

Appendix D

Wetland and Habitats Delineation

**Figure 1.
Site Plan**

Reclamation Plan
Rockaway Quarry Reclamation Project
Pacifica, San Mateo County, California



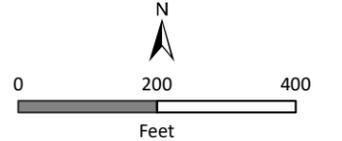
- Property Boundary - 86.20 ac.
- Project Area - 27.42 ac.
- Culverts

Reclamation Areas

- Reclamation Access - 1.13 ac.
- Existing Culvert Replacement - <0.01 ac.
- East Flank - 5.38 ac.
- Hilltop - 4.40 ac.
- Temporary Culvert Installation - <0.01 ac.
- Quarry Face - 4.59 ac.
- Quarry Pit - 8.00 ac.
- Southern Bluff - 2.46 ac.

Mitigation Areas

- Mitigation Area Limit of Work - 0.71 ac.
- Proposed CRLF Mitigation Pond - 0.15 ac.
- Proposed Mitigation Seasonal Wetland - 0.60 ac.



Path: L:\Acad 2000 Files\14000\14006-6\GIS\ArcMap\Reclamation\Exhibit 3 & Figures\1.2.3 Site Plan.mxd

Sources: Google Earth 2018 Aerial, WRA | Prepared By: mrochelle, 2/25/2020



**Pacifica Quarry Reclamation
Army Corps of Engineers
Jurisdictional Delineation**

March 2016

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I. INTRODUCTION

A. Purpose

This report and accompanying map of the Pacifica Quarry reclamation site (hereafter referred to as the “project site”) in San Mateo County, present a delineation of jurisdictional “waters of the U.S.” and “wetlands” as defined by the US Army Corps of Engineers (Corps) pursuant to the Clean Water Act (CWA). As defined in the CWA, “waters of the U.S.” include coastal waters, rivers, streams (including intermittent streams), lakes, ponds, and wetlands. Any discharge of fill or dredged material into waters of the U.S. is subject to regulation by the Corps under Section 404 of the CWA.

B. Study Background

The Pacifica Quarry project site consists of 47.13 acres (APN 018-150-120). On July 8, 2015 and July 14, 2015 Zentner and Zentner (Zentner) conducted a routine wetland delineation of the project site to identify the presence of potential wetlands and non-wetland waters subject to jurisdiction under Section 404 of the Clean Water Act.

C. Location

The project site is located in San Mateo County in the City of Pacifica approximately 10 miles southwest of San Francisco (**Figure 1**). The project site is within the Montara Mountain USGS 7.5 quadrangle.

The project site is a part of the approximately 87-acre Pacifica Quarry property. The Quarry property is comprised of two parcels: the western parcel holds the Quarry and the project site, while the Eastern Parcel, also known as the “Flats”, was graded in the past for Quarry uses and other purposes (see below for more detail) but is not a part of the reclamation project. The two parcels are separated by a parcel owned by the City of Pacifica, which includes Calera Creek (repositioned from the interior of the Eastern Parcel in 2000) and a paved walking/biking trail.

The project site is accessed from the northeastern end of San Marlo Way. Secondary access is across the Eastern Parcel by an access road that exits Highway One south-bound 0.4 miles past the Highways intersection with Reina Del Mar Avenue.

To the south, the project site is bordered by San Marlo Drive and the Rockaway Beach area which includes public beach access, retail shops, restaurants, and a hotel. The Pacific Ocean forms the western border of the property. Mori Point, part of the GGNRA, is located north of the project site. A city-owned parcel that contains a wastewater treatment facility is east of the site (**Figure 2**).

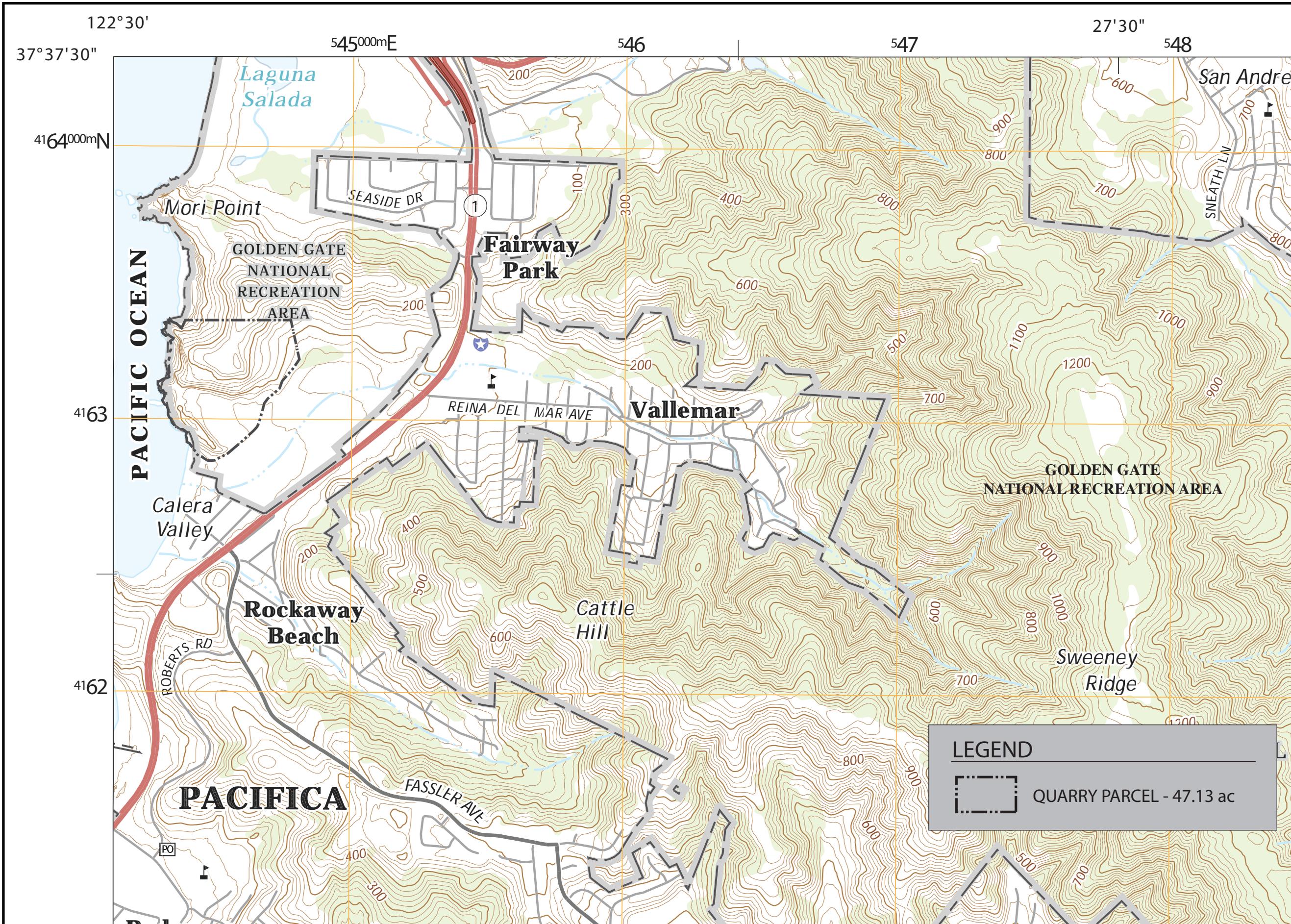


FIGURE 1
 DELINEATION
 STUDY AREA

REVISIONS:	BY:

PACIFICA QUARRY
 PACIFICA, SAN MATEO COUNTY

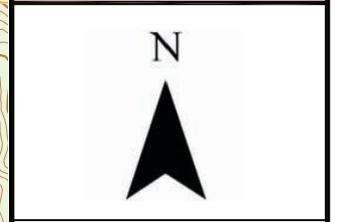




FIGURE 2
 PROJECT
 LOCATION

REVISIONS:	BY:

PACIFICA QUARRY
 PACIFICA, SAN MATEO COUNTY



SOURCE:
 Project files and Google Earth

FILE: D:\Graphic Designer\My Documents\
 PROJECTS\1000-1100\1023 Pacifica
 Quarry\Adobe\RECLAMATION PLAN\Project
 Location.11x17.2015.11.24

DATE:
 01/27/2016, 11:50 am

LEGEND

- PROPERTY BOUNDARY
- CALERA CREEK
MULTI-PURPOSE TRAIL (CCMP)

0 115 230 460 690 920 Feet

D. Site Description

The project site is a former mine dominated, by weedy, non-native plant species. For ease of discussion, the site includes the following locations: the Quarry Face (the scarp left by mining in the parcel center), the Quarry Pit (the bowl remaining in the bottom of the old quarry), the East Flank (the hillside comprised on old quarry debris on the east slope of the quarry), the Hilltop (the area located above the Quarry Face and East Flank), and the Southern Bluff, the old edge of the Quarry on the south (**Figure 3**).

The Quarry Face is predominately an exposed and crumbling rock slope with approximately 170 feet in elevation gain. The lower two thirds of the Face is steep, comprised of loose rock and soil, and is sparsely vegetated. Approximately 120 feet above the old quarry floor, two thirds of the way up the Face, an access road cuts horizontally across the Face. Above the road, the Face climbs another 40 feet at a slightly lesser incline. The access road and upper slope have moderate vegetation cover. Vegetation is predominately non-native and is dominated by pampas grass (*Cortaderia selloana*).

