



August 31, 2007

Ms. Maria Levario
Transportation Corridor Agencies
125 Pacifica, Suite 100
Irvine California 92618-3304

SUBJECT: Foothill Transportation Corridor - South, Orange County, California.

Dear Ms. Levario:

This letter report summarizes our preliminary findings of California Coastal Commission jurisdiction (CCC) for the above-referenced project.¹ This delineation is derived from several sources. The following discussion provides a summary of prior delineations and the current effort to delineate the CCC jurisdiction for the A7-FEC-M (with minor modifications) Foothill Transportation Corridor - South alternative.

CCC jurisdiction within the Study Area, consisting of the disturbance limits and a 100-foot buffer surrounding the disturbance limit, totals approximately 19.12 acres, all of which consist of coastal wetlands. The project, as currently proposed, would permanently impact approximately 0.16 acre of CCC jurisdictional wetland and temporarily impact 7.70 acres of jurisdictional wetland.

I. METHODOLOGY

A. DELINEATION HISTORY

Jurisdictional delineations of aquatic features within the Foothill Transportation Corridor - South Study Area [Exhibits 1 & 2] for the purposes of CEQA and NEPA initially began in 1995. Although various alternatives have been deleted, modified or added since that time, the study area within the coastal zone has generally remained unchanged. From October 1995 to May

¹ This report presents our best effort at estimating the subject jurisdictional boundaries using the most up-to-date regulations and written policy and guidance from the regulatory agencies. Only the regulatory agencies can make a final determination of jurisdictional boundaries. If a final jurisdictional determination is required, GLA can assist in getting written confirmation of jurisdictional boundaries from the agencies.

1996 a jurisdictional delineation was conducted by Michael Brandman Associates (MBA), which included mapping of aquatic features that fell within the coastal zone (1995/1996 MBA Delineation). The MBA delineation indicated that the CCC “requires the presence of only a single wetland parameter for an area to have jurisdictional status”. Therefore, “CCC jurisdictional area [was] identified as identical to that of CDFG”.

From July 2001 to September 2001 and from April 2004 to June 2004, GLA regulatory specialists further updated the delineation, which included re-examining aquatic features in the coastal zone as needed (2004 GLA Delineation). Then, from November 2004 to December 2004, the delineation was refined to incorporate input from the Corps during the field verification. The CCC wetland limits depicted in the April 6, 2005 Delineation Report and again in the September 26, 2005 Addendum, were still based upon the limits of Army Corps of Engineers or California Department of Fish and Game jurisdiction, whichever was greater. All features subject to either CDFG or Corps jurisdiction were presumed to be subject to CCC jurisdiction. Specifically, at the time that GLA refined the MBA 1995 delineation in 2001, sample points were collected to confirm the presence of three-parameter Corps’ wetlands and field widths were measured for San Mateo and San Onofre Creeks to confirm the extent of Corps and CDFG jurisdiction. However, the limits of the non-linear jurisdictional areas were not modified at that time and therefore were still based upon the topography and vegetation boundaries visible on the aerial photography available in 1995. Additional visual inspections were conducted in 2001 and 2004 to verify that no additional areas of inundation were observed within the impact limits. The ultimate digital file used for analysis in the 2005 Delineation and Addendum Reports was produced in 2004 using a combination of shapes generated in 1995, lines buffered using widths measured in the field in 2001 and some refinement based on digital aerial photography.

In 2007, upon reviewing the CCC jurisdictional limits at a greater level of detail using higher-resolution ortho-rectified aerial photography and topography for the purposes of determining coastal consistency, it became apparent that the digital files used for analysis in 2005 were not entirely consistent with the most recent digital base data available. For that reason, additional efforts were made to refine CCC jurisdictional limits where these inconsistencies were observed. The limits of the current jurisdictional areas were based upon the vegetation boundaries visible on aerial photography and confirmed in some locations using GPS as further described below. Refinements were limited to the disturbance area and a 100-foot buffer surrounding the disturbance limits.

B. SPECIFIC DELINEATION METHODOLOGY

Prior to beginning the 2007 field delineations, a series of 100-scale color aerial photographs, 100-scale topographic base maps of the alignments to be evaluated, the delineation maps associated with the prior delineations, soil surveys, ponding data collected during wet-season fairy shrimp surveys conducted in 1996, 1997, and 2001² and USGS topographic maps (San Clemente, Canada Gobenadora, San Juan Capistrano and Dana Point Quadrangles) were examined to determine the locations of potential areas of jurisdiction.

While in the field the limits for each jurisdictional wetland area were recorded onto the 100-scale color aerial photograph using visible landmarks or using a GeoXT GPS datalogger. Other data were recorded onto wetland data sheets that correspond to the location of observation points where presence/absence of indicators for hydrophytic vegetation, wetland hydrology and hydric soils were evaluated. Any feature exhibiting one of the three indicators was classified as a CCC wetland.

Evaluation of hydric soils and wetland hydrology was limited to historic data and visual observations as a result of restrictions imposed by USMC. A prevalence index was used to determine if a hydrophytic vegetation community was present. The prevalence index is a weighted-average wetland indicator status of all plant species in a given sampling plot, where each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4 and UPL = 5) and weighting is by abundance (percent cover).

The location of observation points was determined in the field at the time of the delineation and was dictated by site-specific conditions. For essentially all of the coastal wetlands evaluated, the boundary between wetland and upland was marked by distinct boundaries, usually related to abrupt changes in topography or vegetation. In most instances, these abrupt changes made it possible to locate a clear and distinct wetland boundary without collecting numerous paired observation points.

Depressional wetlands, such as vernal pools, are defined by the 1987 Manual as “Problem Areas” because various indicators for wetland vegetation and/or hydrology may be absent during summer or fall or completely absent during years of below-average rainfall. Although such areas were not formally delineated during the period of ponding when the wet-season fairy shrimp surveys were performed, the data collected during these surveys was used to augment the delineation data thereby providing for hydrological data not available during the July – September window during which the 2001 delineation was performed. The limits of these features were not modified during the current delineation efforts because the original

² Data was collected in part by Tony Bomkamp with GLA

hydrological data was collected during a more typical rainy season and more accurately reflects the maximum extent of ponding.

Where the anticipated disturbance limits affected only portions of a wetland, the observation points were concentrated in areas of potential impacts as indicted by the disturbance limits. For example, observation points associated with the FE/7 San Mateo Marsh – East of I-5 were concentrated along the southern boundary of the wetland as the northern boundary is well removed from the proposed disturbance limits.

Enclosed is a 400-scale map [Exhibit 3] that depicts aquatic features subject to CCC jurisdiction. Jurisdictional totals strictly represent the surface area of each feature and do not include an assessment of the relative quality of each feature.

The United States Soil Conservation Service (SCS)³ has mapped the following soil types as occurring in the general vicinity of the project site:

Soil Unit	Soil Taxonomy	Description
Gaviota fine sandy loam	Lithic Xerorthents	30-50% slopes; consists of well drained, shallow fine sandy loams that formed in material weathered from marine sandstone; found on uplands.
Marina loamy coarse sand	Alfic Xeropsamments	2 to 30% slopes; consists of somewhat excessively drained, very deep loamy coarse sands derived from weakly consolidated to noncoherent ferruginous eolian sand; found on old beach ridges.
Riverwash	No Soil Taxonomy	Consists of unconsolidated alluvium, generally stratified and varying widely in texture, recently deposited in intermittent stream, and subject to frequent changes through stream flow.
Salinas clay loam	Calcic Pachic Haploxerolls	0 to 2 % slopes; consist of well drained and moderately well drained clay loams that formed in sediments washed from Diablo, Linne, Las Flores, Huerhuero and Olivenhain soils; found on flood plains and alluvial fans.
Tidal Flats	No Soil Taxonomy	Occurs as nearly level areas adjacent to bays and lagoons along the coast, periodically covered by tidal overflow. Consists of stratified clayey to sandy deposits; poorly drained and high in salts.

³ SCS is now known as the National Resource Conservation Service or NRCS.

Soil Unit	Soil Taxonomy	Description
Terrace Escarpments	No Soil Taxonomy	Consists of steep to very steep escarpments, occurring on the nearly even fronts of terraces or alluvial fans; loamy or gravelly soil over soft marine sandstone, shale or gravelly sediments.
Tujunga sand	Typic Xeropsamments	0-5% slopes; consists of very deep, excessively drained sands derived from granitic alluvium; found on alluvial fans and flood plains.
Visalia sandy loam	Pachic Haploxerolls	0 to 2% slopes; Consists of moderately well drained, very deep sandy loams derived from granitic alluvium; found on alluvial fans and flood plains.

Hydric soils are those that are "...wet long enough to periodically produce anaerobic conditions, thereby influencing plant growth⁴." Thus the presence of a hydric soil may be a significant indicator of the presence of wetlands. With regard to the soil types identified in the table above, none of the soil types are hydric as listed in the SCS's publication, Hydric Soils of the United States⁵. However, Riverwash, Tidal Flats, Tujunga sands within intermittent streams and floodplains, and Visalia series within flood plains may be hydric as listed in the County of San Diego local lists of hydric soils⁶. The local lists are the most specific and when used with the local soil survey report map sheets provide the potential geographic distribution of hydric soils within a given area although field evidence is necessary to verify the actual distribution.

⁴ Tiner, R.W. 1999. *Wetland Indicators: A Guide to Wetland Identification, Delineation, Classification and Mapping*. Lewis Publishers: Boca Raton, Florida.

⁵ United States Department of Agriculture, Soil Conservation Service. 1991. Hydric Soils of the United States, 3rd Edition, Miscellaneous Publication Number 1491. (In cooperation with the National Technical Committee for Hydric Soils.)

⁶ United States Department of Agriculture, Soil Conservation Service. 1992. Hydric Soils List, San Diego Field Office, Section II, Field Office Technical Guide. Davis, California.

III. JURISDICTION

As indicated on Exhibit 3, portions of the Foothill Transportation Corridor – South fall within the “coastal zone”. Pursuant to the California Coastal Act of 1976 (Public Resources Code Section 30000 et seq.), the California Coastal Commission (CCC) regulates land uses within or adjacent to environmentally sensitive areas (ESAs) within the “coastal zone.”

Public Resources Code Section 30107.5 defines an ESA as:

...any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem and which could be easily disturbed or degraded by human activities and developments.

