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COUNTY OF MARIN  
COMMUNITY DEVELOPMENT AGENCY  
PLANNING DIVISION



June 19, 2017  
Christian Doegl  
Inverness Paradise, LLC  
2 Pine Hill Drive,  
Inverness, CA 94937

Mr. Doegl,

The purpose of this letter report is to provide you the results of the Biological Site Assessment (BSA), and protocol-level rare plant surveys that WRA, Inc. conducted at the residential lot located at 2 Pine Hill Drive (APN 112-321-18), Inverness, Marin County, California (Study Area, Attachment A, Figure 1). The BSA site visits were conducted on April 8, and April 9, 2017, and a follow-up, late season protocol-level rare plant survey was conducted on June 12, 2017. The total size of the Project parcel (Study Area) is approximately 1.35 acre and consists of an unimproved parcel located at the corner of Pine Hill Drive, and Sir Francis Drake Boulevard in Inverness, unincorporated Marin County. The parcel consists of mature, mixed conifer-hardwood forest, with steep slopes and areas of dense brush on the northern portion of the site and a relatively flat area at the southwestern portion of the site along Pine Hill Drive. The relatively flat area currently contains a gravel driveway and motorhome pad, with an Airstream trailer. For the purpose of the report, the Study Area includes the Project parcel, expanded out to the edge of Sir Francis Drake Boulevard, and Pine Hill Drive, and all areas within 100 feet of the Project parcel, where accessible or visible from public property.

This report describes the results of the site visit for which the Study Area was assessed concerning: (1) presence of special-status plant species; (2) potential to support special-status plant and wildlife species; and (3) the presence of other biological resources protected by local, state, and federal laws and regulations including a delineation of wetlands and non-wetland waters for California Coastal Commission (CCC), U.S. Army Corps of Engineers (Corps), and Regional Water Quality Control Board (RWQCB) jurisdiction. This report also contains an evaluation of potential impacts to special-status species and potentially regulated habitats that may or may not occur as a result of the proposed project.

#### **PROJECT DESCRIPTION**

The Project proposes to build a new single-family residence within an approximately 5,500 square foot buildable area in the southwest corner of the parcel. The buildable area has been previously cleared of brush and herbaceous vegetation, and contains a gravel driveway, and motorhome parking area. The majority of the parcel is constrained by steep slopes and/or Environmentally Sensitive Habitat Areas (ESHAs), and the Project has been designed to avoid ESHAs and required ESHA buffers. Additionally, the location of the new residence has been purposefully planned to limit development in undeveloped areas and to minimize its presence from above, neighboring properties, or public vantage points elsewhere within the community of Inverness. Furthermore, the proposed project shall be specifically designed to meet the guidelines for Coastal development in Marin County, the Local Coastal Program Unit II, and the Inverness Community Plan.

The new single family residence proposed will be set in a mix of existing single-family residences along Pine Hill Drive. The new residence, which has yet to be designed, will include a new septic system and drainfield.

The Project has been designed to avoid impacts to special-status plant and wildlife species. All project work, including tree/vegetation removal, building removal/demolition, and initial ground disturbance, will commence between September 1 and January 31, outside of the nesting bird and local bat maternity roost season. Additionally, any felled trees will remain on the ground for 24 hours. Once project activities have commenced within the above-mentioned work window, project work will continue year-round.

## **BIOLOGICAL SITE ASSESSMENT, NSO SURVEY, RARE PLANT SURVEY, AND CCC WETLAND DELINEATION METHODS**

Prior to the site visits, background literature was reviewed to determine potential presence of regulated vegetation types, aquatic communities, and special-status plant and wildlife species. Resources reviewed for regulated vegetation communities and aquatic features include aerial photography (Google Earth 2017), the Inverness USGS 7.5-minute quadrangle (USGS 1971), Online Soil Survey (California Soil Resources Lab [CSRL] 2017), the California Department of Fish and Wildlife's (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2017a), the California Native Plant Society's (CNPS) Electronic Inventory (2017a), *A Manual of California Vegetation, Online Edition* (CNPS 2017b), Consortium of California Herbaria (CCH 2017), *Marin Flora* (Howell et al. 2007), and USFWS National Wetland Inventory (NWI) (2017) map.

Following the background literature review, WRA biologists conducted site visits on April 8, and April 9, 2017. All plant and wildlife species observed within the Study Area were documented (Attachment B)). All biological communities were documented including wetlands or non-wetland waters potentially jurisdictional by the CCC, Corps, and the RWQCB. The wetlands and non-wetland waters were mapped following a one-parameter approach based on the three-parameter guidelines developed by the Corps for the Arid West region (Corps 2010). All relevant data were collected using a sub-meter accurate GPS unit, which were then digitized utilizing ArcGIS 10.0. All plant species were identified to a taxonomic level sufficient to determine rare status (CNPS 2017a) and/or invasive status (Cal-IPC 2006).

## **ASSESSMENT, SURVEY, AND DELINEATION RESULTS**

### **Environmentally Sensitive Habitat Areas (ESHAs)**

#### *Wetlands and Non-wetland Waters*

The Study Area contains two mapped soil types: Sheridan Variant Coarse Sandy Loam, 50 to 70 percent slopes, and Hydraquents, saline (CSRL 2017). The Sheridan Variant Coarse Sandy Loam soil map unit is composed of coarse sands derived from quartz-diorite, is well drained with medium to very rapid runoff, and rapid permeability (USDA 1985), making wetland conditions very unlikely except as seeps or springs. This soil type occurs on the plateau in the southern portion of the Study Area above the steep bank which descends to Sir Francis Drake Boulevard. The Hydraquents, saline soil type is mapped in the lower portion of the Study Area along Sir Francis Drake Boulevard. This soil map unit is composed of tidally influenced, stratified deposits of silt and clay, with thin layers of peat, that are very poorly drained, with very slow to ponded surface

runoff (USDA 1985), making wetland conditions highly likely within this soil mapping unit. The NWI (USFWS 2017) and USGS 7.5-minute quadrangle map (USGS 1971) databases show no wetlands or other aquatic habitats within the Study Area; however, an unnamed dashed blue-line stream, is situated to the north of the property across Sir Francis Drake Boulevard from the Study Area. Three discreet communities were identified within the Study Area and their rankings, as described in *A Manual of California Vegetation, Online Edition* (CNPS 2016b), are listed below.

Perennial Wetland Seep-Ditch (*Scirpus microcarpus* Herbaceous Alliance [Small-fruited bulrush marsh]). Rank: G4, S2. An 0.03-acre (335 linear foot) perennial wetland seep-roadside ditch was observed on April 9, 2017, and is located along the northern border of the Study Area along Sir Francis Drake Boulevard. It is situated at the toe of slope of the steep north-facing bank, along the edge of Sir Francis Drake Boulevard in a linear concave roadside ditch feature. The wetland appears to contain seep conditions due to its position at toe of slope and also likely receives runoff from the adjacent road.

The wetland ditch meets the membership rules of small-fruited bulrush marsh (*Scirpus microcarpus* Herbaceous Alliance), as it contains small-fruited bulrush greater than 30 percent relative cover in the herbaceous layer (CNPS 2017b). The vegetation is dominated by hydrophytes typically found in perennial seeps and swales, including small-fruited bulrush (OBL), broadleaf cattail (*Typha latifolia*, OBL), water parsley (*Oenanthe sarmentosa*, OBL), and watercress (*Nasturtium officinale*, OBL). Soils are presumed hydric within this feature due to the dominance of perennial hydrophytic vegetation, and wetland hydrology. Wetland hydrology indicators present within the feature included surface water, high water table, and saturation.

The perennial seep-ditch in the Study Area is considered an Environmentally Sensitive Habitat Area (ESHA) under the CCA and Marin County Local Coastal Program (LCP), and would likely be considered a jurisdictional feature by the CCC and under Section 404 and 401 of the Clean Water Act (CWA). The vegetation type, small-fruited bulrush marsh, is also considered a G4, S2, meaning it is apparently secure globally, but imperiled in California, and thus would receive consideration under the California Environmental Quality Act (CEQA). Additionally, the seep/swale has the potential to support several hydrophytic special-status plant species (Attachment C, Table C-1).

#### *Upland Communities*

Riparian White Alder Grove (*Alnus rhombifolia* Forest Alliance). Rank: G4, S4. Riparian white alder grove occupies approximately 0.35 acre in the Study Area, located at and directly above the toe of slope of the steep bank along Sir Francis Drake Boulevard. This alliance is mapped according to membership rules (CNPS 2017b) as having greater than 30 percent relative cover of white alder (*Alnus rhombifolia*) in the tree canopy. Within the Study Area, the tree layer is dominated almost exclusively by white alder, with occasional California bay and Bishop pine. The over-story is an estimated 30 to 50 feet above ground-level. The understory is typically composed of a dense stand of small trees and shrubs including red elderberry (*Sambucus racemosa*), California hazelnut (*Corylus cornuta* ssp. *californica*), and evergreen huckleberry (*Vaccinium ovatum*). Beneath the shrub layer, the dominant vegetation consists of ferns, and woody vines, including western sword fern (*Polystichum munitum*), and California blackberry (*Rubus ursinus*). Annual forbs and grasses are sparse to absent. Although the white alder grove within the Study Area is not immediately adjacent to a stream, this vegetation is likely benefiting from the elevated water table and surface runoff from adjacent hillsides flowing toward the unnamed intermittent

USGS blue-line stream across Sir Francis Drake Boulevard to the north. Furthermore, white alder is the dominant riparian species associated with the riparian zone of the nearby stream, and were it not for the placement of the road, the white alder grove within the Study Area would likely be contiguous with the grove associated with the stream; therefore, this community is considered riparian habitat. Riparian habitat is considered an ESHA under the CCA, and Marin County LCP, and would likely be considered jurisdictional by CDFW under Section 1602 of the California Fish and Game Code (CFGC).

### **Non-sensitive Biological Communities**

Bishop Pine Forest (*Pinus muricata* Forest Alliance). Rank: G3 S3. Bishop pine forest occupies approximately 1.26 acres, predominantly occurring on the southern part of the parcel above the steep bank which descends to Sir Francis Drake Boulevard. This alliance is mapped according to membership rules (CNPS 2017b) as having greater than 15 percent relative cover of bishop pine (*Pinus muricata*) in the tree canopy. The tree layer is co-dominated by Bishop pine (*Pinus muricata*), and California bay (*Umbellularia californica*). Characteristic non-dominant trees in the canopy include Pacific madrone (*Arbutus menziesii*), and coast live oak (*Quercus agrifolia*). The over-story is an estimated 40 to 60 feet above ground-level, with a middlestory of broadleaved trees including California bay, and coast live oak. The canopy structure is relatively open and exposed compared to similar, denser Bishop pine forest stands in the Study Area vicinity. Overall, the trees in this community are in good condition; however, the Bishop pines appear to be mature to over-mature, with no observed Bishop pine regeneration in the understory.

The understory is relatively sparse in the southern portion of the Study Area, where vegetation has been regularly maintained, transitioning to dense cover in the central and northern portions of the Study Area. Where vegetation is sparse, near the gravel driveway and motorhome pad, the dominant species are non-native invasive weeds, including big periwinkle (*Vinca major*), and white-flowered onion (*Allium triquetrum*). Transitioning to the north where dense understory herb and shrub cover is denser, dominant understory species include evergreen huckleberry (*Vaccinium ovatum*), and California coffeeberry (*Frangula californica*). Grasses and forbs are scattered to dense and include panic veldtgrass (*Ehrharta erecta*), bracken fern (*Pteridium aquilinum*), California wood fern (*Dryopteris arguta*), western sword fern, and wide-leaved forget-me-not (*Myosotis latifolia*).

Though Bishop pine forest has the potential to support several special-status plant species (Attachment C, Table C-1), it is not considered an ESHA under the Marin County LCP nor would it be classified as a high priority vegetation community based on CDFW guidance (CDFW 2017c). This community is fragmented, is surrounded by existing disturbance such as roads, neighboring residences, and human-caused clearing, and the area in which development is proposed in particular contains a relatively high density of non-native invasive species in the understory including panic veldtgrass, French broom (*Genista monspessulana*), English ivy (*Hedera helix*), and wide-leaved forget-me-not. Bishop pine forest in western Marin County is also known to support the listed northern spotted owl (NSO; *Strix occidentalis caurina*); this species is addressed below.

### **Special-status Plant Species**

A total of 109 special-status plant species have been documented from the Inverness 7.5-minute quadrangle and eight surrounding quadrangles; however, only 13 of these species have the

potential to occur in the Study Area. Attachment C summarizes the habitat requirements, potential to occur, and results of the April and June protocol-level rare plant surveys. The remaining 95 species are unlikely or have no potential to occur in the Study Area due to one or more of the following reasons:

- Hydrologic conditions (e.g. tidal, vernal pool) necessary to support the special-status plant species are not present in the Study Area;
- Edaphic (soil) conditions (e.g. serpentine, shale) necessary to support the special-status plant species are not present in the Study Area;
- Topographic conditions (e.g. elevation range) necessary to support the special-status plant species are not present in the Study Area;
- Unique pH conditions (e.g. alkali or acidic substrates) necessary to support this species are not present in the Study Area;
- Associated vegetation communities (e.g. chaparral, coastal prairie, redwood forest) necessary to support the special-status plant species are not present in the Study Area;
- Land use history and contemporary management (e.g. vegetation clearing, adjacent residential development) has degraded local habitat necessary to support the special-status plant species.

On April 09, and June 12, 2017, a WRA botanist traversed the entire Study Area recording each plant species observed. Plant species were identified with *Marin Flora* (Howell et al. 2007), *The Jepson Manual, 2<sup>nd</sup> Edition* (Baldwin et al. 2012), and/or the Jepson eFlora online database (Jepson eFlora 2017). The timing of the surveys coincided with all of the 13 special-status species bloom periods with potential to occur in the Study Area. A total of 99 plant species were observed in the Study Area; 53 are native species to the Study Area, and 46 are non-native (Attachment B). Based on the results of the April and June surveys, no special-status plant species are present within the Study Area. The following plants were assessed to have a potential to occur within the Study Area.

#### *Special-status Species with Potential to Occur Not Observed during Protocol-Level Surveys*

Marin manzanita (*Arctostaphylos virgata*). CNPS Rank 1B. Not Observed (Initially Assessed: High Potential). Marin manzanita is an evergreen shrub in the heath family (Ericaceae) that blooms from January to March. It typically occurs on sandstone and granitic substrate in broadleaf upland forest, closed-cone conifer forest, chaparral, and North Coast coniferous forest at elevations ranging from 195 to 2,275 feet (CDFW 2017a, CNPS 2017a, Baldwin et al. 2012). Observed associated species include California bay, coast redwood (*Sequoia sempervirens*), Douglas fir (*Pseudotsuga menziesii*), bishop pine, Pacific madrone, tanoak, Eastwood's manzanita (*Arctostaphylos glandulosa*), California hazelnut, blue blossom (*Ceanothus thyrsiflorus*), evergreen huckleberry, yerba santa (*Eriodictyon californicum*), California coffeeberry, and sticky monkey (*Mimulus aurantiacus*) (CDFW 2017a). Marin manzanita was observed at a reference site on Mt. Vision Road during the date of the April survey, but was not observed in the Study Area during the protocol-level rare plant surveys.