The Quarry Pit is predominately flat and vegetated with non-native species. Steep slopes, including the Face, surround the Pit to the north, west, and south. To the east, the Quarry Pit abuts the City-owned parcel and Calera Creek. An approximately 7,800 square foot, 10 foot deep depression is located near the eastern edge. North of the depression is an elevated, predominately exposed rock surface. Approximately 20 cypress (*Cupressus* spp.) trees are located along the southern border of the Quarry Pit. The Quarry Pit is dominated by non-native vegetation including teasel (*Dipsacus sativus*), pampas grass, and perennial pepperweed (*Lepidium latifolium*).

The East Flank is steeply sloped and is comprised predominately of exposed and unstable rock and gains approximately 220 feet in elevation. At the bottom of the East Flank an access road cuts across and up the slope. The road cuts north across the East Flank and then turns south and continues across the Face. The grade of the slope varies throughout the section with several small, relatively flat, plateaus. The section is scarcely vegetated; where vegetation is present, pampas grass is the predominate species.

The Hilltop is located above the Quarry Face and East Flank and south of Mori Point. The Hilltop is relative flat and smooth with two mounds protruding approximately 20 feet about the surface. In contrast with its adjacent landscapes, the surface of the Hilltop has soil and moderate vegetation cover. Pampas grass and coyote bush are the predominate species.

The Southern Bluff abuts the Pacific Ocean to the south, is steeply sloped, and is comprised of predominantly exposed and unstable rock slopes. The slopes are sparsely vegetated with pampas grass. The ridge has moderate vegetation cover comprised predominately of non-native species including fennel (*Foeniculum vulgare*) and mustard (*Brassica nigra*).

Figure 3 has been deleted. See updated figure in updated by WRA above.

1. Topography

The Quarry varies significantly in elevation. The top of the Quarry Face is approximately 260 feet (all elevations are NGVD) and the top of the East Flank is approximately 270 feet while the Pit ranges between 30 and 50 feet in elevation.

2. General Soil Types

The soils on site are classified as pits and dumps and rock outcrop-Orthents complex by SCS (now NRCS). Rock outcrop-Orthents complex comprise the westernmost slopes of the property that abut the Pacific Ocean. The remainder of the property is comprised of pits and dumps soils.

Rock outcrop-Orthents complex is comprised predominately of long and narrow rocky areas that rise abruptly along the coastline of the Pacific Ocean. Rock outcrop is comprised of exposures of sandstone, shale, and basic igneous rock. The orthents consist mainly of areas of mixed alluvium of varying depths, areas of loamy soils that are less than 10 inches thick, and pockets of windblown sand.

Pits and dumps soils consists of rock quarries and are typically barren soils.

3. Major Vegetation Types or Habitats On-Site

The site is dominated by non-native grasslands that are characterized by annual grasses and forbs. The visually-dominant species is pampas grass, a large, invasive shrub. The site also contains exposed rock slopes that contain little vegetation.

4. Observations and Current Uses of Property

The Pacifica Quarry is an undeveloped parcel with a network of unofficial walking trails. These unofficial trails are routinely used by walkers, dog walkers, runners, and bicyclists. The site was mined intensively in the past (see below for more detail) with active reclamation beginning in 1996 subsequent to approval of a Reclamation Plan by the City.

5. Historical Information

In the 20th century, the Pacifica Quarry was an active limestone mine and a major industry in Pacifica. The eastern boundary of the property was home to the Ocean Shore Railroad route which connected the Quarry to the various developments and historic districts in and around Pacifica (Holman 2002).

The railroad was completely removed over 80 years ago and the Quarry closed its operation in the early 1980s. The visible history of the Rockaway Quarry is limited to the partially filled Quarry Pit, some nondescript concrete blocks, and the filled and graded Eastern Parcel. These remaining features do not appear significant, nor are they valuable for interpretative uses (Holman 2002).

Two prehistoric sites are recorded within the Quarry property on the Eastern Parcel and will not be affected by reclamation; see attached cultural resources report.

Over the past seven decades, the Quarry property has been extensively and intensively disturbed for mining and other uses. Photo 1 shows the areas disturbed on the Quarry property; this graphic was prepared by CCC staff, whose assistance is gratefully acknowledged.

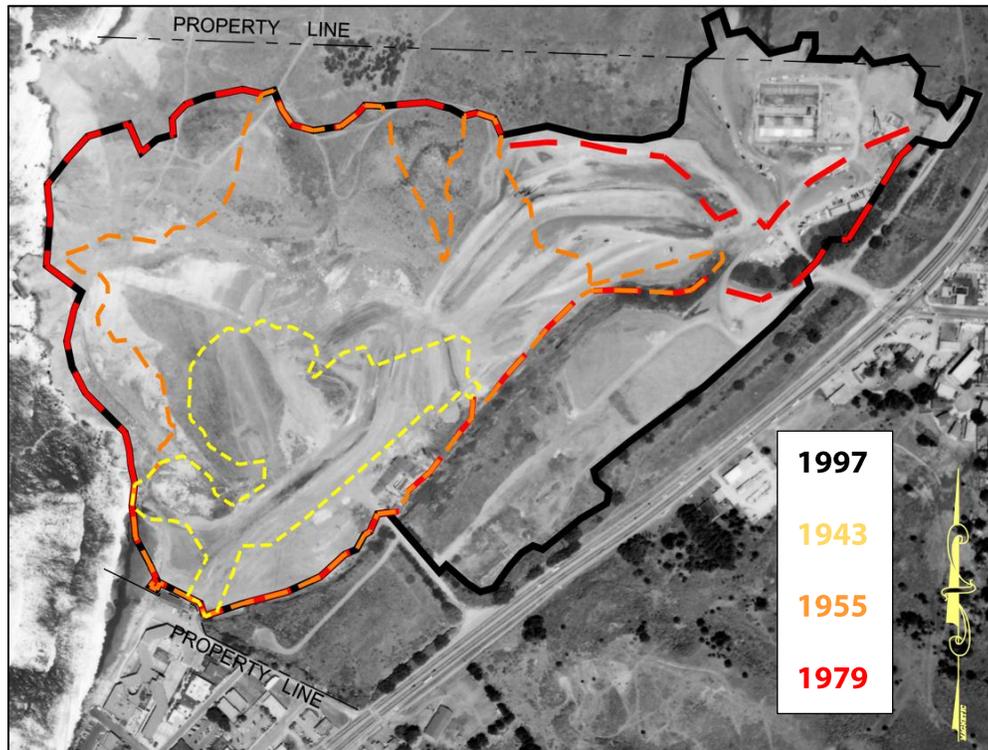


Photo 1: Quarry Property cumulative disturbed area: 1943-1997.

6. Ecological Setting

The project site consists of a former open mine, the Quarry, dominated by rocky slopes and fill deposits left from mining. There are a relatively small areas of lowland grassland in the Quarry Pit or other areas (the East Flank and Southern Bluff, for example) that formed on quarry fill but these are generally surrounded by steep rocky slopes. The rocky slopes are relatively flat on the top and drop off to the Pacific Ocean to the west. The Hilltop is a relatively flat surface that sits above the Quarry Face and East Flank. To the east, the site is adjacent to the perennial Calera Creek, which flows into the Pacific Ocean.



Photo 2: View of the Quarry Pit from the northeast. The Southern Bluff is in the background and the lower slope of the East Flank is on the right of the photo. July 2015.

II. JURISDICTIONAL DELINEATION

A. Introduction

As defined by the Army Corps of Engineers (Corps), “wetlands” are areas periodically or permanently saturated by surface or groundwater and typically support vegetation adapted to life in saturated (hydric) soil. Similarly the Coastal Act Section 30121 defines the term “wetland” as lands within the coastal zone which may be covered periodically or permanently with shallow water and includes saltwater and freshwater marshes, open or closed brackish water marshes, swaps, mudflats, and fens.

Wetlands are recognized as important features on a regional and national level due to their high inherent value to fish and wildlife, use as storage areas for storm and floodwaters, promotion of groundwater recharge, and their water filtration and purification functions. “Other waters” include tributaries or drainage ditches which exhibit perennial or ephemeral flow to a navigable waterway, wetland, or other significant water feature. Other waters may not necessarily be wetlands.

B. Methods

Boundaries between jurisdictional areas and uplands were investigated on July 8 and 14, 2015 using the routine on-site assessment procedure, Section D, Subsection 2, page 57 of the 1987 “Corps of Engineers Wetlands Delineation Manual” (Environmental Laboratory 1987; hereafter the “Delineation Manual”) and the Western Valleys, Mountains, and Coast Region Supplement. Dominant plant species, soil characteristics,

and hydrology indicators were noted within a 10-foot by 10-foot plot at each sample point (Appendix A contains delineation data sheets and **Figures 4, 4.1 and 4.2** contain the jurisdictional delineation maps). Wetlands were distinguished from uplands on this site by the presence of: 1) hydrophytic vegetation, 2) wetland hydrology, and 3) hydric soils (defined below). Data point(s) were mapped on a 1-inch to 250-foot scale map (Figure 4) and 1-inch to 60-foot scale maps (Figures 4.1 and 4.2).

