine habitat present within the project site. There are 13 documented occurrences of Mt. Tamalpais manzanita in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1998 and is approximately 1.2 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.</p>
<p><i>Arctostaphylos virgata</i> Marin manzanita</p>	<p>--/--/1B.2</p>	<p>This perennial evergreen shrub occurs in broad-leaved upland forest, closed-cone coniferous forest, chaparral, and north coast coniferous forest on sandstone or granitic soils. Its known range is 197 to 2,297 feet in elevation. The blooming period for this species is January-March.</p>	<p>Potential habitat occurs in grassland and chamise chaparral. There are 11 documented CNDDDB occurrences of Marin manzanita within 5 miles of the project site. The closest occurrence was last documented in 2005 and is approximately 2.7 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.</p>

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Fabaceae (Leguminosae) – Legume Family			
<i>Amorpha californica napensis</i> Napa false indigo	--/--/1B.2	This perennial deciduous shrub occurs in openings in broadleaved upland forest, chaparral, and cismontane woodland from 492 to 6,562 feet in elevation. The blooming period for this species is April-July.	Potential habitat occurs in California bay forest, coast live oak woodland, and chamise chaparral. There are 15 documented CNDDDB occurrences of Napa false indigo within 5 miles of the project site. The closest occurrence was last documented in 1924 and is approximately 1.4 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Moderate Potential.
<i>Trifolium amoenum</i> Showy Indian clover	FE/--/1B.1	This annual herb occurs in coastal bluff scrub and valley and foothill grassland, sometimes in serpentine soils, from 16 to 1,362 feet in elevation. The blooming period for this species is April-June.	Potential habitat occurs in grasslands within the project site. There is one documented CNDDDB occurrence of showy Indian clover within 5 miles of the project site. This occurrence was last documented in 1933 and is approximately 1.9 miles away. Showy Indian clover was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.
Fagaceae – Oak Family			
<i>Quercus parvula</i> var. <i>tamalpaisensis</i> Tamalpais oak	--/--/1B.3	This perennial evergreen shrub occurs in lower montane coniferous forest from 328 to 2,460 feet in elevation. The blooming period for this species is March-April.	There is no coniferous forest habitat present within the project site. There are seven documented occurrences of Tamalpais oak in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1997 and is approximately 2.7 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Linaceae – Flax Family			
<i>Hesperolinon congestum</i> Marin dwarf flax	FT/ST/1B.1	This annual herb occurs in serpentine soils in chaparral and valley and foothill woodland from 16 to 1,214 feet in elevation. The blooming period for this species is April-July.	There is no serpentine habitat present within the project site. There are five documented occurrences of Marin dwarf flax in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 2002 and is approximately 2.5 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
Malvaceae – Mallow Family			
<i>Sidalcea calycosa</i> ssp. <i>rhizomata</i> Point Reyes checkerbloom	--/--/1B.2	This perennial rhizomatous herb occurs in freshwater marshes and swamps near the coast from 10 to 246 feet in elevation. The blooming period for this species is April-September.	There is no freshwater marsh or swamp habitat present within the project site. There are two documented occurrences of Point Reyes checkerbloom in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in San Anselmo Canyon in 1922, approximately 0.25 mile away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
<i>Sidalcea hickmanii</i> ssp. <i>viridis</i> Marin checkerbloom	--/--/1B.3	This perennial herb occurs on serpentine soils in chaparral from 164 to 1,410 feet in elevation. The blooming period for this species is May-June.	There is no serpentine habitat present within the project site. There is one documented occurrence of Marin checkerbloom in CNDDDB, approximately 2 miles away, that was last documented in 1996. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
Orobanchaceae – Broomrape Family			
<i>Chloropyron maritimum</i> ssp. <i>palustre</i> Point Reyes salty bird's-beak	--/--/1B.2	This hemiparasitic annual herb occurs in coastal marshes and swamps from 0 to 33 feet in elevation. The blooming period for this species is June-October.	There is no coastal marsh or swamp habitat present within the project site. There are three documented occurrences of Point Reyes salty bird's-beak in CNDDDB within 5 miles of the project site. The closest occurrence was last documented at Buck's Landing in 1990, approximately 4.7 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
<i>Kopsiopsis hookeri</i> Small ground-cone	--/--/2B.3	This perennial rhizomatous herb is parasitic on <i>Gaultheria shallon</i> and <i>Vaccinium</i> sp. It occurs in north coast coniferous forest from 295 to 2,904 feet in elevation. The blooming period for this species is April-August.	There is no coniferous forest habitat present within the project site. There are two documented occurrences of small ground-cone in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 2004 and is approximately 3.8 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
Polemoniaceae –Phlox Family			
<i>Navarretia rosulata</i> Marin County navarretia	--/--/1B.2	This annual herb occurs in serpentine soils in closed-cone coniferous forest and chaparral from 656 to 2,083 feet in elevation. The blooming period for this species is May-July.	There is no serpentine habitat present within the project site. There are 10 documented occurrences of Marin County navarretia in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1990 and is approximately 2.2 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
Polygonaceae –Buckwheat Family			
<i>Chorizanthe cuspidata</i> var. <i>cuspidata</i> San Francisco Bay spineflower	--/--/1B.2	This annual herb occurs in sandy soils in coastal bluff scrub, coastal dunes, coastal prairie, and coastal scrub from 10 to 705 feet in elevation. The blooming period for this species is April-August.	There is no suitable habitat present within the project site. There is one documented occurrence of San Francisco Bay spineflower in CNDDDB within 5 miles of the project site. It was last documented in 1873 and is approximately 3.3 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
<i>Eriogonum luteolum</i> var. <i>caninum</i> Tiburon buckwheat	--/--/1B.2	This annual herb occurs in sandy to gravelly serpentine soils in chaparral, cismontane woodland, coastal prairie, and valley and foothill grassland from sea level to 2,297 feet in elevation. The blooming period for this species is May-September.	There is no serpentine habitat present within the project site. There are 14 documented occurrences of Tiburon buckwheat in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1975 and is approximately 1.3 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.

