AQUATIC RESOURCE DELINEATION REPORT

TOLARI PROPERTY, SANTOS RANCH ROAD
HAYWARD, ALAMEDA COUNTY, CALIFORNIA
(APN: 946-3800-4-12)

SEPTEMBER 2022

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1.0 INTRODUCTION

Coast Range Biological, LLC conducted an aquatic resource delineation to identify the location and extent of: (1) waters of the U.S., including wetlands, potentially subject to jurisdiction by the U.S. Army Corps of Engineers (Corps) under Section 404 of the federal Clean Water Act (CWA); and (2) waters of the State, as defined by the State Water Resources Control Board (SWRCB) *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*. The study area for the aquatic resource delineation covers 17-acres and is located on Santos Ranch Road in Hayward, Alameda County, California (Figure 1). The study area includes the Tolari property (APN: 946-3800-4-12) and a portion of the adjacent parcel to the south (Bhupinder property, APN: 946-3800-4-9) that extends from the Tolari property south to Santos Ranch Road. The proposed project on the study area consists of development of a single-family residence, driveway, and associated infrastructure on the Tolari property, with a driveway easement crossing the Bhupinder property from Santos Ranch Road, though detailed project plans have not yet been completed.

2.0 REGULATORY FRAMEWORK AND DEFINITIONS

2.1 Wetlands

The CWA gives the Corps and Environmental Protection Agency (EPA) jurisdiction over "waters of the United States" which include lakes, rivers, streams, and wetlands. "Wetlands" are jointly defined by the Corps and EPA as:

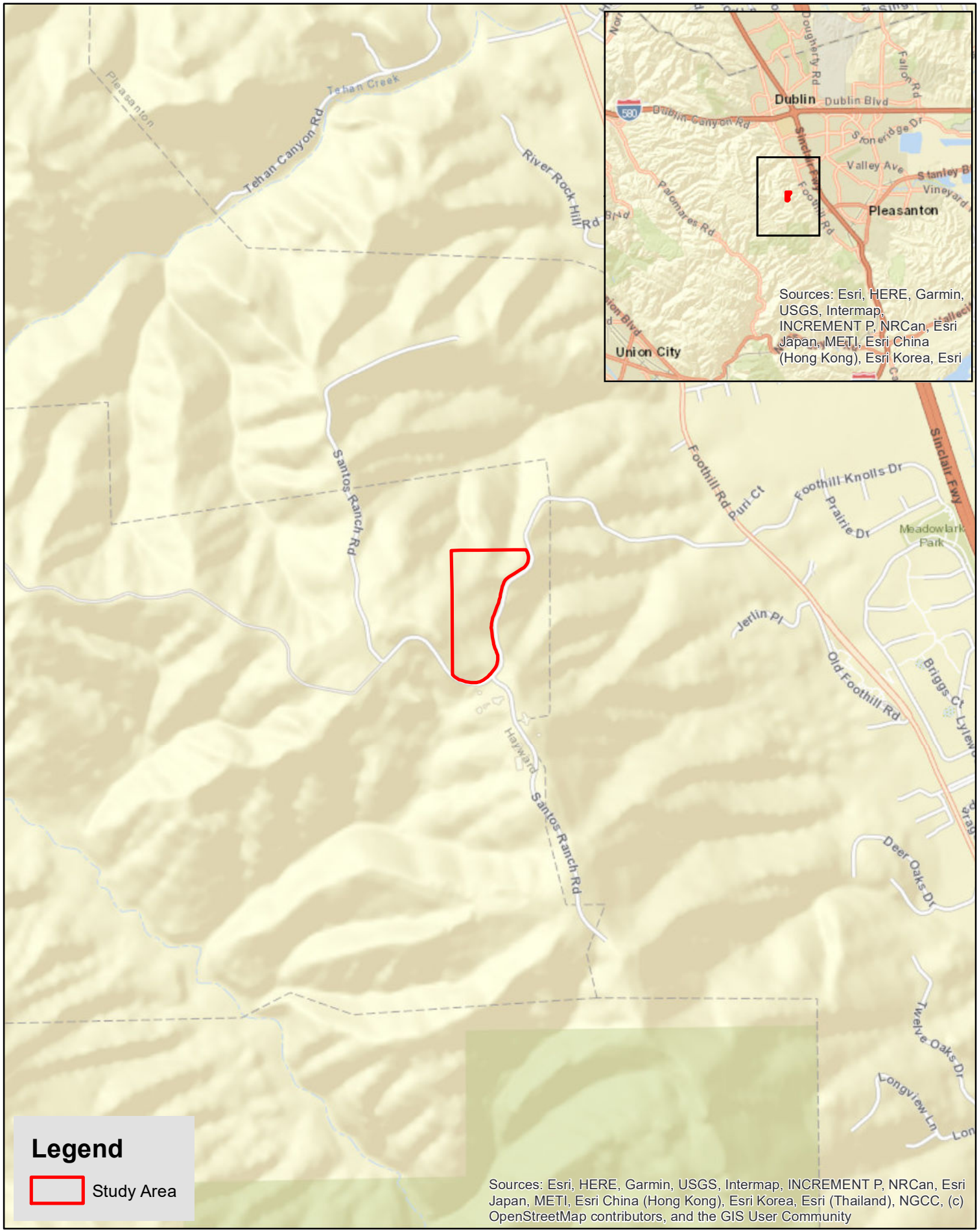
"Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (Federal Register 1980; 1982).

Under normal circumstances and unproblematic situations, wetlands typically have positive indicators of three wetland parameters: hydrophytic vegetation, wetland hydrology, and hydric soils. These parameters are discussed below.

2.1.1 Hydrophytic Vegetation

Hydrophytic vegetation is defined as "*the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanently or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present*" (Environmental Laboratory 1987). In order to determine if hydrophytic vegetation is present, each plant species occurring in a sample plot is identified and assigned a wetland indicator status (Table 1) based on the *National Wetland Plant List* (USACE 2020).

Plants that have an indicator status of OBL, FACW, and FAC are considered to be typically adapted for life in anaerobic soil conditions, and qualify as hydrophytic species for Section 404 delineations. If more than 50 percent of the dominant plant species in a sample plot are classified as hydrophytic species (e.g., FAC or wetter), the area has met the hydrophytic vegetation criterion. Dominant species are selected using the "50/20 rule" (USACE 2008a).



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0 500 1,000 2,000 Feet

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Figure 1. Study area locality map.

Table 1. Wetland Plant Indicator Status.

Indicator Status Rating	Designation	Qualitative Description (USACE 2020)
Obligate (OBL)	Hydrophyte	Almost always occur in wetlands
Facultative Wetland (FACW)	Hydrophyte	Usually occur in wetlands, but may occur in non-wetlands
Facultative (FAC)	Hydrophyte	Occur in wetlands and non-wetlands
Facultative Upland (FACU)	Nonhydrophyte	Usually occur in non-wetlands, but may occur in wetlands
Upland (UPL)	Nonhydrophyte	Almost never occur in wetlands

2.1.2 Wetland Hydrology

Wetland hydrology "encompasses all hydrologic characteristics of areas that are periodically inundated or have soils saturated to the surface at some time during the growing season sufficient to create anaerobic and reducing conditions" (Environmental Laboratory 1987). The jurisdictional wetland hydrology criterion is satisfied if the area supports "*14 or more consecutive days of flooding or ponding, or a water table 12 in. (30 cm) or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability)*" (USACE 2008a). If recorded data—such as stream, tidal gauge, or hydrologic monitoring—are lacking, field indicators are used to determine the presence of wetland hydrology. Field indicators include primary indicators, such as observed inundation or saturation, biotic crust, and oxidized rhizospheres on living roots; or secondary indicators, such as drainage patterns and FAC-neutral test. The presence of one primary indicator, or two secondary indicators, is sufficient to conclude that an area has wetland hydrology (USACE 2008a).

2.1.3 Hydric Soils

Hydric soils are defined by the Natural Resources Conservation Service as "*soils that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part of the soil*" (Federal Register 1994). Nearly all hydric soils exhibit characteristic morphologies that result from repeated periods of saturation or inundation, or both, for more than a few days. Characteristic hydric soil indicators observable in the field include: histic epipedons; sulfidic material; aquic or preaquic moisture regime; reducing conditions; iron and manganese concretions; and soil colors (gleyed soils, soils with mottles and/or low chroma matrix). Color designations are determined by comparing a soil sample with a standard Munsell soil color chart (Gretag Macbeth 2000). The presence of any one of the above listed field indicators is considered sufficient to meet the hydric soil criterion.

2.2 Other Waters of the U.S.

In addition to potential jurisdictional wetlands, this study evaluated the presence of any "waters of the U.S." other than wetlands potentially subject to jurisdiction under Section 404 of the CWA. Non-wetland "other waters" are water bodies, such as lakes, stream channels, drainages, ponds, and other surface water features that exhibit an Ordinary High Water Mark (OHWM) but lack positive indicators of one or more of the three wetland parameters

(hydrophytic vegetation, wetland hydrology, hydric soils) (Federal Register 1986). In non-tidal "other waters," Corps jurisdiction extends to the OHWM, defined as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impressions on the bank, shelving, changes in the characteristics of the soil, destruction of terrestrial vegetation, the presence of litter and debris" (Federal Register 1986; USACE 2005; 2008b).

2.3 Waters of the State

On April 2, 2019, the SWRCB adopted a *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* (Procedures), for inclusion in the *Water Quality Control Plan for Inland Surface Waters and Enclosed Bays and Estuaries and Ocean Waters of California* (SWRCB 2019). The Procedures took effect May 28, 2020. The Procedures consist of four major elements: (1) a wetland definition; (2) a framework for determining if a feature that meets the wetland definition is a water of the State; (3) wetland delineation procedures; and (4) procedures for the submittal, review and approval of applications for Water Quality Certifications and Waste Discharge Requirements for dredge or fill activities.

Based on the new Procedures, the SWRCB and Regional Water Quality Control Board (RWQCB) define "wetland" as follows: "*An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation"* (SWRCB 2019). The Water Code defines "waters of the State" broadly to include *"any surface water or groundwater, including saline waters, within the boundaries of the state.*" "Waters of the State" includes all "waters of the U.S." (SWRCB 2019).