Point Reyes ceanothus (*Ceanothus gloriosus* var. *gloriosus*). CNPS Rank 4. Not Observed (Initially Assessed: High Potential). Point Reyes ceanothus is an evergreen shrub in the buckthorn family (Rhamnaceae) that blooms from March through May. It typically occurs on bluffs and terraces underlain by sandy substrates in coastal bluff scrub, coastal scrub, coastal dune,

and closed-cone coniferous forest habitat at elevations ranging from 15 to 1,690 feet (CNPS 2017a, Baldwin et al. 2012). Observed associated species include shore pine (*Pinus contorta* ssp. *contorta*), evergreen huckleberry, salal (*Gaultheria shallon*), California blackberry, poison oak (*Toxicodendron diversilobum*), silk tassel (*Garrya elliptica*), bracken fern, Pacific reed grass (*Calamagrostis nutkaensis*), beach strawberry (*Fragaria chiloensis*), Henderson's angelica (*Angelica hendersonii*), sea pink (*Armeria maritima*), seaside buckwheat (*Eriogonum latifolium*), and seaside daisy (*Erigeron glaucus*) (CDFW 2017a). Point Reyes ceanothus was initially evaluated to have a high potential to occur in the Study Area due to the presence of coniferous forest habitat and the relative location of documented occurrences. However, this species was not observed during the protocol-level rare plant surveys.

Mt. Vision ceanothus (*Ceanothus gloriosus* var. *porrectus*). CNPS Rank 1B. Not Observed (Initially Assessed: High Potential). Mt. Vision ceanothus is an evergreen shrub in the buckthorn family (Rhamnaceae) that blooms from February through May. It typically occurs in closed-cone coniferous (bishop pine) forest, coastal scrub, and valley and foothill grassland habitat on Inverness Ridge at elevations ranging from 15 to 1,690 feet (CNPS 2017a, Howell et al. 2007, Baldwin et al. 2012). Observed associated species include bishop pine, evergreen huckleberry, coyote brush, salal, California blackberry, blue blossom, California coffeeberry, bracken fern, Pacific reed grass, and Douglas iris (*Iris douglasiana*) (CDFW 2017a). Mt. Vision ceanothus was initially evaluated to have a high potential to occur in the Study Area due to the presence of coniferous forest habitat and the relative location of documented occurrences. However, this species was not observed during the protocol-level rare plant surveys.

Harlequin lotus (*Hosackia gracilis*). CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). Harlequin lotus is a perennial forb in the pea family (Fabaceae) that blooms from March to July. It typically occurs in wetlands or ditches in broadleaf upland forest, coastal scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, meadow and seep, marsh and swamp, North Coast coniferous forest, and valley and foothill grassland habitat at elevations ranging from 0 to 2,275 feet (CNPS 2017a). This species has a wetland indicator status of facultative wetland (FACW) on the National Wetland Plant List (Lichvar et al. 2016). Observed associated species include tinker's penny (*Hypericum anagalloides*), western dog violet (*Viola adunca*), blue-eyed grass (*Sisyrinchium bellum*), golden-eyed grass (*S. californicum*), bird's-foot trefoil (*Lotus corniculatus*), common velvet grass (*Holcus lanatus*), California oat grass (*Danthonia californica*), and silver hair grass (*Aira caryophyllaea*) (CNPS 2017a, personal observation 2017). Harlequin lotus was initially assessed to have moderate potential to occur in the perennial wetland ditch feature. This species was observed in bloom at a reference site at Ledum Swamp, Point Reyes on the date of the June protocol-level rare plant survey. However, this species was not observed within the Study Area during the protocol-level rare plant surveys.

Coast iris (*Iris longipetala*) CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). Coast iris is a perennial bulbiferous herb in the iris family (Iridaceae) that blooms from March to May. It typically occurs in moist, open habitats including coastal prairie, lower montane coniferous forest, meadows and seeps at elevations ranging from 0 to 1,970 feet (CDFW 2017, CNPS 2017b). This species has a wetland indicator status of facultative wetland (FACW) on the National Wetland Plant List (Lichvar et al. 2016). Observed associated species include English plantain (*Plantago lanceolata*), spring vetch (*Vicia sativa*), checkerbloom (*Sidalcea malviflora*), yarrow (*Achillea millefolia*), California poppy (*Eschscholzia californica*), Italian ryegrass (*Festuca perennis*), and slim oat (*Avena barbata*) (personal observation 2017). Coast iris was initially

evaluated to have a moderate potential to occur in openings within the bishop pine forest habitat within the Study Area. However, this species was not observed during the protocol-level rare plant surveys.

North Coast semaphore grass (*Pleuropogon hooverianus*) State Threatened, CNPS Rank 1B, Not Observed (Initially Assessed: Moderate Potential). North Coast semaphore grass is a perennial herb in the grass family (Poaceae) that blooms from April to June. It typically occurs in shady, wet grassy areas in broadleaf upland forest, meadow, seep, and North Coast coniferous forest habitat at elevations ranging from 30 to 2205 feet (CDFW 2017a, CNPS 2017a). This species is a facultative wetland (FACW) plant (Lichvar et al. 2016), and is restricted to vernal pool habitat in some regions of California, but is a generalist in other regions (Keeler-Wolf et al. 1998). Observed associated species include coast live oak, California bay, rushes (*Juncus* spp.), California blackberry, dense sedge (*Carex densa*), field sedge (*Carex praegracilis*), and harding grass (*Phalaris aquatica*) (CDFW 2017a). North Coast semaphore grass was initially assessed as having a moderate potential to occur in the wetland ditch within the Study Area. However, this species was not observed during the protocol-level rare plant surveys.

Nodding semaphore grass (*Pleuropogon refractus*). CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). Nodding semaphore grass is a perennial graminoid in the grass family (Poaceae) that blooms from March through August, and may be identifiable into early fall. It typically occurs in mesic sites, along streams, grassy flats, shady banks, and wet meadows often underlain by granitic substrates in meadow and seep, lower montane coniferous forest, North Coast coniferous forest, and riparian forest habitat at elevations ranging from 0 to 5,200 feet (CDFW 2017a, CNPS 2017b, Baldwin et al. 2012). This species has a wetland indicator status of obligate (OBL) for the Arid West Region (Lichvar et al. 2016). Observed associated species are not reported from the literature. Nodding semaphore grass was initially evaluated to have a moderate potential to occur in the Project Area due to the presence of suitable hydrologic conditions and associated vegetation communities. However, this species was not observed during the protocol-level rare plant surveys.

Lobb's aquatic buttercup (*Ranunculus lobbii*). CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). Lobb's buttercup is annual aquatic forb in the buttercup family (Ranunculaceae) that blooms from February to May. It typically occurs in vernal wet areas within cismontane woodland, North Coast coniferous forest, valley and foothill grassland, and vernal pool habitat at elevations ranging from 45 to 1530 feet (CNPS 2017b). This species is an obligate (OBL) wetland plant (Lichvar et al. 2017), and is known from vernal pool habitat in some regions of California, but is generalist in others (VPA?) (Keeler-Wolf et al. 1998). Observed associated species are not described in the literature. Lobb's buttercup was initially assessed as having a moderate potential to occur in the Study Area within the perennial wetland-ditch. However, this species was not observed during the protocol-level rare plant surveys.

Victor's gooseberry (*Ribes victoris*), CNPS Rank 4. Not Observed (Initially Assessed: High Potential). Victor's gooseberry is an evergreen shrub in the gooseberry family (Grossulariaceae) that blooms from March to April. It is typically located in shady, mesic sites in broadleaf upland forest and chaparral habitat at elevations ranging from 325 to 2440 feet (CNPS 2017a). Observed associated species are not documented in the literature. Victor's gooseberry was initially assessed as having a moderate potential to occur in the Study Area due the presence of broadleaf

forest habitat. However, this species was not observed during the protocol-level rare plant surveys.

Swamp harebell (*Campanula californica*). CNPS Rank 1B. Not Observed (Initially Assessed: High Potential). Swamp harebell is a perennial forb in the harebell family (Campanulaceae) that blooms from June to October. It typically occurs on mesic sites in bog, fen, closed-cone coniferous forest, coastal prairie, meadow, seep, freshwater marsh, and North Coast coniferous forest habitat at elevations ranging from 5 to 1330 feet (CDFW 2017a, CNPS 2017a). Observed associated species include Douglas fir, coast redwood, arroyo willow (*Salix lasiolepis*), rushes (*Juncus* spp.), sedges (*Carex* spp.), water parsley, nootka rose (*Rosa nutkana*), California blackberry (*Rubus ursinus*), seep monkeyflower (*Mimulus guttatus*), coastal hedgenettle (*Stachys chamissonis*), common velvet grass, and tinker's penny (CDFW 2017a). This species was initially determined to have a high potential to occur in the perennial wetland-ditch due to the presence of associated species, mesic conditions, and the close proximity to several documented occurrences. However, this species was not observed during the protocol-level rare plant surveys.

California bottle-brush grass (*Elymus californicus*). CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). California bottle-brush grass is a perennial graminoid in the grass family (Poaceae) that blooms from May to November. It typically occurs along stream banks or other mesic sites within broadleaf upland forest, cismontane woodland, North Coast coniferous forest, and riparian woodland habitat at elevations ranging from 45 to 1530 feet (CNPS 2017a). Observed associated species are not reported in the literature. California bottle-brush grass was initially determined to have a moderate potential to occur in the Study Area due to the presence of associated forest habitat. However, this species was not observed during the protocol-level rare plant surveys.

Baker's goldfields (*Lasthenia californica* ssp. *bakeri*). CNPS Rank 1B. Not Observed (Initially Assessed: Moderate Potential). Baker's goldfields are an annual forb in the sunflower family (Asteraceae) that blooms from April to October. It typically occurs in openings of woody areas in closed-cone coniferous forest and coastal scrub habitat at elevations ranging from 195 to 1,690 feet (CDFW 2017a, CNPS 2017a). Observed associated species include Bishop pine, shore pine, coyote brush, common velvet grass, sweet vernal grass, and Pacific reed grass (CDFW 2017a). Baker's goldfields was initially determined to have a moderate potential to occur in the bishop pine forest portion of the Study Area due to the presence of associated species, and coniferous forest habitat. However, this species was not observed during the protocol-level rare plant surveys.

Coast lily (*Lilium maritimum*). CNPS Rank 1B. Not Observed (Initially Assessed: High Potential). Coast lily is a bulbiferous perennial forb in the lily family (Liliaceae) that blooms from May to August. It typically occurs in closed-cone coniferous forest (e.g. Bishop pine, pygmy cypress), coastal prairie, coastal scrub, broadleaf upland forest, and North Coast coniferous forest habitat at elevations ranging from 15 to 1550 feet (CNPS 2017a, CDFW 2017a). Observed associated species include pygmy cypress (*Hesperocyparis pygmaea*), Bishop pine, Bolander's pine (*P. contorta* ssp. *bolanderi*), coast redwood, wax myrtle (*Morella californica*), evergreen huckleberry, salal (*Gaultheria shallon*), Pacific rhododendron (*Rhododendron macrophyllum*), Labrador tea (*R. columbianum*), slough sedge (*Carex obnupta*), California sedge (*C. californica*), and bracken fern (CDFW 2017a). Coast lily was initially determined to have a high potential to occur within the



Study Area due to the presence of associated species and habitat. This species was observed in bud at a reference site in Ledum Swamp, Point Reyes, on the date of the June protocol-level rare plant survey. However, this species was not observed during the protocol-level rare plant surveys.

Michael's rein orchid (*Piperia michaelii*). CNPS Rank 4. Not Observed (Initially Assessed: Moderate Potential). Michael's rein orchid is a perennial rhizomatous herb in the orchid family (Orchidaceae) that blooms from April to August. It typically occurs on dry sites underlain by mudstone or humus soils in coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, and lower montane coniferous forest habitats at elevations ranging from 10 to 3,000 feet (CDFW 2017a, CNPS2017b). Observed associated species are not published in the literature. This species was initially evaluated to have a moderate potential to occur within the bishop pine forest within the Study Area. However, this species was not observed during the protocol-level rare plant surveys.

### **Special-status Wildlife Species**

A total of 41 special-status wildlife species have been documented within the greater vicinity of the Study Area, of which five species, along with nesting birds, have the potential to occur within the Study Area. The potential for these species to occur within the Study Area are summarized below. Thirty-six of the 41 special-status wildlife species do not have the potential to occur within the Study Area due to one or more of the following reasons:

- Aquatic habitats (e.g. rivers/streams, ponds, estuaries) necessary to support the special-status wildlife species are not present in the Study Area;
- Vegetation types (e.g. tidal marsh, chaparral) that provide nesting and/or foraging resources necessary support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Structures or vegetation (e.g. tules) necessary to provide nesting or cover habitat to support the special-status wildlife species are not present or within the immediate vicinity of the Study Area;
- Host plants (e.g. dog violet, harlequin lotus) necessary to provide larval and nectar resources for the special-status wildlife species are not present in the Study Area;
- The Study Area is outside (e.g. north of, west of) of the special-status wildlife species documented range (including nesting/breeding range, for birds).

A list of special-status wildlife species known to occur in the vicinity of the Study Area was compiled based on available information from CNDDDB (CDFW 2017a) and other sources. The following special-status wildlife species with the potential to occur in the Study Area are described below.

Olive-sided flycatcher (*Contopus cooperi*). CDFW Species of Special Concern. High Potential (Not Observed). The olive-sided flycatcher is a summer (breeding) resident in the region, found in a variety of forested habitats. This species typically nests in coniferous forest at higher elevations, but also nests in mixed forest and woodlands at lower elevations. Breeding habitat is often associated with forest openings and edges. The Study Area and its immediate environs provide suitable breeding habitat for this species, and there are several observations within 1 mile of the Study Area during the breeding season (eBird 2017).

Nesting birds (non-status), High Potential (Present). The Study Area contains vegetation (trees, shrubbery, etc.) that may be used as nesting habitat by bird species with baseline protections under the federal Migratory Bird Treaty Act (MBTA) and the California Fish and Game Code. These laws/codes apply to a wide variety of native birds, including species that are non-migratory and/or commonly found near developed areas in western Marin County. In addition to adult birds, legal protections include active nests (those with eggs or young), the deliberate destruction of which is prohibited.

Silver-haired bat (*Lasionycteris noctivagans*), WBWG Medium Priority. Moderate Potential (Unknown). Silver-haired bats occur in temperate forests (coniferous, deciduous, and mixed) from southern Alaska to northeastern Mexico. Females form maternity roosts almost exclusively inside hollows or under loose bark of large trees and may switch roosts several times (Western Bat Working Group [WBWG] 2015). Hibernation occurs in trees, rock crevices, leaf litter, in and under buildings, and in caves and mines. Foraging for insects occurs above the tree canopy. Mature trees and tree snags within the Study Area provide potential day and night roosting substrates for this species; the nearest documented occurrence is approximately 1.6 miles south of the Study Area (CDFW 2017a).

Hoary bat (*Lasiurus cinereus*), WBWG Medium Priority. Moderate Potential (Unknown). Hoary bats are highly associated with forested habitats in the western United States. They are a solitary species and roost primarily in foliage of both coniferous and deciduous trees, near the ends of branches, typically at the edge of a clearing. Roosts are typically 10 to 30 feet above the ground. This species reportedly has a strong preference for moths, but is also known to eat beetles, flies, grasshoppers, termites, dragonflies, and wasps (WBWG 2015). Tree foliage within the Study Area (particularly adjacent to cleared areas) provides potential roosting substrates for this species; the nearest documented occurrence is approximately 1.7 miles south of the Study Area.

