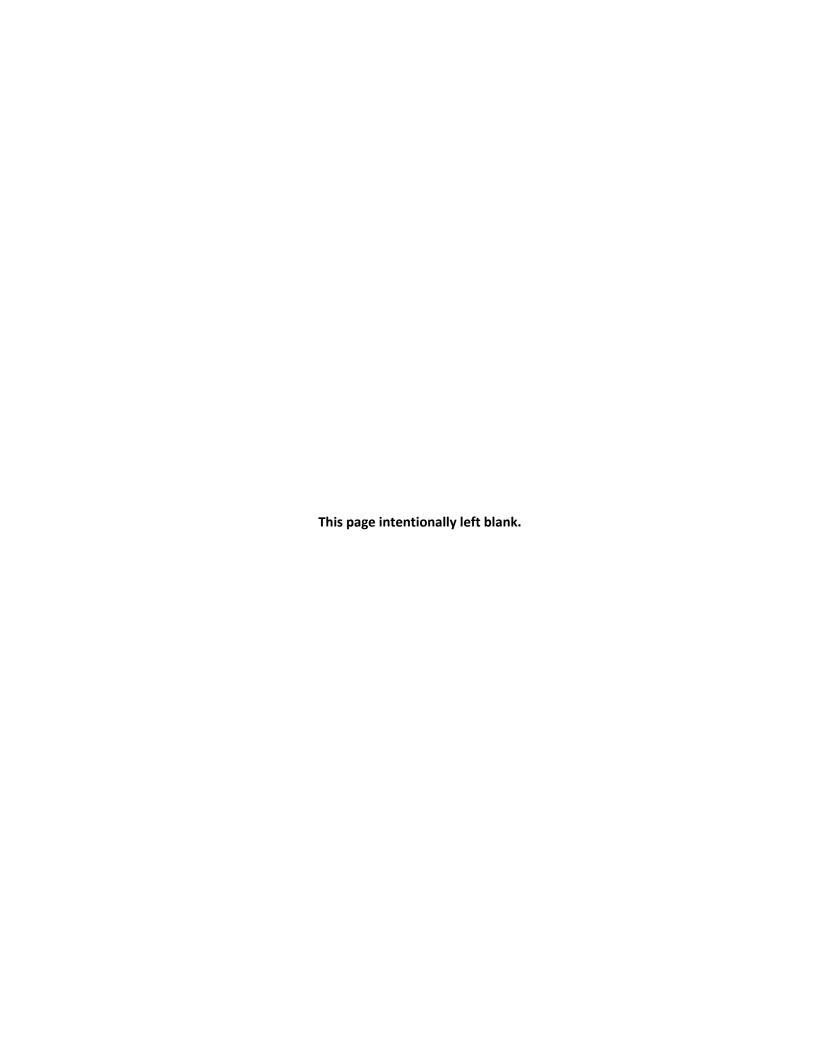
APPENDIX G

Wetlands Delineation Report for NASA-Administered Property at Santa Susana Field Laboratory



Appendix G. NASA SSFL EIS for Proposed Demolition and Environmental Clear	Annendix G. N.	ASA SSEL FIS f	for Proposed	Demolition and	f Environmental	Cleanur
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G1: Wetlands and Waters of the United States, Delineation for the NASA-Administered Portions of the Santa Susana Field Laboratory, Ventura County, California, March 2012

National Aeronautics and Space Administration

George C. Marshall Space Flight Center Marshall Space Flight Center, AL 35812



April 11, 2012

Reply to Attn of:

Office of Center Operations

U.S. Army Corps of Engineers, Los Angeles District Regulatory Division, Ventura Field Office Attn: Antal Szijj 2151 Alessandro Drive, Suite 110 Ventura, California 93001

SUBJECT: Wetlands and Waters of the United States, Request for a Jurisdictional Determination for the NASA-Administered Portions of the Santa Susan Field Laboratory, Ventura County, California.

Dear Mr. Antal Szijj:

The National Aeronautics and Space Administration (NASA) requests a jurisdictional determination for Wetlands and Waters of the United States within the NASA-Administered property of the Santa Susana Field Laboratory located in Ventura County, California.

The NASA-administered property at SSFL consists of 41.7 acres within Area I and all 409.5 acres of Area II.