The SWRCB/RWQCB delineation methodology follows the Corps delineation methodology. Areas that may be exempt from Corps jurisdiction, but may be included as waters of the State under the Procedures or the Porter-Cologne Water Quality Control Act, were identified during the delineation.

3.0 METHODS

Prior to the field delineation, available reference materials were reviewed, including the Web Soil Survey (NRCS 2022a), Hydric Soils Lists (NRCS 2022b), the National Wetlands Inventory (USFWS 2022), the National Hydrography Dataset (USGS 2022), topographic maps (USGS 2018), geologic data (California Geological Survey 2010), previous botanical surveys conducted on the study area (CRB 2022), and aerial imagery. A routine-level jurisdictional delineation was conducted on the study area on September 21, 2022. The study area was traversed on foot and field-checked for indicators of hydrophytic vegetation, wetland hydrology, and hydric soils, as well as drainages with a bed, bank, and OHWM. Twelve sample points were taken on the study area and recorded on Corps data forms provided in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* ("Arid West Manual"; USACE 2008a). Corps data forms are included in Appendix A.

This aquatic resource delineation was conducted in accordance with the Arid West Manual and the *Corps of Engineers Wetlands Delineation Manual* (Corps Manual; Environmental Laboratory 1987). Based on the presence or absence of field indicators—including vegetation, hydrology, and soils—the limits of potential jurisdictional wetlands and other waters of the U.S. and State were determined. Potential jurisdictional waters were mapped in the field with a Trimble GPS unit (sub-meter accuracy) and overlain on a digital orthophoto (data in UTM Zone 10, NAD 83 format) using ArcGIS mapping software. The property boundary was downloaded from the Alameda County parcel layer as an ArcGIS shapefile obtained from the County website. Due to apparent inaccuracies in the parcel layer, the property boundary used in this report was modified based on markers observed in the field and should be considered approximate.

4.0 STUDY AREA DESCRIPTION

The study area covers 17-acres and consists of undeveloped land with some areas of disturbance, including a graded hillside above Santos Ranch Road. Based on an analysis of historical aerial imagery, the road appears to have been constructed in the 1960s, with the hillside graded as part of road construction. Additional historic disturbance, dating to the 1960s, is present in the southern portion of the study area from apparent dirt roads and associated grading. Most of the study area was relatively undisturbed at the time of the delineation, though minor ground disturbance had occurred around the proposed homesite area, associated with story pole construction, prior to the delineation.

Land uses surrounding the study area consist of undeveloped land in Pleasanton Ridge Regional Park (owned by East Bay Regional Park District) to the west, private undeveloped land to the north, Santos Ranch Road and undeveloped private land to the east, and residential development and Pleasanton Township County Water District land to the south (Figure 1).

4.1 Vegetation

Six vegetation types are present on the study area: Coast Live Oak Woodland and Forest, Non-Native Grassland, Purple Needlegrass Grassland, Coyote Brush Scrub, Willow Scrub, and Ruderal Herbaceous (CRB 2022). Coast Live Oak Woodland and Forest, composed of the *Quercus agrifolia* - *Quercus kelloggii* Association[1] within the *Quercus agrifolia* Forest and Woodland Alliance[2], covers the northern portion of the study area on moderate to steep slopes. Coast Live Oak Woodland and Forest is dominated by a canopy of coast live oak (*Quercus agrifolia*[3]), with patchy dense areas of California black oak (*Quercus kelloggii*) and California bay (*Umbellularia californica*). Valley oak (*Quercus lobata*) and big-leaf maple (*Acer macrophyllum*) are occasionally present in the canopy and California buckeye (*Aesculus californica*) is scattered in the subcanopy. The understory consists of shrubs and herbaceous species, including poison oak (*Toxicodendron diversilobum*), creeping snowberry (*Symphoricarpos mollis*), oceanspray (*Holodiscus discolor*), California coffeeberry (*Frangula californica*), oso berry (*Oemleria cerasiformis*), soap plant (*Chlorogalum pomeridianum*),

[1] Association nomenclature follows the California Natural Community List (CDFW 2021).
[2] Alliance nomenclature follows *A Manual of California Vegetation* (Sawyer et al. 2009) and nomenclatural updates in CNPS (2022).
[3] Botanical nomenclature follows Baldwin et al. (2012), along with taxonomic updates in the *Jepson eFlora* (The Jepson Flora Project 2022).

wild pea (*Lathyrus vestitus*), goose grass (*Galium aparine*), yarrow (*Achillea millefolium*), hound's tongue (*Cynoglossum grande*), wood fern (*Dryopteris arguta*), goldback fern (*Pentagramma triangularis*), California polypody (*Polypodium californicum*), California maidenhair (*Adiantum jordanii*), California man-root (*Marah fabacea*), Chinese houses (*Collinsia heterophylla* var. *heterophylla*), Pacific snakeroot (*Sanicula crassicaulis*), milk maids (*Cardamine californica*), blue wildrye (*Elymus glaucus*), and Bermuda buttercup (*Oxalis pes-caprae*).

Non-Native Grassland, composed of the *Avena* spp. - *Bromus* spp. Herbaceous Semi-Natural Alliance, occurs on slopes in the western and southern portion of the study area. Non-Native Grassland consists primarily of non-native grasses and forbs adapted to disturbance, including slender wild oat (*Avena barbata*), soft chess (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red brome (*Bromus rubens*), hedgehog dogtail (*Cynosurus echinatus*), Italian ryegrass (*Festuca perennis*), rattail fescue (*Festuca myuros*), barley (*Hordeum murinum* subsp. *leporinum*), silver hair grass (*Aira caryophyllea*), annual bluegrass (*Poa annua*), filaree (*Erodium botrys*), sheep sorrel (*Rumex acetosella*), cutleaf geranium (*Geranium dissectum*), vetch (*Vicia sativa*), hairy vetch (*Vicia villosa*), rose clover (*Trifolium hirtum*), narrow leaf clover (*Trifolium angustifolium*), subterranean clover (*Trifolium subterraneum*), Italian thistle (*Carduus pycnocephalus*), smooth cat's ear (*Hypochaeris glabra*), and bur clover (*Medicago polymorpha*). Native grasses and forbs are widely scattered throughout the grassland, including purple needlegrass (*Stipa pulchra*), California brome (*Bromus sitchensis* var. *carinatus*), small fescue (*Festuca microstachys*), California poppy (*Eschscholzia californica*), miniature lupine (*Lupinus bicolor*), Q-tips (*Micropus californicus*), rusty popcornflower (*Plagiobothrys nothofulvus*), dwarf plantain (*Plantago erecta*), purple sanicle (*Sanicula bipinnatifida*), blue dicks (*Dipterostemon capitatus*), narrowleaf mules ears (*Wyethia angustifolia*), and western blue-eyed-grass (*Sisyrinchium bellum*).

Purple Needlegrass Grassland, composed of the *Nassella pulchra – Avena* spp. – *Bromus* spp. Association within the *Nassella* spp. - *Melica* spp. Herbaceous Alliance, was mapped in two areas where purple needlegrass formed at least 10 percent relative cover in the herbaceous layer (CRB 2022). Purple Needlegrass Grassland is dominated by purple needlegrass, along with native forbs including fiddleneck (*Amsinckia menziesii*), ear-shaped wild buckwheat (*Eriogonum nudum* var. *auriculatum*), Ithuriel's spear (*Triteleia laxa*), spikeweed (*Centromadia fitchii*), vinegar weed (*Trichostema lanceolatum*), California poppy, and miniature lupine. Non-native grasses and forbs are also present, including slender wild oat, filaree, and sheep sorrel.

Coyote Brush Scrub, composed of the *Baccharis pilularis* Shrubland Alliance, is located on a slope above Santos Ranch Road. Coyote Brush Scrub is dominated by a dense cover of coyote brush (*Baccharis pilularis* subsp. *consanguinea*), with California sagebrush (*Artemisia californica*), sticky monkeyflower (*Diplacus aurantiacus*), silver lupine (*Lupinus albifrons* var. *albifrons*), deerweed (*Acmispon glaber*), French broom (*Genista monspessulana*), California figwort (*Scrophularia californica*), chaparral clarkia (*Clarkia affinis*), poison oak, California poppy, and soap plant scattered throughout openings in the shrub canopy.

Willow Scrub, composed primarily of the *Salix lasiolepis* Shrubland Alliance, occurs in a seep at the toe of a graded slope west of Santos Ranch Road. Willow Scrub is dominated by a

canopy of arroyo willow (*Salix lasiolepis*) and red willow (*Salix laevigata*), along with occasional big-leaf maple, California bay, and coast live oak. The understory consists of shrubs—including Himalayan blackberry (*Rubus armeniacus*), poison oak, coyote brush, and French broom—as well as occasional hydrophytic herbaceous species including brown-head rush (*Juncus phaeocephalus*).

Ruderal Herbaceous habitat, conforming to no recognized vegetation classification system but containing ruderal elements of Non-Native Grassland and Coyote Brush Scrub, occurs on the graded slope above Santos Ranch Road. Ruderal Herbaceous habitat consists of abundant bare ground from the graded slope, along with a mix of native and non-native grasses and forbs described above for Non-Native Grassland and Coyote Brush Scrub, including wild oats, filaree, soft chess, red brome, rattail fescue, coyote brush, California sagebrush, sticky monkeyflower, California poppy, deerweed, and ear-shaped wild buckwheat.

A vegetation map of the study area is included in CRB (2022).

4.2 Geology, Climate, and Soils

The study area is located between ~1,000 and ~1,400-feet elevation (NAVD 88; USGS 2018) and consists of hilly, ridgeline and upper slope topography sloping toward the north and east (Figure 2). The study area is underlain by marine sedimentary and metasedimentary rocks (undivided Cretaceous sandstone, shale, and conglomerate; California Geological Survey 2010).