1. Hydrophytic Vegetation

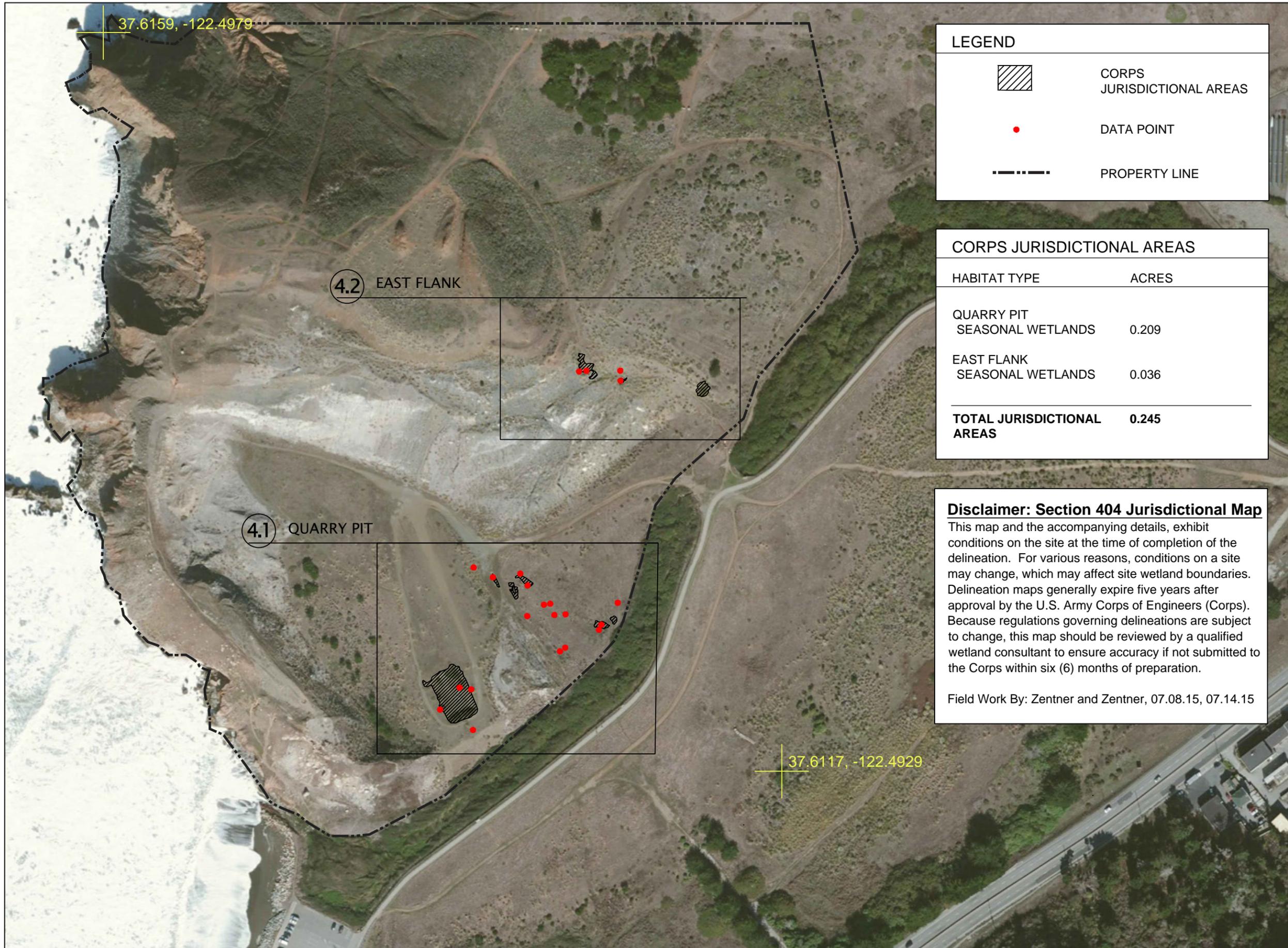
Hydrophytic vegetation is dominated by plant species that can tolerate prolonged inundation or soil saturation during the growing season. More than 50% of the dominant species must be wetland indicators of FAC, FACW and OBL or outweigh them using a prevalence index for the vegetation to be considered hydrophytic. These wetland indicators, or hydrophytes, are listed in the Delineation Manual as OBL, FACW, and FAC. Other plants are listed as FACU or NI, and unlisted plants are considered as UPL. These abbreviations are defined as follows:

OBL	Obligate Wetland Plants	Plants that occur over 99% of the time in wetlands
FACW	Facultative Wetland Plants	Plants that occur 67% to 99% of the time in wetlands
FAC	Facultative Plants	Plants likely to occur 33% to 67% of the time in wetlands
FACU	Facultative Upland Plants	Plants that occur 1% to 33% of the time in wetlands, but which occur more frequently in uplands
NI	Non-indicator plants	These must be checked against the National Indicator List and could be changed to a wetter or drier status
UPL	Upland Plants	Plants that occur less than 1% of the time in wetlands

Note: The 3 facultative categories are subdivided by (+) and (-) modifiers. FAC+ species are considered to be wetter (have a greater estimated probability of occurring in wetlands) than FAC species. FAC- species are considered to be drier (have a lesser estimated probability of occurring in wetlands) than FAC species.

2. Hydric Soils

Hydric soils develop under the low oxygen conditions typical of prolonged inundation or saturation, and generally show visible indications of chemical reduction. The hydric nature of a soil is most often indicated by low matrix chromas of 0 to 1, or 2 with mottles, and is determined by comparing the wetted soil with Munsell Soil Color Charts. The



37.6159, -122.4979

4.2 EAST FLANK

4.1 QUARRY PIT

37.6117, -122.4929

LEGEND

-  CORPS JURISDICTIONAL AREAS
-  DATA POINT
-  PROPERTY LINE

CORPS JURISDICTIONAL AREAS

HABITAT TYPE	ACRES
QUARRY PIT SEASONAL WETLANDS	0.209
EAST FLANK SEASONAL WETLANDS	0.036
TOTAL JURISDICTIONAL AREAS	0.245

Disclaimer: Section 404 Jurisdictional Map
 This map and the accompanying details, exhibit conditions on the site at the time of completion of the delineation. For various reasons, conditions on a site may change, which may affect site wetland boundaries. Delineation maps generally expire five years after approval by the U.S. Army Corps of Engineers (Corps). Because regulations governing delineations are subject to change, this map should be reviewed by a qualified wetland consultant to ensure accuracy if not submitted to the Corps within six (6) months of preparation.

Field Work By: Zentner and Zentner, 07.08.15, 07.14.15

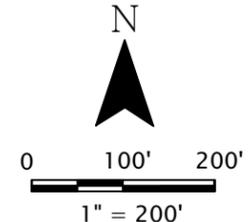


ZENTNER
and ZENTNER
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FIGURE 4
 DELINEATION
 OVERVIEW

PACIFICA QUARRY
 PACIFICA, SAN MATEO COUNTY



N

0 100' 200'

1" = 200'

CARTOGRAPHER:
 Christopher J. Long

AERIAL SOURCE: 8/24/15 Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community.

PROJECT NO. 1023

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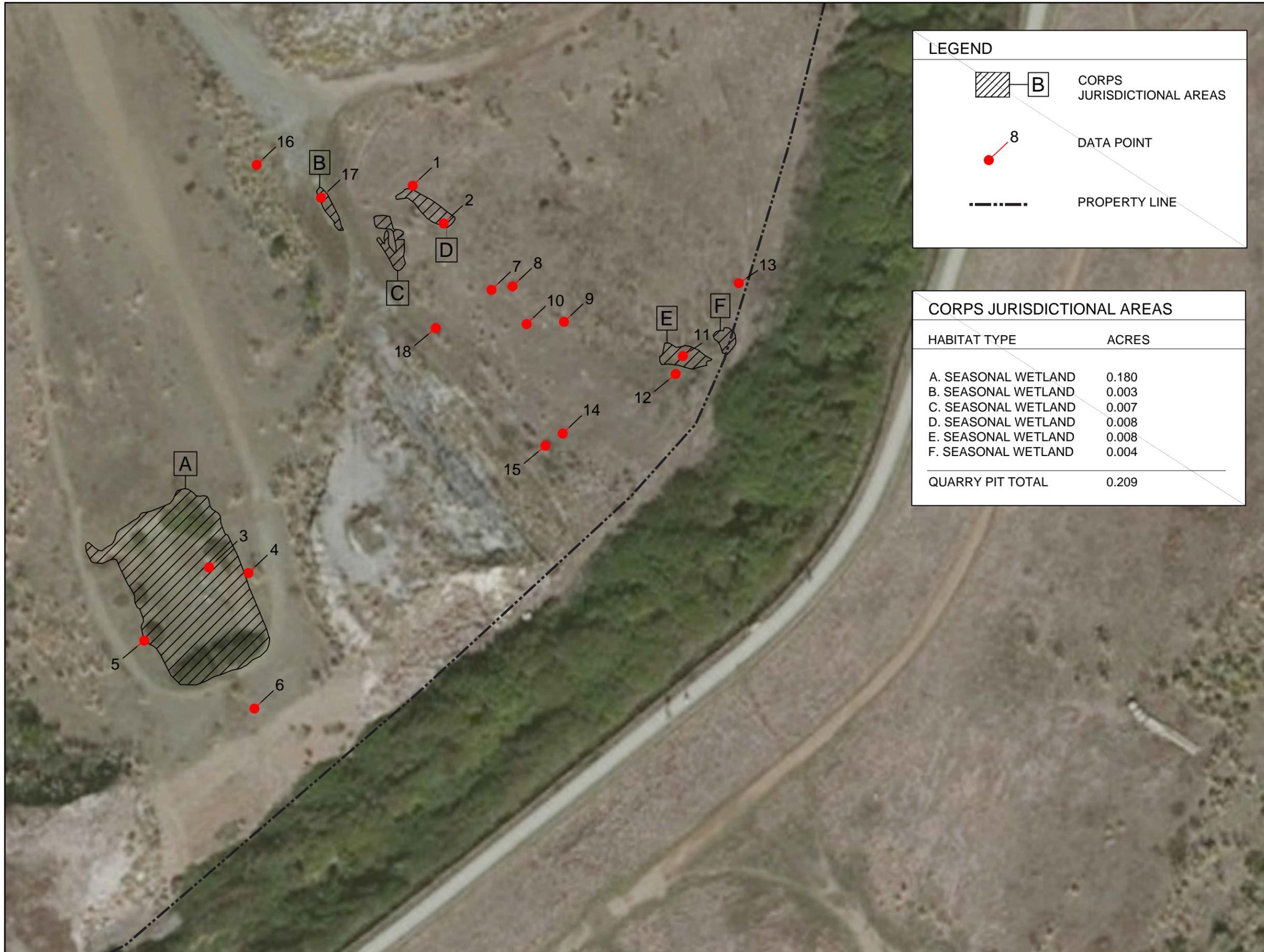
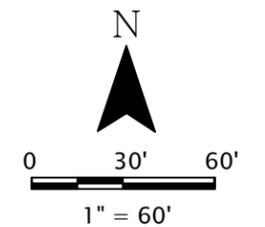


FIGURE 4.1
 QUARRY PIT
 DELINEATION

PACIFICA QUARRY
 PACIFICA, SAN MATEO COUNTY



CARTOGRAPHER:
 Christopher J. Long

AERIAL SOURCE: 8/24/15 Esri,
 DigitalGlobe, GeoEye, Earthstar
 Geographics, CNES/Airbus DS,
 USDA, USGS, AEX, Getmapping,
 Aerogrid, IGN, IGP, swisstopo,
 and the GIS User Community.