Species Name	Listing Status (Federal/ State/ CRPR) ¹	Habitat Requirements	Potential for Occurrence within Project Site
Rhamnaceae –Buckthorn Family			
<i>Ceanothus masonii</i> Mason's ceanothus	--/SR/1B.2	This perennial evergreen shrub occurs in openings in chaparral on rocky, serpentine soils from 755 to 1,640 feet in elevation. The blooming period for this species is March-April.	There is no serpentine habitat present within the project site. There is one documented occurrence of Mason's ceanothus in CNDDDB within 5 miles of the project site. It was last documented in 1994 and is approximately 2.9 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. No Potential.
Rosaceae –Rose Family			
<i>Horkelia tenuiloba</i> Thin-lobed horkelia	--/--/1B.2	This perennial herb occurs in mesic openings in sandy soils in chaparral, broadleaved upland forest, and valley and foothill grassland from 164 to 1,640 feet in elevation. The blooming period for this species is May-August.	Potential habitat occurs in chamise chaparral, coast live oak woodland, and grassland within the project site. There are four documented occurrences of thin-lobed horkelia in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1990 and is approximately 2.7 miles away. This species was not observed during the first round of rare plant surveys conducted in August 2016. Low Potential.
Thymelaeaceae –Daphne Family			
<i>Dirca occidentalis</i> Western leatherwood	--/--/1B.2	This perennial deciduous shrub occurs in broadleaved upland forest, closed cone upland forest, chaparral, north coast coniferous forest, riparian forest, riparian woodland, and cismontane woodland, from 150 to 1,394 feet in elevation. The blooming period for this species is January-April.	Potential habitat occurs in California bay forest, chamise chaparral, and coast live oak woodland. There are two documented CNDDDB occurrences of western leatherwood within 5 miles of the project site. The closest occurrence was last documented in 1990 and is approximately 4.5 miles away. Western leatherwood was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species and can be difficult to detect when not in bloom. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Moderate Potential.