Rainy season precipitation for the region prior to the September 21, 2022 delineation (October 2021 to September 19, 2022) was: (1) 17.43 inches (94 percent of normal) for Oakland Airport, ~15-miles northwest of the study area; (2) 12.89 inches (85 percent of normal) for Livermore, ~7-miles east of the study area; and (3) 8.24-inches (61 percent of normal) for San Jose, ~20-miles south of the study area (National Oceanic and Atmospheric Administration 2022). Rain (approximately 0.5-inch) had fallen on the study area on September 18-19, 2022, prior to the delineation.

Three soil types have been mapped on the study area in the Web Soil Survey (NRCS 2022a):

LpF2—Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15
LsC—Los Osos loam, seeped variant, 3 to 15 percent slopes
MhE2—Millsholm silt loam, 30 to 45 percent slopes, eroded

Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15, consists of 45 percent Los Gatos and similar soils, 35 percent Los Osos and similar soils, and 20 percent minor components. Los Gatos Soils are Fine-loamy, mixed, active, mesic Typic Argixerolls. Los Osos Series soils are Fine, smectitic, thermic Typic Argixerolls. Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15, is well drained, occurs on mountain slopes and hillslopes, and is derived from residuum weathered from sandstone, shale, and occasionally conglomerate. For the Los Gatos soil, a typical profile consists of loam from 0 to 39 inches and bedrock from 39 to 49 inches. The depth to a restrictive feature (lithic bedrock) is 24 to 39 inches, and the depth to water table is >80 inches. For the Los Osos soil, a typical

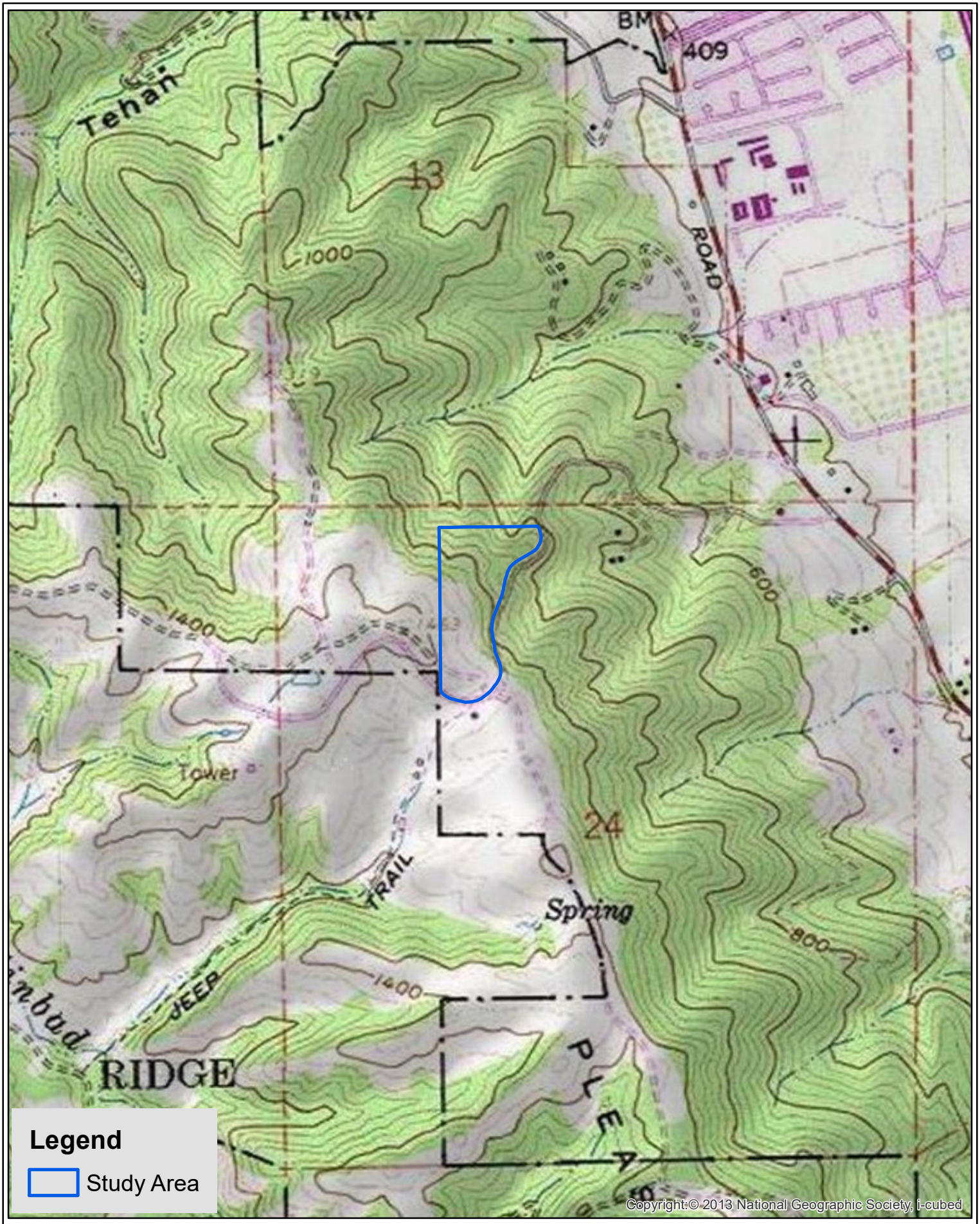

Figure 2. Topographic map of the study area.

Data Source: USGS Dublin 7.5' quad.

Mapscale: 1:12,000

0 300 600 1,200 Feet

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profile consists of silty clay loam from 0 to 30 inches and weathered bedrock from 30 to 40 inches. The depth to a restrictive feature (lithic bedrock) is 24 to 40 inches, and the depth to water table is >80 inches. Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15, is not listed as a hydric soil for Alameda County (NRCS 2022b).

Los Osos loam, seeped variant, 3 to 15 percent slopes, is somewhat poorly drained, occurs in valleys, and is derived from loamy residuum weathered from sandstone and shale. A typical profile consists of loam from 0 to 20 inches, sandy clay loam from 20 to 41 inches, and weathered bedrock from 41 to 45 inches. The depth to a restrictive feature (lithic bedrock) is 18 to 48 inches, and the depth to water table is 24 to 48 inches. Los Osos loam, seeped variant, 3 to 15 percent slopes is listed as a hydric soil for Alameda County when containing unnamed inclusions in depressional landforms (NRCS 2022b).

Millsholm Series soils are Loamy, mixed, superactive, thermic Lithic Haploxerepts. Millsholm silt loam, 30 to 45 percent slopes, eroded, is well drained, occurs on hills, and is derived from residuum weathered from sandstone and shale. A typical profile consists of silt loam from 0 to 6 inches, clay loam from 6 to 16 inches, and unweathered bedrock from 16 to 20 inches. The depth to a restrictive feature (lithic bedrock) is 10 to 20 inches, and the depth to water table is >80 inches. Millsholm silt loam, 30 to 45 percent slopes, eroded, is not listed as a hydric soil for Alameda County (NRCS 2022b).

Soils observed in soil pits on the study area are described in Corps datasheets in Appendix A. A soil map of the study area is included in Appendix B.

4.3 Hydrology

No wetlands, drainages, or other aquatic resources have been mapped on the study area in the USGS 7.5' Dublin topographic quadrangle (USGS 2018; Figure 2), the National Wetlands Inventory (NWI; USFWS 2022; Figure 3), or the National Hydrography Dataset (NHD; USGS 2022). The principal hydrologic sources for the study area are direct precipitation, surface sheet flow and shallow near-surface flow from surrounding uplands, and concentrated flow through five unnamed ephemeral drainages and a roadside ditch along Santos Ranch Road. The ephemeral drainages are unnamed tributaries to Arroyo de la Laguna, an intermittent creek located ~1-mile east of the study area. Arroyo de la Laguna drains southbound to its confluence with Alameda Creek, ~5.3-miles southeast of the study area. Alameda Creek drains generally westbound and discharges into San Francisco Bay, a Traditional Navigable Water (TNW) (USGS 2022).

The three northernmost ephemeral drainages on the study area drain northbound across the study area boundary. Based on topographic contours (Figure 2; USGS 2018) and field observations, the drainages appear to discharge into a larger tributary located offsite, ~1,200 feet north of the study area. The offsite tributary is mapped as a Riverine Wetland in the NWI and as a stream in the USGS 7.5' Dublin topographic quadrangle, and drains eastbound, under Highway 680, and into Arroyo de la Laguna. The remaining two ephemeral drainages, located in the north-central and south-central portions of the study area, drain eastbound into a concrete roadside ditch along Santos Ranch Road, discussed below. All ephemeral drainages observed on the study area contain a bed, bank, and OHWM, and were dry during the