Included within this definition are wetlands, estuaries, streams, riparian habitats, lakes, and portions of open coastal waters that meet the rare or valuable habitat criteria. The CCC regulates the diking, filling, or dredging of wetlands, or lands within 100 feet of wetlands, within the coastal zone. Public Resources Code Section 30121 defines coastal “wetlands” as lands “within the coastal zone which may be covered periodically or permanently with shallow water.” The 1981 CCC Statewide Interpretive Guidelines state that hydric soils and hydrophytic vegetation:

...are useful indicators of wetland conditions, but the presence or absence of hydric soils and/or hydrophytes alone are not necessarily determinative when the Commission identifies wetlands under the Coastal Act. In the past, the Commission has considered all relevant information in making such determinations and relied upon the advice and judgment of experts before reaching its own independent conclusion as to whether a particular area will be considered wetland under the Coastal Act. The Commission intends to continue to follow this policy.

While wetlands are defined by the concurrent presence of three indicators (wetland hydrology, hydrophytic vegetation, and hydric soils) for the purpose of federal regulatory programs administered by the U.S. Army Corps of Engineers (Corps), the CCC, according to the guidelines quoted above, only requires the presence of one of these indicators in the positive determination of coastal wetlands. As such, the CCC also includes riparian habitats that exhibit a predominance of hydrophytic vegetation within their definition of coastal wetlands. Riparian vegetation is defined in the 1981 CCC Statewide Interpretive Guidelines as “an association of plant species which grows adjacent to freshwater watercourses, including perennial and intermittent streams, lakes, and other bodies of fresh water.” Riparian habitats may encompass wetland areas, but may also extend beyond those areas.

IV. RESULTS

CCC jurisdiction within the SOCTIIP Study Area totals 19.12 acres, all of which consists of wetland.

CCC Wetlands Within SOCTIIP Study Area

Feature	Type	Habitat Type	Acres
FE/7-SAN MATEO CREEK	Palustrine/ Estuarine ¹	Arroyo Willow Forest	9.78
FE/7-SAN MATEO MARSH- EAST of I5	Palustrine	Arroyo Willow Forest	3.92
FE/7-SAN MATEO MARSH- WEST of I5	Estuarine	Arroyo Willow Forest	1.97
FE/7-SAN MATEO MARSH- WEST of I5	Estuarine	Mule Fat Scrub	1.04
FE/7-VM20	Palustrine	Vernal Pool	0.05
FE/7-VP3	Palustrine	Vernal Pool	0.18
SAN ONOFRE CREEK	Palustrine/ Estuarine ¹	Coastal Freshwater Marsh	0.51
SAN ONOFRE CREEK	Palustrine/ Estuarine ¹	Arroyo Willow forest	1.67
TOTAL	NA		19.12

¹The portion of these creeks that exhibit ocean-derived salinities in excess of 0.5 ppt would be classified as estuarine. Determination of this boundary requires additional field mapping and would change from year to year depending on various factors including precipitation

FE/7-San Mateo Creek

The San Mateo Creek/Wetland Complex consists of the braided channel of San Mateo Creek and includes areas of the low-flow channel, which are supported by base flow throughout the year. The channel varies from 200 to 1100 feet wide and is composed of coarse sand with cobbles and boulders. There are similar but narrower braids throughout the channel bed with several islands that support both annual and perennial vegetation including mule fat (*Baccharis salicifolia*, FACW-), narrow-leaved willow (*Salix exigua*, OBL), arroyo willow (*Salix lasiolepis*, FACW),

fennel (*Foeniculum vulgare*, FACU), rabbitsfoot grass (*Polypogon monspeliensis*, FACW+), red and ripgut brome (*Bromus rubens* and *Bromus diandrus*, UPL), white clover (*Melilotis alba*, FACU), and curly dock (*Rumex crispus*, FACW-). In general, vegetation within the drainage varies from mature willow woodland to mule fat scrub and open cobbly wash. Wetland areas are vegetated with yellow willow (*Salix lucida*, FACW), arroyo willow (*Salix lasiolepis*, FACW), cattail (*Typha domingensis*, OBL), spike rush (*Eleocharis acicularis*, OBL), bulrush (*Scirpus americanus*, OBL), narrow leafed willow (*Salix exigua*, OBL), mule fat (*Baccharis salicifolia*, FACW-), sedge (*Cyperus* sp., ≥FACW) iceplant (*Carpobrotus* sp., UPL), saltgrass (*Distichlis spicata*, FACW), celery (*Apium graveolens*, FACW), cudweed (*Gnathaliium luteo-album* (FACW-), white alder (*Alnus rhombifolia*, FACW), horsetail (*Equisetum* sp., ≥FAC), and rabbitfoot grass (*Polypogon monspeliensis*, FACW+).

The presence of an OHWM was indicated by the presence of litter and debris, clear line impressed upon the bank, destruction of terrestrial vegetation and change in soil character. CCC jurisdiction associated with San Mateo Creek within the study area totals 9.78 acres, all of which consists of one-parameter wetland based on hydrophytic vegetation.

FE/7-San Mateo Marsh East of I-5

Inland from Interstate-5, a portion of San Mateo Marsh, separated from San Mateo creek by agricultural fields is located immediately east of Interstate-5 and north of Basilone Road. This area consists of willow riparian forest and brackish marsh. The willow riparian forest is dominated by arroyo willow (*Salix lasiolepis*, FACW) with an understory of giant nettle (*Urtica dioica*, FACW). The wettest areas within the willow forest supports fruit bur-reed (*Sparganium eurycarpum*, OBL), Olney's bulrush (*Scirpus americanus*, OBL), red-rooted umbrella sedge (*Cyperus erythrorhizos*, OBL), straw colored umbrella sedge (*Cyperus strigosus*, FACW), and California bulrush (*Scirpus californicus*, OBL). Sediment deposits and moderate shelving indicated the presence of surface hydrology. Soils were composed of low chroma silt layers interbedded with layers of fine sand and buried organics.

CCC jurisdiction associated with San Mateo Marsh – East of I-5 within the study area totals 3.92 acres, all of which consists of one-parameter wetland based on hydrophytic vegetation.

FE/7-San Mateo Marsh West of I-5

San Mateo Marsh is a coastal freshwater marsh that is located near the southern end of the study area where San Mateo Creek discharges into the ocean. The marsh is a mosaic of wetland/riparian habitat that is located on both the coastal and inland sides of Interstate-5. The Trestles Wetland Preserve, on the coastal side of Interstate-5, consists of willow riparian forest, southern sycamore riparian forest, freshwater marsh dominated by hardstem bulrush (*Scirpus*

acutus, OBL) and southern cattail (*Typha domingensis*, OBL), brackish marsh dominated by Olney's bulrush (*Scirpus americanus*, OBL), and small areas of coastal salt marsh dominated by fleshy jaumea (*Jaumea carnosa*, OBL) and pickleweed (*Salicornia virginica*, OBL).

CCC jurisdiction associated with San Mateo Marsh – West of I-5 within the study area totals 3.00 acres, all of which consists of one-parameter wetland based on hydrophytic vegetation.

Vernal Marsh FE/7-VM 20

Vernal Marsh FE-VM 20 is located adjacent to the Interstate-5 off ramp at Basilone Road. The basin appears to have been created by construction of the offramp and supports hydrophytic vegetation including mule fat (*Baccharis salicifolia*, FACW), arroyo willow (*Salix lasiolepis*, FACW), western goldenrod (*Euthamia occidentalis*, OBL), and salt marsh fleabane (*Pluchea odorata*, OBL). The basin was observed to be ponded from February 13, 2001 to February 21, 2001 meeting criteria 3 for hydric soils.

CCC jurisdiction associated with Vernal Marsh FE/7-VM20 within the study area totals 0.05 acres, all of which consists of three-parameter wetland.

Vernal Pool FE/7-VP 3

Vernal Pool FE-VP 3 is a basin which covers 0.18 acres vegetated with dwarf woolly-marbles (*Psilocarphus brevissimus*, OBL), rabbitfoot grass (*Polypogon monspeliensis*, FACW), Boccone's sand spurry (*Spergularia bocconeii*, FAC), smooth cat's ear (*Hypochaeris glabra*, UPL), and mule fat (*Baccharis salicifolia*, FACW). The basin was observed to be ponded from February 13, 2001 to February 21, 2001 meeting criteria 3 for hydric soils.

CCC jurisdiction associated with Vernal Pool FE/7-VP3 within the study area totals 0.18 acres, all of which consists of three-parameter wetland.

San Onofre Creek

The low flow channels within the creek are dominated by herbaceous cover including water-cress (*Rorippa nasturtium-aquaticum*, OBL) yellow waterweed (*Ludwigia peploides*, OBL), water speedwell (*Veronica anagallis-aquatica*, OBL), southern cattail (*Typha domingensis*, OBL), and common monkey flower (*Mimulus guttatus*, OBL). Dominant overstory vegetation includes western sycamore (*Platanus racemosa*, FACW) and arroyo willow (*Salix lasiolepis*, FACW).

CCC jurisdiction associated with San Onofre Creek within the study area totals 2.18 acres, all of which consists of one-parameter wetland based on hydrophytic vegetation.

V. DISCUSSION

Impact totals represent only the surface area expected to be subject to regulation by the CCC and do not represent a relative assessment of function. This analysis assumes that all features within the disturbance limits are permanently filled, except for those that will be bridged. For bridges, the small area of impact where the support columns are founded into the ground have been included as permanent impacts, while the remaining bridge right of way is assumed to be temporarily impacted for piling installation. The bridge structure will span over the open terrain and shading impacts have been determined to be de minimus; there is no permanent impact from the bridge structure beyond the support columns [See Appendix B].

A. Impact Analysis

Permanent impacts to CCC jurisdiction total 0.16 acre, all of which consist of wetland.
 Temporary impacts to CCC jurisdiction total 7.70 acres, all of which consists of wetland.

Permanent Impacts to CCC Wetlands

Feature	Type	Habitat Type	Acres
FE/7-SAN MATEO CREEK	Palustrine/ Estuarine	Arroyo Willow Forest	0.006
FE/7-SAN MATEO MARSH- EAST of I-5	Paulstrine	Arroyo Willow Forest	0.147
SAN ONOFRE CREEK	Palustrine/ Estuarine	Arroyo Willow Forest	0.005
TOTAL		NA	0.16

Temporary Impacts to CCC Wetlands

Feature	Type	Habitat Type	Acres
FE/7-SAN MATEO CREEK	Palustrine/ Estuarine	Arroyo Willow Forest	5.75
FE/7-SAN MATEO MARSH- EAST of I-5	Palustrine	Arroyo Willow Forest	0.89
SAN ONOFRE CREEK	Palustrine/ Estuarine	Arroyo Willow Forest	0.63
SAN ONOFRE CREEK	Palustrine/ Estuarine	Coastal Freshwater Marsh	0.42
TOTAL	NA		7.70

B. Regulatory Authorization

Potential CCC jurisdiction at the site will include direct impacts to all areas that are permanently or periodically inundated or saturated close to the soil surface occurring within the coastal zone. In the absence of data regarding the extent of inundation or saturation, the extent of hydrophytic vegetation was used to indicate the limits of coastal wetlands as described in Section I. In addition, the CCC will consider indirect impacts due to shading where such impacts affect portions of wetlands or riparian habitat.