Species Name	Listing Status (Federal/ State/ CRPR)	Habitat Requirements	Potential for Occurrence within Project Site
Angiosperms – Monocots			
Liliaceae –Lily Family			
<i>Fritillaria lanceolata</i> var. <i>tristulis</i> Marin checker lily	--/--/1B.1	This perennial bulbiferous herb occurs in coastal bluff scrub, coastal prairie, and coastal scrub from 49 to 492 feet in elevation. The blooming period for this species is February-May.	There is no suitable habitat present within the project site. There are two documented occurrences of Marin checker lily in CNDDDB within 5 miles of the project site. The closest occurrence was last documented in 1936 and is approximately 4.3 miles away. Marin checker lily was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was not conducted within the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. No Potential.
Poaceae –Grass Family			
<i>Stuckenia filiformis</i> ssp. <i>Alpine</i> Slender-leaved pondweed	--/--/2B.2	Freshwater wetland and marsh, below 7,600 feet in elevation. Blooms May through July.	No suitable habitat is present. The closest CNDDDB occurrence is approximately 1.9 miles from the site. This species was not observed during the first round of rare plant surveys in August 2016. No Potential.
<i>Pleuropogon hooverianus</i> North coast semaphore grass	--/ST/1B.1	This perennial rhizomatous herb occurs in open and mesic areas in broadleaved upland forest, meadows and seeps, and north coast coniferous forest from 33 to 2,201 feet in elevation. The blooming period for this species is April-August.	Potential habitat occurs in California bay forest within the project site. There are four documented CNDDDB occurrences of North Coast semaphore grass within 5 miles of the project site. The closest occurrence was last documented in 2013 and is approximately 3.2 miles away. North Coast semaphore was not observed during the first round of rare plant surveys conducted in August 2016. However, the survey was conducted toward the end of the known blooming period for this species. The survey(s) in spring 2017 will be conducted during the known blooming period for this species. Low Potential.