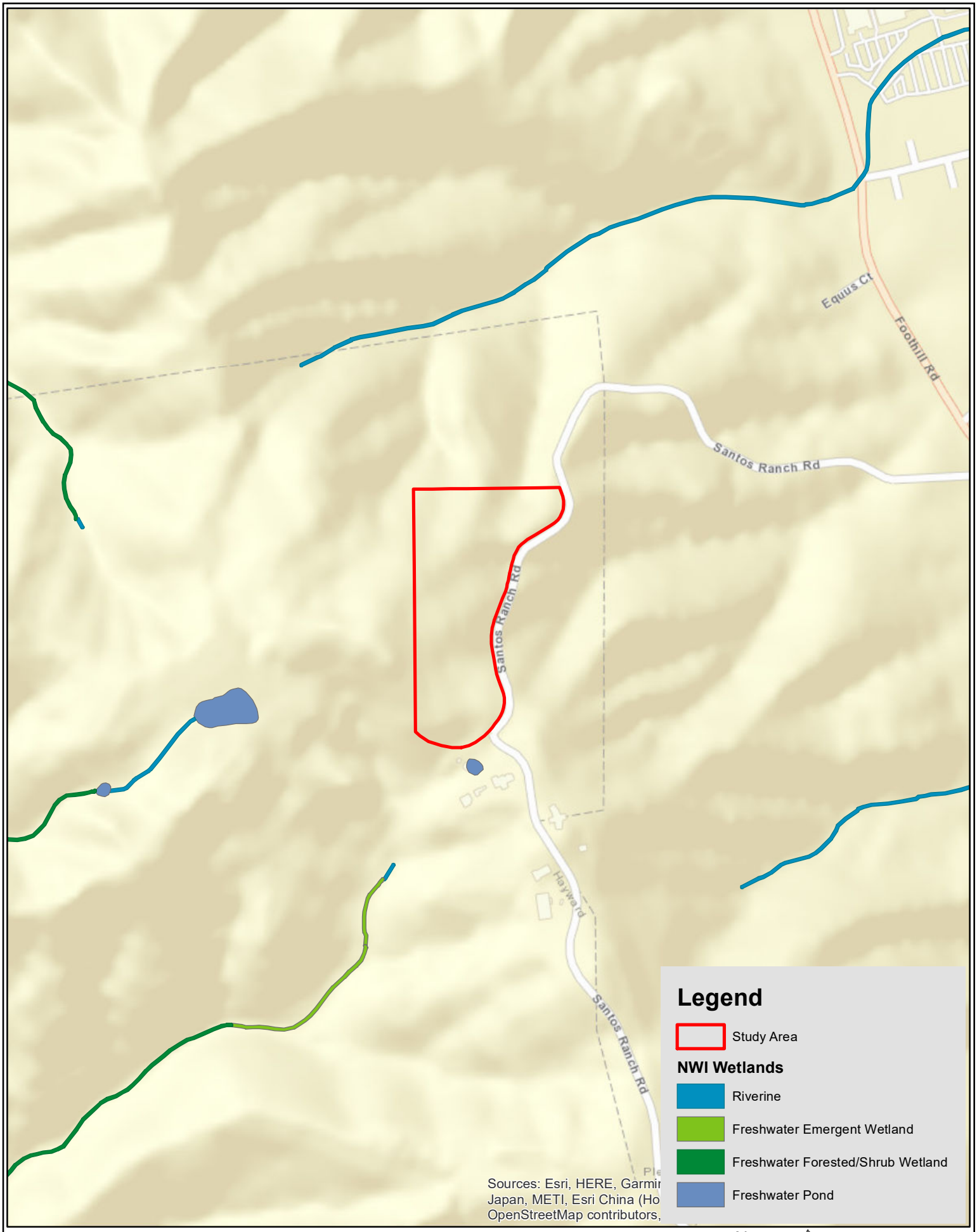

Figure 3. National Wetlands Inventory map of the study area.

Map Date: 9/19/22; Data Source: NWI (USFWS 2022).

Mapscale: 1:8,000

0 300 600 1,200 Feet

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September 21, 2022 delineation.

The roadside ditch, presumably excavated for roadside drainage, is present in the southern portion of the study area along Santos Ranch Road. The ditch supports an earthen bed, bank, and OHWM in the upstream reach in the southern portion of the study area. The ditch drains into a concrete roadside ditch, ~2-3-feet wide, that drains along Santos Ranch Road for ~1,491-feet and into a culvert under the road. The culvert drains offsite, presumably discharging eventually, via storm drain networks, engineered channels, and/or other drainages, into Arroyo de la Laguna. The concrete roadside ditch drains along the eastern study area boundary but is located outside the study area.

A seep is located in the eastern portion of the study area, at the toe of the slope west of Santos Ranch Road. The seep drains into the concrete roadside ditch described above.

5.0 RESULTS

5.1 Aquatic Resources

Aquatic resources delineated on the study area during the September 21, 2022 delineation consist of Potential Jurisdictional Wetlands (supporting positive indicators of all three wetland parameters), Potential Jurisdictional Other Waters (ephemeral drainages which have a bed, bank, and OHWM, but lack one or more of the three wetland parameters), and Roadside Ditches (ditches which have a bed, bank, and OHWM and were apparently excavated for roadside drainage). These features are discussed below, mapped in Figure 4, and summarized in Table 2. Delineation datasheets are included in Appendix A, study area photographs are included in Appendix C, and a list of all plant species observed on the study area (during both the delineation and botanical surveys conducted from April-July 2022 (CRB 2022)), and their wetland indicator status, is included in Appendix D.

5.1.1 Potential Jurisdictional Wetlands

Willow Scrub

Willow Scrub (WS) covers 2,722 ft^2 (0.062-acre) and is located at the toe of a graded slope west of Santos Ranch Road that receives seepage water and surfaced runoff from the adjacent slope (Table 2; Figure 4; Appendix C-1). WS is dominated by hydrophytic vegetation, including a canopy of arroyo willow and red willow, along with occasional big-leaf maple, California bay, and coast live oak. The understory consists of shrubs—including Himalayan blackberry, poison oak, coyote brush, and French broom—as well as occasional hydrophytic herbaceous species including brown-head rush (Sample Point 10a). Hydric soil indicators are present, including Loamy Gleyed Matrix (F2), as well as positive wetland hydrology indicators, including Surface Water (A1), High Water Table (A2), Saturation (A3), Drainage Patterns (B10), and FAC-Neutral Test (D5). WS discharges directly into the concrete roadside ditch that drains into a culvert under Santos Ranch Road (Appendix C-2). Adjacent uplands occur on slopes above the wetland, which are dominated by upland plant species and lack wetland hydrology and hydric soil indicators (Sample Point 10b; Appendix C-3).

Figure 4. Delineation map of the Tolari Santos Ranch Road study area, Hayward, Alameda County (APN 946-3800-4-12).

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Image Date: 5/26/21; Map Date: 9/22/22

Table 2. Aquatic Resources Delineated on the Study Area.

Feature Name	Area (ft^2)	Length (ft)	Ave. Width (ft)	Sample Point	Hydric Soils	Wetland Hydro	Hydro Veg	Cowardin Class	Lat/Lon
Potential Jurisdictional Wetlands									
WS	2,722	N/A	N/A	10a	X	X	X	PFO	37.663374, -121.926096
Potential Jurisdictional Other Waters of the U.S. and/or State									
Ephemeral Drainages									
ED1	1,338	446	3	1		X		R4SB	37.663910, -121.927636
ED2	148	74	2	3		X		R4SB	37.663914, -121.927468
ED3	724	181	4	2		X		R4SB	37.664506, -121.926134
ED4	482	241	2	9		X		R4SB	37.663480, -121.926621
ED5	372	186	2	7		X		R4SB	37.661941, -121.926594
Roadside Ditches									
RD	1,395	465	3	11		X		None	37.660870, -121.927052

5.1.2 Potential Jurisdictional Other Waters

Ephemeral Drainages

Five drainages were observed on the study area that likely support ephemeral hydrology (flowing only after significant rain events) based on indicators observed in the field (Table 2; Figure 4). The ephemeral drainages (ED) are typically 2 to 4-feet wide, with a bed, bank, and OHWM (scour, sediment deposition, bed/banks) along with wetland hydrology indicators, including Riverine Sediment Deposits (B2) and Drainage Patterns (B10), but lack a preponderance of hydrophytic vegetation and hydric soil indicators (Sample Points 1, 2, 3, 7, 9; Appendix C-4 to C-8).

Ephemeral drainages ED1, ED2, and ED3 appear to drain directly to a larger tributary located offsite, ~1,200 feet north of the study area. The offsite tributary is mapped as a Riverine Wetland in the NWI and as a stream in the USGS 7.5' Dublin topographic quadrangle, and drains eastbound, under Highway 680, and into Arroyo de la Laguna. Ephemeral drainages ED4 and ED5 drain into the concrete roadside ditch along Santos Ranch Road, which drains northbound and discharges into a culvert under Santos Ranch Road (Figure 4). ED5 discharges directly into the concrete roadside ditch. ED4 drains into a culvert located at the top of the road cut, which drains downslope and into either the concrete roadside ditch or adjacent culvert inlet.

Earthen Roadside Ditch

An earthen roadside ditch is present on the southern portion of the study area along Santos Ranch Road. The roadside ditch (RD) is ~3-feet wide, with a bed, bank, and OHWM (scour, sediment deposition, bed/banks) along with wetland hydrology indicators, including Riverine

Sediment Deposits (B2) and Drainage Patterns (B10), but lacks a preponderance of hydrophytic vegetation and hydric soil indicators (Sample Point 11; Appendix C-9).

RD appears to have been excavated in uplands for roadside drainage and—based on conditions observed in the field and a review of the NWI, NHD, USGS topographic maps, and other sources—is not a natural tributary to downstream TNW's. However, Santos Ranch Road appears to have been constructed in the 1960s, with the hillside graded as part of road construction, and pre-construction drainage is difficult to determine. RD drains into the concrete roadside ditch mentioned previously (Appendix C-10). The concrete roadside ditch is not located within study area boundaries, but is included on Figure 4 for reference.

Other Potential Aquatic Resources

Other areas were investigated on the study area that could potentially support aquatic resources, such as in slumps, draws, and other concave areas that may collect water from adjacent slopes (Figure 4). However, based on field sampling (Sample Points 4, 5, 6, 8; Appendix C-11 to C-14), these areas lack a bed, bank, and OHWM, as well as positive indicators of the three wetland parameters. Therefore, these areas do not qualify as aquatic resources.

6.0 POTENTIAL CORPS AND OTHER REGULATORY AGENCY JURISDICTION

Aquatic resources delineated on the study area during the September 21, 2022 delineation consist of Potential Jurisdictional Wetlands (supporting positive indicators of all three wetland parameters), Potential Jurisdictional Other Waters (ephemeral drainages which have a bed, bank, and OHWM, but lack one or more of the three wetland parameters), and Roadside Ditches (ditches which have a bed, bank, and OHWM and were apparently excavated for roadside drainage). These features are summarized in Table 2 and are mapped in Figure 4. The potential jurisdictional status of aquatic resources delineated on the study area are discussed below.