A wetland delineation was conducted for NASA in January 2012. The survey was conducted to support NASA's preparation of an Environmental Impact Statement (EIS), which is being prepared to assess the potential impacts of NASA's proposed action to demolish structures and remediate soil and groundwater on the NASA-Administered property at SSFL, as well as to support subsequent permitting that might be required under Section 404 of the Clean Water Act. The results of this delineation are considered preliminary pending your determination. A copy of NASA's survey is enclosed.

If you have any questions, please contact Jeremiah Kolb at (256)544-6304.

Sincerely,

Allen Elliott

SSFL Project Director

Ellen Elitt

National Aeronautics and Space Administration (NASA)

Enclosure: Wetlands and Waters of the United States, Delineation for the NASA-Administered Portions of the Santa Susana Field Laboratory, Ventura County, California

Wetlands and Waters of the United States, Delineation for the NASA-Administered Portions of the Santa Susana Field Laboratory, Ventura County, California

National Aeronautics and Space Administration
Huntsville, Alabama

March 2012

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Acronyms and Abbreviations

% per mil (per thousand)
°F degrees Fahrenheit

CFR Code of Federal Regulations

CWA Clean Water Act

EIS Environmental Impact Statement
ELV Expendable Launch Vehicle

HUC Hydrologic Unit Code

LF linear foot LOX liquid oxygen

NASA National Aeronautics and Space Administration

NHD National Hydrology Dataset

NRCS Natural Resources Conservation Service

NWI National Wetland Inventory

PABHx Palustrine Aquatic Bed Permanently Flooded Excavated

PEMC Palustrine Emergent Seasonally Flooded
PFOA Palustrine Forested Temporarily Flooded

PLF Propellant Load Facility

PSSA Palustrine Scrub-Shrub Temporarily Flooded

PSSB Palustrine Scrub-Shrub Saturated

PSSC Palustrine Scrub-Shrub Seasonally Flooded

PUBHx Palustrine Unconsolidated Bottom Permanently Flooded Excavated

SPA Storage Propellant Area
SSFL Santa Susana Field Laboratory
STL Systems Test Laboratory

U.S. United States

USACE U.S. Army Corps of Engineers

USGS U.S. Geological Survey

SECTION 1

Introduction

Wetlands and other waters are ecological habitats protected under the federal Clean Water Act (CWA). Activities that have the potential to discharge fill materials into "waters of the United States" (U.S.), including wetlands, must be authorized by the U.S. Army Corps of Engineers (USACE) under Section 404 of the CWA. This report presents the results of a wetlands delineation for the National Aeronautics and Space Administration (NASA)—administered property at the Santa Susana Field Laboratory (SSFL) in Ventura County, California. The results of this delineation are considered preliminary, pending verification by the USACE regulatory branch. A general description of the project location and environmental setting are provided in the following text. Study methods and survey results are provided in Sections 2 and 3, respectively.

1.1 Project Location and Description

SSFL is located mostly within an unincorporated part of Ventura County, California (Figure 1-1). The site is in a remote, mountainous area near the crest of the Simi Hills at the western border of the San Fernando Valley, approximately 30 miles northwest of downtown Los Angeles.

SSFL was established shortly after World War II and has been used primarily as a site to develop and test nuclear reactors, rockets, and missiles. The total site is 2,850 acres and is divided into four test areas (Areas I, II, III, and IV) and two buffer areas (northern and southern buffer areas). The NASA-administered property at SSFL consists of 41.7 acres within Area I and all 409.5 acres of Area II, together representing approximately 15.6 percent of the total area of the site (Figure 1-2).