C. Potential Mitigation

Permanent impacts to CCC jurisdiction will be mitigated through the creation and/or restoration of native grassland, wet meadow, mulefat scrub, southern willow woodland, and southern coast live oak/elderberry woodland habitats within approximately 216.4 acres in and adjacent to Chiquita Creek, located within the San Juan Creek watershed and 1.0 acres of southern willow woodland within the coastal zone in the vicinity of San Mateo Creek adjacent to Extended Detention Basin # 2.

Temporary impacts to CCC jurisdiction will be restored at a 1:1 ratio.

Maria Levario
Transportation Corridor Agencies
August 31, 2007
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If you have any questions about this letter report, please contact either Ingrid Chlup or Thienan Ly at (949) 837-0404.

Sincerely,

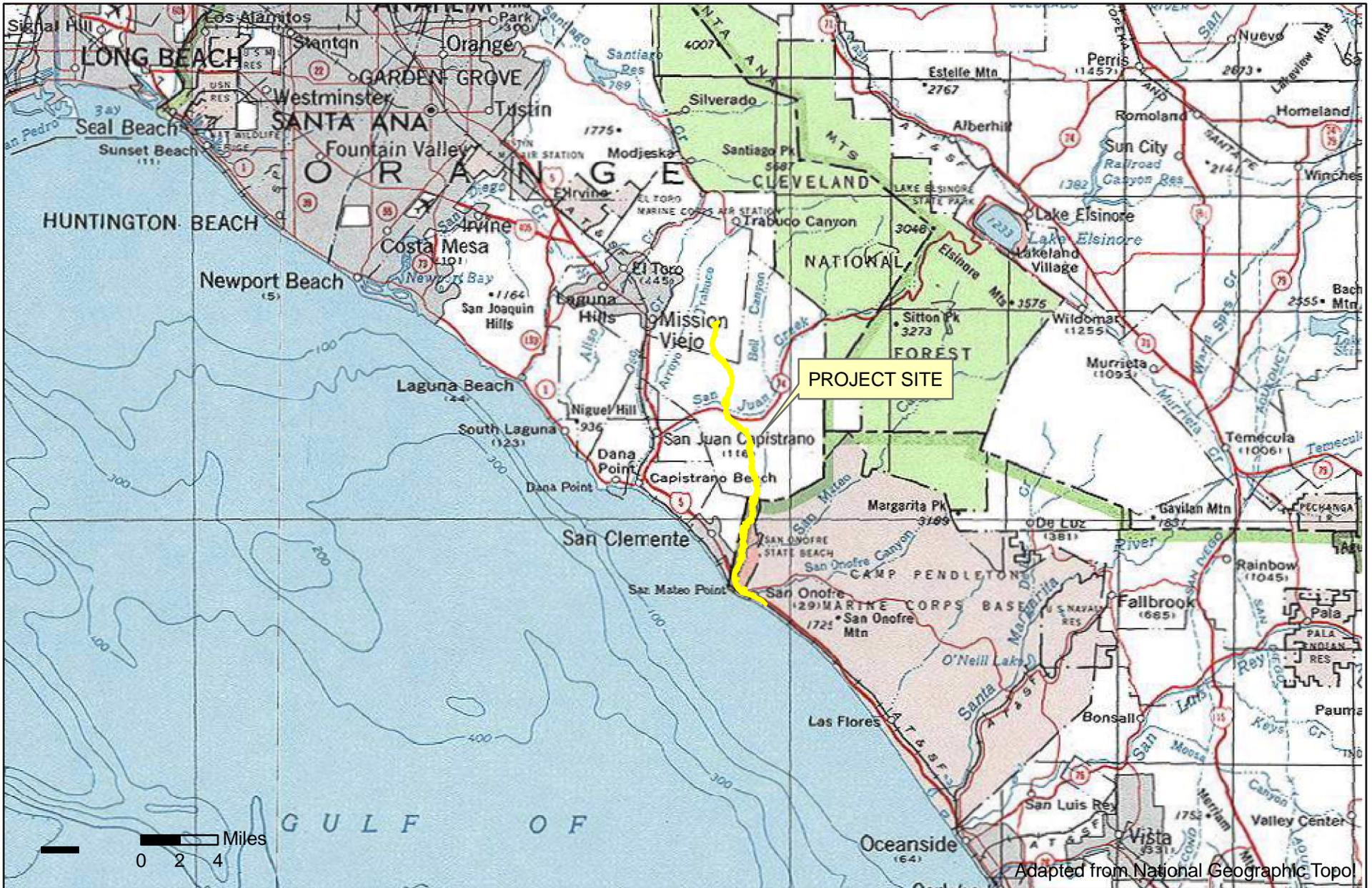
GLENN LUKOS ASSOCIATES, INC.

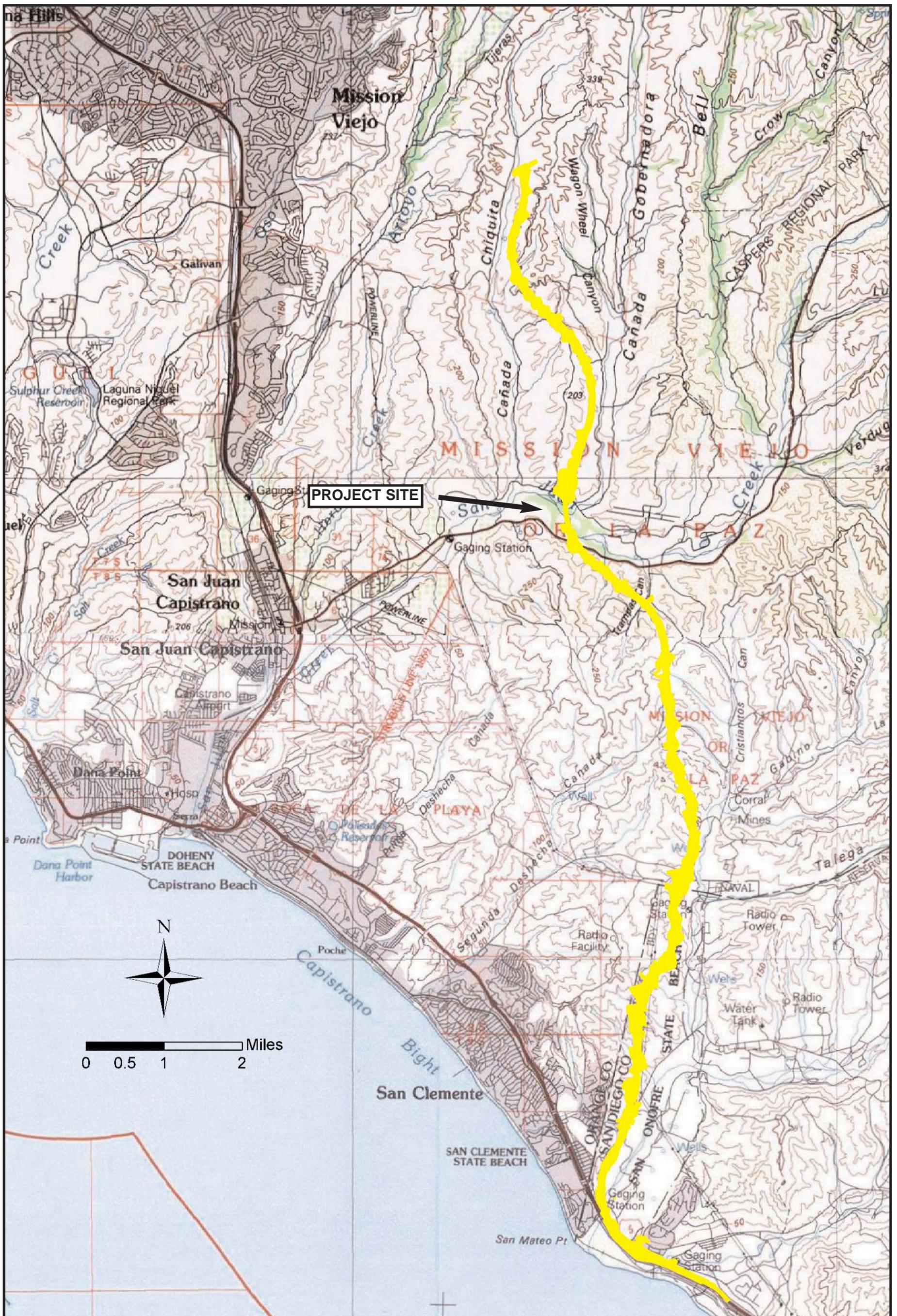
A handwritten signature in black ink, appearing to read 'Ingrid Chlup', written in a cursive style.