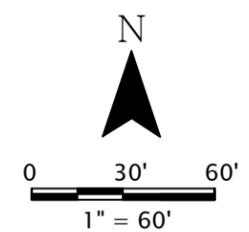
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FIGURE 4.2
 EAST FLANK
 DELINEATION

PACIFICA QUARRY
 PACIFICA, SAN MATEO COUNTY



CARTOGRAPHER:
 Christopher J. Long

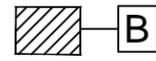
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 DigitalGlobe, GeoEye, Earthstar
 Geographics, CNES/Airbus DS,
 USDA, USGS, AEX, Getmapping,
 Aerogrid, IGN, IGP, swisstopo,
 and the GIS User Community.

PROJECT NO. 1023

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 eflank

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LEGEND

 CORPS JURISDICTIONAL AREAS

 DATA POINT

 PROPERTY LINE

CORPS JURISDICTIONAL AREAS

HABITAT TYPE	ACRES
H. SEASONAL WETLAND	0.019
I. SEASONAL WETLAND	0.002
J. SEASONAL WETLAND	0.015
EAST FLANK TOTAL	0.036



hydric nature of a soil may also be indicated by the presence of manganese or iron nodules, or other more subtle characteristics.

3. Wetland Hydrology

Common wetland hydrology indicators demonstrate inundation or saturation and include observations of standing water, saturated soils, algal mats, water-matted detritus, and water stains on rocks or other objects. In evaluating these hydrology indicators some attention must be given to the frequency and duration of inundation, and the effects of recent weather, unusual flooding and climatic fluctuations. According to the AWS, an area must have “14 or more days of flooding or ponding or a water table 12 inches (30 centimeters) or less below the soil surface, during the growing season at a minimum frequency of 5 years in 10 (50 percent or higher probability)” to satisfy the hydrology standard. The old standard (US Army Corps 1987 Manual) was that an area must have ponding for 5% of the growing season (18 days in California) or a water table at a depth equal to 80% of the root mass.

4. Other Waters

The Corps also regulates “other waters tributary to waters of the U.S.” Boundaries between uplands and other waters are determined based on water elevations and geomorphic features. In freshwater conditions, the boundary between uplands and other waters is the ordinary high water mark (OHWM). In tidal conditions, the boundary is set by the high tide line, roughly equivalent to mean high water. The CCC regulates these areas under other names, either as riparian habitats or as tidal waters.

C. Results

The majority of the site is uplands, composed primarily of grasslands, dominated by invasive upland species, and exposed rock slopes and surfaces. Jurisdictional areas, shown on Figure 4, total 0.245 acres and included several wetland areas. Representative photos of the wetlands are shown in appendix B. Table 1 shows a summary of the wetlands or no-wetland waters that meet the Corps definition.

Table 1: Summary of Areas Meeting Corps Definitions for Wetlands or Non-Wetland Waters

<i>Feature Type</i>	<i>Cowardin Class</i>	<i>Size</i>
<i>Wetlands:</i>	PEM1	0.245 acres

1. Corps Jurisdictional Areas

a. Wetland

Total Area: 0.245 acres

Areas: A, B, C, D, E, F, H, and I

Data Points: 2, 3, 11, 17, 19, and 21

The wetlands are located within the flat Quarry Pit grassland and on the East Flank.

i. *Vegetation*

The vegetation in much of the seasonal wetlands consists of a matrix of FAC and FACW species such as rabbit's foot grass (*polypogon monspeliensis*; FACW) and toad rush (*Juncus bufonius*; FACW). In all of the seasonal wetland plots, hydrophytes exceed 50% of dominants.



Photo 3: Photo from wetland H located on the upper region of the East Flank. Dark green vegetation shown throughout photo is predominately salt rush (*Juncus lescurii*).

Table 2 below lists the common and occasional dominants of the wetlands

Table 2: Wetland Vegetation

<i>Common Name</i>	<i>Scientific Name</i>	<i>Regional Indicator Status</i>
<i>Common Dominants</i>		
Bird's foot trefoil	<i>Lotus corniculatus</i>	FAC
Bristly ox tongue	<i>Helminthotheca echioides</i>	FAC

Cutleaf Plantain	<i>Plantago coronopus</i>	FACW
Rabbit's foot grass	<i>Polypogon monspeliensis</i>	FACW
Toad rush	<i>Juncus bufonius</i>	FACW
Salt rush	<i>Juncus lescurii</i>	FACW
<i>Occasional</i>		
Meadow barley	<i>Hordeum braccyantherum</i>	FACW
Pampas grass	<i>Cortaderia selloana</i>	FACU
Purple vetch	<i>Vicia Americana</i>	FAC
Tall flat sedge	<i>Cyperus eragrostis</i>	FACW
Willow	<i>Salix spp.</i>	FACW

ii. Soils

Wetlands are located on the Quarry Pit and the East Flank. Both areas are mapped as Pits and Dumps which is classified as gravel pits, refuse dumps, and rock quarries. These soils are typically barren (SCS 1977).

The soils at the wetland data points generally have a color between 10YR 4/1 and 10YR 3/2 with occasional rust mottles. The wetland soils are primarily silty with small gravel throughout.

iii. Hydrology

Wetlands A, B, C, D, E, F, and I are located on the Quarry Pit within relatively small depressions that collect rainwater and runoff. Wetland I, on the East Flank, is seasonally inundated with rainwater and runoff. Wetland J is located on a slope of the East Flank. Based on the large willow that has grown at Wetland J, there is likely a small, sub-surface, perennial seep beneath the willow. Wetland H, on the East Flank is fed by a perennial seep and the soils are inundated year round. There is no evidence that these wetlands fill and flow outside of their boundaries.

b. Other waters

The site does not contain any features classified as other waters.

2. Non-jurisdictional Areas

Data points: 1, 4, 5, 6, 7, 8, 9, 10, 12, 13, 14, 15, 16, 18, 20, and 22

Most of the site is exposed rock and annual grasslands that contain non-native, often invasive upland, grasses, forbs, shrubs and trees. There is no evidence of hydrologic indicators in these areas



Photo 4: Upland habitat. Western portion of the Quarry Pit is shown with the main Face in the background.

a. Vegetation

The uplands are dominated by UPL plants with some FAC and FACU vegetation. Upland vegetation generally exceeded hydrophytes by a 3:1 margin or more.

The common dominants in the non-jurisdictional areas are provided in Table 3 Below

Table 3: Non-jurisdictional Area Vegetation

Common Name	Scientific Name	Regional Indicator Status
<i>Common Dominants</i>		
Fennel	<i>Foeniculum vulgare</i>	UPL
Italian rye	<i>Carduus pysnocephalus</i>	UPL
Pampas grass	<i>Cortaderia selloana</i>	FACU
Soft chess	<i>Bromus hordeaceus</i>	FACU
Wild oats	<i>Avena fatua</i>	UPL

<i>Occasional</i>		
Black mustard	<i>Brassica nigra</i>	UPL
English plantain	<i>Plantago lanceolate</i>	FACU
Purple needle grass	<i>Stipa pulchra</i>	UPL

b. Soils

In general, the upland soils were found to be silty with small rocks and gravel. The color was between 10YR 5/3 and 10YR 4/3. These are relatively light silty soils. A few soils samples in the uplands included lighter mottles. Root oxidation was absent from all samples.

c. Hydrology

All of the sample locations in the uplands failed the hydrology criteria with no ponded water, saturation or evidence of wetland hydrology.

References

Environmental Laboratory. 1987. US Army Corps of Engineers, Wetlands Delineation Manual.

Holman and Associates (Holman). 2002. Archival Research, Field Reconnaissance, and Consultation for the former Rockaway Quarry. Report on file, City of Pacifica Planning and Economic Development Department.

SCS. 1969. Soil Survey of San Mateo County, California.