6.1 Potential Corps Jurisdiction

On January 23, 2020, the EPA and the Corps finalized the Navigable Waters Protection Rule to define "waters of the U.S." The rule took effect on June 22, 2020. On August 30, 2021, the U.S. District Court for the District of Arizona vacated and remanded the Navigable Waters Protection Rule in the case of *Pascua Yaqui Tribe v. U.S. Environmental Protection Agency.* According to the EPA (USEPA 2022): "*In light of this order, the agencies have halted implementation of the Navigable Waters Protection Rule and are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice. The agencies are working expeditiously to move forward with the rulemakings announced on June 9, 2021, in order to better protect our nation's vital water resources that support public health, environmental protection, agricultural activity, and economic growth. The agencies remain committed to crafting a durable definition of "waters of the United States" that is informed by diverse perspectives and based on an inclusive foundation.*

The agencies are interpreting "waters of the United States" consistent with the pre-2015 regulatory regime until further notice … The term waters of the United States means:

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

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA" (USEPA 2022).

According to guidance present prior to the pre-2015 regulatory regime (USEPA 2008):

"*The agencies will assert jurisdiction over the following waters:*

- *Traditional navigable waters*
- *Wetlands adjacent to traditional navigable waters*
- *Non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months)*
- *Wetlands that directly abut such tributaries*

The agencies will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water:

- *Non-navigable tributaries that are not relatively permanent*

- *Wetlands adjacent to non-navigable tributaries that are not relatively permanent*
- *Wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary*

The agencies generally will not assert jurisdiction over the following features:

- *Swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow)*
- *Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water*

The agencies will apply the significant nexus standard as follows:

- *A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters*
- *Significant nexus includes consideration of hydrologic and ecologic factors"*

The ephemeral drainages ED1-ED5 might qualify for Corps jurisdiction "*based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water"* as "*Non-navigable tributaries that are not relatively permanent*". If the ED1-ED5 channels qualify for Corps jurisdiction, wetland WS, which is located on the flow path along ED4 where it has been culverted at the top of a road cut, may potentially qualify for Corps jurisdiction as "*Wetlands adjacent to non-navigable tributaries that are not relatively permanent."*

The roadside ditch (RD) on the study area is likely exempt from Corps jurisdiction since, according to Corps/EPA guidance: "*The agencies generally will not assert jurisdiction over the following features … Ditches (including roadside ditches) excavated wholly in and draining only uplands and that do not carry a relatively permanent flow of water."*

The regulatory analysis described above is preliminary. Due to recent changes based on Court decisions, regulatory jurisdiction is in flux, and therefore the Corps would need to determine its jurisdiction on the study area based on a verification of this report. Discharge of dredged or fill material within Corps jurisdiction normally requires a permit under Section 404 of the federal CWA. In addition, the Corps, under Section 401 of the federal CWA, is required to meet state water quality regulations prior to granting a Section 404 permit. This is accomplished by application to the local RWQCB for Section 401 certification (or waiver) that requirements have been met.

6.2 Potential Waters of the State

According to the new Procedures (SWRCB 2019), which took effect May 28, 2020: "*The permitting authority shall rely on any wetland area delineation from a final aquatic resource report verified by the U.S. Army Corps of Engineers (Corps) for the purposes of determining the extent of wetland waters of the U.S. A delineation of any wetland areas potentially*

impacted by the project that are not delineated in a final aquatic resource report verified by the Corps shall be performed using the methods described in the three federal documents listed below (collectively referred to as "1987 Manual and Supplements") to determine whether the area meets the state definition of a wetland as defined above. As described in the 1987 Manual and Supplements, an area "lacks vegetation" if it has less than 5 percent areal coverage of plants at the peak of the growing season. The methods shall be modified only to allow for the fact that the lack of vegetation does not preclude the determination of such an area that meets the definition of wetland. Terms as defined in these Procedures shall be used if there is conflict with terms in the 1987 Manual and Supplements."

As described above, the principal difference in the aquatic resource delineation methodology between the Corps and SWRCB/RWQCB is that waters of the State include areas with positive indicators of wetland hydrology and hydric soils, but contain less than 5 percent areal coverage of plants at the peak of the growing season. However, though the remaining delineation methodology is the same under both the federal CWA and new SWRCB/RWQCB Procedures, numerous aquatic resources (such as ephemeral tributaries, some drainage ditches, and isolated wetlands), which may be exempt from federal jurisdiction are currently considered waters of the State under the Porter-Cologne Water Quality Control Act and/or the Procedures that took effect May 28, 2020.

Section IV.D of the Procedures lists activities and areas excluded from the application of the Procedures for regulation of discharges of dredged or fill material to waters of the State (pages 13-15). In general, activities excluded from the Procedures include: certain farming activities; suction dredge mining; and routine and emergency operation and maintenance activities conducted by public agencies, water utilities, or special districts that result in the discharge of dredged or fill material to artificial, existing waters of the State. Areas excluded from the Procedures include wetlands that are prior converted farmland; rice cultivation; and certain ditches that are used for agricultural purposes.

Ephemeral drainages ED1-ED5 and wetland WS (Figure 4; Table 2) would likely be considered "waters of the State", and the discharge of fill material to these aquatic resources would be subject to the Procedures. Roadside ditch RD could potentially qualify as "waters of the State" since the Water Code defines "waters of the State" broadly to include *"any surface water or groundwater, including saline waters, within the boundaries of the state"* and roadside ditches (unlike some agricultural ditches) are not specifically excluded from the application of the Procedures. However, as with the Corps, the SWRCB/RWQCB would need to make the final determination regarding aquatic resources under its jurisdiction on the study area.

6.3 California Department of Fish and Wildlife and Local Agency Jurisdiction

Streams, rivers, and lakes up to the top-of-bank or dripline of riparian vegetation (whichever is greater) also fall within the jurisdiction of the California Department of Fish and Wildlife (CDFW). Work within CDFW jurisdiction typically requires a Streambed Alteration Agreement. In addition, aquatic resources could fall under the jurisdiction of local agencies which could have permit, setback, or other requirements for work conducted in or adjacent to aquatic resources. Neither CDFW nor local agency jurisdiction was determined as part of this aquatic resource delineation. The potential CDFW/local agency jurisdiction of aquatic

resources on the study area should be evaluated during a biological resources assessment or similar study, in conjunction with this aquatic resource delineation report.

7.0 LIMITATIONS

The results of this delineation are preliminary and based on conditions observed during the field visit, and the wetland scientist's interpretation of those conditions and Corps guidelines. Plants that are dominant at the time of this delineation may shift in importance depending on rainfall conditions and season, or population shifts over time. Wetlands and other waters that meet the technical parameters described in this report are presented as "potential jurisdictional wetlands/other waters." Ultimate authority over the jurisdictional nature of all aquatic features within the study area resides with the Corps and other regulatory agencies, as appropriate. The Corps makes the final determination (subject to administrative appeal and judicial review) about the location and extent of wetlands and other waters of the U.S. on the study area. This report does not constitute authorization to conduct the project, and the report should be sent to the Corps for verification, and any required permits obtained, prior to any work conducted in jurisdictional waters. In addition, California state agencies such as the SWRCB/RWQCB and CDFW, as well as local agencies, may also have jurisdiction over wetlands and other waters on the study area, and permits and/or other approvals should be obtained from these agencies as needed.

8.0 REFERENCES

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APPENDIX A

CORPS DELINEATION DATA FORMS

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 1

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): ephemeral drainage Local relief (concave, convex, none): concave Slope (%): 60

Subregion (LRR): LRR C Lat: 37.663702 Long: -121.927788 Datum: NAD 83

Soil Map Unit Name: Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. Located in an ephemeral drainage channel, ~3-feet wide, with a bed, bank, and OHWM.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus agrifolia*	30	Yes	UPL
2. *Umbellularia californica*	30	Yes	FAC
3.			
4.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	20	Yes	UPL
2. *Carduus pycnocephalus*	10	Yes	UPL
3. *Bromus diandrus*	10	Yes	UPL
4. *Torilis arvensis*	5	No	UPL
5.			
6.			
7.			
8.			
	45	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 20.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	75	x 5 =	375
Column Totals:	105 (A)		465 (B)

Prevalence Index = B/A = 4.43

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Trees mostly overhanging and not rooted in plot. Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 1

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					Loamy/Clayey	loam with rock fragments

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in an ephemeral drainage channel, ~3-feet wide, with a bed, bank, and OHWM (scour, bed/banks, sediment deposits). Drains northbound off the study area.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 2

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): ephemeral drainage Local relief (concave, convex, none): concave Slope (%): 70

Subregion (LRR): LRR C Lat: 37.664673 Long: -121.925992 Datum: NAD 83

Soil Map Unit Name: Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Seasonal hydrology naturally problematic. Located in ephemeral drainage channel, ~4-feet wide, with bed, bank, and OHWM.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____	=Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. *Toxicodendron diversilobum*	30	Yes	FACU
2.			
3.			
4.			
5.			
	30	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Carduus pycnocephalus*	40	Yes	UPL
2. *Bromus diandrus*	5	No	UPL
3. *Dryopteris arguta*	5	No	UPL
4. *Avena barbata*	5	No	UPL
5.			
6.			
7.			
8.			
	55	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	____	=Total Cover	

% Bare Ground in Herb Stratum 30 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	55	x 5 =	275
Column Totals:	85 (A)		395 (B)

Prevalence Index = B/A = 4.65

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 2

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 2/2	100					Loamy/Clayey	loam with rock fragments

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in ephemeral drainage channel, ~4-feet wide, with bed, bank, and OHWM (scour, sediment deposits, bed/banks). Drains north off the study area.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 3

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): ephemeral drainage Local relief (concave, convex, none): concave Slope (%): 70

Subregion (LRR): LRR C Lat: 37.663828 Long: -121.927418 Datum: NAD 83

Soil Map Unit Name: Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, and OHWM.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Umbellularia californica*	30	Yes	FAC
2. *Quercus agrifolia*	30	Yes	UPL
3.			
4.			
	60	=Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Carduus pycnocephalus*	30	Yes	UPL
2. *Cynosurus echinatus*	20	Yes	UPL
3. *Dryopteris arguta*	5	No	UPL
4. *Avena barbata*	5	No	UPL
5.			
6.			
7.			
8.			
	60	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 25.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	90	x 5 =	450
Column Totals:	120 (A)		540 (B)

Prevalence Index = B/A = 4.50

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 3

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	clay loam w/ rock fragments

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, and OHWM (scour, sediment deposits, bed/banks). Drains northbound and discharges into drainage ED1.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 4