Listed species unlikely to occur

Northern spotted owl. Federal Threatened, State Threatened. Unlikely (Not Observed). The northern spotted owl (NSO) is the resident spotted owl subspecies found in cool temperate forests in the coastal portion of California, from Marin County northward. The natural history of this subspecies is summarized by the USFWS (2008) and Gutiérrez et al. (1995). Typical habitats consist of old-growth or otherwise mature coniferous forest and mixed coniferous-hardwood forest; younger (second-growth) forest with stands of large/mature trees may also be occupied. High-quality breeding habitat features a tall, multi-tiered, multi-species canopy dominated by big trees, trees with cavities and/or broken tops, and woody debris and space under the canopy. NSO breeding pairs are usually monogamous and also demonstrate site fidelity, maintaining nesting territories and home ranges across years. The greater breeding season is February through August, and nesting occurs on platform-like substrates in the forest canopy. Substrates used as nest sites include tree cavities, epicormic branching (multiple branches forming from a single node), broken tree tops, large horizontal branches, and old nests built by other birds or squirrels. NSO young leave the nest (by gliding and climbing through the canopy) in late May through June, though they remain dependent on their parents for several weeks thereafter as they learn how to fly and forage independently. NSOs forage for nocturnal mammals; dusky-footed woodrats (*Neotoma fuscipes*) are the primary prey in California.

NSO is known to occur in the vicinity of Inverness and associated communities. According to the California Department of Fish and Wildlife's (CDFW's) Spotted Owl Viewer database (CDFW

2017b), the nearest documented territory center is located approximately 0.6 mile west of the Study Area within a patch of contiguous mixed forest; nesting was most recently documented in this area in 2009. The nearest NSO observation points, presumably in affiliation with the aforementioned territory, are located approximately 0.4 mile to the west and southwest of the Study Area. The other documented territory centers nearest the Study Area are located approximately 0.8 mile to the northwest and 0.9 mile to the southwest, respectively.

The Study Area is within a mosaic of low-density development and much larger areas of contiguous mixed coniferous-hardwood forest. Several mature trees are present within the Study Area, including two large, structurally complex Bishop pines. Thus, while the potential for occasional NSO presence within and near the Study Area is assumed (e.g., NSO movement and possibly roosting), nesting and/or other forms of relatively consistent presence are unlikely. The close proximity of homes and two roads, as well as the exposed nature of at least portions of these trees, renders them of low quality for NSO. Furthermore, areas of documented NSO occupation in the vicinity are located within substantially larger areas of dense, contiguous forest. Nonetheless, a cautious approach regarding NSO is recommended given its dual federal and state listing (see Summary section below).

## **SUMMARY & HABITAT/SPECIES-SPECIFIC SUMMARY**

### **Environmentally Sensitive Habitat Areas (ESHAs)**

#### *Wetlands and Non-wetland Waters ESHA*

##### Perennial Wetland Seep-Ditch

An 0.03-acre (335 linear foot) perennial wetland seep-roadside ditch was identified within the Study Area (Figure 4). The perennial seep-ditch is considered an ESHA under the CCA and Marin County LCP, and would likely be considered a jurisdictional feature by the CCC and under Section 404 and 401 of the CWA. The vegetation type, small-fruited bulrush marsh, is also considered a G4, S2, meaning it is apparently secure globally, but imperiled in California, and thus would receive consideration under the CEQA. Under the Marin County LCP Unit II, "a buffer strip 100 feet in width, minimum, as measured landward from the edge of the wetland, shall be established along the periphery of all wetlands." The project has been designed to avoid direct impacts to the seep wetland and not encroach within the 100-foot buffer zone as shown in Attachment A, Figure 4. Therefore, no impacts to wetlands will occur.

#### *Upland ESHA*

##### Riparian White Alder Grove

An approximately 0.35-acre riparian white alder grove was identified within the Study Area, located at and directly above the toe of slope of the steep bank along Sir Francis Drake Boulevard (Figure 4). Riparian habitat is considered an ESHA under the CCA, and Marin County LCP, and would likely be considered jurisdictional by CDFW under Section 1602 of the California Fish and Game Code (CFGC). Under the Marin County LCP Unit II, a 50-foot buffer from the landward edge of the riparian vegetation shall be established to protect this habitat from impacts from adjacent land uses. The project has been designed to avoid direct impacts to the riparian

vegetation and not encroach within the 50-foot buffer zone as shown in Attachment A, Figure 4. Therefore, no impacts to riparian habitat will occur.

### **Special-status Plant Species**

A total of 13 special-status plant species were determined to have a moderate or high potential to occur within the Study Area. A protocol-level rare plant survey was conducted concurrent with the BSA site visit, on April 9, 2017 during the bloom period of nine of the 13 special-status species with potential to occur, and an additional late-season protocol-level rare plant survey was conducted on June 12, 2017 covering the bloom period of the remaining four special-status plant species. No special-status plants were observed in the Study Area during the protocol-level rare plant surveys. Therefore, no impacts to special-status plants are anticipated to occur as a result of constructing the Project.

### **Special-status Wildlife Species**

#### Nesting birds

Olive-sided flycatcher and a variety of other non-status bird species whose nesting activities are protected by federal and state regulations have the potential to nest within the Study Area. Regulatory agencies (e.g., CDFW) typically treat February 1 through August 31 as the general nesting bird season, i.e. the period when project activities (tree/vegetation removal, ground disturbance, etc.) may result in impacts to nesting birds. In order to avoid impacts to nesting birds all tree and other vegetation removal within the Study Area, will be conducted from September 1 to January 31, outside of the nesting bird season.

#### Special-status bats

Silver-haired bat and hoary bat have potential to roost, including maternity roosting, within the standing trees located within the Study Area. In order to avoid impacts to special-status bat species, all removal and trimming of trees will be conducted between September 1 and January 31, outside of the local bat maternity roosting period.

#### Northern spotted owl

NSO is unlikely to nest within or within 500 feet the Study Area. (The USFWS [2006] has published a guiding technical document regarding acoustic disturbances and the potential for NSO harassment; using a conservative approach in which ambient/existing conditions in the Study Area are considered "natural ambient" [ $< 50$  decibels; the lowest such category] and project-related conditions are considered "high" [81-90 Db], the estimated NSO harassment distance would be 500 feet.) Additionally, the limited tree removal for project purposes within the Study Area is unlikely to adversely influence the ability of the species to persist in the greater vicinity. Nonetheless, given the dual listing of the species (state and federal), all tree removal/trimming will occur between September 1 and January 31 to ensure that no direct take or harassment of NSO or NSO nests occurs as a result project implementation.

### **Summary**

Based on the site visit and review of information pertinent to the Study Area, the construction of the Project will not result in impacts to special-status plant and wildlife species or to any sensitive habitats. The Project has been designed to avoid impacting ESHAs and ESHA buffers. Based on the project schedule, the project would have no impact to special-status and non-status nesting birds protected by the Migratory Bird Treaty Act and California Fish and Game Code, nor would it impact special-status bats, or the federal- and state-listed NSO.

Based on the evidence collected and analyzed, the Project would not substantially reduce the number or restrict the range of a rare, endangered or threatened plant or animal. The project would not cause a fish or wildlife population to drop below self-sustaining levels. The project would not adversely affect riparian habitat, wetlands, marshes, or other significant wildlife habitats. **The project will not result in any potentially significant adverse biological impacts to the environment.**

If you have questions or require additional information, please contact us.

Sincerely,

Doug Spicher, Principal  
WRA, Inc.

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**Attachment A, Figures**

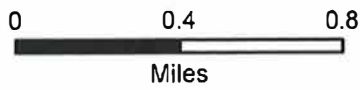
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This map may contain data from publicly available sources including, but not limited to, parcel boundaries. These data sources may be inaccurate. They are intended for reference purposes only and do not represent legal boundaries or absolute locations.

Figure 1. Study Area Location Map

Pine Hill Inverness  
Marin County, California



Map Prepared Date: 4/6/2017  
Map Prepared By: czumwalt  
Base Source: Esri Streaming - National Geographic  
Data Source(s): WRA

- |  |                              |                                   |                                |
|--|------------------------------|-----------------------------------|--------------------------------|
|  CNDDDB Plant Occurrences | 7, Franciscan thistle        | 14, Mason's Illaenopsis           | 21, rose leptosiphon           |
| 1, Blasdale's bent grass   | 8, Humboldt Bay owl's-clover | 15, Mt. Vision ceanothus          | 22, San Francisco owl's-clover |
| 2, Bolander's water-hemlock  | 9, Lyngbye's sedge           | 16, North Coast phacelia          | 23, Sonoma alopecurus          |
| 3, bristle-stalked sedge   | 10, Marin checker lily       | 17, Point Reyes blennosperma      | 24, Sonoma spineflower         |
| 4, California beaked-rush  | 11, Marin knotweed           | 18, Point Reyes checkerbloom      | 25, swamp harebell             |
| 5, coast lily  | 12, Marin manzanita          | 19, Point Reyes salty bird's-beak | 26, water star-grass           |
| 6, fragrant fritillary   | 13, marsh microseris         | 20, purple-stemmed checkerbloom   | 27, western leatherwood        |

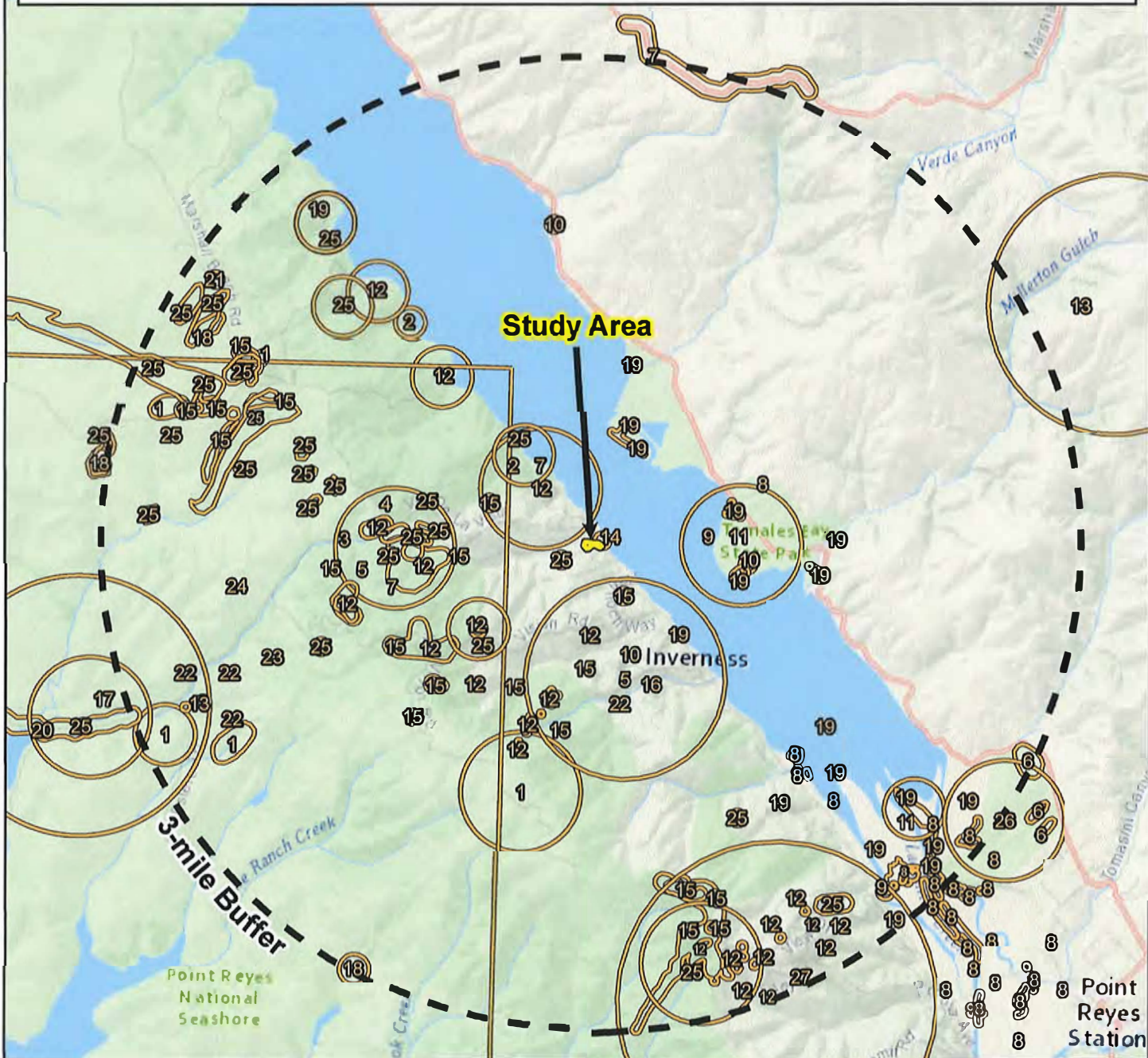


Figure 2. Special-status Plants Documented within 3 Miles of the Study Area

Pine Hill Inverness  
Marin County, California



ENVIRONMENTAL CONSULTANTS

Map Prepared Date: 4/5/2017  
Map Prepared By: czumwell  
Base Source: National Geographic  
Data Source(s): CNDDDB April 2017

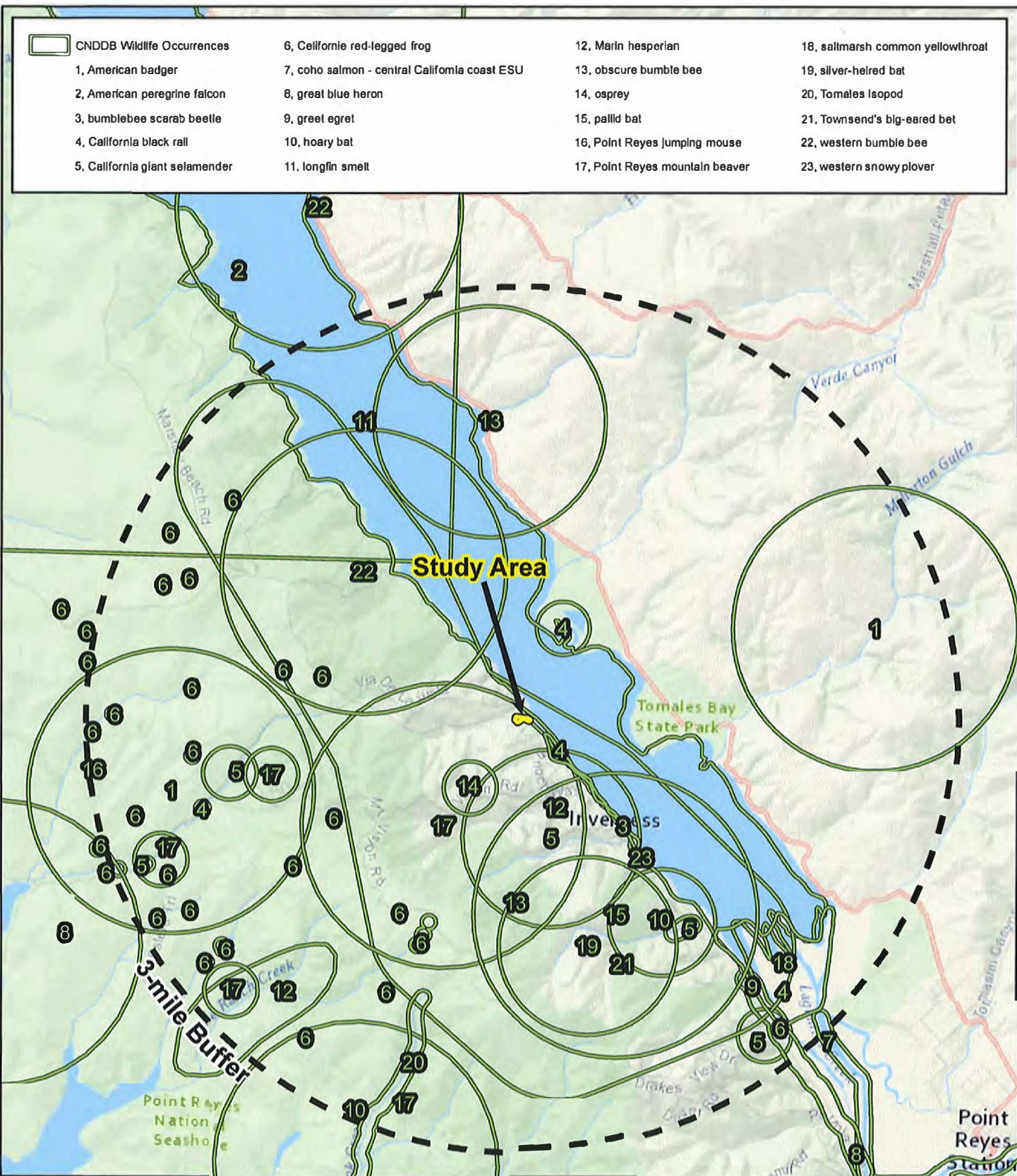


Figure 2. Special-status Wildlife Documented within 3 Miles of the Study Area

Pine Hill Inverness  
Marin County, California



ENVIRONMENTAL CONSULTANTS







Map Prepared Date: 4/5/2017  
Map Prepared By: czumwalt  
Base Source: National Geographic  
Data Source(s): CNDDB April 2017