Appendix A

Wetland Delineation Data Sheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 1
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks: The sampled area is not within a wetland.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____					
2. _____					
3. _____					
4. _____					
_____ = Total Cover					
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
_____ = Total Cover					
Herb Stratum (Plot size: <u>10x10</u>)	Absolute % Cover	Dominant Species?	Indicator Status		
1. <u>Helminthotheca echioides</u>	35%	Y1	FAC		
2. <u>Medicago polymorpha</u>	1%	-	FACU		
3. <u>Lolium multiflorum</u>	45%	Y	UPL		
4. <u>Avena fatua</u>	20%	Y	UPL		
5. <u>Vicia sativa</u>	2%	-	UPL		
6. <u>Lotus corniculatus</u>	1%	-	FAC		
7. <u>Linum spp.</u>	1%	-	UPL		
8. _____					
_____ = Total Cover					
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status		
1. _____					
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>			
Remarks:					

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A)
 Total Number of Dominant Species Across All Strata: 3 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 0 x 2 = 0
 FAC species 36 x 3 = 108
 FACU species 1 x 4 = 4
 UPL species 68 x 5 = 340
 Column Totals: 105 (A) 452 (B)
 Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 2

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): concave (minor) Slope (%): <2%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: Sample point is within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>45</u> x 2 = <u>90</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>15</u> x 5 = <u>75</u> Column Totals: <u>100</u> (A) <u>285</u> (B) Prevalence Index = B/A = <u>2.85</u>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
_____ = Total Cover				
Herb Stratum (Plot size: <u>10x10</u>)				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Polypogon monspeliensis</u>	<u>30%</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Helminthotheca echioides</u>	<u>10%</u>	<u>-</u>	<u>FAC</u>	
3. <u>Lolium multiflorum</u>	<u>15%</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Cyperus eragrostis</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
5. <u>Hordeum brachyantherum</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
6. <u>Lotus corniculatus</u>	<u>30%</u>	<u>Y</u>	<u>FAC</u>	
7. <u>Rumex crassus</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
8. _____	_____	_____	_____	
<u>100%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>		
Remarks: Wetland vegetation is dominate.				

SOIL

Sampling Point: 2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
6	10 YR 5/2						Clay	Large dirt clods, uniform color

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

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

Indicators for Problematic Hydric Soils³:

- | | | |
|--|---|---|
| <input type="checkbox"/> Histosol (A1) | <input type="checkbox"/> Sandy Redox (S5) | <input type="checkbox"/> 1 cm Muck (A9) (LRR C) |
| <input type="checkbox"/> Histic Epipedon (A2) | <input type="checkbox"/> Stripped Matrix (S6) | <input type="checkbox"/> 2 cm Muck (A10) (LRR B) |
| <input type="checkbox"/> Black Histic (A3) | <input type="checkbox"/> Loamy Mucky Mineral (F1) | <input type="checkbox"/> Reduced Vertic (F18) |
| <input type="checkbox"/> Hydrogen Sulfide (A4) | <input type="checkbox"/> Loamy Gleyed Matrix (F2) | <input type="checkbox"/> Red Parent Material (TF2) |
| <input type="checkbox"/> Stratified Layers (A5) (LRR C) | <input type="checkbox"/> Depleted Matrix (F3) | <input type="checkbox"/> Other (Explain in Remarks) |
| <input type="checkbox"/> 1 cm Muck (A9) (LRR D) | <input type="checkbox"/> Redox Dark Surface (F6) | |
| <input type="checkbox"/> Depleted Below Dark Surface (A11) | <input type="checkbox"/> Depleted Dark Surface (F7) | |
| <input type="checkbox"/> Thick Dark Surface (A12) | <input type="checkbox"/> Redox Depressions (F8) | |
| <input type="checkbox"/> Sandy Mucky Mineral (S1) | <input type="checkbox"/> Vernal Pools (F9) | |
| <input type="checkbox"/> Sandy Gleyed Matrix (S4) | | |

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

Restrictive Layer (if present):

Type: n/a
 Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil is hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input checked="" type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

Wetland Hydrology Present? Yes No

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

Remarks:

Sample site was dry, but showed signs of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 3

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): basin Local relief (concave, convex, none): concave Slope (%): <5%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Stratum	Plot size	Absolute % Cover	Dominant Species?	Indicator Status	
Tree Stratum (Plot size: <u>10x10'</u>)					
1. <u>Salix spp.</u>		<u>10%</u>	<u>Y</u>	<u>FACW</u>	
2. _____					
3. _____					
4. _____					
		<u>10%</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)					
1. _____					
2. _____					
3. _____					
4. _____					
5. _____					
		<u>0%</u> = Total Cover			
Herb Stratum (Plot size: <u>10x10'</u>)					
1. <u>Plantago lanceolata</u>		<u>35%</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Cyperus eragrostis</u>		<u>10%</u>	<u>Y</u>	<u>FACW</u>	
3. <u>Aster spp.</u>		<u>10%</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Brachypodium distochyon</u>		<u>15%</u>	<u>Y</u>	<u>UPL</u>	
5. <u>Rumex Crispus</u>		<u>10%</u>	<u>Y</u>	<u>FACW</u>	
6. <u>Lotus corniculatus</u>		<u>5%</u>	<u>-</u>	<u>FAC</u>	
7. <u>Lythrum hyssopifolium</u>		<u>5%</u>	<u>-</u>	<u>OBL</u>	
8. _____					
		<u>90%</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)					
1. _____					
2. _____					
		<u>0%</u> = Total Cover			
% Bare Ground in Herb Stratum <u>10%</u> % Cover of Biotic Crust <u>0%</u>					

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 60% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>5%</u>	x 1 = <u>5</u>
FACW species <u>30%</u>	x 2 = <u>60</u>
FAC species <u>15%</u>	x 3 = <u>45</u>
FACU species <u>35%</u>	x 4 = <u>140</u>
UPL species <u>15%</u>	x 5 = <u>75</u>
Column Totals: <u>100</u> (A)	<u>325</u> (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Remarks:	Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Sample plot is dominated by wetland vegetation.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 4
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Sample location is not a wetland; it is not dominated by wetland vegetation.	

VEGETATION – Use scientific names of plants.

<table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:40%;"><u>Tree Stratum</u> (Plot size: <u>10x10'</u>)</td> <td style="width:10%; text-align: center;">Absolute % Cover</td> <td style="width:10%; text-align: center;">Dominant Species?</td> <td style="width:10%; text-align: center;">Indicator Status</td> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">0% = Total Cover</td></tr> <tr> <td><u>Sapling/Shrub Stratum</u> (Plot size: <u>10x10'</u>)</td> <td></td> <td></td> <td></td> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td>3. _____</td><td></td><td></td><td></td></tr> <tr><td>4. _____</td><td></td><td></td><td></td></tr> <tr><td>5. _____</td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">0% = Total Cover</td></tr> <tr> <td><u>Herb Stratum</u> (Plot size: <u>10x10'</u>)</td> <td></td> <td></td> <td></td> </tr> <tr><td>1. <u>Plantago lanceolata</u></td><td style="text-align: center;">18%</td><td style="text-align: center;">Y</td><td style="text-align: center;">FACU</td></tr> <tr><td>2. <u>Helminthotheca echioides</u></td><td style="text-align: center;">5%</td><td style="text-align: center;">-</td><td style="text-align: center;">FAC</td></tr> <tr><td>3. <u>Avena fatua</u></td><td style="text-align: center;">5%</td><td style="text-align: center;">-</td><td style="text-align: center;">UPL</td></tr> <tr><td>4. <u>Lotus corniculatus</u></td><td style="text-align: center;">1%</td><td style="text-align: center;">-</td><td style="text-align: center;">FAC</td></tr> <tr><td>5. <u>Erodium spp.</u></td><td style="text-align: center;">1%</td><td style="text-align: center;">-</td><td style="text-align: center;">UPL</td></tr> <tr><td>6. <u>Brachypodium distachyon</u></td><td style="text-align: center;">18%</td><td style="text-align: center;">Y</td><td style="text-align: center;">UPL</td></tr> <tr><td>7. <u>Medicago polymorpha</u></td><td style="text-align: center;">2%</td><td style="text-align: center;">-</td><td style="text-align: center;">FACU</td></tr> <tr><td>8. _____</td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">50% = Total Cover</td></tr> <tr> <td><u>Woody Vine Stratum</u> (Plot size: _____)</td> <td></td> <td></td> <td></td> </tr> <tr><td>1. _____</td><td></td><td></td><td></td></tr> <tr><td>2. _____</td><td></td><td></td><td></td></tr> <tr><td colspan="4" style="text-align: right;">0% = Total Cover</td></tr> <tr> <td colspan="2"> % Bare Ground in Herb Stratum <u>50%</u> % Cover of Biotic Crust <u>0%</u> </td> <td></td> <td></td> </tr> </table>	<u>Tree Stratum</u> (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	1. _____				2. _____				3. _____				4. _____				0% = Total Cover				<u>Sapling/Shrub Stratum</u> (Plot size: <u>10x10'</u>)				1. _____				2. _____				3. _____				4. _____				5. _____				0% = Total Cover				<u>Herb Stratum</u> (Plot size: <u>10x10'</u>)				1. <u>Plantago lanceolata</u>	18%	Y	FACU	2. <u>Helminthotheca echioides</u>	5%	-	FAC	3. <u>Avena fatua</u>	5%	-	UPL	4. <u>Lotus corniculatus</u>	1%	-	FAC	5. <u>Erodium spp.</u>	1%	-	UPL	6. <u>Brachypodium distachyon</u>	18%	Y	UPL	7. <u>Medicago polymorpha</u>	2%	-	FACU	8. _____				50% = Total Cover				<u>Woody Vine Stratum</u> (Plot size: _____)				1. _____				2. _____				0% = Total Cover				% Bare Ground in Herb Stratum <u>50%</u> % Cover of Biotic Crust <u>0%</u>				<table style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2">Dominance Test worksheet:</td> </tr> <tr> <td>Number of Dominant Species That Are OBL, FACW, or FAC:</td> <td style="text-align: right;"><u>0</u> (A)</td> </tr> <tr> <td>Total Number of Dominant Species Across All Strata:</td> <td style="text-align: right;"><u>2</u> (B)</td> </tr> <tr> <td>Percent of Dominant Species That Are OBL, FACW, or FAC:</td> <td style="text-align: right;"><u>0%</u> (A/B)</td> </tr> <tr> <td colspan="2">Prevalence Index worksheet:</td> </tr> <tr> <td style="text-align: center;">Total % Cover of:</td> <td style="text-align: center;">Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>6</u></td> <td>x 3 = <u>18</u></td> </tr> <tr> <td>FACU species <u>20</u></td> <td>x 4 = <u>80</u></td> </tr> <tr> <td>UPL species <u>24</u></td> <td>x 5 = <u>120</u></td> </tr> <tr> <td>Column Totals: <u>50</u> (A)</td> <td><u>218</u> (B)</td> </tr> <tr> <td colspan="2" style="text-align: center;">Prevalence Index = B/A = <u>4.36</u></td> </tr> <tr> <td colspan="2">Hydrophytic Vegetation Indicators:</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Dominance Test is >50%</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Prevalence Index is ≤3.0¹</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)</td> </tr> <tr> <td colspan="2"><input type="checkbox"/> Problematic Hydrophytic Vegetation¹ (Explain)</td> </tr> <tr> <td colspan="2">¹Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.</td> </tr> <tr> <td colspan="2">Hydrophytic Vegetation Present? 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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 5

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Remarks:					
Sample location is not within a wetland.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status																	
1. <u>Salix spp.</u>	15%	Y	FACW	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)																
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Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																				
Remarks:																				
No hydrophytic vegetation.																				