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): slump/draw Local relief (concave, convex, none): concave Slope (%): 35

Subregion (LRR): LRR C Lat: 37.663110 Long: -121.927274 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Seasonal hydrology naturally problematic. No wetland parameters met.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Festuca perennis*	60	Yes	FAC
2. *Avena barbata*	25	Yes	UPL
3. *Bromus diandrus*	5	No	UPL
4. *Vicia sativa*	5	No	FACU
5. *Epilobium brachycarpum*	2	No	FAC
6. *Trifolium hirtum*	2	No	UPL
7.			
8.			
	99 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 3 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 50.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	62	x 3 =	186
FACU species	5	x 4 =	20
UPL species	32	x 5 =	160
Column Totals:	99 (A)		366 (B)

Prevalence Index = B/A = 3.70

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 4

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Loamy/Clayey	loam
4-16	10YR 4/3	100					Loamy/Clayey	clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in concave slump/draw that appears to receive more hydrologic input compared to surrounding slopes and drains toward ephemeral drainage downslope. However, no surface or sub-surface wetland hydrology indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 5

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): slump Local relief (concave, convex, none): concave Slope (%): 25

Subregion (LRR): LRR C Lat: 37.662268 Long: -121.926977 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	50	Yes	UPL
2. *Trifolium angustifolium*	20	Yes	UPL
3. *Bromus hordeaceus*	20	Yes	FACU
4. *Festuca perennis*	10	No	FAC
5. *Vicia sativa*	5	No	FACU
6.			
7.			
8.			
	105 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	10	x 3 =	30
FACU species	25	x 4 =	100
UPL species	70	x 5 =	350
Column Totals:	105 (A)		480 (B)

Prevalence Index = B/A = 4.57

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 5

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/3	100					Loamy/Clayey	loam
4-16	10YR 3/3	95	10YR 4/6	5	C	PL/M	Loamy/Clayey	clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:

Redoximorphic features present, but low chroma matrix lacking. Located in slump that drains into a culvert, so indicator F8 presumably not applicable. Due to topographic position, receives hydrologic input from surrounding slopes, but hydrophytic vegetation and wetland hydrology indicators lacking.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

Located in slump with marginal, slumpy channel, but no strong bed/bank or OHWM. Drains into culvert, but lacks wetland hyrology indicators.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 6

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): draw Local relief (concave, convex, none): concave Slope (%): 15

Subregion (LRR): LRR C Lat: 37.661769 Long: -121.927016 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Seasonal hydrology naturally problematic. No wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	70	Yes	UPL
2. *Bromus hordeaceus*	10	No	FACU
3. *Festuca perennis*	10	No	FAC
4. *Hordeum marinum*	5	No	FAC
5. *Achillea millefolium*	1	No	FACU
6.			
7.			
8.			
	96 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	15	x 3 =	45
FACU species	11	x 4 =	44
UPL species	70	x 5 =	350
Column Totals:	96 (A)		439 (B)

Prevalence Index = B/A = 4.57

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%

____ Prevalence Index is ≤3.0[1]

____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 6

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 3/3	100					Loamy/Clayey	loam
4-16	10YR 3/3	100					Loamy/Clayey	clay loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in draw above ephemeral drainage. However, no bed/bank, OHWM, or wetland hydrology indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 7

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): ephemeral drainage Local relief (concave, convex, none): concave Slope (%): 20

Subregion (LRR): LRR C Lat: 37.661806 Long: -121.926805 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes X	No ____	

Remarks:
Seasonal hydrology naturally problematic. Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, and OHWM.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	____ =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Elymus caput-medusae*	50	Yes	UPL
2. *Carduus pycnocephalus*	20	Yes	UPL
3. *Bromus hordeaceus*	10	No	FACU
4. *Festuca perennis*	5	No	FAC
5. *Cynosurus echinatus*	5	No	UPL
6. *Avena barbata*	5	No	UPL
7. *Bromus diandrus*	5	No	UPL
8. *Aira caryophyllea*	1	No	FACU
	101 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 5 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	5	x 3 =	15
FACU species	11	x 4 =	44
UPL species	85	x 5 =	425
Column Totals:	101 (A)		484 (B)

Prevalence Index = B/A = 4.79

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%

____ Prevalence Index is ≤3.0[1]

____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 7

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Loamy/Clayey	loam
3-16	10YR 4/3	100					Loamy/Clayey	clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, OHWM (scour, sediment deposits). Drains eastbound into roadside ditch.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 8

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): shallow basin Local relief (concave, convex, none): concave Slope (%): 1

Subregion (LRR): LRR C Lat: 37.662840 Long: -121.927603 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes ____ No X

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. Located in basin at toe of slope with hydric soil indicators, but strongly upland vegetation and no wetland hydrology indicators observed.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	50	Yes	UPL
2. *Carduus pycnocephalus*	30	Yes	UPL
3. *Festuca perennis*	5	No	FAC
4. *Bromus diandrus*	5	No	UPL
5. *Elymus caput-medusae*	5	No	UPL
6. *Bromus hordeaceus*	5	No	FACU
7. *Rumex pulcher*	1	No	FAC
8.			
	101 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 2 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 2 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	6	x 3 =	18
FACU species	5	x 4 =	20
UPL species	90	x 5 =	450
Column Totals:	101 (A)		488 (B)

Prevalence Index = B/A = 4.83

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 8

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 4/3	100					Loamy/Clayey	loam
3-16	10YR 4/3	95	10YR 5/6	5	C	PL/M	Loamy/Clayey	clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- X Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:

Located in basin with hydric soil indicators observed. However, no wetland hydrology or hydrophytic vegetation present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

None

Remarks:

Located in basin at toe of slope with no wetland hydrology indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 9

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): ephemeral drainage Local relief (concave, convex, none): concave Slope (%): 10

Subregion (LRR): LRR C Lat: 37.663336 Long: -121.926950 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, and OHWM.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Quercus agrifolia*	50	Yes	UPL
2.			
3.			
4.			
	50	=Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
		=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Bromus diandrus*	20	Yes	UPL
2. *Cynosurus echinatus*	20	Yes	UPL
3. *Avena barbata*	15	No	UPL
4. *Carduus pycnocephalus*	15	No	UPL
5. *Brachypodium distachyon*	5	No	UPL
6. *Pentagramma triangularis*	1	No	UPL
7. *Elymus glaucus*	1	No	FACU
8.			
	77	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	1	x 4 =	4
UPL species	126	x 5 =	630
Column Totals:	127 (A)		634 (B)

Prevalence Index = B/A = 4.99

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 9

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/3	100					Loamy/Clayey	rocky loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: ___

Depth (inches): ___

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in ephemeral drainage channel, ~2-feet wide, with bed, bank, OHWM (scour, sediment deposits). Drains eastbound into culvert and then roadside ditch.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 10a

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): toe of slope Local relief (concave, convex, none): none Slope (%): 30

Subregion (LRR): LRR C Lat: 37.663395 Long: -121.926071 Datum: NAD 83

Soil Map Unit Name: Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes X No ____
Hydric Soil Present? Yes X No ____
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** X **No** ____

Remarks:
Seasonal hydrology naturally problematic. Located in seep wetland that drains into roadside ditch.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1. *Salix laevigata*	80	Yes	FACW
2.			
3.			
4.			
	80	=Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. *Toxicodendron diversilobum*	15	Yes	FACU
2.			
3.			
4.			
5.			
	15	=Total Cover	
Herb Stratum (Plot size: 5')			
1. *Juncus phaeocephalus*	10	Yes	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10	=Total Cover	
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
		=Total Cover	

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)

Total Number of Dominant Species Across All Strata: 3 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	90	x 2 =	180
FAC species	0	x 3 =	0
FACU species	15	x 4 =	60
UPL species	0	x 5 =	0
Column Totals:	105 (A)		240 (B)

Prevalence Index = B/A = 2.29

Hydrophytic Vegetation Indicators:

X Dominance Test is >50%
X Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** X **No** ____

Remarks:
Sample point dominated by hydrophytic vegetation.

SOIL

Sampling Point: 10a

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	N 4/	85	10YR 5/6	15	C	PL/M	Loamy/Clayey	clay

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- X Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** X **No** ___

Remarks:
Hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- X Surface Water (A1)
- X High Water Table (A2)
- X Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- X FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes X	No ___	Depth (inches): 1		
Water Table Present?	Yes X	No ___	Depth (inches): 0		
Saturation Present? (includes capillary fringe)	Yes X	No ___	Depth (inches): 0	**Wetland Hydrology Present?**	**Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located at toe of slope that receives groundwater seepage as well as surface runoff from adjacent slope. Discharges directly into concrete roadside ditch along Santos Ranch Road, which drains into culvert under road.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 10b

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): slope Local relief (concave, convex, none): convex Slope (%): 60

Subregion (LRR): LRR C Lat: 37.663542 Long: -121.926119 Datum: NAD 83

Soil Map Unit Name: Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15 NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present?	Yes ____	No X	**Is the Sampled Area within a Wetland?** **Yes** ____ **No** X
Hydric Soil Present?	Yes ____	No X	
Wetland Hydrology Present?	Yes ____	No X	

Remarks:
Seasonal hydrology naturally problematic. Located on slope above wetland. No wetland parameters met.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	____ =Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1. *Baccharis pilularis*	30	Yes	UPL
2. *Diplacus aurantiacus*	30	Yes	FACU
3. *Genista monspessulana*	20	Yes	UPL
4.			
5.			
	80 =Total Cover		
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	10	Yes	UPL
2. *Melica sp.*	5	Yes	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	15 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	____ =Total Cover		

% Bare Ground in Herb Stratum 10 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 5 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	0	x 3 =	0
FACU species	30	x 4 =	120
UPL species	65	x 5 =	325
Column Totals:	95 (A)		445 (B)

Prevalence Index = B/A = 4.68

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%
___ Prevalence Index is ≤3.0[1]
___ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
___ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 10b

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR 3/2	100					Loamy/Clayey	loam

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- ___ Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? Yes ___ No X Depth (inches): ___
(includes capillary fringe)

Wetland Hydrology Present? **Yes** ___ **No** X

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located on slope above wetland. No wetland hydrology indicators observed.