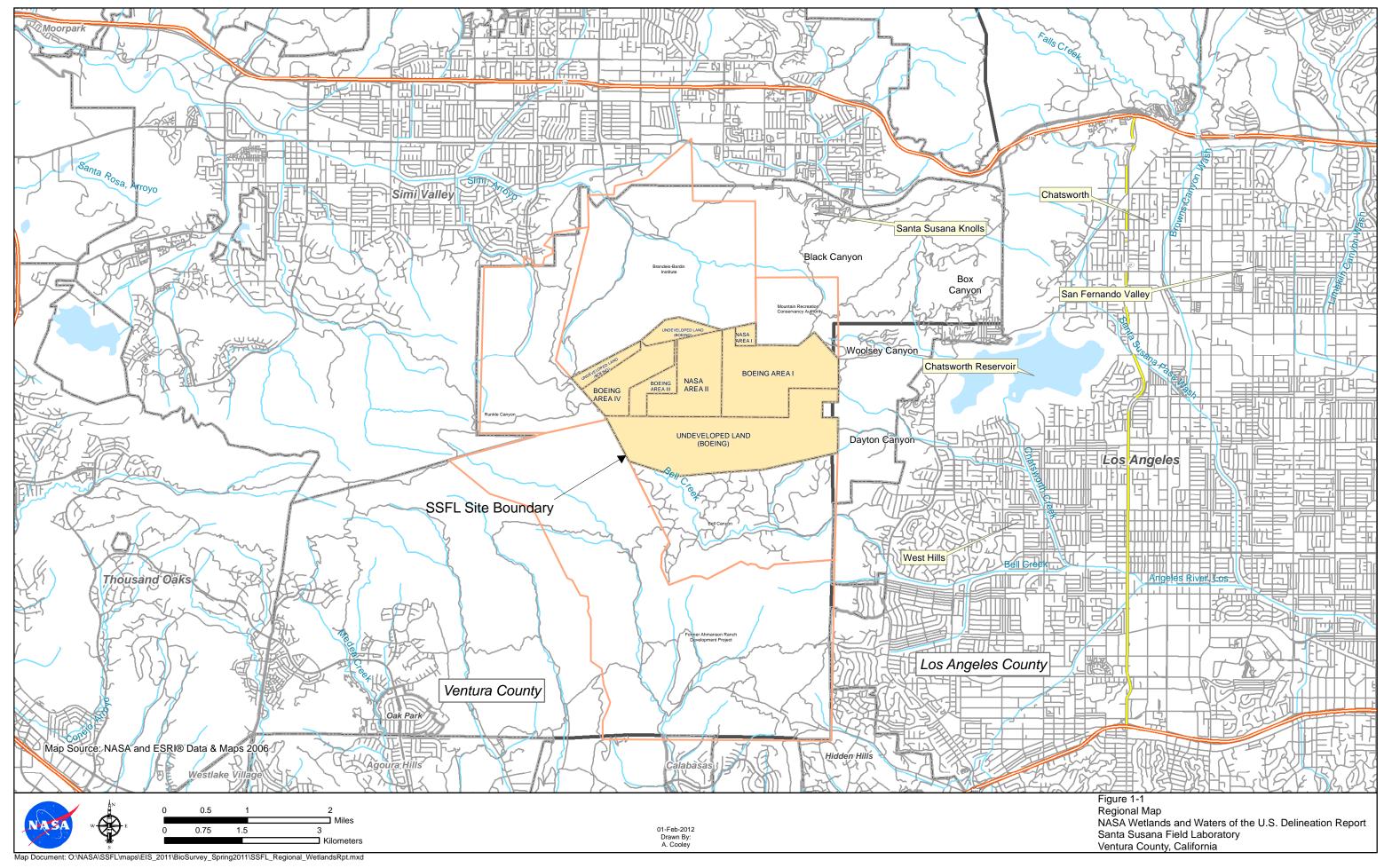
This report presents the results of a wetland delineation of the NASA-administered property at SSFL. The survey was conducted to support NASA's preparation of an Environmental Impact Statement (EIS), which is being prepared to assess the potential impacts of NASA's proposal to demolish structures and remediate soil and groundwater on the NASA-administered property at SSFL, as well as to support subsequent permitting that might be required under Section 404 of the CWA.

1.2 Environmental Setting

SSFL's landscape is dominated by sandstone outcropping hills, areas of natural vegetation, and numerous industrial facilities and roadways. The site is within the central portion of the Southern California Coast ecological subregion, in the Simi Valley–Santa Susana Mountains (261Be) ecological subsection (Miles and Goudey, 1998). This ecological subsection includes steep mountains, moderately steep to steep hills, and nearly level to gently sloping floodplains, terraces, and alluvial fans.

1.2.1 Terrestrial Vegetation

Eight natural terrestrial habitat types as well as ruderal and developed areas have been identified on the NASA-administered property at SSFL (NASA, 2011). These habitat types are described briefly in the following subsections. Table 1-1 provides a comparison of the mapped habitat types and the current California vegetation classification system (Sawyer et al., 2009). Aquatic features including wetlands and drainages are described in more detail in Section 3.