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
9	10 YR 5-6						Silty	Small gravel with mottles

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil within sample plot is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:

No wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 6
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): hillside Local relief (concave, convex, none): concave Slope (%): 5%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>10x10'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
1. <u>Salix spp.</u>	<u>15%</u>	<u>Y</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>3</u> (B)
2. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
	<u>15%</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				
1. _____	_____	_____	_____	Prevalence Index worksheet:
2. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
3. _____	_____	_____	_____	OBL species <u>0</u> x 1 = <u>0</u>
4. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
5. _____	_____	_____	_____	FAC species <u>10</u> x 3 = <u>30</u>
	<u>0%</u> = Total Cover			FACU species <u>25</u> x 4 = <u>100</u>
Herb Stratum (Plot size: <u>10x10'</u>)				UPL species <u>55</u> x 5 = <u>275</u>
1. <u>Plantago lanceolata</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	Column Totals: <u>90</u> (A) <u>405</u> (B)
2. <u>Brachypodium distachyon</u>	<u>20%</u>	<u>Y</u>	<u>UPL</u>	Prevalence Index = B/A = <u>4.5</u>
3. <u>Lotus corniculatus</u>	<u>5%</u>	<u>-</u>	<u>FAC</u>	
4. <u>Avena fatua</u>	<u>20%</u>	<u>Y</u>	<u>UPL</u>	Hydrophytic Vegetation Indicators:
5. <u>Stipa pulchra</u>	<u>10%</u>	<u>-</u>	<u>UPL</u>	<input type="checkbox"/> Dominance Test is >50%
6. <u>Sonchus oleraceus</u>	<u>5%</u>	<u>-</u>	<u>FACU</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
7. <u>Lolium multiflorum</u>	<u>5%</u>	<u>-</u>	<u>UPL</u>	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
8. <u>Helminthotheca echioides</u>	<u>5%</u>	<u>-</u>	<u>FAC</u>	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
	<u>90%</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
	_____ = Total Cover			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum <u>10%</u> % Cover of Biotic Crust <u>0%</u>				
Remarks: No hydrophytic vegetation.				

SOIL

Sampling Point: 6

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
8	10 YR 5-3						Silty	Small gravel with lighter mottles. Mottles 10 YR 6-6.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:
The soil is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:
No wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 7

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10x10'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
3. _____				
4. _____				
	<u>0%</u> = Total Cover			
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10x10'</u>)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>5</u> x 2 = <u>10</u>
4. _____				FAC species <u>45</u> x 3 = <u>135</u>
5. _____				FACU species <u>0</u> x 4 = <u>0</u>
	<u>0%</u> = Total Cover			UPL species <u>50</u> x 5 = <u>250</u>
<u>Herb Stratum</u> (Plot size: <u>10x10'</u>)				Column Totals: <u>100</u> (A) <u>395</u> (B)
1. <u>Polypogon monspeliensis</u>	<u>5%</u>		<u>FACW</u>	Prevalence Index = B/A = <u>3.95</u>
2. <u>Helminthotheca echioides</u>	<u>10%</u>		<u>FAC</u>	
3. <u>Lotus corniculatus</u>	<u>35%</u>	<u>Y</u>	<u>FAC</u>	
4. <u>Lolium multiflorum</u>	<u>40%</u>	<u>Y</u>	<u>UPL</u>	
5. <u>Vicia americana</u>	<u>10%</u>		<u>UPL</u>	
6. _____				
7. _____				
8. _____				
	<u>100%</u> = Total Cover			
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
	_____ = Total Cover			<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
% Bare Ground in Herb Stratum <u>0%</u> % Cover of Biotic Crust <u>0%</u>				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks:				
Vegetation within sample plot is predominately upland species with some FAC species present.				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 8
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Sample point is within a wetland.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Worksheet
Tree Stratum (Plot size: <u>10x10'</u>)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0% = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>2</u> x 2 = <u>4</u> FAC species <u>40</u> x 3 = <u>120</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>43</u> x 5 = <u>215</u> Column Totals: <u>85</u> (A) <u>339</u> (B) Prevalence Index = B/A = <u>4.0</u>
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
0% = Total Cover				
Herb Stratum (Plot size: <u>10x10'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Hordeum brachyantherum</u>	<u>2%</u>		<u>FACW</u>	
2. <u>Helminthotheca echioides</u>	<u>40%</u>		<u>FAC</u>	
3. <u>Foeniculum vulgare</u>	<u>3%</u>		<u>UPL</u>	
4. <u>Stipa pulchra</u>	<u>40%</u>		<u>UPL</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
85% = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>15</u> % Cover of Biotic Crust <u>0</u>				
Remarks: Vegetation is dominated by upland species.				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/8/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 9
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Sample location is not within a wetland.	

VEGETATION – Use scientific names of plants.

Stratum	Plot size	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u>	<u>(Plot size: 10x10')</u>				Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
1. _____					Total Number of Dominant Species Across All Strata: <u>4</u> (B)
2. _____					Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
3. _____					
4. _____					
		<u>0%</u>	= Total Cover		
<u>Sapling/Shrub Stratum</u>	<u>(Plot size: 10x10')</u>				Prevalence Index worksheet:
1. _____					Total % Cover of: _____ Multiply by: _____
2. _____					OBL species <u>0</u> x 1 = <u>0</u>
3. _____					FACW species <u>25</u> x 2 = <u>50</u>
4. _____					FAC species <u>30</u> x 3 = <u>90</u>
5. _____					FACU species <u>20</u> x 4 = <u>80</u>
		<u>0%</u>	= Total Cover		UPL species <u>25</u> x 5 = <u>125</u>
<u>Herb Stratum</u>	<u>(Plot size: 10x10')</u>				Column Totals: <u>100</u> (A) <u>345</u> (B)
1. <u>Hordeum brachyantherum</u>		<u>20%</u>	<u>Y</u>	<u>FACW</u>	Prevalence Index = B/A = <u>3.45</u>
2. <u>Helminthoteca echioides</u>		<u>20%</u>	<u>Y</u>	<u>FAC</u>	
3. <u>Rumex crispus</u>		<u>10%</u>	<u>-</u>	<u>FAC</u>	
4. <u>Polygonum monspeliensis</u>		<u>5%</u>	<u>-</u>	<u>FACW</u>	
5. <u>Lolium multiflorum</u>		<u>25%</u>	<u>Y</u>	<u>UPL</u>	
6. <u>Bromus hordeaceus</u>		<u>20%</u>	<u>Y</u>	<u>FACU</u>	
7. _____					
8. _____					
		<u>100%</u>	= Total Cover		
<u>Woody Vine Stratum</u>	<u>(Plot size: _____)</u>				Hydrophytic Vegetation Indicators:
1. _____					<input type="checkbox"/> Dominance Test is >50%
2. _____					<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
					<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
					<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
					¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
					Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Vegetation was predominately wetland species.					

SOIL

Sampling Point: 9

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
4	10 YR 3-2						Silty	Small gravel, color is uniform

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

Indicators for Problematic Hydric Soils³:

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil within sample plot is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:

Site shows no signs wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 10
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Sample location is not a wetland; it is not dominated by wetland vegetation.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
Tree Stratum (Plot size: <u>10x10'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
3. _____				
4. _____				
	<u>0%</u> = Total Cover			
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				
1. _____				Prevalence Index worksheet:
2. _____				Total % Cover of: _____ Multiply by: _____
3. _____				OBL species <u>0</u> x 1 = <u>0</u>
4. _____				FACW species <u>0</u> x 2 = <u>0</u>
5. _____				FAC species <u>20</u> x 3 = <u>60</u>
	<u>0%</u> = Total Cover			FACU species <u>20</u> x 4 = <u>80</u>
Herb Stratum (Plot size: <u>10x10</u>)				UPL species <u>60</u> x 5 = <u>300</u>
1. <u>Cortaderia selloana</u>	<u>15%</u>	<u>Y</u>	<u>FACU</u>	Column Totals: <u>100</u> (A) <u>440</u> (B)
2. <u>Helminthotheca echioides</u>	<u>10%</u>	<u>-</u>	<u>FAC</u>	Prevalence Index = B/A = <u>4.4</u>
3. <u>Lolium multiflorum</u>	<u>55%</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Lotus corniculatus</u>	<u>10%</u>	<u>-</u>	<u>FAC</u>	
5. <u>Foeniculum vulgare</u>	<u>5%</u>	<u>-</u>	<u>UPL</u>	
6. <u>Medicago polymorpha</u>	<u>5%</u>	<u>-</u>	<u>FACU</u>	
7. _____				
8. _____				
	<u>100%</u> = Total Cover			
Woody Vine Stratum (Plot size: _____)				
1. _____				Hydrophytic Vegetation Indicators:
2. _____				<input type="checkbox"/> Dominance Test is >50%
	<u>0%</u> = Total Cover			<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
% Bare Ground in Herb Stratum <u>0%</u> % Cover of Biotic Crust <u>0%</u>				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The sample site is dominated by upland species.				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 11