U.S. Army Corps of Engineers
WETLAND DETERMINATION DATA SHEET – Arid West Region
See ERDC/EL TR-08-28; the proponent agency is CECW-CO-R

OMB Control #: 0710-0024, Exp: 11/30/2024
Requirement Control Symbol EXEMPT:
(Authority: AR 335-15, paragraph 5-2a)

Project/Site: Tolari Santos Ranch Road, (APN: 946-3800-4-12) City/County: Hayward, Alameda County Sampling Date: 9/21/22

Applicant/Owner: Geno Tolari State: CA Sampling Point: 11

Investigator(s): T. Mahony, Coast Range Biological LLC Section, Township, Range: S24 T3S R1W, Mount Diablo Meridian

Landform (hillside, terrace, etc.): roadside ditch Local relief (concave, convex, none): concave Slope (%): 10

Subregion (LRR): LRR C Lat: 37.660885 Long: -121.927353 Datum: NAD 83

Soil Map Unit Name: Millsholm silt loam, 30 to 45 percent slopes, eroded NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No ____ (If no, explain in Remarks.)

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes X No ____

Are Vegetation ____, Soil ____, or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

SUMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, etc.

Hydrophytic Vegetation Present? Yes ____ No X
Hydric Soil Present? Yes ____ No X
Wetland Hydrology Present? Yes X No ____

Is the Sampled Area within a Wetland? **Yes** ____ **No** X

Remarks:
Seasonal hydrology naturally problematic. Located in roadside ditch, ~3-feet wide, with bed, bank, and OHWM and ephemeral hydrology.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 10')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	=Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	=Total Cover		
Herb Stratum (Plot size: 5')			
1. *Avena barbata*	60	Yes	UPL
2. *Grindelia camporum*	10	No	FACW
3. *Trichostema lanceolatum*	10	No	FACU
4. *Festuca perennis*	5	No	FAC
5.			
6.			
7.			
8.			
	85 =Total Cover		
Woody Vine Stratum (Plot size: 5')			
1.			
2.			
	=Total Cover		

% Bare Ground in Herb Stratum 20 % Cover of Biotic Crust ____

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)

Total Number of Dominant Species Across All Strata: 1 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 0.0% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	10	x 2 =	20
FAC species	5	x 3 =	15
FACU species	10	x 4 =	40
UPL species	60	x 5 =	300
Column Totals:	85 (A)		375 (B)

Prevalence Index = B/A = 4.41

Hydrophytic Vegetation Indicators:

____ Dominance Test is >50%
____ Prevalence Index is ≤3.0[1]
____ Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present? **Yes** ____ **No** X

Remarks:
Sample point not dominated by hydrophytic vegetation.

SOIL

Sampling Point: 11

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3	100					Loamy/Clayey	loam with abundant rock fragments

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, CS=Covered or Coated Sand Grains. [2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) **(LRR C)**
- ___ 1 cm Muck (A9) **(LRR D)**
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)

Indicators for Problematic Hydric Soils[3]:

- ___ 1 cm Muck (A9) **(LRR C)**
- ___ 2 cm Muck (A10) **(LRR B)**
- ___ Iron-Manganese Masses (F12) **(LRR D)**
- ___ Reduced Vertic (F18)
- ___ Red Parent Material (F21)
- ___ Very Shallow Dark Surface (F22)
- ___ Other (Explain in Remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if observed):

Type: bedrock

Depth (inches): 8

Hydric Soil Present? **Yes** ___ **No** X

Remarks:
No hydric soil indicators observed.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- ___ Saturation (A3)
- ___ Water Marks (B1) **(Nonriverine)**
- ___ Sediment Deposits (B2) **(Nonriverine)**
- ___ Drift Deposits (B3) **(Nonriverine)**
- ___ Surface Soil Cracks (B6)
- ___ Inundation Visible on Aerial Imagery (B7)
- ___ Water-Stained Leaves (B9)
- ___ Salt Crust (B11)
- ___ Biotic Crust (B12)
- ___ Aquatic Invertebrates (B13)
- ___ Hydrogen Sulfide Odor (C1)
- ___ Oxidized Rhizospheres on Living Roots (C3)
- ___ Presence of Reduced Iron (C4)
- ___ Recent Iron Reduction in Tilled Soils (C6)
- ___ Thin Muck Surface (C7)
- ___ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ___ Water Marks (B1) **(Riverine)**
- X Sediment Deposits (B2) **(Riverine)**
- ___ Drift Deposits (B3) **(Riverine)**
- X Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes ___	No X	Depth (inches): ___
Water Table Present?	Yes ___	No X	Depth (inches): ___
Saturation Present? (includes capillary fringe)	Yes ___	No X	Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:
None

Remarks:
Located in roadside ditch, ~3-feet wide, with bed, bank, and OHWM (scour, sediment deposits) and ephemeral hydrology. Drains along Santos Ranch Road and into concrete roadside ditch located off the study area.

APPENDIX B

SOIL MAP OF THE STUDY AREA

Soil Map—Alameda Area, California
(SantosRanchRd_studyarea)

Map Scale: 1:2,530 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 35 70 140 210

Feet: 0 100 200 400 600

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 10N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:20,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Alameda Area, California
Survey Area Data: Version 15, Sep 9, 2021

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 9, 2022—Mar 11, 2022

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
LpF2	Los Gatos-Los Osos complex, 30 to 75 percent slopes, eroded, MLRA 15	8.0	47.1%
LsC	Los Osos loam, seeped variant, 3 to 15 percent slopes	0.6	3.8%
MhE2	Millsholm silt loam, 30 to 45 percent slopes, eroded	8.3	49.1%
Totals for Area of Interest		**17.0**	**100.0%**

APPENDIX C

PHOTOGRAPHS OF THE STUDY AREA

Appendix C-1. Willow Scrub wetland (WS) at Sample Point 10a.

Appendix C-2. Concrete roadside ditch along Santos Ranch Road, below WS, with culvert inlet downstream in upper portion of photo, looking downstream (north).

Appendix C-3. Upland slope above WS at Sample Point 10b.

Appendix C-4. Ephemeral drainage ED1 at Sample Point 1, looking downstream.

Appendix C-5. Ephemeral drainage ED2 at Sample Point 3, looking downstream.

Appendix C-6. Ephemeral drainage ED3 at Sample Point 2, looking upstream.

Appendix C-7. Ephemeral drainage ED4 at Sample Point 9, looking downstream.

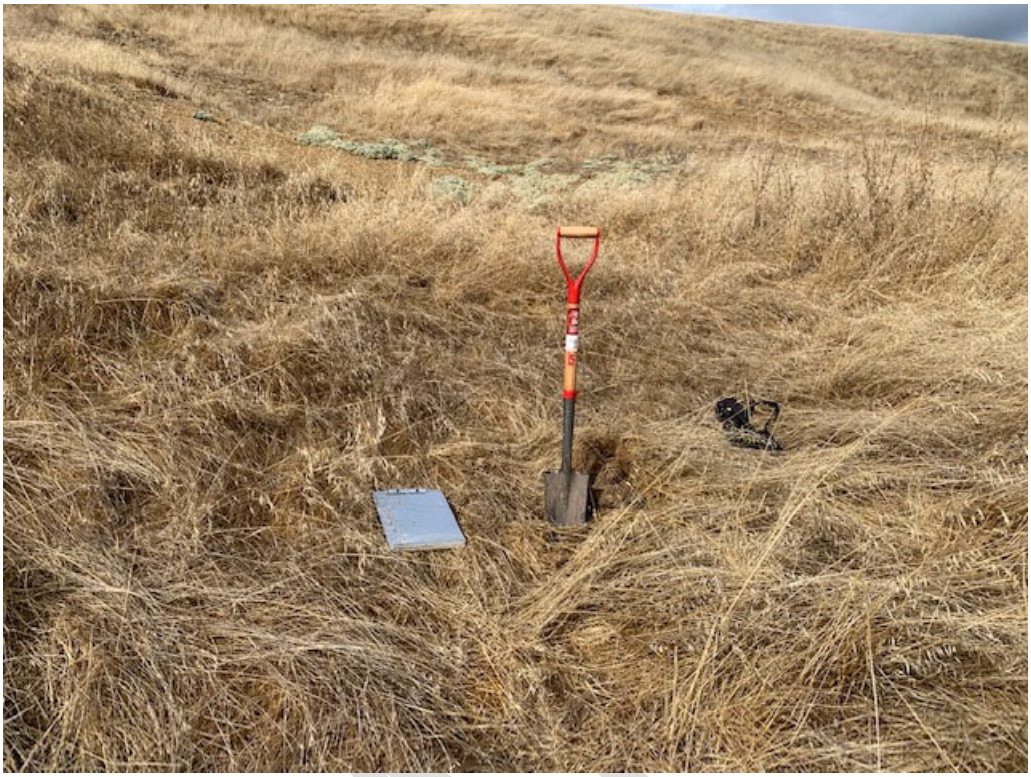
Appendix C-8. Ephemeral drainage ED5 at Sample Point 7, looking downstream.

Appendix C-9. Roadside ditch (RD) at Sample Point 11, looking upstream.

Appendix C-10. Concrete roadside ditch along Santos Ranch Road, located off the study area, looking downstream (north).

Appendix C-11. Sample Point 4 in slump/draw above ED4, looking upslope (west).

Appendix C-12. Sample Point 5 in slump/draw lacking bed, bank, and OHWM and positive indicators of all the three wetland parameters, looking upslope (west).



Appendix C-13. Sample Point 6 in draw upslope of ED5, lacking bed/bank/OHWM as well as positive indicators of all three wetland parameters, looking upslope (west).

Appendix C-14. Sample Point 8 in shallow basin, lacking positive indicators of all three wetland parameters, looking south.

APPENDIX D

PLANT SPECIES OBSERVED ON THE STUDY AREA AND THEIR WETLAND INDICATOR STATUS

Appendix D. Plant species observed on the study area on April 6, June 6, July 13, and September 21, 2022 and their wetland indicator status.