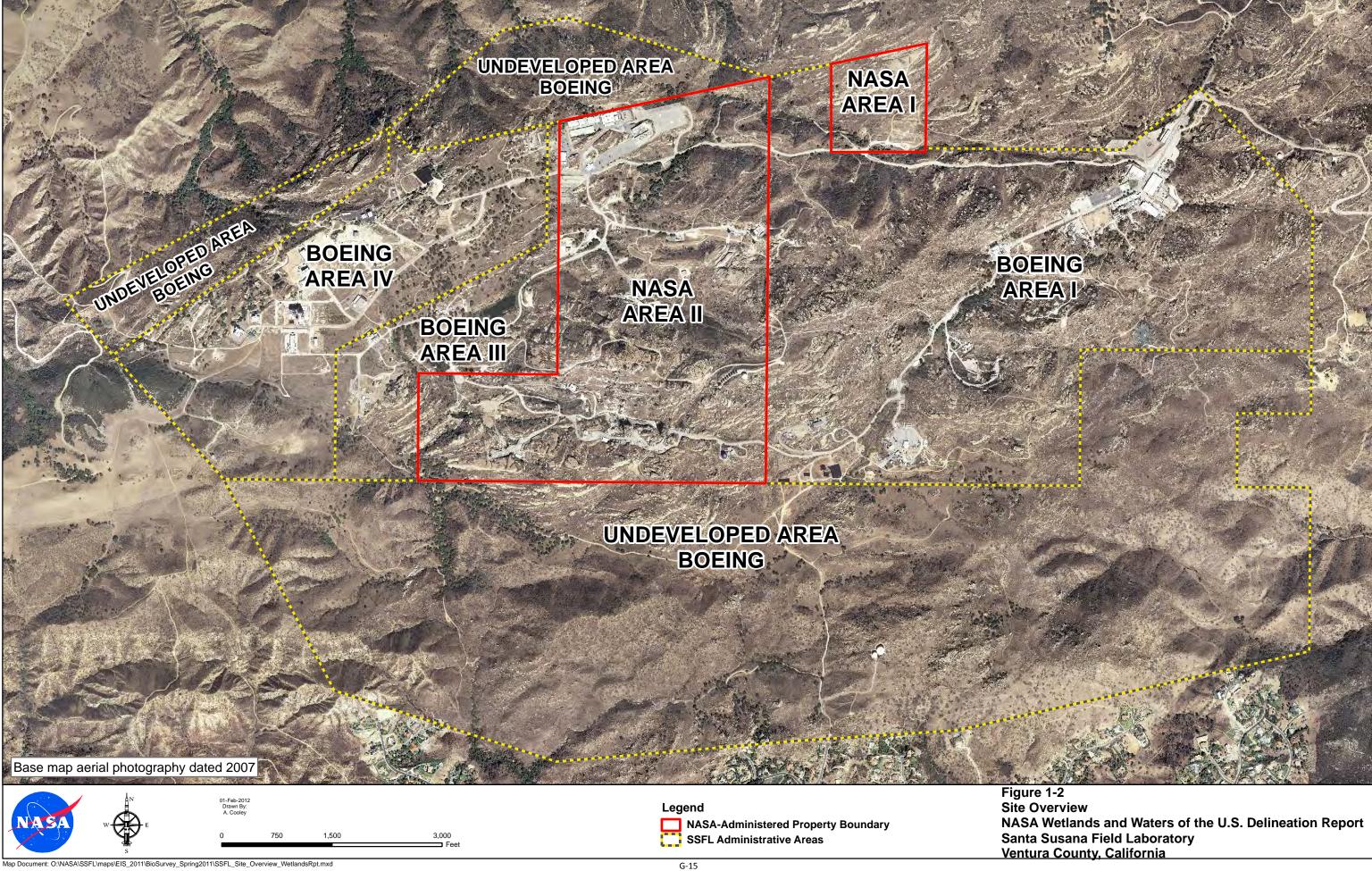


TABLE 1-1
Mapped Habitat Types and Current California Vegetation Classification System
Wetland Delineation for the NASA-Administered Portions of SSFL