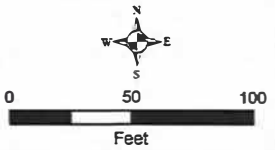
Pine Hill Inverness

Marin County,  
California

Figure 4  
Biological Communities



	Study Area
<b>Biological Community</b>	
	Bishop Pine Forest (1.26 ac.)
	Riparian White Alder grove (0.35 ac.)
	Perennial Wetland Seep-ditch (0.03 ac., 335 ft.)
<b>ESHA Buffers</b>	
	50 ft. ESHA Buffer from Riparian
	100 ft. ESHA Buffer from Perennial Wetland



Map Prepared Date: 4/28/2017  
 Map Prepared By: czumwalt  
 Base Source: Esri Streaming - NAIP 2014  
 Data Source(s): WRA

**Attachment B**

**Observed Plant and Wildlife Species within the Study Area**

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Attachment B. Plant species observed in the Project Area, April 9, and June 12, 2017.

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Adoxaceae	<i>Sambucus racemosa</i>	Red elderberry	shrub	native	-	-	FACU
Alismataceae	<i>Alisma triviale</i>	Northern water plantain	perennial herb (aquatic)	native	-	-	OBL
Alliaceae	<i>Allium triquetrum</i>	White flowered onion	perennial herb (bulb)	non-native (invasive)	-	-	-
Anacardiaceae	<i>Toxicodendron diversilobum</i>	Poison oak	vine, shrub	native	-	-	FAC
Apiaceae	<i>Conium maculatum</i>	Poison hemlock	perennial herb	non-native (invasive)	-	Moderate	FAC
Apiaceae	<i>Oenanthe sarmentosa</i>	Water parsley	perennial herb	native	-	-	OBL
Apiaceae	<i>Torilis arvensis</i>	Field hedge parsley	annual herb	non-native (invasive)	-	Moderate	-
Apocynaceae	<i>Vinca major</i>	Vinca	perennial herb	non-native (invasive)	-	Moderate	-
Araliaceae	<i>Hedera helix</i>	English ivy	vine, shrub	non-native (invasive)	-	-	FACU
Asteraceae	<i>Baccharis pilularis</i>	Coyote brush	shrub	native	-	-	-
Asteraceae	<i>Cirsium brevistylum</i>	Indian thistle	perennial herb	native	-	-	-
Asteraceae	<i>Cirsium vulgare</i>	Bullthistle	perennial herb	non-native (invasive)	-	Moderate	FACU
Asteraceae	<i>Delairea odorata</i>	Cape ivy	perennial herb	non-native (invasive)	-	High	-
Asteraceae	<i>Erigeron karvinskianus</i>	Latin american fleabane	perennial herb	non-native (invasive)	-	-	FAC
Asteraceae	<i>Hypochaeris radicata</i>	Hairy cats ear	perennial herb	non-native (invasive)	-	Moderate	FACU
Asteraceae	<i>Leucanthemum vulgare</i>	Oxe eye daisy	perennial herb	non-native (invasive)	-	Moderate	FACU
Asteraceae	<i>Silybum marianum</i>	Milk thistle	annual, perennial herb	non-native (invasive)	-	Limited	-

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Asteraceae	<i>Sonchus asper</i> ssp. <i>asper</i>	Sow thistle	annual herb	non-native (invasive)	-	-	FACU
Asteraceae	<i>Taraxacum officinale</i>	Red seeded dandelion	perennial herb	non-native (invasive)	-	-	FACU
Betulaceae	<i>Alnus rhombifolia</i>	White alder	tree	native	-	-	FACW
Betulaceae	<i>Corylus cornuta</i> ssp. <i>californica</i>	Beaked hazelnut	shrub	native	-	-	FACU
Blechnaceae	<i>Woodwardia fimbriata</i>	Western chain fern	fern	native	-	-	-
Boraginaceae	<i>Myosotis latifolia</i>	Wide leaved forget me not	perennial herb	non-native (invasive)	-	Limited	-
Brassicaceae	<i>Barbarea verna</i>	Wintercress	perennial herb	non-native	-	-	-
Brassicaceae	<i>Hirschfeldia incana</i>	Mustard	perennial herb	non-native (invasive)	-	Moderate	-
Brassicaceae	<i>Nasturtium officinale</i>	Watercress	perennial herb (aquatic)	native	-	-	OBL
Caprifoliaceae	<i>Lonicera hispidula</i>	Pink honeysuckle	vine, shrub	native	-	-	FACU
Caryophyllaceae	<i>Cerastium glomeratum</i>	Large mouse ears	annual herb	non-native	-	-	FACU
Caryophyllaceae	<i>Polycarpon tetraphyllum</i> var. <i>tetraphyllum</i>	Four leaved allseed	annual herb	non-native	-	-	-
Caryophyllaceae	<i>Stellaria media</i>	Chickweed	annual herb	non-native	-	-	FACU
Cucurbitaceae	<i>Marah fabacea</i>	California man-root	perennial herb, vine	native	-	-	-
Cyperaceae	<i>Scirpus microcarpus</i>	Mountain bog bulrush	perennial grasslike herb	native	-	-	OBL
Dennstaedtiaceae	<i>Pteridium aquilinum</i> var. <i>pubescens</i>	Western bracken fern	fern	native	-	-	FACU
Dryopteridaceae	<i>Dryopteris arguta</i>	Wood fern	fern	native	-	-	-

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Dryopteridaceae	<i>Polystichum munitum</i>	Western sword fern	fern	native	-	-	FACU
Equisetaceae	<i>Equisetum telmateia</i> ssp. <i>braunii</i>	Giant horsetail	fern	native	-	-	FACW
Ericaceae	<i>Arbutus menziesii</i>	Madrono	tree	native	-	-	-
Ericaceae	<i>Vaccinium ovatum</i>	Evergreen huckleberry	shrub	native	-	-	FACU
Euphorbiaceae	<i>Euphorbia lathyris</i>	Gopher plant	annual, perennial herb	non-native (invasive)	-	-	-
Euphorbiaceae	<i>Euphorbia peplus</i>	Petty spurge	annual herb	non-native	-	-	-
Fabaceae	<i>Genista monspessulana</i>	French broom	shrub	non-native (invasive)	-	High	-
Fabaceae	<i>Lathyrus vestitus</i>	Common pacific pea	perennial herb	native	-	-	-
Fabaceae	<i>Trifolium repens</i>	White clover	perennial herb	non-native	-	-	FAC
Fabaceae	<i>Vicia sativa</i>	Spring vetch	annual herb, vine	non-native	-	-	UPL
Fagaceae	<i>Notholithocarpus densiflorus</i>	Tanoak	tree, shrub	native	-	-	-
Fagaceae	<i>Quercus agrifolia</i>	Coast live oak	tree	native	-	-	-
Geraniaceae	<i>Geranium dissectum</i>	Wild geranium	annual herb	non-native (invasive)	-	Limited	-
Grossulariaceae	<i>Ribes menziesii</i>	Gooseberry	shrub	native	-	-	-
Iridaceae	<i>Iris douglasiana</i>	Douglas iris	perennial herb	native	-	-	-
Juncaceae	<i>Juncus bolanderi</i>	Bolander's rush	perennial grasslike herb	native	-	-	OBL
Juncaceae	<i>Juncus effusus</i>	Common bog rush	perennial grasslike herb	native	-	-	FACW
Lamiaceae	<i>Lamium galeobdolon</i>	Yellow archangel	perennial herb	non-native	-	-	-

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Lamiaceae	<i>Stachys chamissonis</i>	Hedge nettle	perennial herb	native	-	-	FACW
Lamiaceae	<i>Stachys rigida</i> var. <i>quercetorum</i>	Rough hedgenettle	perennial herb	native	-	-	FACW
Lauraceae	<i>Umbellularia californica</i>	California bay	tree	native	-	-	FAC
Liliaceae	<i>Prosartes</i> sp.	-	-	-	-	-	-
Montiaceae	<i>Claytonia perfoliata</i>	Miner's lettuce	annual herb	native	-	-	FAC
Montiaceae	<i>Claytonia sibirica</i>	Candy flower	perennial herb	native	-	-	FAC
Myrsinaceae	<i>Lysimachia arvensis</i>	Scarlet pimpernel	annual herb	non-native	-	-	FAC
Myrsinaceae	<i>Lysimachia latifolia</i>	Pacific starflower	perennial herb	native	-	-	FACW
Onagraceae	<i>Epilobium ciliatum</i> ssp. <i>ciliatum</i>	Willow herb	perennial herb	native	-	-	FACW
Oxalidaceae	<i>Oxalis</i> sp.	-	-	-	-	-	-
Papaveraceae	<i>Dicentra formosa</i>	Pacific bleedinghearts	perennial herb	native	-	-	FACU
Phrymaceae	<i>Mimulus aurantiacus</i>	Sticky monkeyflower	shrub	native	-	-	FACU
Phrymaceae	<i>Mimulus guttatus</i>	Yellow monkey flower	annual, perennial herb (rhizomatous)	native	-	-	OBL
Pinaceae	<i>Pinus muricata</i>	Bishop pine	tree	native	-	-	-
Plantaginaceae	<i>Digitalis purpurea</i>	Foxglove	perennial herb	non-native (invasive)	-	Limited	FACU
Plantaginaceae	<i>Plantago lanceolata</i>	Ribwort	perennial herb	non-native (invasive)	-	Limited	FACU
Plantaginaceae	<i>Veronica americana</i>	American brooklime	perennial herb	native	-	-	OBL
Poaceae	<i>Avena barbata</i>	Slim oat	annual, perennial grass	non-native (invasive)	-	Moderate	-

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Poaceae	<i>Briza maxima</i>	Rattlesnake grass	annual grass	non-native (invasive)	-	Limited	-
Poaceae	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	perennial grass	native	-	-	-
Poaceae	<i>Bromus diandrus</i>	Ripgut brome	annual grass	non-native (invasive)	-	Moderate	-
Poaceae	<i>Bromus laevipes</i>	Narrow flowered brome	annual, perennial grass	native	-	-	-
Poaceae	<i>Cortaderia</i> sp.	-	-	-	-	-	-
Poaceae	<i>Cynosurus echinatus</i>	Dogtail grass	annual grass	non-native (invasive)	-	Moderate	-
Poaceae	<i>Ehrharta erecta</i>	Upright veldt grass	perennial grass	non-native (invasive)	-	Moderate	-
Poaceae	<i>Elymus glaucus</i>	Blue wildrye	perennial grass	native	-	-	FACU
Poaceae	<i>Festuca arundinacea</i>	Reed fescue	perennial grass	non-native (invasive)	-	Moderate	FAC
Poaceae	<i>Festuca perennis</i>	Italian rye grass	annual, perennial grass	non-native	-	-	FAC
Poaceae	<i>Holcus lanatus</i>	Common velvetgrass	perennial grass	non-native (invasive)	-	Moderate	FAC
Poaceae	<i>Poa annua</i>	Annual blue grass	annual grass	non-native	-	-	FAC
Polygonaceae	<i>Rumex acetosella</i>	Sheep sorrel	perennial herb	non-native (invasive)	-	Moderate	FACU
Polygonaceae	<i>Rumex conglomeratus</i>	Green dock	perennial herb	non-native	-	-	FACW
Polygonaceae	<i>Rumex crispus</i>	Curly dock	perennial herb	non-native (invasive)	-	Limited	FAC
Polygonaceae	<i>Rumex pulcher</i>	Fiddleleaf dock	perennial herb	non-native	-	-	FAC
Pteridaceae	<i>Pentagramma triangularis</i>	Gold back fern	fern	native	-	-	-

Family	Scientific name	Common name	Life form	Origin	Rare Status <sup>1</sup>	Invasive Status <sup>2</sup>	Wetland indicator <sup>3</sup>
Rhamnaceae	<i>Frangula californica</i>	California coffeeberry	shrub	native	-	-	-
Rosaceae	<i>Cotoneaster lacteus</i>	Milkflower cotoneaster	shrub	non-native (invasive)	-	Moderate	-
Rosaceae	<i>Duchesnea indica</i> var. <i>indica</i>	Mock-strawberry	perennial herb	non-native	-	-	UPL
Rosaceae	<i>Holodiscus discolor</i>	Oceanspray	shrub	native	-	-	FACU
Rosaceae	<i>Rubus ursinus</i>	California blackberry	vine, shrub	native	-	-	FACU
Rubiaceae	<i>Galium aparine</i>	Cleavers	annual herb	native	-	-	FACU
Salicaceae	<i>Salix lasiolepis</i>	Arroyo willow	tree, shrub	native	-	-	FACW
Sapindaceae	<i>Aesculus californica</i>	Buckeye	tree	native	-	-	-
Saxifragaceae	<i>Tellima grandiflora</i>	Fringe cups	perennial herb	native	-	-	FACU
Scrophulariaceae	<i>Scrophularia californica</i>	California bee plant	perennial herb	native	-	-	FAC
Typhaceae	<i>Typha latifolia</i>	Broadleaf cattail	perennial herb (aquatic)	native	-	-	OBL
Woodsiaceae	<i>Athyrium filix-femina</i> var. <i>cyclosorum</i>	Western lady fern	fern	native	-	-	FAC

All species identified using the *Jepson eFlora* (2017) and *Marin Flora* (Howell et al. 2007); nomenclature follows *Jepson eFlora*.