Ingrid Chlup
Regulatory Specialist

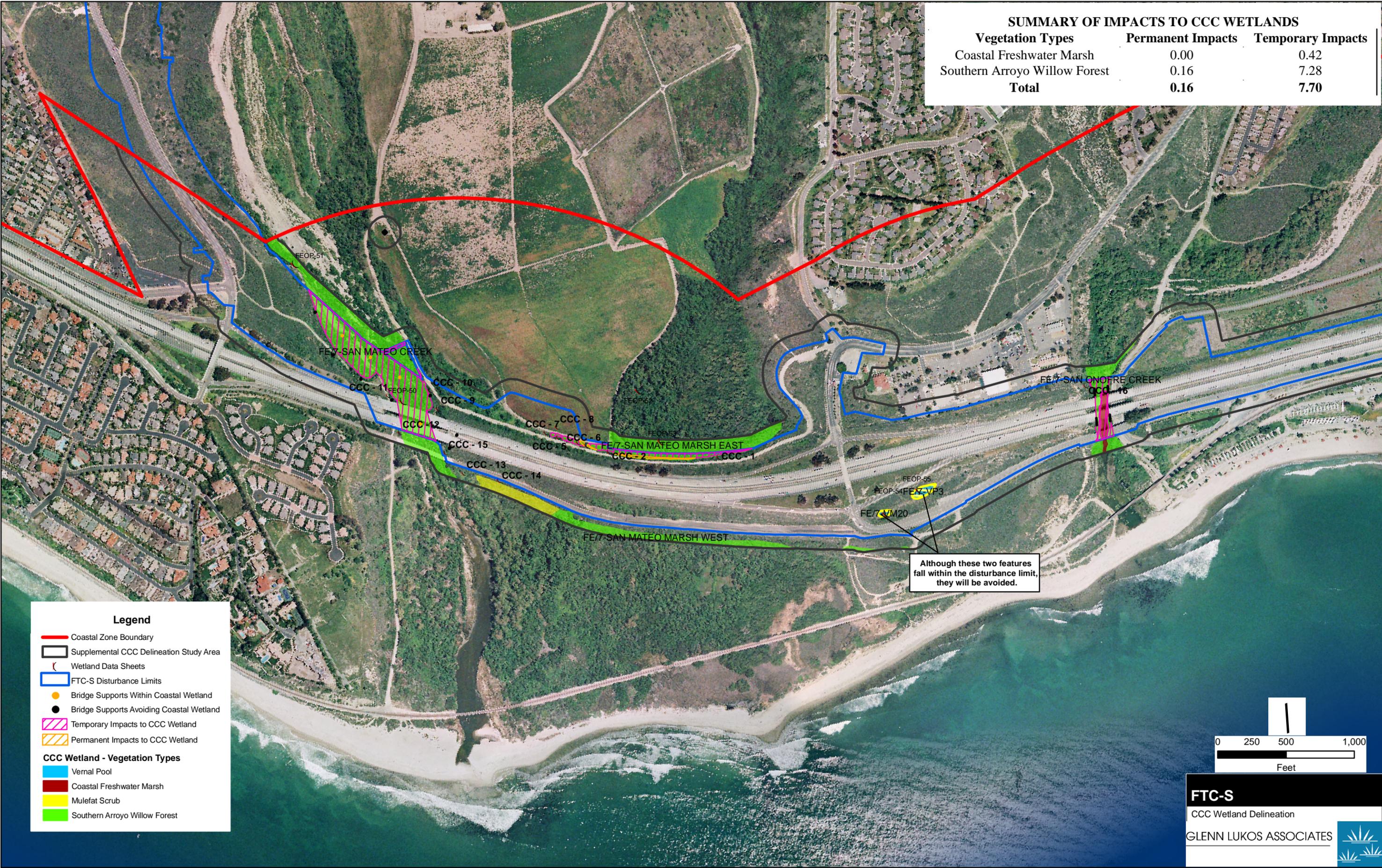
Thienan Ly
Regulatory Specialist

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SUMMARY OF IMPACTS TO CCC WETLANDS		
Vegetation Types	Permanent Impacts	Temporary Impacts
Coastal Freshwater Marsh	0.00	0.42
Southern Arroyo Willow Forest	0.16	7.28
Total	0.16	7.70



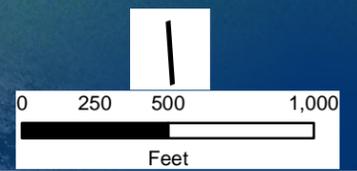
Although these two features fall within the disturbance limit, they will be avoided.

Legend

- Coastal Zone Boundary
- Supplemental CCC Delineation Study Area
- ⌂ Wetland Data Sheets
- FTC-S Disturbance Limits
- Bridge Supports Within Coastal Wetland
- Bridge Supports Avoiding Coastal Wetland
- Temporary Impacts to CCC Wetland
- Permanent Impacts to CCC Wetland

CCC Wetland - Vegetation Types

- Vernal Pool
- Coastal Freshwater Marsh
- Mulefat Scrub
- Southern Arroyo Willow Forest



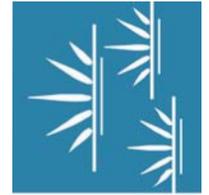
FTC-S
 CCC Wetland Delineation
 GLENN LUKOS ASSOCIATES



PHOTOGRAPH 3: Margin of San Mateo Marsh at Toby's road. Road is elevated several feet above marsh. Tree layer at margin dominated by arroyo willow, understory dominated by poison oak.



PHOTOGRAPH 4: typical Mexican elderberry woodland



GLENN LUKOS ASSOCIATES

EXHIBIT 4

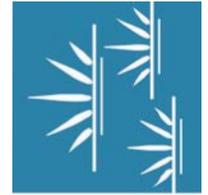




PHOTOGRAPH 1: Southeast Edge of San Mateo Creek looking northeast from footbridge. Note the distinct change in vegetation: Willows on left edge of photo are rooted at base of abutment.



PHOTOGRAPH 2: Southeast Edge of San Mateo Creek looking southwest from footbridge. Note the distinct change in vegetation: Willows in background are rooted at base of bank.



GLENN LUKOS ASSOCIATES

EXHIBIT 4

**SOCTIP CCC
DELINEATION REFINEMENT**

Site Photographs

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Sactip City/County: Campbellton SD county Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-1
 Investigator(s): J. Chip J. Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): Roadbed Local relief (concave, convex, none): Slope Slope (%): 2%
 Subregion (LRR): C Lat: 117°35' 0.99 Long: 33°23' 14.235 Datum: NAD 83
 Soil Map Unit Name: Tidal Flats NWI classification: NA

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

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Groove willow - Salix lasiolepis</u>	<u>100%</u>		<u>D</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____				
Total Cover: <u>100%</u>				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. _____				Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species <u>100</u> x 2 = <u>200</u>
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species <u>.5</u> x 4 = <u>2</u>
Total Cover: _____				UPL species <u>63</u> x 5 = <u>315</u>
Herb Stratum				Column Totals: <u>163.5</u> (A) <u>317</u> (B)
1. <u>Toxicodendron diversilobum</u>	<u>6.0%</u>	<u>up1</u>	<u>D</u>	Prevalence Index = B/A = <u>3.2</u>
2. <u>Caster bean - Ricinus communis</u>	<u>0.5</u>	<u>facu</u>		
3. <u>Barbours salt-tolerant pelularis</u>	<u>1</u>	<u>up1</u>		
4. <u>Artemisia californica</u>	<u>1</u>	<u>up1</u>		
5. <u>brassica nigra</u>	<u>1</u>	<u>up1</u>		
6. _____				
7. _____				
8. _____				
Total Cover: <u>62.5</u>				
Woody Vine Stratum				Hydrophytic Vegetation Indicators:
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<input checked="" 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)
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Remarks:				¹ Indicators of hydric soil and wetland hydrology must be present.
				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>

SOIL

Sampling Point: _____

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		
	Not available							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

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

Field Observations:

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

Water Table Present? Yes _____ No _____ Depth (inches): Not available

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: None notes slope elevated ~15 feet above marsh where shown groundwater has been detected in the past.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soctip City/County: Camp Pendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-2
 Investigator(s): Ingrid Oliva, Thurman Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): roadbed Local relief (concave, convex, none): slope Slope (%): 3%
 Subregion (LRR): C Lat: 117°25'13.1679 Long: 33°23'18.827 Datum: NAD83
 Soil Map Unit Name: tujuuga sand, 0-5% slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Sambucus mexicana</u>	<u>100%</u>	<u>D</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>100</u> x 3 = <u>300</u> FACU species _____ x 4 = _____ UPL species <u>80</u> x 5 = <u>400</u> Column Totals: <u>180</u> (A) <u>700</u> (B) Prevalence Index = B/A = <u>3.9</u>
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>to</u>	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Toxicodendron diversilobum</u>	<u>80%</u>	<u>D</u>	<u>upl</u>	Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input checked="" type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks:				

SOIL

Sampling Point: _____

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		
	<i>not available</i>							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.) <input type="checkbox"/> Histosol (A1) <input type="checkbox"/> Histic Epipedon (A2) <input type="checkbox"/> Black Histic (A3) <input type="checkbox"/> Hydrogen Sulfide (A4) <input type="checkbox"/> Stratified Layers (A5) (LRR C) <input type="checkbox"/> 1 cm Muck (A9) (LRR D) <input type="checkbox"/> Depleted Below Dark Surface (A11) <input type="checkbox"/> Thick Dark Surface (A12) <input type="checkbox"/> Sandy Mucky Mineral (S1) <input type="checkbox"/> Sandy Gleyed Matrix (S4)		Indicators for Problematic Hydric Soils³: <input type="checkbox"/> 1 cm Muck (A9) (LRR C) <input type="checkbox"/> 2 cm Muck (A10) (LRR B) <input type="checkbox"/> Reduced Vertic (F18) <input type="checkbox"/> Red Parent Material (TF2) <input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> Sandy Redox (S5) <input type="checkbox"/> Stripped Matrix (S6) <input type="checkbox"/> Loamy Mucky Mineral (F1) <input type="checkbox"/> Loamy Gleyed Matrix (F2) <input type="checkbox"/> Depleted Matrix (F3) <input type="checkbox"/> Redox Dark Surface (F6) <input type="checkbox"/> Depleted Dark Surface (F7) <input type="checkbox"/> Redox Depressions (F8) <input type="checkbox"/> Vernal Pools (F9)	³ Indicators of hydrophytic vegetation and wetland hydrology must be present.	

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators: <u>Primary Indicators (any one indicator is sufficient)</u> <input type="checkbox"/> Surface Water (A1) <input type="checkbox"/> High Water Table (A2) <input type="checkbox"/> Saturation (A3) <input type="checkbox"/> Water Marks (B1) (Nonriverine) <input type="checkbox"/> Sediment Deposits (B2) (Nonriverine) <input type="checkbox"/> Drift Deposits (B3) (Nonriverine) <input type="checkbox"/> Surface Soil Cracks (B6) <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) <input type="checkbox"/> Water-Stained Leaves (B9)		<u>Secondary Indicators (2 or more required)</u> <input type="checkbox"/> Salt Crust (B11) <input type="checkbox"/> Biotic Crust (B12) <input type="checkbox"/> Aquatic Invertebrates (B13) <input type="checkbox"/> Hydrogen Sulfide Odor (C1) <input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3) <input type="checkbox"/> Presence of Reduced Iron (C4) <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) <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"/> Thin Muck Surface (C7) <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)
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Field Observations:

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

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

Remarks:
on slope, elevated ~ 6 feet above elevation at which shallow ground water has been detected in past