Scientific Name	Common Name	Wetland Indicator Status (USACE 2020)
Acer macrophyllum	big-leaf maple	FAC
Achillea millefolium	yarrow	FACU
Achyrachaena mollis	blow-wives	FAC
Acmispon americanus var. *americanus*	Spanish clover	UPL
Acmispon glaber	deerweed	UPL
Acmispon strigosus	strigose trefoil	UPL
Acmispon wrangelianus	California lotus	UPL
Adiantum jordanii	California maidenhair	FAC
Aesculus californica	California buckeye	UPL
*Aira caryophyllea**	silver hair grass	FACU
Amsinckia menziesii	fiddleneck	UPL
*Anthriscus caucalis**	bur-chervil	UPL
Artemisia californica	California sagebrush	UPL
Asclepias fascicularis	narrow-leaved milkweed	FAC
*Avena barbata**	slender wild oat	UPL
*Avena fatua**	wild oat	UPL
Baccharis pilularis subsp. *consanguinea*	coyote brush	UPL
*Brachypodium distachyon**	false brome	UPL
*Briza minor**	little quaking grass	FAC
Brodiaea elegans	elegant brodiaea	FACU
*Bromus diandrus**	ripgut brome	UPL
*Bromus hordeaceus**	soft chess	FACU
*Bromus madritensis**	Spanish brome	UPL
*Bromus rubens**	red brome	UPL
Bromus sitchensis var. *carinatus*	California brome	UPL
Calandrinia menziesii	redmaids	UPL
Calochortus albus	white globe lily	UPL
Calochortus luteus	yellow mariposa	UPL
Calystegia subacaulis	hill morning glory	UPL
Cardamine californica	milk maids	UPL
Cardamine oligosperma	bitter cress	FAC
*Carduus pycnocephalus**	Italian thistle	UPL
*Carduus tenuiflorus**	plumeless thistle	UPL
Castilleja attenuata	valley tassels	UPL
*Centaurea solstitialis**	yellow star-thistle	UPL
Centromadia fitchii	spikeweed	FACU
*Cerastium glomeratum**	mouse-eared chickweed	UPL
Chlorogalum pomeridianum	soap plant	UPL
Clarkia affinis	chaparral clarkia	UPL
Clarkia purpurea var. *quadrivulnera*	wine cup clarkia	UPL
Claytonia perfoliata subsp. *perfoliata*	miner's lettuce	FAC
Collinsia heterophylla var. *heterophylla*	Chinese houses	UPL
*Convolvulus arvensis**	field bindweed	UPL
Corethrogyne filaginifolia	common sand aster	UPL
*Crepis capillaris**	smooth hawksbeard	FACU

Scientific Name	Common Name	Wetland Indicator Status (USACE 2020)
Croton setiger	turkey-mullein	UPL
Cynoglossum grande	hound's tongue	UPL
*Cynosurus echinatus**	hedgehog dogtail	UPL
*Dactylis glomerata**	orchard grass	FACU
Daucus pusillus	wild carrot	UPL
Diplacus aurantiacus	sticky monkeyflower	FACU
Dipterostemon capitatus	blue dicks	FACU
*Dittrichia graveolens**	stinkwort	UPL
Drymocallis glandulosa subsp. *wrangelliana*	sticky cinquefoil	FAC
Dryopteris arguta	wood fern	UPL
*Elymus caput-medusae**	Medusa head	UPL
Elymus glaucus	blue wildrye	FACU
Elymus multisetus	big squirreltail	UPL
Elymus triticoides	creeping wildrye	FAC
Epilobium brachycarpum	autumn willowherb	FAC
Epilobium canum subsp. *canum*	California fuchsia	UPL
Eriogonum nudum var. *auriculatum*	ear-shaped wild buckwheat	UPL
*Erodium botrys**	filaree	FACU
*Erodium cicutarium**	redstem filaree	UPL
*Erodium moschatum**	whitestem filaree	UPL
Eschscholzia californica	California poppy	UPL
*Euphorbia peplus**	petty spurge	UPL
Eurybia radulina	roughleaf aster	UPL
*Festuca bromoides**	brome fescue	FAC
Festuca microstachys	small fescue	UPL
*Festuca myuros**	rattail fescue	FACU
*Festuca perennis**	Italian ryegrass	FAC
*Foeniculum vulgare**	fennel	UPL
Frangula californica	California coffeeberry	UPL
Galium aparine	goose grass	FACU
Galium porrigens var. *porrigens*	climbing bedstraw	UPL
*Genista monspessulana**	French broom	UPL
*Geranium dissectum**	cutleaf geranium	UPL
*Geranium molle**	dove's foot geranium	UPL
Grindelia camporum	gum plant	FACW
*Hirschfeldia incana**	summer mustard	UPL
Holodiscus discolor	oceanspray	FACU
Hordeum marinum subsp. *gussoneanum**	Mediterranean barley	FAC
Hordeum murinum subsp. *leporinum**	barley	FACU
*Hypochaeris glabra**	smooth cat's ear	UPL
Juncus occidentalis	western rush	FACW
Juncus patens	spreading rush	FACW
Juncus phaeocephalus	brown-head rush	FACW
Koeleria macrantha	junegrass	UPL
*Lactuca serriola**	prickly lettuce	FACU

Scientific Name	Common Name	Wetland Indicator Status (USACE 2020)
Lagophylla ramosissima	common hareleaf	UPL
*Lamarckia aurea**	goldentop	FACU
Lathyrus vestitus	wild pea	UPL
Lepidium nitidum	shining peppergrass	FAC
Lithophragma affine	woodland star	UPL
*Logfia gallica**	narrow-leaved cottonrose	UPL
Lupinus albifrons var. *albifrons*	silver bush lupine	UPL
Lupinus bicolor	miniature lupine	UPL
Lupinus succulentus	arroyo lupine	UPL
Luzula comosa	wood rush	FAC
*Lysimachia arvensis**	scarlet pimpernel	FAC
Madia elegans	common madia	UPL
Madia gracilis	slender tarweed	UPL
Marah fabacea	California man-root	UPL
*Medicago polymorpha**	bur clover	FACU
Melica californica	California melicgrass	UPL
Melica imperfecta	little California melica	UPL
Micranthes californica	California saxifrage	FACW
Micropus californicus	Q-tips	FACU
Monardella villosa subsp. *villosa*	coyote mint	UPL
Navarretia pubescens	downy pincushion plant	UPL
Navarretia squarrosa	skunkweed	FACU
Nemophila pedunculata	littlefoot nemophila	FAC
Oemleria cerasiformis	oso berry	FACU
*Oxalis pes-caprae**	Bermuda buttercup	UPL
Pellaea andromedifolia	coffee fern	UPL
Pentagramma triangularis	goldback fern	UPL
Perideridia kelloggii	Kellogg's yampah	UPL
Phacelia imbricata var. *imbricata*	imbricate scorpionweed	UPL
Plagiobothrys nothofulvus	rusty popcornflower	FAC
Plantago erecta	dwarf plantain	UPL
Plectritis ciliosa	long-spurred plectritis	FACU
*Poa annua**	annual bluegrass	FAC
Poa secunda	Nevada bluegrass	FACU
Pogogyne serpylloides	thyme-leaf pogogyne	FACW
Polypodium californicum	California polypody	UPL
Pseudognaphalium californicum	California cudweed	UPL
*Pseudognaphalium luteoalbum**	annual cudweed	FAC
Pterostegia drymarioides	woodland threadstem	UPL
Quercus agrifolia	coast live oak	UPL
Quercus kelloggii	California black oak	UPL
Quercus lobata	valley oak	FACU
Ranunculus californicus	California buttercup	FACU
Ranunculus hebecarpus	downy buttercup	UPL
*Rubus armeniacus**	Himalayan blackberry	FAC
*Rumex acetosella**	sheep sorrel	FACU
*Rumex pulcher**	fiddle dock	FAC
Rupertia physodes	Rupert's scruf-pea	UPL

Scientific Name	Common Name	Wetland Indicator Status (USACE 2020)
Salix laevigata	red willow	FACW
Salix lasiolepis	arroyo willow	FACW
Sambucus nigra	blue elderberry	FACU
Sanicula bipinnata	poison sanicle	UPL
Sanicula bipinnatifida	purple sanicle	UPL
Sanicula crassicaulis	Pacific snakeroot	UPL
*Scandix pecten-veneris**	shepherd's needle	UPL
Scrophularia californica	California figwort	FAC
*Senecio vulgaris**	common groundsel	FACU
*Sherardia arvensis**	field madder	UPL
*Silybum marianum**	milk thistle	UPL
Sisyrinchium bellum	western blue-eyed-grass	FACW
Solidago velutina subsp. *californica*	California goldenrod	UPL
Sonchus asper subsp. *asper**	prickly sow thistle	FAC
*Stellaria media**	common chickweed	FACU
Stipa pulchra	purple needlegrass	UPL
Symphoricarpos mollis	creeping snowberry	FACU
Tauschia hartwegii	Hartweg's tauschia	UPL
Thysanocarpus curvipes	lacepod	UPL
*Torilis arvensis**	field hedge parsley	UPL
Toxicodendron diversilobum	poison oak	FACU
Toxicoscordion sp.	death camas	
Trichostema lanceolatum	vinegar weed	FACU
Trifolium albopurpureum	rancheria clover	FACU
*Trifolium angustifolium**	narrow leaf clover	UPL
Trifolium bifidum var. *decipiens*	deceptive clover	UPL
Trifolium ciliolatum	foothill clover	UPL
*Trifolium dubium**	little hop clover	UPL
*Trifolium glomeratum**	clustered clover	UPL
*Trifolium hirtum**	rose clover	UPL
*Trifolium subterraneum**	subterranean clover	UPL
Trifolium willdenovii	tomcat clover	FACW
Triteleia laxa	Ithuriel's spear	UPL
Umbellularia californica	California bay	FAC
Uropappus lindleyi	Lindley's silverpuffs	UPL
*Vicia sativa**	vetch	FACU
*Vicia villosa**	hairy vetch	UPL
Wyethia angustifolia	narrowleaf mules ears	FACU
Wyethia glabra	smooth mules ears	UPL
* = non-native species		