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Helminthotheca echioides</u>	30%	Y	FAC	
2. <u>Hordeum brachyantherum</u>	5%	-	FACW	
3. <u>Polypogon monspeliensis</u>	25%	Y	FACW	
4. <u>Bromus hordeaceus</u>	10%	-	FACU	
5. <u>Rumex crispus</u>	5%	-	FAC	
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>25</u> % Cover of Biotic Crust <u>0</u>				

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
 Total Number of Dominant Species Across All Strata: 2 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:
 Total % Cover of: _____ Multiply by: _____
 OBL species 0 x 1 = 0
 FACW species 30 x 2 = 60
 FAC species 35 x 3 = 105
 FACU species 10 x 4 = 40
 UPL species 0 x 5 = 0
 Column Totals: 75 (A) 205 (B)
 Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks:
 Vegetation in sample plot is dominated by wetland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 12
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>	

Remarks:

Sample point is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				OBL species <u>0</u> x 1 = <u>0</u>
1. _____	_____	_____	_____	FACW species <u>0</u> x 2 = <u>0</u>
2. _____	_____	_____	_____	FAC species <u>2</u> x 3 = <u>6</u>
3. _____	_____	_____	_____	FACU species <u>98</u> x 4 = <u>392</u>
4. _____	_____	_____	_____	UPL species <u>0</u> x 5 = <u>0</u>
5. _____	_____	_____	_____	Column Totals: <u>100</u> (A) <u>398</u> (B)
_____ = Total Cover				Prevalence Index = B/A = <u>4.0</u>
Herb Stratum (Plot size: <u>10x10</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Medicago polymorpha</u>	<u>90%</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Bromus hordeaceus</u>	<u>8%</u>	<u>-</u>	<u>FACU</u>	
3. <u>Helminthotheca echioides</u>	<u>2%</u>	<u>-</u>	<u>FAC</u>	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
<u>100%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u>		% Cover of Biotic Crust <u>0</u>		

Remarks:

Upland vegetation is dominate throughout the sample site.

SOIL

Sampling Point: .12

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
9	10 YR 3/1						Silty	lighter mottles present, lots of gravel within upper 6 inches.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:

Sample site did not show signs of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 13

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
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Remarks:
Sample location is not a wetland; it is not dominated by wetland vegetation.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>) 1. _____ 2. _____ 3. _____ 4. _____ _____ = Total Cover	Absolute % Cover _____ _____ _____ _____ _____	Dominant Species? _____ _____ _____ _____ _____	Indicator Status _____ _____ _____ _____ _____	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>2</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ _____ = Total Cover	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	_____ _____ _____ _____ _____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>0</u> x 2 = <u>0</u> FAC species <u>7</u> x 3 = <u>21</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>93</u> x 5 = <u>465</u> Column Totals: <u>100</u> (A) <u>486</u> (B) Prevalence Index = B/A = <u>4.9</u>
Herb Stratum (Plot size: <u>10x10</u>) 1. <u>Avena fatua</u> 2. <u>Helminthotheca echioides</u> 3. <u>Carduus pycnocephalus</u> 4. <u>Stipa pulchra</u> 5. <u>Foeniculum vulgare</u> 6. <u>Vicia americana</u> 7. _____ 8. _____ _____ = Total Cover	50% 5% 2% 1% 40% 2% _____ _____	Y - - - Y - _____ _____	UPL FAC UPL UPL FAC _____ _____	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)
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____ _____ = Total Cover	_____ _____ _____	_____ _____ _____	_____ _____ _____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
% Bare Ground in Herb Stratum <u>0%</u> % Cover of Biotic Crust <u>0%</u>				Remarks: The sample site is dominated by upland species.

SOIL

Sampling Point: 13

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
6	10 YR 4/3						Silty	Small gravel. Uniform color.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Water Table Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
Saturation Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): _____	
(includes capillary fringe)			

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

Remarks:

The sample site does not show signs of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 14

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/>	No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Remarks:					
Sample location is not a wetland; it is not dominated by wetland vegetation.					

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
0% = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
0% = Total Cover				
Herb Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Daucus carota</u>	5%	-	FACU	
2. <u>Helminthotheca echioides</u>	10%	-	FAC	
3. <u>Lolium multiflorum</u>	35%	Y	UPL	
4. <u>Lotus corniculatus</u>	35%	Y	FAC	
5. <u>Foeniculum vulgare</u>	5%	-	UPL	
6. <u>Bromus hordeaceus</u>	5%	-	FACU	
7. <u>Rumex crispus</u>	5%	-	FAC	
8. _____				
100% = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
0% = Total Cover				
% Bare Ground in Herb Stratum <u>0%</u>		% Cover of Biotic Crust <u>0%</u>		

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>50</u>	x 3 = <u>150</u>
FACU species <u>10</u>	x 4 = <u>40</u>
UPL species <u>40</u>	x 5 = <u>200</u>
Column Totals: <u>100</u> (A)	<u>390</u> (B)

Prevalence Index = B/A = 3.9

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present?	Yes <input type="checkbox"/>	No <input checked="" type="checkbox"/>
--	------------------------------	--

Remarks:

The sample site is dominated by upland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 15
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Sample site is not within a wetland.	

VEGETATION – Use scientific names of plants.

Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>10x10'</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
1. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
3. _____				
4. _____				
_____ = Total Cover				
<u>Sapling/Shrub Stratum</u> (Plot size: <u>10x10'</u>)				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species <u>0</u> x 1 = <u>0</u>
3. _____				FACW species <u>0</u> x 2 = <u>0</u>
4. _____				FAC species <u>15</u> x 3 = <u>45</u>
5. _____				FACU species <u>25</u> x 4 = <u>100</u>
_____ = Total Cover				UPL species <u>50</u> x 5 = <u>250</u>
<u>Herb Stratum</u> (Plot size: <u>10x10'</u>)				Column Totals: <u>90</u> (A) <u>395</u> (B)
1. <u>Helminthotheca echioides</u>	<u>10%</u>	<u>Y</u>	<u>FAC</u>	Prevalence Index = B/A = <u>4.4</u>
2. <u>Foeniculum vulgare</u>	<u>25%</u>	<u>Y</u>	<u>UPL</u>	
3. <u>Daucus carota</u>	<u>25%</u>	<u>Y</u>	<u>FACU</u>	
4. <u>Lotus corniculatus</u>	<u>5%</u>	<u>-</u>	<u>FAC</u>	
5. <u>Brassica nigra</u>	<u>10%</u>	<u>-</u>	<u>UPL</u>	
6. <u>Bromus madritensis</u>	<u>15%</u>	<u>-</u>	<u>UPL</u>	
7. _____				
8. _____				
_____ = Total Cover				
<u>Woody Vine Stratum</u> (Plot size: _____)				Hydrophytic Vegetation Indicators:
1. _____				<input type="checkbox"/> Dominance Test is >50%
2. _____				<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
_____ = Total Cover				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
_____ = Total Cover				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
% Bare Ground in Herb Stratum <u>10</u>	% Cover of Biotic Crust <u>0</u>			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
_____ = Total Cover				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: Vegetation is sample plot is dominated by upland species.				

SOIL

Sampling Point: 15

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
5	10 YR 5/3						Silty	Uniform color; small gravel present throughout soil.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:
Soil is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>	<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:
The sample point shows no signs of wetland hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 16

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		

Remarks:
Sampled area is not within a wetland..

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>1</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0%</u> (A/B)														
1. _____																		
2. _____																		
3. _____																		
4. _____																		
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>) <u>0%</u> = Total Cover				Prevalence Index worksheet: <table border="0"> <tr> <td>Total % Cover of:</td> <td>Multiply by:</td> </tr> <tr> <td>OBL species <u>0</u></td> <td>x 1 = <u>0</u></td> </tr> <tr> <td>FACW species <u>0</u></td> <td>x 2 = <u>0</u></td> </tr> <tr> <td>FAC species <u>3</u></td> <td>x 3 = <u>9</u></td> </tr> <tr> <td>FACU species <u>65</u></td> <td>x 4 = <u>260</u></td> </tr> <tr> <td>UPL species <u>2</u></td> <td>x 5 = <u>10</u></td> </tr> <tr> <td>Column Totals: <u>70</u> (A)</td> <td><u>279</u> (B)</td> </tr> </table> Prevalence Index = B/A = <u>4.0</u>	Total % Cover of:	Multiply by:	OBL species <u>0</u>	x 1 = <u>0</u>	FACW species <u>0</u>	x 2 = <u>0</u>	FAC species <u>3</u>	x 3 = <u>9</u>	FACU species <u>65</u>	x 4 = <u>260</u>	UPL species <u>2</u>	x 5 = <u>10</u>	Column Totals: <u>70</u> (A)	<u>279</u> (B)
Total % Cover of:	Multiply by:																	
OBL species <u>0</u>	x 1 = <u>0</u>																	
FACW species <u>0</u>	x 2 = <u>0</u>																	
FAC species <u>3</u>	x 3 = <u>9</u>																	
FACU species <u>65</u>	x 4 = <u>260</u>																	
UPL species <u>2</u>	x 5 = <u>10</u>																	
Column Totals: <u>70</u> (A)	<u>279</u> (B)																	
Herb Stratum (Plot size: <u>10x10</u>) <u>0%</u> = Total Cover																		
1. <u>Cortaderia seloana</u>	<u>50%</u>	<u>Y</u>	<u>FACU</u>															
2. <u>Brachypodium distachyon</u>	<u>15%</u>	<u>-</u>	<u>FACU</u>															
3. <u>Lolium multiflorum</u>	<u>2%</u>	<u>-</u>	<u>UPL</u>															
4. <u>Lotus corniculatus</u>	<u>3%</u>	<u>-</u>	<u>FAC</u>															
Woody Vine Stratum (Plot size: _____) <u>70%</u> = Total Cover																		
1. _____																		
2. _____																		
_____ <u>0%</u> = Total Cover																		
% Bare Ground in Herb Stratum <u>30%</u>		% Cover of Biotic Crust <u>0%</u>		Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)														
_____ <u>0%</u> = Total Cover																		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																		