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SocTip City/County: Camp Pendleton, CA SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-3
 Investigator(s): Minda Chlop, Mendenly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): ag ditch Local relief (concave, convex, none): concave Slope (%): 1%
 Subregion (LRR): C Lat: 117°35'14.992 Long: 33°23'21.030 Datum: NAD83
 Soil Map Unit Name: Tujunga sand, 0-5% slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Saxifragaceae</u>	<u>80%</u>	<u>D</u>	<u>few</u>	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)
2. <u>elderberry-Sambucus mexicana</u>	<u>20%</u>	<u>N</u>	<u>fac</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species <u>80</u> x 2 = <u>160</u> FAC species <u>20</u> x 3 = <u>60</u> FACU species _____ x 4 = _____ UPL species <u>60</u> x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum	Total Cover: _____			
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	_____
Total Cover: _____				
Herb Stratum	Total Cover: _____			Hydrophytic Vegetation Indicators: <input checked="" 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 Indicators of hydric soil and wetland hydrology must be present.
1. <u>Toxicodendron diversilobum</u>	<u>60%</u>	<u>D</u>	<u>upl</u>	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum	Total Cover: _____			Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	_____
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

SOIL

Sampling Point: _____

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		
	<i>Not available</i>							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<i>None observed</i>

Field Observations:

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

Water Table Present? Yes _____ No _____ Depth (inches): *Not Available*

Saturation Present? Yes _____ No Depth (inches): *8*

(includes capillary fringe)

Wetland Hydrology Present? Yes _____ No _____

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

Remarks: *None visible, however additional observations would be necessary, apparently, this did not reveal flows from ag fields which have not been under irrigation recently, resulting in change in hydrology*

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOC tip City/County: Camp Pendleton, San Diego Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCG4
 Investigator(s): Ingrid Lopez, Tienan Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): road bed Local relief (concave, convex, none): Slope Slope (%): 0.57%
 Subregion (LRR): C Lat: 117°35'15.143 Long: 33°23'21.529 Datum: NAD83
 Soil Map Unit Name: TU, very sand, D - 5% slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																
1. <u>Sambucus mexicana</u>	<u>80</u>	<u>D</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)																																
2. _____				Total Number of Dominant Species Across All Strata: <u>2</u> (B)																																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100%</u> (A/B)																																
4. _____				Prevalence Index worksheet:																																
Total Cover: _____					<table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center">_____</td> <td>x 1 =</td> <td align="center">_____</td> </tr> <tr> <td>FACW species</td> <td align="center"><u>20</u></td> <td>x 2 =</td> <td align="center"><u>40</u></td> </tr> <tr> <td>FAC species</td> <td align="center"><u>80</u></td> <td>x 3 =</td> <td align="center"><u>240</u></td> </tr> <tr> <td>FACU species</td> <td align="center">_____</td> <td>x 4 =</td> <td align="center">_____</td> </tr> <tr> <td>UPL species</td> <td align="center"><u>2</u></td> <td>x 5 =</td> <td align="center"><u>10</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>102</u> (A)</td> <td></td> <td align="center"><u>290</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>2.8</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	_____	x 1 =	_____	FACW species	<u>20</u>	x 2 =	<u>40</u>	FAC species	<u>80</u>	x 3 =	<u>240</u>	FACU species	_____	x 4 =	_____	UPL species	<u>2</u>	x 5 =	<u>10</u>	Column Totals:	<u>102</u> (A)		<u>290</u> (B)	Prevalence Index = B/A = <u>2.8</u>		
Total % Cover of:		Multiply by:																																		
OBL species	_____	x 1 =	_____																																	
FACW species	<u>20</u>	x 2 =	<u>40</u>																																	
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FACU species	_____	x 4 =	_____																																	
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Column Totals:	<u>102</u> (A)		<u>290</u> (B)																																	
Prevalence Index = B/A = <u>2.8</u>																																				
Sapling/Shrub Stratum				Hydrophytic Vegetation Indicators: <input checked="" type="checkbox"/> Dominance Test is >50% <input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹ <input checked="" 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>Boerhaavia strictifolia</u>	<u>20</u>	<u>D</u>	<u>FACW</u>																																	
2. _____				¹ Indicators of hydric soil and wetland hydrology must be present.																																
3. _____																																				
Herb Stratum				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>																																
1. <u>brassicaria nigra</u>	<u>1</u>	<u>N</u>	<u>UPL</u>																																	
2. <u>bronus dioandrus</u>	<u>1</u>	<u>N</u>	<u>UPL</u>	Remarks:																																
3. _____																																				
Woody Vine Stratum																																				
1. _____																																				
2. _____																																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																																				

SOIL

Sampling Point: _____

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		
	<i>Not available</i>							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F1B)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
	<i>None observed</i>

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:

See CCC-3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SACTIP City/County: CAMP PENDER, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-5
 Investigator(s): Wendy, T. Menanly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): ag ditch Local relief (concave, convex, none): none Slope (%): 0.5%
 Subregion (LRR): C Lat: 17°35'14.59" Long: 33°23'22.807" Datum: NAD83
 Soil Map Unit Name: Timpani sand, 0-5 % slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	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>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <u>basarharpallularis</u>	<u>70</u>	<u>D</u>	<u>upl</u>	Total % Cover of: _____ Multiply by: _____
2. <u>bascharis sibirica</u>	<u>5</u>		<u>facw</u>	OBL species _____ x 1 = _____
3. <u>artemisia canadensis</u>	<u>5</u>		<u>upl</u>	FACW species <u>5</u> x 2 = <u>10</u>
4. _____	_____	_____	_____	FAC species <u>6</u> x 3 = <u>18</u>
5. _____	_____	_____	_____	FACU species <u>3</u> x 4 = <u>12</u>
Total Cover: <u>80</u>				UPL species <u>80</u> x 5 = <u>400</u>
Herb Stratum				Column Totals: <u>94</u> (A) <u>440</u> (B)
1. <u>foeniculum vulgare</u>	<u>3</u>		<u>facu</u>	Prevalence Index = B/A = <u>4.6</u>
2. <u>conyza canadensis</u>	<u>3</u>		<u>fac</u>	
3. <u>cyrtodon dactylon</u>	<u>3</u>		<u>fac</u>	
4. <u>brassica nigra</u>	<u>10</u>	<u>D</u>	<u>upl</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>19</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:				

SOIL

Sampling Point: _____

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		
<i>Not available due to sample constraints at Base</i>								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present): Type: _____ Depth (inches): _____	Hydric Soil Present? Yes _____ No _____
--	--

Remarks:

HYDROLOGY

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

None observed

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

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

Remarks:
See CSC-3

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SACTIP City/County: Camp Pendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-6
 Investigator(s): Ingrid Chup Anichan Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): Slope Local relief (concave, convex, none): None Slope (%): 1%
 Subregion (LRR): C Lat: 117°35'14.514 Long: 33°23'21.785 Datum: NAD83
 Soil Map Unit Name: Tupiza sand, 0-5% slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Sambucus mexicana</u>	<u>80</u>	<u>D</u>	<u>fac</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>33%</u> (A/B)
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Artemisia californica</u>	<u>50</u>	<u>D</u>	<u>upl</u>	Total % Cover of: _____ Multiply by: _____
2. _____				OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species <u>80</u> x 3 = <u>240</u>
5. _____				FACU species _____ x 4 = _____
Total Cover: _____				UPL species <u>85</u> x 5 = <u>425</u>
				Column Totals: <u>165</u> (A) <u>665</u> (B)
				Prevalence Index = B/A = <u>4.0</u>
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Lythrum diandrum</u>	<u>25</u>	<u>N</u>	<u>upl</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>Toxicodendron diversilobum</u>	<u>50</u>	<u>D</u>	<u>upl</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
Total Cover: _____				
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks:				

SOIL

Sampling Point: _____

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		
	<i>Not available due to sample restriction</i>							

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

None visible

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No _____ Depth (inches): *Not available*
 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:

*add to Topo: add to Road, no sustainable wetland hydrology expected
 local lab to fill spec for I-5*

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SACTIP City/County: Camp Pendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: _____ Sampling Point: CCC-7
 Investigator(s): Imnd Chlop, Thermanly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): ag field Local relief (concave, convex, none): flat Slope (%): 0.5%
 Subregion (LRR): C Lat: 44°35'17.123 Long: 103°23'23.574 Datum: NAD83
 Soil Map Unit Name: Injungra Sand, 0-5% slopes NWI classification: NA
 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 _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Sambucus mexicana</u>	<u>10</u>	<u>D</u>	<u>facw</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>5</u> (B)
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>40%</u> (A/B)
Total Cover: _____				
Sapling/Shrub Stratum				Dominance Test worksheet:
1. <u>haccharis Salicifolia</u>	<u>10</u>	<u>D</u>	<u>facw</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species <u>20</u> x 2 = <u>40</u> FAC species <u>10</u> x 3 = <u>30</u> FACU species <u>5</u> x 4 = <u>20</u> UPL species <u>105</u> x 5 = <u>525</u> Column Totals: <u>140</u> (A) <u>615</u> (B) Prevalence Index = B/A = <u>4.4</u>
2. <u>artemisia californica</u>	<u>5</u>	<u>N</u>	<u>upl</u>	
3. <u>haccharis pilularis</u>	<u>5</u>	<u>N</u>	<u>upl</u>	
4. <u>vicenaria maritima</u>	<u>5</u>	<u>N</u>	<u>upl</u>	
5. <u>Quercus basilaris</u>	<u>10</u>	<u>D</u>	<u>upl</u>	
Total Cover: <u>35</u>				
Herb Stratum				Dominance Test worksheet:
1. <u>brassica nigra</u>	<u>40</u>	<u>D</u>	<u>upl</u>	Indicators of hydric soil and wetland hydrology must be present. Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
2. <u>brassica rubra</u>	<u>40</u>	<u>D</u>	<u>upl</u>	
3. <u>spunta bariata</u>	<u>10</u>	<u>D</u>	<u>upl</u>	
4. <u>artemisia trivulium vulgare</u>	<u>5</u>	<u>N</u>	<u>facw</u>	
5. <u>Conyza canadensis</u>	<u>5</u>	<u>N</u>	<u>fac</u>	
6. <u>Sichus asper</u>	<u>5</u>	<u>N</u>	<u>fac</u>	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks:				

SOIL

Sampling Point: _____

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		
<i>Not available due to sample constraints on base</i>								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)	Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	
<input type="checkbox"/> Thick Dark Surface (A12)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)	
<input type="checkbox"/> Sandy Redox (S5)	
<input type="checkbox"/> Stripped Matrix (S6)	
<input type="checkbox"/> Loamy Mucky Mineral (F1)	
<input type="checkbox"/> Loamy Gleyed Matrix (F2)	
<input type="checkbox"/> Depleted Matrix (F3)	
<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Vernal Pools (F9)	

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:	Secondary Indicators (2 or more required)
<u>Primary Indicators (any one indicator is sufficient)</u>	
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)
<i>None visible</i>	

Field Observations:

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

Water Table Present? Yes _____ No _____ Depth (inches): *Not available*

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: *See CCC-3*

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SACTIP City/County: Camp Pendleton, SD Sampling Date: 7/29/07
 Applicant/Owner: TCA State: _____ Sampling Point: CG-8
 Investigator(s): Ingrid Chrup, Thienan Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): ag field Local relief (concave, convex, none): flat Slope (%): none
 Subregion (LRR): C Lat: 44°35'16.285 Long: 103°23'23.318 Datum: NAD83
 Soil Map Unit Name: Tujunga sand, 0-5% slopes NWI classification: NA
 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 _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species <u>10</u> x 3 = <u>70</u> FACU species _____ x 4 = _____ UPL species <u>40</u> x 5 = <u>200</u> Column Totals: <u>50</u> (A) _____ (B) Prevalence Index = B/A = <u>280</u> <u>4.6</u>
<u>Sapling/Shrub Stratum</u>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
<u>Herb Stratum</u>				
1. <u>Sisymbrium lrr</u>	<u>20</u>	<u>0</u>	<u>Upl</u>	
2. <u>Avena fatua</u>	<u>5</u>		<u>Upl</u>	
3. <u>Hordeum vulgare</u>	<u>5</u>		<u>Upl</u>	
4. <u>Coryza canadensis</u>	<u>10</u>		<u>FAC</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>60</u>				
<u>Woody Vine Stratum</u>				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>40</u>	% Cover of Biotic Crust _____			
Hydrophytic Vegetation Present? Yes _____ No <u>/</u>				
Remarks:				

SOIL

Sampling Point: _____

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		
Not available due to sample constraints on base								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- | | | |
|--|--|--|
| <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"/> Thin Muck Surface (C7) |
| <input type="checkbox"/> Surface Soil Cracks (B6) | <input type="checkbox"/> Recent Iron Reduction in Plowed Soils (C6) | <input type="checkbox"/> Crayfish Burrows (C8) |
| <input type="checkbox"/> Inundation Visible on Aerial Imagery (B7) | <input type="checkbox"/> Other (Explain in Remarks) | <input type="checkbox"/> Saturation Visible on Aerial Imagery (C9) |
| <input type="checkbox"/> Water-Stained Leaves (B9) | | <input type="checkbox"/> Shallow Aquitard (D3) |
| | | <input type="checkbox"/> FAC-Neutral Test (D5) |

None visible

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No _____ Depth (inches): not available
 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 visible saturation or inundation observed during rainy season post storms during

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: SUCTIP City/County: CAMP PENDLETON, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: _____ Sampling Point: ccc-9
 Investigator(s): Ingrid Anup, Thumanu Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): Toe of alluvium/alluvium Local relief (concave, convex, none): Slope Slope (%): 4%
 Subregion (LRR): C Lat: 117°35'22.988 Long: 33°23'29.899 Datum: NAD83
 Soil Map Unit Name: Tupunga sand, 0-5% slopes NWI classification: NA
 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 _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present? Yes _____ No _____	
Wetland Hydrology Present? Yes _____ No _____	

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A) Total Number of Dominant Species Across All Strata: <u>7</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>43%</u> (A/B)
1. <u>Sambucus mexicana</u>	<u>60</u>	<u>D</u>	<u>FAC</u>	
2. _____				
3. _____				
4. _____				
Total Cover: _____				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species <u>21</u> x 2 = <u>42</u> FAC species <u>50</u> x 3 = <u>150</u> FACU species <u>10</u> x 4 = <u>40</u> UPL species <u>24</u> x 5 = <u>120</u> Column Totals: <u>115</u> (A) <u>382</u> (B) Prevalence Index = B/A = <u>3.3</u>
1. <u>Fraxinus salicifolia</u>	<u>10%</u>	<u>D</u>	<u>FACW</u>	
2. <u>Artemisia californica</u>	<u>5</u>	<u>D</u>	<u>UPL</u>	
3. <u>Fraxinus pilularis</u>	<u>5</u>	<u>D</u>	<u>UPL</u>	
4. <u>Eriogonum fasciculatum</u>	<u>1</u>		<u>UPL</u>	
5. <u>Heteromeles arbutifolia</u>	<u>5</u>	<u>D</u>	<u>UPL</u>	
Total Cover: <u>26</u>				
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators: ___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain)
1. <u>Polypogon monspeliensis</u>	<u>10</u>	<u>D</u>	<u>FACW</u>	
2. <u>Toxicaria diversiflora</u>	<u>5</u>		<u>UPL</u>	
3. <u>Artemisia douglasiana</u>	<u>1</u>		<u>FACW</u>	
4. <u>Foeniculum vulgare</u>	<u>10</u>	<u>D</u>	<u>FACW</u>	
5. <u>Hesperis matronalis</u>	<u>3</u>		<u>UPL</u>	
6. <u>Gnaphalium aureum</u>	<u>5</u>		<u>UPL</u>	
7. _____				
8. _____				
Total Cover: <u>34</u>				
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
1. _____				
2. _____				
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				
Remarks:				

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: S0CT11P City/County: Camp Pendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: JCA State: CA Sampling Point: CCC-10
 Investigator(s): IMANDANI, THURMAN W Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): terrace edge to sand dunes Local relief (concave, convex, none): flat Slope (%): 1.5%
 Subregion (LRR): C Lat: 117° 35' 22.454 Long: 33° 23' 31.049 Datum: NAD83
 Soil Map Unit Name: Tujunqui sand, 0-5% slopes NWI classification: NA
 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 type="checkbox"/>	Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
--	---	---	--

Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>50</u> (AB)
4. _____	_____	_____	_____	Total Cover: _____	
<u>Sapling/Shrub Stratum</u>				Prevalence Index worksheet:	
1. <u>baccharis pilularis</u>	<u>25</u>	_____	<u>sp1</u>	Total % Cover of:	Multiply by:
2. <u>baccharis salicifolia</u>	<u>40</u>	<u>D</u>	<u>FACW</u>	OBL species _____ x 1 = _____	FACW species <u>45</u> x 2 = <u>90</u>
3. _____	_____	_____	_____	FAC species _____ x 3 = _____	FACU species <u>30</u> x 4 = <u>120</u>
4. _____	_____	_____	_____	UPL species <u>25</u> x 5 = <u>125</u>	Column Totals: <u>100</u> (A) <u>335</u> (B)
5. _____	_____	_____	_____	Prevalence Index = B/A = <u>3.4</u>	
Total Cover: <u>65</u>				Hydrophytic Vegetation Indicators:	
<u>Herb Stratum</u>				<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>forniculum vulgare</u>	<u>30</u>	<u>D</u>	<u>FACU</u>	¹ Indicators of hydric soil and wetland hydrology must be present.	
2. <u>gymnoschoenus aegyptiaca</u>	<u>5</u>	_____	<u>FACW</u>		
3. _____	_____	_____	_____	Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
4. _____	_____	_____	_____	Remarks:	
5. _____	_____	_____	_____	Total Cover: _____	
<u>Woody Vine Stratum</u>				% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____	
1. _____	_____	_____	_____	Remarks:	
2. _____	_____	_____	_____	Total Cover: _____	

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCTHP City/County: Campbellton, SD Sampling Date: 7/24/07
 Applicant/Owner: TPA State: CA Sampling Point: CCC-11
 Investigator(s): Wynnd Anupitman M Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): top of bank Local relief (concave, convex, none): none Slope (%): 1%
 Subregion (LRR): C Lat: 117°35'25.653 Long: 33°23'22.838 Datum: NAD83
 Soil Map Unit Name: Riverwash NWI classification: NA

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

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:																																
1. <u>Salix lasiolepis</u>	<u>85</u>	<u>0</u>	<u>facw</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)																																
2. _____				Total Number of Dominant Species Across All Strata: <u>4</u> (B)																																
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)																																
4. _____																																				
Total Cover: _____																																				
Sapling/Shrub Stratum																																				
1. <u>baccharis pilularis</u>	<u>5</u>	<u>0</u>	<u>upl</u>	Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td align="center" colspan="2">Total % Cover of:</td> <td align="center" colspan="2">Multiply by:</td> </tr> <tr> <td>OBL species</td> <td align="center">_____</td> <td>x 1 =</td> <td>_____</td> </tr> <tr> <td>FACW species</td> <td align="center"><u>90</u></td> <td>x 2 =</td> <td><u>180</u></td> </tr> <tr> <td>FAC species</td> <td align="center">_____</td> <td>x 3 =</td> <td>_____</td> </tr> <tr> <td>FACU species</td> <td align="center">_____</td> <td>x 4 =</td> <td>_____</td> </tr> <tr> <td>UPL species</td> <td align="center"><u>65</u></td> <td>x 5 =</td> <td><u>325</u></td> </tr> <tr> <td>Column Totals:</td> <td align="center"><u>155</u> (A)</td> <td></td> <td><u>505</u> (B)</td> </tr> <tr> <td align="center" colspan="4">Prevalence Index = B/A = <u>3.3</u></td> </tr> </table>	Total % Cover of:		Multiply by:		OBL species	_____	x 1 =	_____	FACW species	<u>90</u>	x 2 =	<u>180</u>	FAC species	_____	x 3 =	_____	FACU species	_____	x 4 =	_____	UPL species	<u>65</u>	x 5 =	<u>325</u>	Column Totals:	<u>155</u> (A)		<u>505</u> (B)	Prevalence Index = B/A = <u>3.3</u>			
Total % Cover of:		Multiply by:																																		
OBL species	_____	x 1 =	_____																																	
FACW species	<u>90</u>	x 2 =	<u>180</u>																																	
FAC species	_____	x 3 =	_____																																	
FACU species	_____	x 4 =	_____																																	
UPL species	<u>65</u>	x 5 =	<u>325</u>																																	
Column Totals:	<u>155</u> (A)		<u>505</u> (B)																																	
Prevalence Index = B/A = <u>3.3</u>																																				
2. <u>baccharis salicifolia</u>	<u>5</u>	<u>0</u>	<u>facw</u>																																	
3. <u>erigeronm tomentosum</u>	<u>1</u>		<u>upl</u>																																	
4. <u>artemesia californica</u>	<u>1</u>		<u>upl</u>																																	
5. <u>opuntia sp (cholla)</u>	<u>2</u>		<u>upl</u>																																	
<u>Rhus ovata upl 1</u>			<u>upl</u>																																	
Total Cover: <u>15</u>																																				
Herb Stratum																																				
1. <u>torusdendron diversilobum</u>	<u>50</u>	<u>0</u>	<u>upl</u>	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)																																
2. <u>ammiaria menziesii</u>	<u>5</u>		<u>upl</u>																																	
3. _____																																				
4. _____																																				
5. _____																																				
6. _____																																				
7. _____																																				
8. _____																																				
Total Cover: <u>55</u>																																				
Woody Vine Stratum																																				
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present.																																
2. _____																																				
Total Cover: _____																																				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>																																		
Remarks:																																				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SACTIP City/County: CAMP PENDLETON, SD Sampling Date: 7/24/07
 Applicant/Owner: FCA State: _____ Sampling Point: CC-12
 Investigator(s): Ingrid Anup, Thierman W Section, Township, Range: S15, T9S, R7W
 Landform (hillslope, terrace, etc.): top of slope Local relief (concave, convex, none): none Slope (%): 27%
 Subregion (LRR): C Lat: 117° 35' 39.362 Long: 33° 23' 24.213 Datum: NAD83
 Soil Map Unit Name: PIREWASH NWI classification: NA