<sup>1</sup>Rare Status: The CNPS Inventory of Rare and Endangered Plants (CNPS 2017)

FE: Federal Endangered

FT: Federal Threatened

SE: State Endangered

ST: State Threatened

SR: State Rare

Rank 1A: Plants presumed extirpated in California and either rare or extinct elsewhere

Rank 1B: Plants rare, threatened, or endangered in California and elsewhere

Rank 2A: Plants presumed extirpated in California, but more common elsewhere

Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere

Rank 3: Plants about which we need more information – a review list

Rank 4: Plants of limited distribution – a watch list

<sup>2</sup>Invasive Status: California Invasive Plant Inventory (Cal-IPC 2006)

- High: Severe ecological impacts; high rates of dispersal and establishment; most are widely distributed ecologically.
- Moderate: Substantial and apparent ecological impacts; moderate-high rates of dispersal, establishment dependent on disturbance; limited-moderate distribution ecologically
- Limited: Minor or not well documented ecological impacts; low-moderate rate of invasiveness; limited distribution ecologically
- Assessed: Assessed by Cal-IPC and determined to not be an existing current threat

<sup>3</sup>Wetland Status: National Wetland Plant List (Lichvar et al. 2016)

- OBL: Almost always a hydrophyte, rarely in uplands
- FACW: Usually a hydrophyte, but occasionally found in uplands
- FAC: Commonly either a hydrophyte or non-hydrophyte
- FACU: Occasionally a hydrophyte, but usually found in uplands
- UPL: Rarely a hydrophyte, almost always in uplands
- NL: Rarely a hydrophyte, almost always in uplands
- NI: No information; not factored during wetland delineation

Table B-2. Wildlife Species Observed in the Study Area on April 8, and June 12, 2017.

Common Name (status if applicable)	Species
<b>MAMMALS</b>	
dusky-footed woodrat (nest)	<i>Neotoma fuscipes</i>
<b>BIRDS</b>	
American robin	<i>Turdus migratorius</i>
chestnut-backed chickadee	<i>Poecile rufescens</i>
common raven	<i>Corvus corax</i>
Cooper's hawk	<i>Accipiter cooperii</i>
Swainson's thrush	<i>Catharus ustulatus</i>
<b>AMPHIBIANS</b>	
Pacific chorus frog	<i>Pseudacris regilla</i>

\* Key to status codes:

FE	Federal Endangered
FT	Federal Threatened
FC	Federal Candidate
FD	Federal De-listed
BCC	USFWS Birds of Conservation Concern
SE	State Endangered
SD	State Delisted
ST	State Threatened
SR	State Rare
SSC	CDFG Species of Special Concern
CFP	CDFG Fully Protected Animal
WBWG	Western Bat Working Group High or Medium Priority species



**Attachment C-**

**Special-Status Plant and Wildlife Species Habitat Suitability and Survey Results for the  
Study Area**

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**Table C. Special-status species habitat suitability and survey results for the Study Area.** List compiled from California Department of Fish and Wildlife (CDFW) Natural Diversity Database (CNDDDB) and California Native Plant Society (CNPS) Electronic Inventory searches (2017) for the Inverness USGS 7.5' quadrangle, and seven surrounding quadrangles.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
pink sand verbena <i>Abronia umbellata</i> var. <i>breviflora</i>	Rank 1B	Coastal dune, coastal strand; located on foredunes and interdunes with low vegetation cover. Elevation range: 0 – 35 feet. Blooms: June – October.	<b>No Potential.</b> The Study Area does not contain coastal dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Blasdale's bent grass <i>Agrostis blasdalei</i>	Rank 1B	Coastal dune, coastal bluff scrub, coastal prairie; located on sandy to gravelly substrate close to rocks of bluff faces; typically located in nutrient poor areas with sparse vegetation cover. Elevation range: 15 – 490 feet. Blooms: May – July.	<b>No Potential.</b> The Study Area does not contain coastal dune, prairie, or bluff scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Franciscan onion <i>Allium peninsulare</i> var. <i>franciscanum</i>	Rank 1B	Cismontane woodland, valley and foothill grassland/clay, volcanic, often serpentine. Elevation ranges from 170 to 980 feet. Blooms (Apr), May-June.	<b>No Potential.</b> The Study Area lacks volcanic or serpentine soils necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Sonoma alopecurus <i>Alopecurus aequalis</i> var. <i>sonomensis</i>	FE, Rank 1B	Freshwater marshes and swamps, riparian scrub; closely associated with other wetland species. Elevation range: 15 – 1200 feet. Blooms: May – July.	<b>Unlikely.</b> Although the Study Area contains wetland habitat, this species is closely associated with large, extensive marsh wetlands.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Napa false indigo <i>Amorpha californica</i> var. <i>napensis</i>	Rank 1B	Broadleaved upland forest (openings), chaparral, cismontane woodland. Elevation ranges from 390 to 6560 feet. Blooms April-July.	<b>Unlikely.</b> Although the Study Area contains potentially suitable forest habitat, this species is not known from the Point Reyes peninsula.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
bent-flowered fiddleneck <i>Amsinckia lunaris</i>	Rank 1B	Coastal bluff scrub, cismontane woodland, valley and foothill grassland. Elevation ranges from 10 to 1640 feet. Blooms March-June.	<b>Unlikely.</b> The Study Area lacks coastal bluff scrub and valley and foothill grasslands known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
coast rock cress <i>Arabis blepharophylla</i>	Rank 4	Broadleaf upland forest, coastal bluff scrub, coastal prairie, coastal scrub; located on rocky sites, often on coastal bluffs. Elevation range: 10 – 3575 feet. Blooms: February – May.	<b>No Potential.</b> The Study Area does not contain coastal bluff and rock outcrops in open herbaceous, woodland, or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Mt. Tamalpais manzanita <i>Arctostaphylos montana</i> ssp. <i>montana</i>	Rank 1B	Chaparral, valley and foothill grassland/serpentine, rocky. Elevation ranges from 520 to 2490 feet. Blooms February-April.	<b>No Potential.</b> The Study Area lacks serpentine substrates necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Marin manzanita <i>Arctostaphylos virgata</i>	Rank 1B	Broadleaf upland forest, closed-cone coniferous forest, chaparral, North Coast coniferous forest; on sandstone and granitic substrates. Elevation range: 195 – 2275 feet. Blooms: January – March.	<b>High Potential.</b> The Study Area contains coniferous forest habitat sufficient to support this species. There are several documented occurrences within 5 miles of the Study Area.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Brewer's milk-vetch <i>Astragalus breweri</i>	Rank 4	Chaparral, cismontane woodland, meadows and seeps, valley and foothill grassland (open, often gravelly)/often serpentine, volcanic. Elevation ranges from 300 to 2400 feet. Blooms April-June.	<b>No Potential.</b> The Study Area lacks serpentine or volcanic substrates known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
coastal marsh milk-vetch <i>Astragalus pycnostachyus</i> var. <i>pycnostachyus</i>	Rank 1B	Coastal dunes, coastal scrub, coastal salt marshes; mesic sites in dunes, along streams, and marshes. Elevation range: 0 – 100 feet. Blooms: April – October.	<b>No Potential.</b> The Study Area does not contain wetlands in coastal dunes or coastal marsh habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	Rank 1B	Playas, valley and foothill grassland (adobe clay), vernal pools/alkaline. Elevation ranges from 0 to 200 feet. Blooms March-June.	<b>No Potential.</b> The Study Area lacks vernal pools or alkaline substrates necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes Blennosperma <i>Blennosperma nanum</i> var. <i>robustum</i>	SR; Rank 1B	Coastal prairie, coastal scrub; located on open coastal hills underlain by sandy substrate. Elevation range: 30 – 475 feet. Blooms: February – April.	<b>No Potential.</b> The Study Area does not contain coastal prairie or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Thurber's reed grass <i>Calamagrostis crassiglumis</i>	Rank 2B	Coastal scrub, freshwater marsh; typically located in marshy swales surrounded by grasslands or coastal scrub. Elevation range: 30 – 150 feet. Blooms: May – July.	<b>Unlikely.</b> The Study Area does not contain coastal scrub or high-quality freshwater marsh habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
serpentine reed grass <i>Calamagrostis ophitidis</i>	Rank 4	Chaparral (open, often north-facing slopes), lower montane coniferous forest, meadows and seeps, valley and foothill grassland/serpentine, rocky. Elevation ranges from 300 to 3490 feet. Blooms April-July.	<b>No Potential.</b> The Study Area lacks serpentine substrate necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
round-leaved filaree <i>California macrophylla</i>	Rank 1B	Cismontane woodland, valley and foothill grassland/clay. Elevation ranges from 50 to 3940 feet. Blooms March-May.	<b>Unlikely.</b> The Study Area lacks valley and foothill grassland and clay substrates known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Oakland star-tulip <i>Calochortus umbellatus</i>	Rank 4	Broadleaved upland forest, chaparral, cismontane woodland, lower montane coniferous forest, valley and foothill grassland/often serpentine. Elevation ranges from 330 to 2300 feet. Blooms March-May.	<b>Unlikely.</b> The Study Area lacks open grassland, and serpentine substrates known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
coastal bluff morning glory <i>Calystegia purpurata</i> ssp. <i>saxicola</i>	Rank 1B	Coastal dunes, coastal scrub; located on coastal bluffs. Elevation range: 30 – 330 feet. Blooms: May – September.	<b>No Potential.</b> The Study Area does not contain coastal dune or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
swamp harebell <i>Campanula californica</i>	Rank 1B	Bogs and fens, closed-cone coniferous forest, coastal prairie, meadows, freshwater marsh, North Coast coniferous forest; situated in wetlands and areas seasonally saturated to inundated. Elevation range: 3 – 1320 feet. Blooms: June – October.	<b>High Potential.</b> The Study Area contains wetland habitat that may support this species. There are several documented occurrences within 5 miles of the Study Area (CDFW 2017).	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
seaside bittercress <i>Cardamine angulata</i>	Rank 2B	Lower montane coniferous forest, north coast coniferous forest/wet areas, streambanks. Elevation ranges from 210 to 3000 feet. Blooms (January), March-July.	<b>Unlikely.</b> Despite potentially suitable coniferous forest, this species is commonly associated with streambanks, in coast redwood forest.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Buxbaum's sedge <i>Carex buxbaumii</i>	Rank 4	Bogs and fens, meadows and seeps, marshes and swamps; situated in freshwater wetlands. Elevation range: 10 – 10725 feet. Blooms: March – August.	<b>Unlikely.</b> Although the Study Area contains wetland habitat, this species is closely associated with large, extensive marsh wetlands in relatively flatland habitats.	<b>Presumed Absent.</b> No further actions are recommended for this species.
bristle-stalked sedge <i>Carex leptalea</i>	Rank 2B	Bogs and fens, meadows, marshes and swamps; typically located in bogs and wet meadows. Elevation range: 0 – 2275 feet. Blooms: March – July.	<b>Unlikely.</b> Although the Study Area contains wetland habitat, this species is closely associated with large, extensive marsh wetlands in relatively flatland habitats.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Lyngbye's sedge <i>Carex lyngbyei</i>	Rank 2B	Marshes and swamps; brackish to freshwater. Elevation range: 0 – 35 feet. Blooms: April – August.	<b>Unlikely.</b> Although the Study Area contains wetland habitat, this species is typically associated with brackish waters.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Tiburon paintbrush <i>Castilleja affinis</i> var. <i>neglecta</i>	FE, ST, Rank 1B	Valley and foothill grassland (serpentine). Elevation ranges from 200 to 1310 feet. Blooms April-June.	<b>No Potential.</b> The Study Area lacks serpentine substrates necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
johnny-nip <i>Castilleja ambigua</i> ssp. <i>ambigua</i>	Rank 4	Coastal bluff scrub, coastal prairie, coastal scrub, marshes and swamps, valley and foothill grassland, vernal pool margins. Elevation range: 0 – 1415 feet. Blooms: March – August.	<b>No Potential.</b> The Study Area does not contain coastal prairie or bluff scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Humboldt Bay owl's-clover <i>Castilleja ambigua</i> ssp. <i>humboldtiensis</i>	Rank 1B	Coastal salt marsh; located in marshes associated with salt grass, cordgrass, pickleweed, and jaumea. Elevation range: 0 – 10 feet. Blooms: April – August.	<b>No Potential.</b> The Study Area does not contain coastal brackish or coastal salt marsh necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes paintbrush <i>Castilleja leschkeana</i>	Rank 1A	Marshes and swamps (coastal). Elevation ranges from 0 to 30 feet (. Blooms Jun.	<b>No Potential.</b> This species was only known in Marin from swales behind dunes in the Point Reyes Peninsula. This species may have been an accidental introduction from an Alaskan species, and is now presumed extirpated (Howell et al. 2007).	<b>Presumed Absent.</b> No further actions are recommended for this species.
Nicasio ceanothus <i>Ceanothus decornutus</i>	Rank 1B.2	Chaparral, serpentine, rocky, clayey sites. Elevation range: 770 – 950 feet. Blooms: March – May.	<b>No Potential.</b> The Study Area lacks serpentine substrate and chaparral necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
glory bush <i>Ceanothus gloriosus</i> var. <i>exaltatus</i>	Rank 4	Chaparral. Elevation range: 90 – 1985 feet. Blooms: March – August.	<b>Unlikely.</b> The Study Area does not contain maritime chaparral habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes ceanothus <i>Ceanothus gloriosus</i> var. <i>gloriosus</i>	Rank 4	Coastal bluff scrub, closed-cone coniferous forest, coastal dunes, coastal scrub. Elevation range: 15 – 1690 feet. Blooms: March – May.	<b>High Potential.</b> The Study Area contains coniferous forest habitat sufficient to support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.



SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Mt. Vision ceanothus <i>Ceanothus gloriosus</i> var. <i>porrectus</i>	Rank 1B	Closed-cone coniferous forest, coastal prairie, coastal scrub, valley and foothill grassland. Elevation ranges from 80 to 1000 feet. Blooms February-May.	<b>High Potential.</b> The Study Area contains coniferous forest habitat sufficient to support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Mason's ceanothus <i>Ceanothus masonii</i>	SR, Rank 1B	Chaparral (openings, rocky, serpentine). Elevation ranges from 750 to 1640 feet. Blooms March-April.	<b>No Potential.</b> The Study Area lacks chaparral and serpentine substrates necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes bird's-beak <i>Chloropyron maritimum</i> ssp. <i>palustre</i>	Rank 1B	Coastal salt marshes; located in low-growing saltgrass and pickleweed mats. Elevation range: 0 – 35 feet. Blooms: June – October.	<b>No Potential.</b> The Study Area does not contain coastal brackish or coastal salt marsh necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
San Francisco Bay spineflower <i>Chorizanthe cuspidata</i> var. <i>cuspidata</i>	Rank 1B	Coastal bluff scrub, coastal dunes, coastal prairie, coastal scrub; located on sandy substrates of terraces and slopes. Elevation range: 10 – 700 feet. Blooms: April – August.	<b>No Potential.</b> The Study Area does not contain coastal dune, prairie, or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
woolly-headed spineflower <i>Chorizanthe cuspidata</i> var. <i>villosa</i>	Rank 1B	Coastal scrub, coastal dunes, coastal prairie; located on sandy substrates near the beach. Elevation range: 10 – 195 feet. Blooms: May – August.	<b>No Potential.</b> The Study Area does not contain coastal dune, prairie, or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
robust spineflower <i>Chorizanthe robusta</i> var. <i>robusta</i>	FE, Rank 1B	Chaparral (maritime), cismontane woodland (openings), coastal dunes, coastal scrub/sandy or gravelly. Elevation ranges from 10 to 980 feet. Blooms April-September.	<b>No Potential.</b> The Study Area lacks sandy soils, maritime chaparral, coastal scrub, and coastal dunes known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Sonoma spineflower <i>Chorizanthe valida</i>	FE; SE; Rank 1B	Coastal prairie; located on sandy substrates. Elevation range: 30 – 165 feet. Blooms: June – August.	<b>No Potential.</b> The Study Area does not contain coastal prairie habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Bolander's water hemlock <i>Cicuta maculata</i> var. <i>bolanderi</i>	Rank 2B	Coastal freshwater and brackish marshes. Elevation range: 0 – 650 feet. Blooms: July – September.	<b>Unlikely.</b> The Study Area does not contain marsh habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Franciscan thistle <i>Cirsium andrewsii</i>	Rank 1B	Coastal bluff scrub, broadleaf upland forest, coastal scrub; sometimes located along serpentine seeps. Elevation range: 0 – 490 feet. Blooms: March – July.	<b>No Potential.</b> The Study Area does not scrub habitat, nor does it contain serpentine substrate associated with this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Mt. Tamalpais thistle <i>Cirsium hydrophilum</i> var. <i>vaseyi</i>	Rank 1B	Broadleafed upland forest, chaparral, meadows and seeps/serpentine seeps. Elevation ranges from 790 to 2030 feet. Blooms May-August .	<b>No Potential.</b> The Study Area lacks serpentine seeps necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Raiche's red ribbons <i>Clarkia concinna</i> ssp. <i>raichei</i>	Rank 1B	Coastal bluff scrub. Elevation ranges from 0 to 330 feet. Blooms April-May.	<b>No Potential.</b> The Study Area lacks coastal bluff scrub known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
round-headed Chinese-houses <i>Collinsia corymbosa</i>	Rank 1B	Coastal dunes. Elevation ranges from 0 to 70 feet. Blooms April-June.	<b>No Potential.</b> The Study Area lacks coastal dunes necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Baker's larkspur <i>Delphinium bakeri</i>	FE, SE, Rank 1B	Broadleafed upland forest, coastal scrub, valley and foothill grassland/decomposed shale, often mesic. Elevation ranges from 260 to 1000 feet. Blooms March-May.	<b>Unlikely.</b> The Study Area lacks coastal bluff scrub, and valley and foothill grassland known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
golden larkspur <i>Delphinium luteum</i>	FE, SR, Rank 1B	Chaparral, coastal prairie, coastal scrub/rocky. Elevation ranges from 0 to 330 feet. Blooms March-May.	<b>No Potential.</b> The Study Area lacks chaparral, coastal scrub, and coastal prairie known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
western leatherwood <i>Dirca occidentalis</i>	Rank 1B	Broadleaf upland forest, chaparral, closed-cone coniferous forest, cismontane woodland, North Coast coniferous forest, riparian forest, riparian woodland; located on brushy, mesic slopes in woodland and forest. Elevation range: 165 – 1285 feet. Blooms: January – April.	<b>Unlikely.</b> Although the Study Area contains forest habitat that could potentially support this species; there are no documented occurrences from Point Reyes Peninsula.	<b>Presumed Absent.</b> No further actions are recommended for this species.
<i>Elymus californicus</i> California bottle-brush grass	Rank 4	Broadleaf upland forest, cismontane woodland, North Coast coniferous forest, riparian woodland. Elevation range: 45 – 1530 feet. Blooms: May – November.	<b>Moderate Potential.</b> The Study Area contains forest habitat that may support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Koch's cord moss <i>Entosthodon kochii</i>	Rank 1B	Cismontane woodland (soil). Elevation ranges from 590 to 3280 feet.	<b>Unlikely.</b> The Study Area lacks river banks known to support this species (CDFW 2017).	<b>Presumed Absent.</b> No further actions are recommended for this species.
supple daisy <i>Erigeron supplex</i>	Rank 1B	Coastal bluff scrub, coastal prairie; typically located in grassy sites along the coastline. Elevation range: 30 – 165 feet. Blooms: May – July.	<b>No Potential.</b> The Study Area does not contain coastal scrub or prairie habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Tiburon buckwheat <i>Eriogonum luteolum</i> var. <i>caninum</i>	Rank 1B	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland/serpentine, sandy to gravelly. Elevation ranges from 0 to 2,300 feet. Blooms May-September.	<b>No Potential.</b> The Study Area lacks serpentine soils necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
bluff wallflower <i>Erysimum concinnum</i>	Rank 4	Coastal bluff scrub, coastal dunes, coastal prairie; located in areas underlain by sandy substrate. Elevation range: 0 – 600 feet. Blooms: February – July.	<b>No Potential.</b> The Study Area does not contain coastal scrub, dune, or prairie habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Marin checker lily <i>Fritillaria lanceolata</i> var. <i>tristulis</i>	Rank 1B	Coastal bluff scrub, coastal scrub, coastal prairie; observed in canyons, riparian areas, and rock outcrops; often located on serpentine substrate. Elevation range: 45 – 490 feet. Blooms: February – May.	<b>Unlikely.</b> Despite potentially suitable riparian habitat, known populations of this species on the Point Reyes Peninsula occur on coastal grasslands and scrub, in more open, exposed, rocky slopes not present within the Study Area (Howell et al. 2007).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
fragrant fritillary <i>Fritillaria liliacea</i>	Rank 1B	Coastal scrub, valley and foothill grassland, coastal prairie, cismontane woodland; located in grassy sites underlain by clay, typically derived from volcanics or serpentine. Elevation range: 10 – 1335 feet. Blooms: February – April.	<b>No Potential.</b> The Study Area does not contain grassland, prairie, open scrub, or clay soils derived from serpentine or volcanics necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
blue coast gilia <i>Gilia capitata</i> ssp. <i>chamissonis</i>	Rank 1B	Coastal dunes, coastal scrub. Elevation range: 5 – 600 feet. Blooms: April – July.	<b>No Potential.</b> The Study Area does not contain coastal dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
woolly-headed gilia <i>Gilia capitata</i> ssp. <i>tomentosa</i>	Rank 1B	Coastal bluff scrub; rocky outcrops on the coast. Elevation range: 15 – 155 feet. Blooms: May – July.	<b>No Potential.</b> The Study Area does not contain rocky outcrops in coastal bluff scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
dark-eyed gilia <i>Gilia millefoliata</i>	Rank 1B	Coastal dune. Elevation range: 5 – 100 feet. Blooms: April – July.	<b>No Potential.</b> The Study Area does not contain coastal dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
San Francisco gumplant <i>Grindelia hirsutula</i> var. <i>maritima</i>	Rank 3	Coastal scrub, coastal bluff scrub, valley and foothill grassland; situated on sea bluffs underlain by sand substrate, often derived from serpentine. Elevation range: 45 – 1300 feet. Blooms: June – September.	<b>No Potential.</b> The Study Area does not contain rocky outcrops in coastal scrub or grassland habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
white seaside tarplant <i>Hemizonia congesta</i> ssp. <i>congesta</i>	Rank 1B	Coastal scrub, valley and foothill grassland; located in grassy valleys and hills, often fallow fields. Elevation range: 65 – 1820 feet. Blooms: April – November.	<b>No Potential.</b> The Study Area does not contain coastal scrub or grassland habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
short-leaved evax <i>Hesperevax sparsiflora</i> var. <i>brevifolia</i>	Rank 1B	Coastal bluff scrub, coastal dune; located on sandy bluffs and flats near the immediate coastline. Elevation range: 0 – 700 feet. Blooms: March – June.	<b>No Potential.</b> The Study Area does not contain coastal bluff scrub or dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Marin western flax <i>Hesperolinon congestum</i>	FT, ST, Rank 1B	Chaparral, valley and foothill grassland/serpentine. Elevation ranges from 20 to 1210 feet (5 to 370 meters). Blooms April-July.	<b>No Potential.</b> The Study Area lacks serpentine substrates known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
water star-grass <i>Heteranthera dubia</i>	Rank 2B	Marshes and swamps (alkaline, still or slow-moving water)/requires a pH of 7 or higher, usually in slightly eutrophic waters. Elevation ranges from 100 to 4900 feet. Blooms July-October.	<b>No Potential.</b> The Study Area lacks marshes and swamps known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Kellogg's horkelia <i>Horkelia cuneata</i> var. <i>sericea</i>	Rank 1B	Closed cone coniferous forest, coastal scrub, chaparral; located in openings on relict dunes and coastal sandhills. Elevation range: 30 – 650 feet. Blooms: April – September.	<b>Unlikely.</b> The Study Area lacks openings with sandy soils necessary to support this species. The only documented occurrence in the vicinity of the Study Area is from 1935 near Abbotts Lagoon (CDFW 2017).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Point Reyes horkelia <i>Horkelia marinensis</i>	Rank 1B	Coastal dunes, coastal prairie, coastal scrub; located on sandy flats and dunes near the coast; in open grassy sites within scrub. Elevation range: 15 – 1140 feet. Blooms: May – September.	<b>No Potential.</b> The Study Area does not contain coastal dune, prairie, or scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
thin-lobed horkelia <i>Horkelia tenuiloba</i>	Rank 1B	Broadleafed upland forest, chaparral, valley and foothill grassland/mesic openings, sandy. Elevation ranges from 160 to 1640 feet. Blooms May-July (August).	<b>Unlikely.</b> The Study Area lacks chaparral, valley and foothill grassland, and mesic openings with sandy soils known to support this species. This species is not known from the Point Reyes Peninsula.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Harlequin lotus <i>Hosackia gracilis</i>	Rank 4	Broadleaf upland forest, coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal prairie, coastal scrub, meadows and seeps, marshes and swamps, North Coast coniferous forest, valley and foothill grassland; located in wetlands and often roadside ditches or compacted decommissioned roadbeds. Elevation range: 0 – 2275 feet. Blooms: March – July.	<b>Moderate Potential.</b> The Study Area contains wetland habitat that may support this species; however, this species is closely associated with larger, more expansive wetlands and ditches than are present in the Study Area.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
coast iris <i>Iris longipetala</i>	Rank 4	Coastal prairie, lower montane coniferous forest, meadows and seeps/mesic. Elevation ranges from 0 to 1970 feet. Blooms March-May.	<b>Moderate Potential.</b> The Study Area contains potentially suitable coniferous forest that could support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
small groundcone <i>Kopsiopsis hookeri</i>	Rank 2B	North coast coniferous forest. Elevation ranges from 300 to 2900 feet. Blooms April-August.	<b>Unlikely.</b> This species is typically associated with North coast coniferous forest (e.g. redwood or Douglas fir forest) not present in the Study Area.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Baker's goldfields <i>Lasthenia californica</i> ssp. <i>bakeri</i>	Rank 1B	Closed-cone coniferous forest, coastal scrub; located in openings in scrub and coastal forest habitat. Elevation range: 195 – 1690 feet. Blooms: April – October.	<b>Moderate Potential.</b> The Study Area contains coniferous forest habitat that may support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
perennial goldfields <i>Lasthenia californica</i> ssp. <i>macrantha</i>	Rank 1B	Coastal bluff scrub, coastal dune, coastal scrub. Elevation range: 15 – 1690 feet. Blooms: January – November.	<b>No Potential.</b> The Study Area does not contain coastal bluff, scrub, or dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
beach layia <i>Layia carnosa</i>	FE; SE; Rank 1B	Coastal dunes; located in sparsely vegetated semi-stabilized dunes behind foredunes. Elevation range: 0 – 195 feet. Blooms: March – July.	<b>No Potential.</b> The Study Area does not contain coastal dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.+



SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
bristly leptosiphon <i>Leptosiphon acicularis</i>	Rank 4	Chaparral, cismontane woodland, coastal prairie, valley and foothill grassland. Elevation ranges from 180 to 4920 feet (55 to 1500 meters). Blooms Apr-Jul.	<b>Unlikely.</b> The Study Area lacks coastal prairie, valley and foothill grassland, and thin, rocky soils, typically associated with this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
coast yellow Leptosiphon <i>Leptosiphon croceus</i>	SC, Rank 1B	Coastal bluff scrub, coastal prairie. Elevation ranges from 30 to 490 feet (10 to 150 meters). Blooms Apr-May.	<b>No Potential.</b> The Study Area lacks coastal bluff scrub, or coastal scrub known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
large-flowered leptosiphon <i>Leptosiphon grandiflorus</i>	Rank 4	Coastal bluff scrub, closed-cone coniferous forest, cismontane woodland, coastal dunes, coastal prairie, coastal scrub, valley and foothill grassland; typically on sandy substrate. Elevation range: 15 – 3965 feet. Blooms: April – August.	<b>Unlikely.</b> The Study Area lacks open areas with sandy soils necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
rose leptosiphon <i>Leptosiphon rosaceus</i>	Rank 1B	Coastal bluff scrub. Elevation range: 0 – 325 feet. Blooms: April – July.	<b>No Potential.</b> The Study Area does not contain coastal bluff scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
woolly-headed lessingia <i>Lessingia hololeuca</i>	Rank 3	Broadleafed upland forest, coastal scrub, lower montane coniferous forest, valley and foothill grassland/clay, serpentine. Elevation ranges from 50 to 1000 feet. Blooms June-October.	<b>No Potential.</b> The Study Area lacks serpentine soils necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Tamalpais lessingia <i>Lessingia micradenia</i> var. <i>micradenia</i>	Rank 1B	Chaparral, valley and foothill grassland/usually serpentine, often roadsides. Elevation ranges from 330 to 1640 feet (100 to 500 meters). Blooms (Jun), Jul-Oct.	<b>No Potential.</b> The Study Area lacks chaparral, valley and foothill grassland and serpentine substrates known to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
<i>Lilaeopsis masonii</i> Mason's Lilaeopsis	SR, Rank 1B	Freshwater and brackish coastal marshes, riparian scrub; located on channel banks in the splash zone on bare mud substrate. Elevation range: 0 – 35 feet. Blooms: April – November.	<b>No Potential.</b> The Study Area does not contain coastal brackish or coastal salt marsh necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
coast lily <i>Lilium maritimum</i>	Rank 1B	Closed-cone coniferous forest, coastal prairie, coastal scrub, broadleaf upland forest, North Coast coniferous forest; typically located on sandy soils, often in raised hummocks or bogs, and roadside ditches. Elevation range: 15 – 1545 feet. Blooms: May – August.	<b>High Potential.</b> The Study Area contains wetland and closed-cone coniferous forest habitat that may support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Pitkin Marsh lily <i>Lilium pardalinum</i> ssp. <i>pitkinense</i>	FE, SE, Rank 1B	Cismontane woodland, meadows and seeps, marshes and swamps (freshwater)/mesic, sandy. Elevation ranges from 110 to 210 feet. Blooms June-July.	<b>No Potential.</b> The Study Area lacks large, intact marshes and swamps. This species is only known from Pitkin Marsh in Sonoma County (CDFW 2017).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Point Reyes meadowfoam <i>Limnanthes douglasii</i> ssp. <i>sulphurea</i>	SE; Rank 1B	Freshwater marshes and swamps, vernal pools, coastal prairie, meadows and seeps, cismontane woodland; located in vernal wet depression in open rolling, coastal prairies and meadows; typically located on clay substrate. Elevation range: 0 – 455 feet. Blooms: March – May.	<b>Unlikely.</b> The Study Area does not contain vernal pool, marsh, or other mesic herbaceous-dominated habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Tidestrom's lupine <i>Lupinus tidestromii</i>	FE; SE; Rank 1B	Coastal dunes; on partially stabilized dunes immediately near the ocean. Elevation range: 0 – 100 feet. Blooms: April – June.	<b>No Potential.</b> The Study Area does not contain coastal dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Mt. Diablo cottonweed <i>Micropus amphibolus</i>	Rank 3	Broadleaved upland forest, chaparral, cismontane woodland, valley and foothill grassland/rocky. Elevation ranges from 150 to 2710 feet (45 to 825 meters). Blooms Mar-May.	<b>Unlikely.</b> The Study Area lacks rocky slopes known to support this species (CDFW 2017).	<b>Presumed Absent.</b> No further actions are recommended for this species.
marsh microseris <i>Microseris paludosa</i>	Rank 1B	Closed-cone coniferous forest, cismontane woodland, coastal scrub, valley and foothill grassland. Elevation range: 15 – 925 feet. Blooms: April – July.	<b>Unlikely.</b> Although the Study Area contains Bishop pine forest, this species is known from relatively open, "park-like" pine forests situated directly on the coastal bluff.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
elongate copper moss <i>Mielichhoferia elongata</i>	Rank 4	Broadleafed upland forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest, meadows and seeps, subalpine coniferous forest/metamorphic rock, usually acidic, usually vernal mesic, often roadsides, sometimes carbonate. Elevation ranges from 0 to 6430 feet.	<b>No Potential.</b> The Study Area lacks acidic metamorphic rock substrate necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
northern curly-leaved Monardella <i>Monardella sinuata</i> ssp. <i>nigrescens</i>	Rank 1B	Chaparral, coastal dune, coastal scrub, lower montane coniferous forest (ponderosa pine forest); situated on sandy substrates. Elevation range: 0 – 975 feet. Blooms: April – September.	<b>No Potential.</b> The Study Area does not contain chaparral, scrub, or dune habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Marin County navarretia <i>Navarretia rosulata</i>	Rank 1B	Closed-cone coniferous forest, chaparral/serpentine, rocky. Elevation ranges from 660 to 2080 feet (200 to 635 meters). Blooms May-Jul.	<b>No Potential.</b> The Study Area lacks serpentine substrate necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Gairdner's yampah <i>Perideridia gairdneri</i> ssp. <i>gairdneri</i>	Rank 4	Broadleaf upland forest, chaparral, coastal prairie, valley and foothill grassland, vernal pools; located in vernal mesic sites. Elevation range: 0 – 1985 feet. Blooms: June – October.	<b>Unlikely.</b> The Study Area does not contain mesic grassland habitat closely associated with this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
North Coast phacelia <i>Phacelia insularis</i> var. <i>continentis</i>	Rank 1B	Coastal bluff scrub, coastal dune; located on open maritime bluffs underlain by sandy substrate. Elevation range: 30 – 555 feet. Blooms: March – May.	<b>No Potential.</b> The Study Area does not contain coastal bluff scrub, coastal dune, or maritime bluff habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes rein orchid <i>Piperia elegans</i> ssp. <i>decurtata</i>	Rank 1B	Coastal bluff scrub. Elevation range: 45 – 600 feet. Blooms: July – October.	<b>No Potential.</b> The Study Area does not contain coastal bluff scrub habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Michael's rein orchid <i>Piperia michaelii</i>	Rank 4	Coastal bluff scrub, closed-cone coniferous forest, chaparral, cismontane woodland, coastal scrub, lower montane coniferous forest. Elevation ranges from 10 to 3000 feet (3 to 915 meters). Blooms Apr-Aug.	<b>Moderate Potential.</b> The Study Area contains potentially suitable coniferous forest habitat that could support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Petaluma popcornflower <i>Plagiobothrys mollis</i> var. <i>vestitus</i>	Rank 1A	Marshes and swamps (coastal salt), valley and foothill grassland (mesic). Elevation ranges from 30 to 160 feet (10 to 50 meters). Blooms Jun-Jul.	<b>No Potential.</b> The Study Area lacks marshes and swamps or mesic grasslands. This species is presumed extinct.	<b>Presumed Absent.</b> No further actions are recommended for this species.
North Coast semaphore grass <i>Pleuropogon hooverianus</i>	ST, Rank 1B	Broadleafed upland forest, meadows and seeps, north coast coniferous forest/open areas, mesic. Elevation ranges from 30 to 2200 feet (10 to 671 meters). Blooms Apr-Jun.	<b>Moderate Potential.</b> The Study Area contains potentially suitable wetland habitat which could support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
nodding semaphore grass <i>Pleuropogon refractus</i>	Rank 4	Lower montane coniferous forest, meadows and seeps, north coast coniferous forest, riparian forest/mesic. Elevation ranges from 0 to 5250 feet (0 to 1600 meters). Blooms (Mar), Apr-Aug.	<b>Moderate Potential.</b> The Study Area contains potentially suitable wetland, and riparian forest habitat that could support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Marin knotweed <i>Polygonum marinense</i>	Rank 3	Salt and brackish coastal marshes. Elevation range: 0 – 35 feet. Blooms: sometimes April, May – August, sometimes October.	<b>No Potential.</b> The Study Area does not contain coastal brackish or coastal salt marsh necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Tamalpais oak <i>Quercus parvula</i> var. <i>tamalpaisensis</i>	Rank 1B	Lower montane coniferous forest. Elevation ranges from 330 to 2460 feet (100 to 750 meters). Blooms Mar-Apr.	<b>No Potential.</b> The Study Area is below the known elevation range of the species. This species is not known from the Point Reyes Peninsula.	<b>Presumed Absent.</b> This species was not observed during the site visit. No further actions are recommended for this species.
Lobb's buttercup <i>Ranunculus lobbii</i>	Rank 4	Cismontane woodland, North Coast coniferous forest, valley and foothill grassland, vernal pools; located in mesic, vernal wet areas. Elevation range: 45 – 1530 feet. Blooms: February – May.	<b>Moderate Potential.</b> The Study Area contains wetland habitat which could potentially support this species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
California beaked-rush <i>Rhynchospora californica</i>	Rank 1B	Bogs and fens, lower montane coniferous forest, meadows and seeps, freshwater marshes and swamps. Elevation range: 145 – 3315 feet. Blooms: May – July.	<b>Unlikely.</b> Although the Study Area contains wetland habitat, this species is closely associated with extensive perennial marsh habitats not present within the Study Area.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Victor's gooseberry <i>Ribes victoris</i>	Rank 4	Broadleafed upland forest, chaparral/mesic, shady. Elevation ranges from 330 to 2460 feet (100 to 750 meters). Blooms Mar-Apr.	<b>Moderate Potential.</b> The Study Area contains broadleaf riparian forest which could support this species. However, the Study Area is below the documented elevation range of the species.	<b>Not Observed.</b> This species was not observed during the April or June protocol-level rare plant surveys. No further actions are recommended for this species.
Point Reyes checkerbloom <i>Sidalcea calycosa</i> ssp. <i>rhizomata</i>	Rank 1B	Marshes and swamps; located in freshwater marsh habitat near the coast. Elevation range: 10 – 245 feet. Blooms: April – September.	<b>No Potential.</b> The Study Area does not contain large, freshwater marsh habitat with an open canopy necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Marin checkerbloom <i>Sidalcea hickmanii</i> ssp. <i>viridis</i>	Rank 1B	Chaparral; located on serpentine or volcanic substrate, often located in burns. Elevation range: 160 – 1400 feet. Blooms: May – June.	<b>No Potential.</b> The Study Area does not contain serpentine chaparral habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
purple-stemmed checkerbloom <i>Sidalcea malviflora</i> ssp. <i>purpurea</i>	Rank 1B	Broadleaf upland forest, coastal scrub, coastal prairie. Elevation range: 45 – 280 feet. Blooms: May – June.	<b>Unlikely.</b> The Study Area does not contain coastal scrub or coastal prairie habitat most often associated with this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Santa Cruz microseris <i>Stebbinsoseris dicipiens</i>	Rank 1B	Broadleaved upland forest, closed-cone coniferous forest, chaparral, coastal prairie, coastal scrub, valley and foothill grassland/open areas, sometimes serpentine. Elevation ranges from 30 to 1640 feet (10 to 500 meters). Blooms Apr-May.	<b>No Potential.</b> The Study Area lacks open, sandy, shaly, or serpentine sites necessary to support this species (Jespon eFlora 2017).	<b>Presumed Absent.</b> No further actions are recommended for this species.
beach starwort <i>Stellaria littoralis</i>	Rank 4	Bogs and fens, coastal bluff scrub, coastal dune, coastal scrub, marsh and swamp; situated in wetlands. Elevation range: 15 – 130 feet. Blooms: March – July.	<b>No Potential.</b> The Study Area does not contain perennial wetland habitat within coastal scrub or dune habitats.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Tamalpais jewelflower <i>Streptanthus batrachopus</i>	Rank 1B	Closed-cone coniferous forest, chaparral/serpentine. Elevation ranges from 1000 to 2130 feet (305 to 650 meters). Blooms Apr-Jul.	<b>No Potential.</b> The Study Area lacks serpentine substrate necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
<i>Streptanthus glandulosus</i> ssp. <i>pulchellus</i> Mt. Tamalpais jewelflower	Rank 1B	Chaparral, valley and foothill grassland; located on serpentine slopes. Elevation range: 490 – 2600 feet. Blooms: May – August.	<b>No Potential.</b> The Study Area does not contain serpentine chaparral or grassland habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
whiteworm lichen <i>Thamnotia vermicularis</i>	Rank 2B	Chaparral, valley and foothill grassland/on rocks derived from sandstone. Elevation ranges from 300 to 300 feet (90 to 90 meters).	<b>No Potential.</b> The Study Area lacks rocky sites in chaparral, and valley and foothill grassland necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.



SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
showy rancheria clover <i>Trifolium amoenum</i>	FE, Rank 1B	Valley and foothill grassland, coastal bluff scrub, swales, open sunny sites, sometimes on serpentine. Elevation range: 15 – 1365 feet. Blooms: April – June.	<b>No Potential.</b> The Study Area does not contain grassland, coastal bluff habitat, or serpentine substrate necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
San Francisco owl's-clover <i>Triphysaria floribunda</i>	Rank 1B	Coastal prairie, valley and foothill grassland; located on serpentine and non-serpentine substrate. Elevation range: 30 – 520 feet. Blooms: April – June.	<b>No Potential.</b> The Study Area does not contain prairie or other grassland habitat necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
coastal triquetrella <i>Triquetrella californica</i>	Rank 1B	Coastal bluff scrub, coastal scrub, valley and foothill grassland; grows within 100 feet of the coastline in scrub and grasslands on open gravel substrates of roads, hillsides, bluffs, and slopes. Elevation range: 30 – 325 feet.	<b>No Potential.</b> The Study Area does not contain coastal scrub or grassland habitat, and is not located within 100 feet of the coastline.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
<b>Mammals</b>				
pallid bat <i>Antrozous pallidus</i>	SSC, WBWG High	Occurs in a variety of habitats, including grasslands, woodland and forest. Most common in open, dry habitats with rocky areas for roosting. Roosts must protect bats from high temperatures. Very sensitive to disturbance of roosting sites.	<b>Unlikely.</b> The Study Area does not contain rock outcrops or other large rock structures for roosting, and is within the coastal fog belt.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes mountain beaver <i>Aplodontia rufa phaea</i>	SSC	Occurs only in western Marin County, almost entirely within Point Reyes National Sea shore. Found on moist, north-facing slopes within areas of coastal scrub. Lives in burrow systems and forages on a variety of herbaceous plants.	<b>No Potential.</b> This species is only known to occur on the western side of Inverness Ridge (citation).	<b>Presumed Absent.</b> No further actions are recommended for this species.
Townsend's big-eared bat <i>Corynorhinus townsendii townsendii</i>	SC, SSC, WBWG	Associated with a wide variety of habitats from deserts to mid-elevation mixed coniferous-deciduous forest. Females form maternity colonies in buildings, caves and mines and males roost singly or in small groups. Foraging occurs in open forest habitats where they glean moths from vegetation.	<b>Moderate Potential.</b> Buildings within the Study Area provide potential roosting substrates for this species. The nearest documented occurrence is approximately 1.5 miles southeast of the Study Area, and includes a communal roost (CDFW 2016a).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
silver-haired bat <i>Lasionycteris noctivagans</i> .	WBWG Medium	Primarily a forest dweller, feeding over streams, ponds, and open brushy areas. Summer habitats include a variety of forest and woodland types, both coastal and montane. Roosts in hollow trees, snags, buildings, rock crevices, caves, and under bark.	<b>Moderate Potential.</b> Buildings and tree snags within the Study Area provide potential roosting substrates for this species. The nearest documented occurrence is approximately 1.6 miles south of the Study Area (CDFW 2016a).	<b>Presumed Present.</b> If needed, tree removal should occur from September through January (outside of the local bat maternity roosting period); otherwise, a more detailed bat habitat assessment/survey effort is recommended.
western red bat <i>Lasiurus blossevillii</i>	SSC	Typically solitary, roosting primarily in the foliage of trees or shrubs. Day roosts are commonly in edge habitats adjacent to streams or open fields, in orchards, and sometimes in urban areas. Apparent association with intact riparian habitat.	<b>Unlikely.</b> The Study Area lacks riparian habitat and streams, and does not provide any typical arboreal roosting habitat for this species. May occasionally forage over the site.	<b>Presumed Absent.</b> No further actions are recommended for this species.
hoary bat <i>Lasiurus cinereus</i>	WBWG Medium	Prefers open forested habitats or habitat mosaics, with access to trees for cover and open areas or habitat edges for feeding. Roosts in dense foliage of medium to large trees. Feeds primarily on moths. Requires water.	<b>Moderate Potential.</b> Larger trees within the Study Area provide potential roosting substrates for this species. The nearest documented occurrence is approximately 1.7 miles southeast of the Study Area (CDFW 2016a).	<b>Presumed Present.</b> If needed, tree removal should occur from September through January (outside of the local bat maternity roosting period); otherwise, a more detailed bat habitat assessment/survey effort is recommended.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
American badger <i>Taxidea taxus</i>	SSC	Most abundant in drier open stages of most shrub, open forest, and herbaceous habitats, with friable soils. Requires friable soils and open, uncultivated ground. Preys on burrowing rodents.	<b>Unlikely.</b> The Study Area is primarily forested and does not contain open habitat necessary for this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Point Reyes jumping mouse <i>Zapus trinotatus orarius</i>	SSC	Bunch grass marshes on the uplands of Point Reyes, in areas safe from continuous inundation. Eats mainly grass seeds with some insects and fruit taken. Builds grassy nests on ground under vegetation, burrows in winter.	<b>No Potential.</b> The Study Area is primarily forested, and outside of this subspecies' range; all occurrences in CNDDB are located west of Inverness Ridge (CDFW 2016a).	<b>Not Present.</b> No further actions are recommended.
<b>Birds</b>				
tricolored blackbird <i>Agelaius tricolor</i>	SSC	Nearly endemic to California, where it is most numerous in the Central Valley and vicinity. Highly colonial, nesting in dense aggregations over or near freshwater in emergent growth or riparian thickets. Also uses flooded agricultural fields. Abundant insect prey near breeding areas essential.	<b>Unlikely.</b> The Study Area does not provide any suitable freshwater marsh habitat.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
golden eagle <i>Aquila chrysaetos</i>	CFP	Present year-round, occurring in rolling foothill and mountain areas, sage-juniper flats, desert. Cliff-walled canyons provide nesting habitat in most parts of range; also nests in larger trees.	<b>Unlikely.</b> The Study Area does not contain cliffs to provide for nesting or open scrub, woodland, or grassland habitat for foraging.	<b>Presumed Absent.</b> No further actions are recommended for this species.
great egret <i>Ardea alba</i>	none (breeding sites protected by CDFW)	Year-round resident. Nests colonially in taller trees, usually in close proximity to aquatic foraging areas: marshes, ponds, estuaries, and rivers. Forages primarily for fishes.	<b>Unlikely.</b> Although the Study Area provides trees that are suitable for nesting, Tomales Bay is relatively distant and no indicators of egret breeding on-site have been observed, including during site visits conducted at dusk (when nest attendance would be most visible).	<b>Presumed Absent.</b> No further actions are recommended for this species.
great blue heron <i>Ardea herodias</i>	none (breeding sites protected by CDFW)	Year-round resident. Nests colonially or semi-colonially in tall trees and cliffs, also sequestered terrestrial substrates. Breeding sites usually in close proximity to aquatic foraging areas: marshes, estuaries, tidal flats, and rivers. Forages primarily for fishes and other aquatic prey, also smaller terrestrial vertebrates.	<b>Unlikely.</b> Although the Study Area provides trees that are suitable for nesting, Tomales Bay is relatively distant and no indicators of heron breeding on-site have been observed, including during site visits conducted at dusk (when nest attendance would be most visible).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
burrowing owl <i>Athene cunicularia</i>	SSC	Year-round resident and winter visitor. Occurs in open, dry grasslands and scrub habitats with low-growing vegetation, perches and abundant mammal burrows. Preys upon insects and small vertebrates. Nests and roosts in old mammal burrows, most commonly those of ground squirrels.	<b>Unlikely.</b> The Study Area is primarily forested; grassland areas present are restricted in area and isolated.	<b>Presumed Absent.</b> No further actions are recommended for this species.
Vaux's swift <i>Chaetura vauxi</i>	SSC	Summer resident, typically nesting and roosting in the cavities of large, hollowed-out trees. Forages high in the air, generally over or near lakes and rivers.	<b>Unlikely.</b> Although the Study Area is primarily forested, large, hollowed-out trees have not been observed there, and the Study Area is outside of this species' local breeding range (Shuford and Gardali 2008).	<b>Presumed Absent.</b> No further actions are recommended for this species.
western snowy plover <i>Charadrius alexandrinus nivosus</i>	FT, SSC	Year-round resident and winter visitor. Found on sandy beaches, salt ponds and shores of large alkali lakes. Need sandy gravelly or friable soils for nesting.	<b>No Potential.</b> The Study Area does not contain beaches, salt flats, or similar substrates and thus provides no suitable habitat.	<b>Presumed Absent.</b> No further actions are recommended for this species.
northern harrier <i>Circus cyaneus</i>	SSC	Largely resident in open, moist habitats including marshes, grasslands and prairies. Nests on the ground in densely vegetated habitats, usually near water.	<b>Unlikely.</b> The Study Area does not contain grassland or open marsh habitat to provide for nesting and foraging. May occasionally fly over the area.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
olive-sided flycatcher <i>Contopus cooperi</i>	SSC	Summer resident, typically breeding in montane, late-successional coniferous forests where tall trees overlook canyons, meadows, lakes or other open terrain. Also breeds in mixed forests at lower elevations. Often associated with forest edges.	<b>High Potential.</b> The Study Area contains dense coniferous forest and forest edges that are suitable for nesting.	<b>Presumed Present.</b> Initial vegetation removal and/or ground disturbance should occur from September through January (outside of the nesting bird season); otherwise, a nesting bird survey should be conducted and active nests avoided.
black swift <i>Cypseloides niger</i>	SSC	Summer resident with a fragmented breeding distribution; most occupied areas in California either montane or coastal. Breeds in small colonies on cliffs behind or adjacent to waterfalls, in deep canyons, and sea-bluffs above surf. Forages aerially over wide areas.	<b>No Potential.</b> The Study Area does not provide cliffs or similar features that are suitable for nesting, and Marin County is not within the current known breeding range (Shuford and Gardali 2008).	<b>Presumed Absent.</b> No further actions are recommended for this species.
white-tailed kite <i>Elanus leucurus</i>	CFP	Resident in coastal and valley lowlands with scattered trees and large shrubs, including grasslands, marshes and agricultural areas. Preys on small diurnal mammals and other vertebrates.	<b>Unlikely.</b> The Study Area is primarily forested, with limited grassland and other open areas.	<b>Presumed Absent.</b> No further actions are recommended for this species.
American peregrine falcon <i>Falco peregrinus anatum</i>	FD, SE, CFP	Resident and winter visitor. Occurs near water, including coastal areas, wetlands, lakes and rivers. Usually nests on sheltered cliffs or tall man-made structures. Preys primarily on waterbirds.	<b>No Potential.</b> The Study Area does not contain cliffs to provide for nesting or open terrestrial and/or aquatic habitat for foraging.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
tufted puffin <i>Fratercula cirrhata</i>	SSC	Marine species, nesting on offshore and coastal islands, islets, and sea stacks. Requires sod or earth into which the birds can burrow. Forages for fishes at sea.	<b>No Potential.</b> The Study Area does not contain marine habitat or isolated coastal areas for nesting.	<b>Presumed Absent.</b> No further actions are recommended for this species.
San Francisco (saltmarsh) common yellowthroat <i>Geothlypis trichas sinuosa</i>	SSC	Year-round resident in the greater San Francisco Bay area. Occurs in and adjacent to marshes and wetlands (salt, brackish and fresh). Requires thick, continuous vegetative cover for foraging and nesting.	<b>Unlikely.</b> Wetland habitat within the Study Area is too small in area to provide any typical habitat for this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.
bald eagle <i>Haliaeetus leucocephalus</i>	FD, SE, CFP	Occurs year-round in California, but primarily a winter visitor. Nests in large trees in the vicinity of larger lakes, reservoirs and rivers. Wintering habitat somewhat more variable but usually features large concentrations of waterfowl or fish.	<b>Unlikely.</b> The Study Area does not contain riverine or lacustrine habitat necessary to provide foraging for this species. May occasionally fly-over the site.	<b>Presumed Absent.</b> No further actions are recommended for this species.
California black rail <i>Lateralus jamaicensis cotumiculus</i>	ST, CFP	Year-round resident in marshes (saline to freshwater) with dense vegetation within four inches of the ground. Prefers larger, undisturbed marshes with an extensive upper zone, and that are close to a major water source. Extremely secretive and cryptic.	<b>No Potential.</b> The Study Area does not contain any suitable marsh habitat for this species.	<b>Presumed Absent.</b> No further actions are recommended for this species.



SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
purple martin <i>Progne subis</i>	SSC	Summer resident, breeding in coniferous and mixed forest and woodland habitats. Along the north coast, associated with redwoods. Nests in tree cavities as well as cavities in man-made structures.	<b>Unlikely.</b> Although the Study Area contains large trees, there are no perennial lakes or streams to provide nesting and foraging habitat.	<b>Presumed Absent.</b> No further actions are recommended for this species.
yellow warbler <i>Setophaga petechia</i>	SSC	Summer resident throughout much of California. Breeds in riparian vegetation close to water, including streams and wet meadows. Microhabitat used for nesting variable, but dense willow growth is typical. Occurs widely on migration.	<b>Unlikely.</b> Although the Study Area contain coniferous forest habitat, this species is closely associated with open riparian habitat and montane habitat not present in the Study Area.	<b>Presumed Absent.</b> No further actions are recommended for this species.
northern spotted owl <i>Strix occidentalis caurina</i>	FT, ST, SSC	Year-round resident in dense, structurally complex forests with a multi-story canopy. In Marin County, uses both coniferous and mixed (coniferous-hardwood) forests. Nests on arboreal platform-like substrates, including in tree cavities. Preys on mammals.	<b>Unlikely.</b> Forest stands in the general vicinity of the Study Area are known to support this species; the nearest documented territory center is located approximately 0.6 mile to the west (CDFW 2016b). However, the Study Area features two roads and several homes in very close proximity, and the canopies of mature trees there are largely exposed, rendering nesting unlikely. The Study Area may occasionally be used for local movement, and possibly roosting.	<b>Presumed Absent.</b> While nesting within the Study Area is unlikely, any necessary tree removal and/or trimming should occur from September through January, outside of the general nesting bird season.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
<b>Reptiles &amp; Amphibians</b>				
Pacific (western) pond turtle <i>Actinemys marmorata</i>	SSC	Occurs in perennial ponds, lakes, rivers and streams with suitable basking habitat (mud banks, mats of floating vegetation, partially submerged logs) and submerged shelter. Nests in sunlit areas with friable soil near aquatic habitat.	<b>No Potential.</b> The Study Area does not contain perennial waters necessary to support this species.	<b>Presumed Absent.</b> No further actions are recommended.
California red-legged frog <i>Rana draytonii</i>	FT, SSC	Occurs in lowlands and foothills in or near sources of deep water with dense riparian and/or emergent vegetation. Requires eleven to 20 weeks of continuous inundation for larval development. Access to aestivation habitat (mammal burrows, etc.) critical in areas where aquatic habitats dry down during the summer. Documented to disperse over upland areas during and after rain events. Feeds primarily on invertebrates.	<b>Unlikely.</b> The Study Area does not contain any suitable aquatic habitat (including for breeding), nor is it situated along any logical dispersal route. Although there are multiple documented occurrences in the general vicinity (including several within 1.0 mile), the nearest occurrences are all located on the west side of Inverness Ridge. Conversely, the nearest occurrences on east of the ridge are located at least 3.0 miles southeast of the Study Area, at very low elevation (CDFW 2016a).	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
<b>Fish</b>				
Tomales roach <i>Lavinia symmetricus</i> (ssp. 2)	SSC	Occurs in tributaries to Tomales Bay. Habitat generalist, tolerant of relatively high temperatures and low oxygen levels. Does not occur in highly saline waters.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for fishes.	<b>Not Present.</b> No further actions are recommended.
tidewater goby <i>Eucyclogobius newberryi</i>	FE, SSC	Brackish water habitats along the California coast from Agua Hedionda Lagoon, San Diego County to the mouth of the Smith River. Found in shallow lagoons and lower stream reaches; requires fairly still but not stagnant water, and high oxygen levels.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for fishes.	<b>Not Present.</b> No further actions are recommended.
steelhead - central California coast DPS <i>Oncorhynchus mykiss irideus</i>	FT, NMFS	Anadromous. Occurs from the Russian River south to Soquel Creek and Pajaro River. Also in San Francisco and San Pablo Bay Basins. Adults migrate upstream to spawn in cool, clear, well-oxygenated streams. Juveniles remain in fresh water for 1 or more years before migrating downstream to the ocean.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for fishes.	<b>Not Present.</b> No further actions are recommended.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
coho salmon – central California coast DPS <i>Oncorhynchus kisutch</i>	FE, SE, NMFS	Federal listing includes populations between Punta Gorda and San Lorenzo River. State listing includes populations south of San Francisco Bay only. Anadromous; adults occur in coastal marine waters, and spawn in coastal streams. Requires beds of loose, silt-free, coarse gravel for spawning. Also needs cover, cool water and sufficient dissolved oxygen.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for fishes.	<b>Not Present.</b> No further actions are recommended.
longfin smelt <i>Spirinchus thaleichthys</i>	FC, ST, SSC, RP	Anadromous. Found in open waters of estuaries, typically in the middle to lower portion of the water column. Prefers salinities of 15 to 30 ppt, but can be found in completely freshwater to almost pure seawater. Spawning occurs in upstream freshwaters.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for fishes.	<b>Not Present.</b> No further actions are recommended.
<b>Invertebrates</b>				
monarch butterfly <i>Danaus plexippus</i>	none; winter roosts protected by CDFW	Winter roost sites extend along the coast from northern Mendocino County to Baja California, Mexico. Roosts located in wind-protected tree groves (eucalyptus, Monterey pine and/or Monterey cypress), with nectar and water sources nearby.	<b>Unlikely.</b> The Study Area does not contain groves of non-native conifers or eucalyptus with suitable roosting characteristics.	<b>Presumed Absent.</b> No further actions are recommended for this species.

SPECIES	STATUS*	HABITAT REQUIREMENTS	POTENTIAL TO OCCUR IN STUDY AREA	SURVEY RESULTS AND RECOMMENDATIONS
Myrtle's silverspot butterfly <i>Speyeria zerene myrtleae</i>	FE, RP	Restricted to the foggy, coastal dunes/hills of the Point Reyes peninsula; extirpated from coastal San Mateo County. Larval foodplant thought to be <i>Viola adunca</i> .	<b>No Potential.</b> The Study Area does not provide any dune or similar habitat; this subspecies occurs only on Point Reyes proper (CDFW 2016a).	<b>Not Present.</b> No further actions are recommended.
California freshwater shrimp <i>Syncaris pacifica</i>	FE, SE, RP	Endemic to Marin, Napa, and Sonoma counties. Found in low elevation, low gradient (generally less than 1%) perennial streams where riparian cover is moderate to heavy. Favors shallow pools away from main stream flow. Winters near undercut banks with exposed roots. In the summer uses leafy branches touching water.	<b>No Potential.</b> The Study Area does not contain perennial aquatic habitat suitable for this species.	<b>Not Present.</b> No further actions are recommended.

**\* Key to status codes:**

FC	Federal Candidate (for listing)
FE	Federal Endangered
FT	Federal Threatened
SE	State Endangered
ST	State Threatened
SR	State Rare
Rank 1A	CNPS Rank 1A: Plants presumed extinct in California
Rank 1B	CNPS Rank 1B: Plants rare, threatened or endangered in California and elsewhere
Rank 2A	CNPS Rank 2A: Plants presumed extirpated in California, but more common elsewhere
Rank 2B	CNPS Rank 2B: Plants rare, threatened, or endangered in California, but more common elsewhere
Rank 3	CNPS Rank 3: Plants about which CNPS needs more information (a review list)
Rank 4	CNPS Rank 4: Plants of limited distribution (a watch list)

**Potential to Occur:**

No Potential. Habitat on and adjacent to the site is clearly unsuitable for the species requirements (cover, substrate, elevation, hydrology, plant community, site history, disturbance regime).

Unlikely. Few of the habitat components meeting the species requirements are present, and/or the majority of habitat on and adjacent to the site is unsuitable or of very poor quality. The species is not likely to be found on the site.

Moderate Potential. Some of the habitat components meeting the species requirements are present, and/or only some of the habitat on or adjacent to the site is unsuitable. The species has a moderate probability of being found on the site.

High Potential. All of the habitat components meeting the species requirements are present and/or most of the habitat on or adjacent to the site is highly suitable. The species has a high probability of being found on the site.

**Results and Recommendations:**

Present. Species was observed on the site or has been recorded (i.e. CNDDDB, other reports) on the site recently.

Presumed Present. Species has a high likelihood of occurring and actions to avoid/mitigate impacts are recommended; surveys not conducted.

Presumed Absent. Species is Presumed to not be present or utilize the site due to a lack of key habitat components.

Not Observed. Species was not observed during protocol-level surveys.

Not Present. Species has been determined not to be present due to a complete lack of suitable habitat and/or site location outside of the species' known range.

**Attachment D**

**Representative Photographs of the Study Area**

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Photograph 1. Photograph depicting buildable area in the southern corner of the Study Area with gravel driveway and airstream trailer. Understory vegetation in this area consists of ruderal, non-native vegetation including white-flowered onion (*Allium triquetrum*), and big periwinkle (*Vinca major*).



Photograph 2. Photograph depicting bishop pine forest within the Study Area. This community is co-dominated by bishop pine (*Pinus muricata*), and California bay (*Umbellularia californica*).



Photograph 3. Photograph depicting perennial wetland seep-ditch in the northern portion of the Study Area along Sir Francis Drake Boulevard. This community is dominated by small-fruited bulrush (*Scirpus microcarpus*).



Photograph 4. Photograph depicting riparian white alder grove in the Study Area. This community is dominated by white alder (*Alnus rhombifolia*), a typical riparian species.