Table C: Plant Species Observed within the Project Site

Lichens

Ramalina menziesii Lace lichen

Ferns and Allies

Dennstaedtiaceae - Bracken Family

Pteridium aquilinum var. *pubescens* Bracken fern

Pteridaceae - Brake Family

Adiantum jordanii California maidenhair fern

Pentagramma triangularis Goldback fern

Woodsiaceae - Woodsia Family

Athyrium filix-femina var. *cyclosorum* Western lady fern

Gymnosperms

Cupressaceae - Cypress Family

Hesperocyparis macrocarpa Monterey cypress

Pinaceae - Pine Family

**Pinus pinea* Italian stone pine

Pinus radiata Monterey pine

Pseudotsuga menziesii var. *menziesii* Douglas-fir

Angiosperms - Dicots

Anacardiaceae - Cashew or Sumac Family

Toxicodendron diversilobum Western poison-oak

Apiaceae (Umbelliferae) - Carrot Family

*[†]*Foeniculum vulgare* Sweet fennel

Perideridia kelloggii Kellogg's yampah

*[†]*Torilis arvensis* Knot hedge-parsley

Asteraceae (Compositae) - Sunflower Family

Achillea millefolium Common yarrow

Artemisia californica California sagebrush

Artemisia douglasiana Douglas' mugwort

Baccharis pilularis ssp. *consanguinea* Coyote brush

*[†]*Carduus pycnocephalus* ssp. *pycnocephalus* Italian thistle

*[†]*Centaurea solstitialis* Yellow starthistle

Eurybia radulina Broad-leaf aster

Grindelia camporum Great Valley gumplant

Hemizonia congesta ssp. *lutescens* Tarweed

Heterotheca sessiliflora ssp. *bolanderi* Bolander's goldenaster

*[†]*Hypochaeris radicata* Rough cat's-ear

**Lactuca serriola* Prickly lettuce

**Logfia gallica* Narrowleaf cottonrose

Madia gracilis Slender tarweed

Micropus californicus var. *californicus* Cottontop

Pseudognaphalium californicum California everlasting

Brassicaceae (Cruciferae) - Mustard Family

*[†]*Hirschfeldia incana* Short-podded mustard

Caprifoliaceae - Honeysuckle Family

Lonicera hispidula California honeysuckle

Caryophyllaceae - Pink Family	
* <i>Petrorhagia prolifera</i>	Childing pink
Crassulaceae - Stonecrop Family	
<i>Dudleya</i> sp.	Dudleya
Ericaceae - Heath Family	
<i>Arbutus menziesii</i>	Madrone
<i>Arctostaphylos manzanita</i> ssp. <i>manzanita</i>	Common manzanita
Euphorbiaceae - Spurge Family	
<i>Croton setigerus</i>	Turkey mullein
Fabaceae (Leguminosae) - Legume Family	
* [†] <i>Acacia dealbata</i>	Silver wattle
* <i>Acacia melanoxydon</i>	Blackwood acacia
<i>Acmispon americanus</i> var. <i>americanus</i>	Spanish lotus
* [†] <i>Genista monspessulana</i>	French broom
* <i>Trifolium hirtum</i>	Rose clover
* <i>Vicia</i> sp.	Vetch
Fagaceae - Oak Family	
<i>Quercus agrifolia</i> var. <i>agrifolia</i>	Coast live oak
<i>Quercus garryana</i> var. <i>garryana</i>	Garry oak
<i>Quercus lobata</i>	Valley oak
Geraniaceae - Geranium Family	
* <i>Erodium cicutarium</i>	Red-stem filaree
Lamiaceae (Labiatae) - Mint Family	
<i>Monardella villosa</i>	Coyote mint
Lauraceae - Laurel Family	
<i>Umbellularia californica</i>	California bay
Myrsinaceae - Myrsine Family	
* <i>Lysimachia arvensis</i>	Scarlet pimpernel
Myrtaceae - Myrtle Family	
* <i>Eucalyptus globulus</i>	Blue gum
Orobanchaceae - Broomrape Family	
<i>Cordylanthus pilosus</i> ssp. <i>pilosus</i>	Bird's-beak
Papaveraceae - Poppy Family	
<i>Eschscholzia californica</i>	California poppy
Phrymaceae - Lopseed Family	
<i>Mimulus aurantiacus</i>	sticky monkeyflower
Plantaginaceae - Plantain Family	
* <i>Plantago lanceolata</i>	English plantain
Polygonaceae - Buckwheat Family	
<i>Eriogonum nudum</i>	Naked wild buckwheat
Rosaceae - Rose Family	
<i>Adenostoma fasciculatum</i>	Chamise
* [†] <i>Cotoneaster franchetii</i>	Franchet's cotoneaster
<i>Heteromeles arbutifolia</i>	Toyon
Rubiaceae - Madder Family	
<i>Galium porrigens</i> var. <i>porrigens</i>	Climbing bedstraw
Sapindaceae - Soapberry Family	
<i>Acer macrophyllum</i>	Big-leaf maple
<i>Aesculus californica</i>	California buckeye

Angiosperms -Monocots

Agavaceae - Agave Family

Chlorogalum pomeridianum var. *pomeridianum* Soap plant

Amaryllidaceae - Amaryllis Family

**Amaryllis belladonna* Naked ladies

Poaceae (Gramineae) - Grass Family

*[†]*Avena fatua* Wild oat
*[†]*Brachypodium distachyon* Purple falsebrome
**Briza maxima* Rattlesnake grass
**Briza minor* Small quaking grass
*[†]*Bromus diandrus* Rippgut grass
**Bromus hordeaceus* Soft chess
*[†]*Cynosurus echinatus* Hedgehog dogtail
*[†]*Ehrharta erecta* Panic veldt grass
Elymus glaucus Blue wildrye
Koeleria macrantha Junegrass
Melica sp. Melicgrass
Stipa pulchra Purple needlegrass

*non-native species; [†]noxious weed

7.0 INVASIVE SPECIES

There are several non-native plant species within the project site, including fourteen that are listed in the high or moderate categories on the California Invasive Plant Council's California Invasive Plant Inventory Database (Cal-IPC 2016). These species are listed in Table C and include the following:

- sweet fennel (*Foeniculum vulgare*)
- knot hedge-parsley (*Torilis arvensis*)
- Italian thistle (*Carduus pycnocephalus* ssp. *pycnocephalus*)
- yellow starthistle (*Centaurea solstitialis*)
- rough cat's-ear (*Hypochaeris radicata*)
- short-podded mustard (*Hirschfeldia incana*)
- silver wattle (*Acacia dealbata*)
- French broom (*Genista monspessulana*)
- Franchet's cotoneaster (*Cotoneaster franchetii*)
- wild oat (*Avena fatua*)
- purple false brome (*Brachypodium distachyon*)
- ripgut grass (*Bromus diandrus*)
- hedgehog dogtail (*Cynosurus echinatus*)
- panic veldt grass (*Ehrharta erecta*)

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