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 _____ No _____ Hydric Soil Present? Yes _____ No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: _____ _____ _____	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Populus fremontii</u>	<u>100%</u>	<u>D</u>	<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Artemisia Californica</u>	<u>60%</u>	<u>D</u>	<u>UPL</u>	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species <u>100</u> x 2 = <u>200</u>
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
Total Cover: _____				UPL species <u>60</u> x 5 = <u>300</u>
				Column Totals: <u>160</u> (A) <u>500</u> (B)
				Prevalence Index = B/A = <u>3.1</u>
Herb Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
3. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes _____ No <u>X</u>
Remarks: _____ _____ _____				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SCTIP City/County: CAMP Jendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: _____ Sampling Point: CCC-13
 Investigator(s): Ingrid Chiv, Therman Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): terrace Local relief (concave, convex, none): flat Slope (%): 2%
 Subregion (LRR): C Lat: 44°35'39.342 Long: 103°23'24.213 Datum: NAD83
 Soil Map Unit Name: Tupungki sand, 0-5% slopes NWI classification: NA
 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 _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Hydric Soil Present?	Yes _____ No _____	
Wetland Hydrology Present?	Yes _____ No _____	
Remarks:		

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Sambucus mexicana</u>	<u>25</u>	<u>D</u>	<u>FAC</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>9</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				Prevalence Index worksheet:
1. <u>baccharis salicifolia</u>	<u>25</u>	<u>D</u>	<u>FACW</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Artemisia californica</u>	<u>15</u>	<u>D</u>	<u>UPL</u>	OBL species _____ x 1 = _____
3. <u>Baccharis pilularis</u>	<u>25</u>	<u>D</u>	<u>UPL</u>	FACW species <u>25</u> x 2 = <u>50</u>
4. _____	_____	_____	_____	FAC species <u>25</u> x 3 = <u>75</u>
5. _____	_____	_____	_____	FACU species <u>5</u> x 4 = <u>20</u>
Total Cover: _____				UPL species <u>50</u> x 5 = <u>250</u>
Herb Stratum				Column Totals: <u>105</u> (A) <u>395</u> (B)
1. <u>Aristida nigra</u>	<u>10</u>	<u>D</u>	<u>UPL</u>	Prevalence Index = B/A = <u>> 3</u>
2. <u>Ferniculum vulgare</u>	<u>5</u>	<u>D</u>	<u>FACW</u>	
3. _____	_____	_____	_____	Hydrophytic Vegetation Indicators:
4. _____	_____	_____	_____	___ Dominance Test is >50%
5. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
6. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
7. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
8. _____	_____	_____	_____	
Total Cover: _____				¹ Indicators of hydric soil and wetland hydrology must be present.
Woody Vine Stratum				Hydrophytic Vegetation Present? Yes _____ No _____
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		
Remarks:				

SOIL

Sampling Point: _____

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		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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 checked="" 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.

Restrictive Layer (if present):	Hydric Soil Present? Yes _____ No _____
Type: _____ Depth (inches): _____	

Remarks: _____

HYDROLOGY

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

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

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

Remarks: _____

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCTIP City/County: Camp Pendleton, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-14
 Investigator(s): INDEPENDENT, IMENAN by Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): top of slope Local relief (concave, convex, none): flat Slope (%): 2%
 Subregion (LRR): C Lat: 117° 35' 39.342 Long: 33° 23' 24.213 Datum: NAD83
 Soil Map Unit Name: Tuyunga sand, 0-5% slopes NWI classification: NA
 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 type="checkbox"/>	Hydic Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
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Remarks:

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>Sambucus mexicana</u>	<u>15</u>	<u>D</u>	<u>fol</u>	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>3</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>33</u> (A/B)
4. _____	_____	_____	_____	Prevalence Index worksheet:	
Total Cover: _____				Total % Cover of:	Multiply by:
<u>Sapling/Shrub Stratum</u>				OBL species _____	x 1 = _____
1. <u>Artemisia californica</u>	<u>25</u>	_____	<u>upl</u>	FACW species _____	x 2 = _____
2. <u>Prosopis juliflora</u>	<u>35</u>	<u>D</u>	<u>upl</u>	FAC species _____	x 3 = _____
3. _____	_____	_____	_____	FACU species _____	x 4 = _____
4. _____	_____	_____	_____	UPL species _____	x 5 = _____
5. _____	_____	_____	_____	Column Totals: _____	(A) _____ (B)
Total Cover: _____				Prevalence Index = B/A = _____	
<u>Herb Stratum</u>				Hydrophytic Vegetation Indicators:	
1. <u>Trinervium daniellii</u>	<u>20</u>	<u>D</u>	<u>upl</u>	<input type="checkbox"/> Dominance Test is >50%	
2. _____	_____	_____	_____	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹	
3. _____	_____	_____	_____	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____	_____	_____	_____	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____	_____	_____	_____	_____	
6. _____	_____	_____	_____	_____	
7. _____	_____	_____	_____	_____	
8. _____	_____	_____	_____	_____	
Total Cover: _____				¹ Indicators of hydric soil and wetland hydrology must be present.	
<u>Woody Vine Stratum</u>				Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	
1. _____	_____	_____	_____	_____	
2. _____	_____	_____	_____	_____	
Total Cover: _____				_____	
% Bare Ground in Herb Stratum _____		% Cover of Biotic Crust _____		_____	

Remarks:

SOIL

Sampling Point: _____

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		

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, 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 checked="" 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.

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks: _____

HYDROLOGY

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

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: _____

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCTIP City/County: Camp Blanding, SD Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CCC-15
 Investigator(s): Ingrid Ohlup, Thiaman W Section, Township, Range: 14S, 79S, R7W
 Landform (hillslope, terrace, etc.): slope adjacent to water Local relief (concave, convex, none): slope Slope (%): 2%
 Subregion (LRR): C Lat: 117°35'39.362 Long: 33°23'24.213 Datum: NAD83
 Soil Map Unit Name: Tujunaga SAND 1 0-5% slopes NWI classification: NA
 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 type="checkbox"/> Hydric Soil Present? Yes <input type="checkbox"/> No <input type="checkbox"/> Wetland Hydrology Present? Yes <input type="checkbox"/> No <input type="checkbox"/>	Is the Sampled Area within a Wetland? Yes <input type="checkbox"/> No <input type="checkbox"/>
Remarks:	

VEGETATION

Tree Stratum (Use scientific names.)	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>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
4. _____	_____	_____	_____	
Total Cover: _____				
Sapling/Shrub Stratum				
1. <u>Artemisia californica</u>	<u>25</u>		<u>upl</u>	Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
2. <u>Baccharis pilularis</u>	<u>50</u>	<u>D</u>	<u>upl</u>	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
Total Cover: _____				
Herb Stratum				
1. <u>Foeniculum vulgare</u>	<u>25</u>	<u>D</u>	<u>facu</u>	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)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: _____				
Woody Vine Stratum				
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present.
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>		
Remarks:				

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: SOCTILP City/County: Camp Pendleton, San Diego County Sampling Date: 7/24/07
 Applicant/Owner: TCA State: CA Sampling Point: CC16
 Investigator(s): J Chmp, T Ly Section, Township, Range: S14, T9S, R7W
 Landform (hillslope, terrace, etc.): hillslope Local relief (concave, convex, none): none Slope (%): 40%
 Subregion (LRR): C Lat: 117°34'39.61 Long: 33°23'1.301 Datum: NAD83
 Soil Map Unit Name: Visalia sandy loam, 0-2% slopes NWI classification: NA
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No (If no, explain in Remarks.) Dry year
 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 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: <u>slope adj to San Onofre creek</u> <u>CCC</u>	

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A) Total Number of Dominant Species Across All Strata: <u>5</u> (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>0</u> (A/B)
2. _____	_____	_____	_____	
3. _____	_____	_____	_____	
4. _____	_____	_____	_____	
Sapling/Shrub Stratum <u>isomeris arborea</u> Total Cover: _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
1. <u>Sambucus mexicana</u>	<u>5</u>	<u>—</u>	<u>upl</u>	
2. <u>Malosma laurina</u>	<u>10</u>	<u>—</u>	<u>fac</u>	
3. <u>Eriogonum fasciculatum</u>	<u>15</u>	<u>D</u>	<u>upl</u>	
4. <u>Artemisia Californica</u>	<u>5</u>	<u>—</u>	<u>upl</u>	
5. <u>Boerhaavia pulvaris</u>	<u>15</u>	<u>D</u>	<u>upl</u>	
<u>Rhus integrifolia</u> Total Cover: <u>75</u>				
Herb Stratum				___ Dominance Test is >50% ___ Prevalence Index is ≤3.0 ¹ ___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) ___ Problematic Hydrophytic Vegetation ¹ (Explain) ¹ Indicators of hydric soil and wetland hydrology must be present.
1. <u>brassica nigra</u>	<u>40</u>	<u>D</u>	<u>upl</u>	
2. <u>Carpobrotus edulis</u>	<u>40</u>	<u>D</u>	<u>upl</u>	
3. <u>Opuntia basilaris</u>	<u>5</u>	<u>—</u>	<u>upl</u>	
4. <u>Baccharis diversilobum</u>	<u>5</u>	<u>—</u>	<u>upl</u>	
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
Total Cover: <u>90</u>				
Woody Vine Stratum				
1. _____	_____	_____	_____	
2. _____	_____	_____	_____	
Total Cover: _____				
% Bare Ground in Herb Stratum <u>10</u>		% Cover of Biotic Crust <u>—</u>		
Hydrophytic Vegetation Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>				
Remarks:				

SOIL

Sampling Point: _____

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		
Not available								

¹Type: C=Concentration, D=Depletion, RM=Reduced Matrix. ²Location: PL=Pore Lining, RC=Root Channel, M=Matrix.