Remarks:
The sample site is dominated by upland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 17

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/>	No <input type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input type="checkbox"/>			

Remarks:
Sampled meets all three wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
2. _____				
3. _____				
4. _____				
<u>0%</u> = Total Cover				Prevalence Index worksheet: <u>0</u> Total % Cover of: <u>0</u> Multiply by: OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>0</u> x 3 = <u>0</u> FACU species <u>0</u> x 4 = <u>0</u> UPL species <u>20</u> x 5 = <u>100</u> Column Totals: <u>70</u> (A) <u>200</u> (B) Prevalence Index = B/A = <u>2.9</u>
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
<u>0%</u> = Total Cover				
Herb Stratum (Plot size: <u>10x10'</u>)				
1. <u>Plantago coronopus</u>	<u>35%</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Bromus madritensis</u>	<u>15%</u>	<u>v</u>	<u>UPL</u>	
3. <u>Lolium multiflorum</u>	<u>5%</u>	<u>-</u>	<u>UPL</u>	
4. <u>Polypogon monspeliensis</u>	<u>15%</u>	<u>Y</u>	<u>FACW</u>	
5. _____				
6. _____				
7. _____				
8. _____				
<u>70%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum <u>30%</u>		% Cover of Biotic Crust <u>0%</u>		

Remarks:
Vegetation within the sample plot is dominated by wetland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 18

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

The sampled area is not within a wetland.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A) Total Number of Dominant Species Across All Strata: <u>4</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>25%</u> (A/B)
1. _____				
2. _____				
3. _____				
4. _____				
_____ = Total Cover	<u>0%</u>			
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
_____ = Total Cover	<u>0%</u>			
Herb Stratum (Plot size: <u>10x10</u>)				
1. <u>Helminthotheca echioides</u>	<u>15%</u>	<u>Y</u>	<u>FAC</u>	
2. <u>Plantago coronopus</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
3. <u>Lolium multiflorum</u>	<u>25%</u>	<u>Y</u>	<u>UPL</u>	
4. <u>Cortaderia seloana</u>	<u>15%</u>	<u>Y</u>	<u>FACU</u>	
5. <u>Medicago polymorpha</u>	<u>5%</u>	<u>-</u>	<u>FACU</u>	
6. <u>Lotus corniculatus</u>	<u>5%</u>	<u>-</u>	<u>FAC</u>	
7. <u>Linum spp.</u>	<u>30%</u>	<u>Y</u>	<u>UPL</u>	
8. _____				
_____ = Total Cover	<u>100%</u>			
Woody Vine Stratum (Plot size: _____)				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

Remarks:

The sample site is dominated by upland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 19

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): none

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/>	Hydic Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
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Remarks:
Sampled area meets all three wetland criteria.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A) Total Number of Dominant Species Across All Strata: <u>3</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>66%</u> (A/B)
1. <u>Willow spp.</u>	<u>15%</u>	<u>-</u>	<u>FACW</u>	
2. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species <u>0</u> x 1 = <u>0</u> FACW species <u>50</u> x 2 = <u>100</u> FAC species <u>5</u> x 3 = <u>15</u> FACU species <u>20</u> x 4 = <u>80</u> UPL species <u>10</u> x 5 = <u>50</u> Column Totals: <u>85</u> (A) <u>245</u> (B) Prevalence Index = B/A = <u>2.9</u>
3. _____				
4. _____				
<u>15%</u> = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
1. _____				
2. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
3. _____				
4. _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
5. _____				
<u>0%</u> = Total Cover				
Herb Stratum (Plot size: <u>10x10</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Remarks: Vegetation within the sample plot is dominated by wetland species.
1. <u>Cortaderia selloana</u>	<u>20%</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Lotus corniculatus</u>	<u>5%</u>	<u>-</u>	<u>FAC</u>	
3. <u>Juncus bufonius</u>	<u>25%</u>	<u>y</u>	<u>FACW</u>	
4. <u>Plantago coronopus</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
5. <u>Juncus Lescurii</u>	<u>20%</u>	<u>Y</u>	<u>FACW</u>	
6. <u>Anagallis arvensis</u>	<u>5%</u>	<u>-</u>	<u>UPL</u>	
7. <u>Bellardia trixago</u>	<u>5%</u>	<u>-</u>	<u>UPL</u>	
8. _____				
<u>85%</u> = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
<u>0%</u> = Total Cover				
% Bare Ground in Herb Stratum <u>15%</u>		% Cover of Biotic Crust <u>0%</u>		

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 20

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The sampled area is not within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
0% = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
0% = Total Cover				
Herb Stratum (Plot size: <u>10x10</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cortaderia seloana</u>	35%	Y	FACU	
2. <u>Lotus corniculatus</u>	3%	-	FAC	
3. <u>Melilotus officinalis</u>	2%	-	UPL	
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
40% = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60</u> % Cover of Biotic Crust <u>0</u>				

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>0</u>	x 2 = <u>0</u>
FAC species <u>3</u>	x 3 = <u>9</u>
FACU species <u>35</u>	x 4 = <u>140</u>
UPL species <u>2</u>	x 5 = <u>10</u>
Column Totals: <u>40</u> (A)	<u>159</u> (B)

Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:

Dominance Test is >50%

Prevalence Index is ≤3.0¹

Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks:
The sample site is dominated by upland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015
 Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 21
 Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%
 Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29
 Soil Map Unit Name: Candelstick and Pit NWI classification: None

Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No
 Are Vegetation , Soil , or Hydrology 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 <input checked="" type="checkbox"/> No <input type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Remarks: The sampled area is within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
0% = Total Cover				
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
0% = Total Cover				
Herb Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. <u>Cortaderia selloana</u>	<u>40%</u>	<u>Y</u>	<u>FACU</u>	
2. <u>Juncus Lescurii</u>	<u>50%</u>	<u>y</u>	<u>FACW</u>	
3. <u>Juncus bufonius</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
4. <u>Centaurium muehlenbergii</u>	<u>5%</u>	<u>-</u>	<u>FACW</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
100% = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>0</u> % Cover of Biotic Crust <u>0</u>				

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% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species <u>0</u>	x 1 = <u>0</u>
FACW species <u>60</u>	x 2 = <u>120</u>
FAC species <u>0</u>	x 3 = <u>0</u>
FACU species <u>40</u>	x 4 = <u>160</u>
UPL species <u>0</u>	x 5 = <u>0</u>
Column Totals: <u>100</u> (A)	<u>280</u> (B)

 Prevalence Index = B/A = 2.8

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

Hydrophytic Vegetation Present? Yes No

Remarks:
 The sample site is dominated by wetland species.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: The Pacifica Quarry City/County: Pacifica, San Mateo County Sampling Date: 7/14/2015

Applicant/Owner: preserve@Pacifica, LLC. State: CA Sampling Point: 22

Investigator(s): John Zentner Section, Township, Range: 2, 4 south, 6 west

Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): none Slope (%): 0%

Subregion (LRR): LRR B Lat: 37.613221 Long: -122.495293 Datum: NGVD 29

Soil Map Unit Name: Candelstick and Pit NWI classification: None

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

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

Are Vegetation , Soil , or Hydrology 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 <input type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Remarks: The sampled area is not within a wetland.	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>10x10'</u>)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				
2. _____				
3. _____				
4. _____				
				0% = Total Cover
Sapling/Shrub Stratum (Plot size: <u>10x10'</u>)				
1. _____				
2. _____				
3. _____				
4. _____				
5. _____				
				0% = Total Cover
Herb Stratum (Plot size: <u>10x10</u>)				
1. <u>Cortaderia selloana</u>	30%	Y	FACU	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
				30% = Total Cover
Woody Vine Stratum (Plot size: _____)				
1. _____				
2. _____				
				_____ = Total Cover
% Bare Ground in Herb Stratum <u>70</u>		% Cover of Biotic Crust <u>0</u>		

Dominance Test worksheet:
 Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A)
 Total Number of Dominant Species Across All Strata: 0 (B)
 Percent of Dominant Species That Are OBL, FACW, or FAC: 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 0 x 5 = 0
 Column Totals: 30 (A) 120 (B)
 Prevalence Index = B/A = 4.0

Hydrophytic Vegetation Indicators:
 Dominance Test is >50%
 Prevalence Index is ≤3.0¹
 Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
 Problematic Hydrophytic Vegetation¹ (Explain)

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

Hydrophytic Vegetation Present? Yes No

Remarks:
 The sample site consists of one upland species and bare ground. No wetland species are present.

SOIL

Sampling Point: 22

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
3	7.5 YR 2/0						Silty	Lots of rocks and small pebbles throughout sample.

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: n/a

Depth (inches): n/a

Hydric Soil Present? Yes No

Remarks:

Soil is not hydric.

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes No Depth (inches): _____

Water Table Present? Yes No Depth (inches): _____

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

Wetland Hydrology Present? Yes No

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

Remarks:

The sample point does not have wetland hydrology.

Appendix B

Representative Photographs of the Wetlands



Wetland D: Sample point 2



Wetland B: Sample point 17



Upland: Sample point 9



Wetland I: Sample point 19



Wetland H: Sample point 21