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

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

- 1 cm Muck (A9) (LRR C)
- 2 cm Muck (A10) (LRR B)
- Reduced Vertic (F18)
- Red Parent Material (TF2)
- Other (Explain in Remarks)

³Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

Secondary Indicators (2 or more required)

Primary Indicators (any one indicator is sufficient)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Plowed Soils (C6)
- Other (Explain in Remarks)

- Water Marks (B1) (Riverine)
- Sediment Deposits (B2) (Riverine)
- Drift Deposits (B3) (Riverine)
- Drainage Patterns (B10)
- Dry-Season Water Table (C2)
- Thin Muck Surface (C7)
- Crayfish Burrows (C8)
- Saturation Visible on Aerial Imagery (C9)
- Shallow Aquitard (D3)
- FAC-Neutral Test (D5)

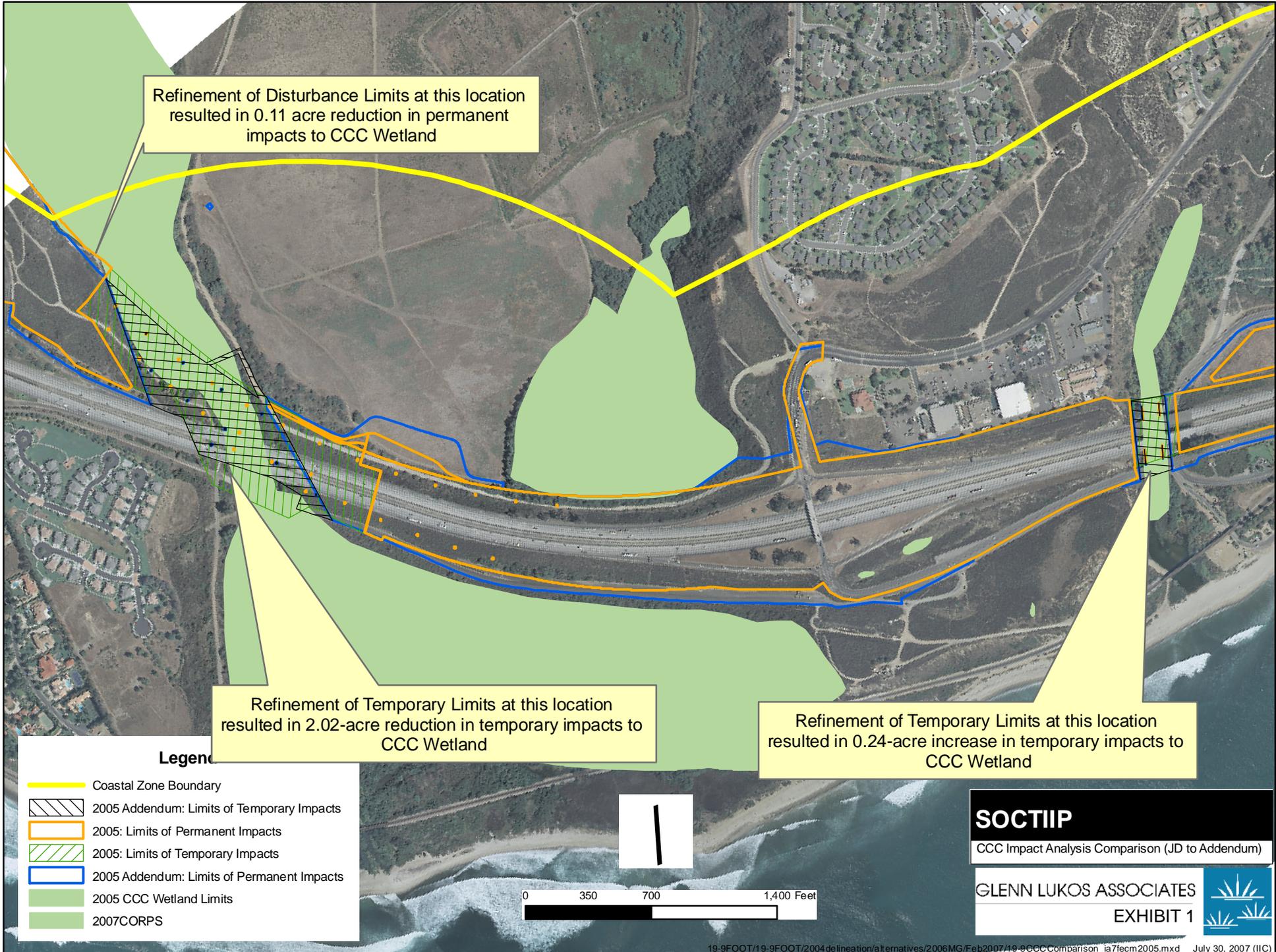
Field Observations:

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: None present



Refinement of Disturbance Limits at this location resulted in 0.11 acre reduction in permanent impacts to CCC Wetland

Refinement of Temporary Limits at this location resulted in 2.02-acre reduction in temporary impacts to CCC Wetland

Refinement of Temporary Limits at this location resulted in 0.24-acre increase in temporary impacts to CCC Wetland

Legend

- Coastal Zone Boundary
- 2005 Addendum: Limits of Temporary Impacts
- 2005: Limits of Permanent Impacts
- 2005: Limits of Temporary Impacts
- 2005 Addendum: Limits of Permanent Impacts
- 2005 CCC Wetland Limits
- 2007CORPS

SOCTIIP
 CCC Impact Analysis Comparison (JD to Addendum)

GLENN LUKOS ASSOCIATES

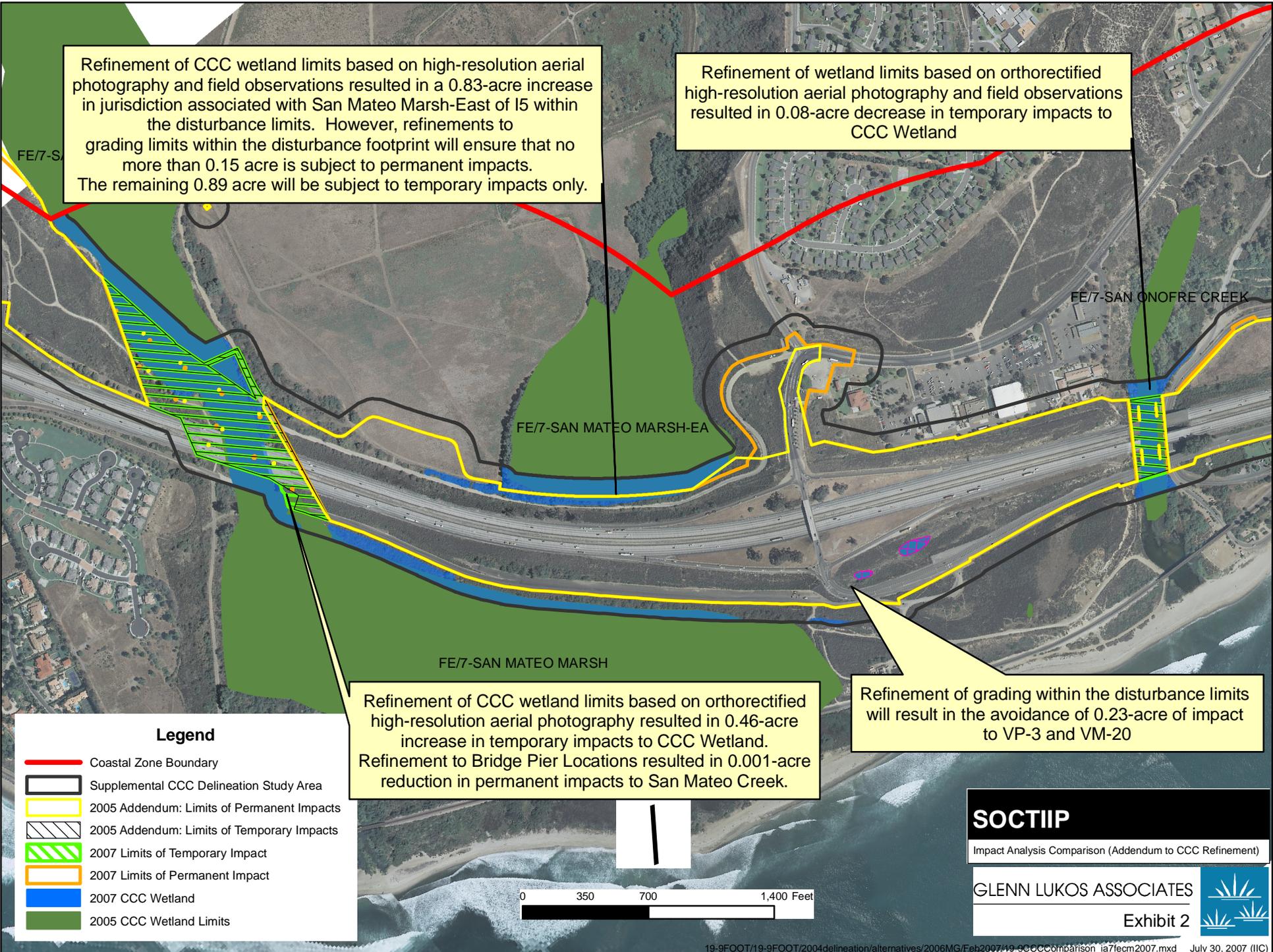
EXHIBIT 1

Refinement of CCC wetland limits based on high-resolution aerial photography and field observations resulted in a 0.83-acre increase in jurisdiction associated with San Mateo Marsh-East of I5 within the disturbance limits. However, refinements to grading limits within the disturbance footprint will ensure that no more than 0.15 acre is subject to permanent impacts. The remaining 0.89 acre will be subject to temporary impacts only.

Refinement of wetland limits based on orthorectified high-resolution aerial photography and field observations resulted in 0.08-acre decrease in temporary impacts to CCC Wetland

Refinement of CCC wetland limits based on orthorectified high-resolution aerial photography resulted in 0.46-acre increase in temporary impacts to CCC Wetland. Refinement to Bridge Pier Locations resulted in 0.001-acre reduction in permanent impacts to San Mateo Creek.

Refinement of grading within the disturbance limits will result in the avoidance of 0.23-acre of impact to VP-3 and VM-20



Legend

- Coastal Zone Boundary
- Supplemental CCC Delineation Study Area
- 2005 Addendum: Limits of Permanent Impacts
- 2005 Addendum: Limits of Temporary Impacts
- 2007 Limits of Temporary Impact
- 2007 Limits of Permanent Impact
- 2007 CCC Wetland
- 2005 CCC Wetland Limits

SOCTIIP
 Impact Analysis Comparison (Addendum to CCC Refinement)

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Exhibit 2