Mapped Natural Habitat Types	Current California Vegetation Classification System ^a	
Chaparral	Adenostoma fasciculatum—Salvia mellifera Shrubland Alliance Malosma laurina Shrubland Alliance Malacothamnus fasciculatus Shrubland Alliance Eriodictyon crassifolium Provisional Shrubland Alliance	
Venturan Coastal Sage Scrub	Artemisia californica –Eriogonum fasciculatum Shrubland Alliand	
Non-Native Grassland	Avena(barbata, fatua) Semi-Natural Herbaceous Stands	
Coast Live Oak Woodland	Quercus agrifolia Woodland Alliance	
Coast Live Oak Riparian Forest	Quercus agrifolia Woodland Alliance	
Baccharis Scrub	Baccharis pilularis Shrubland Alliance	
Mule-fat Scrub	Baccharis salicifolia Shrubland Alliance	
Southern Willow Scrub	Salix lasiolepis Shrubland Alliance	

^a From Sawyer et al. (2009).

1.2.1.1 Chaparral

Chaparral is the most abundant and widespread natural community at the NASA-administered property. This habitat covers 172.6 acres (approximately 38 percent) of the site. Characteristic species include chamise (*Adenostoma fasciculatum*), hoaryleaf ceanothus (*Ceanothus crassifolius*), black sage (*Salvia mellifera*), laurel sumac (*Malosma laurina*), thickleaf yerba santa (*Eriodictyon crassifolium*), Mendocino bushmallow (*Malacothamnus fasciculatus*), and chaparral yucca (*Yucca whipplei*). The abundance of these species is variable within this habitat type depending on soils, aspect, past disturbance, and other environmental factors.

1.2.1.2 Venturan Coastal Sage Scrub

Venturan coastal sage scrub covers 64.4 acres (approximately 15 percent) of the site. Characteristic species include coastal sagebrush (*Artemisia californica*), Eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), black sage, chaparral yucca, thickleaf yerba santa, and common deerweed (*Acmispon glaber*).

1.2.1.3 Non-native Grassland

Grassland habitat covers 18.6 acres (approximately 4 percent) of the site and often occurs in a mosaic with other habitat types. Most of the grasslands are characterized by slender oat (*Avena barbata*) intermixed with other introduced annual grasses such as ripgut brome (*Bromus diandrus*), soft brome (*Bromus hordeaceus*), and fescue (*Vulpia* spp). Native grasses including needlegrass (*Nassella* spp.), littleseed muhly (*Muhlenbergia microsperma*), and deergrass (*Muhlenbergia rigens*) are present in a few areas, but generally provide only minimal cover. Common herbaceous species include suncup (*Camissonia* spp.), winecup clarkia (*Clarkia purpurea*), longbeak stork's bill (*Erodium botrys*), and winter vetch (*Vicia villosa*).

1.2.1.4 Coast Live Oak Woodland

Coast live oak woodland is distributed widely across the site but makes up only 13.2 acres (approximately 3 percent) of the NASA-administered property. This habitat is characterized by mature coast live oak (*Quercus agrifolia*) trees. The understory generally consists of annual grasses such as ripgut brome and slender oat, with occasional native grasses including blue wildrye (*Elymus glaucus*) and California brome (*Bromus carinatus*). The

^{1 &}quot;NASA-administered property" and "site" are synonymous throughout.

understory shrub layer is poorly developed and, where present, generally consists of scattered Pacific poison oak (*Toxicodendron diversilobum*).

1.2.1.5 Coast Live Oak Riparian Forest

Coast live oak riparian forest is found along the edges of the seasonal streams on the site. This habitat type covers 9.2 acres (approximately 2 percent) of the NASA-administered property. The composition of this community is generally similar to the coast live oak woodland habitat described previously, although the understory typically is more diverse in these areas and includes species such as Douglas' sagewort (*Artemisia douglasiana*), creeping snowberry (*Symphoricarpos mollis*), and American black elderberry (*Sambucus nigra*).

1.2.1.6 Baccharis Scrub

Baccharis scrub is limited, covering only 2.6 total acres (less than 1 percent) of the site. This community is characterized by generally pure stands of coyotebrush (*Baccharis pilularis*). In these areas, coyotebrush ranges from dense cover with a sparse herbaceous layer to more open stands with an understory composed of annual grasses and scattered forbs.

1.2.1.7 Mule-fat Scrub

Mule-fat scrub is limited, covering 2.1 acres (less than 1 percent) of the site. This habitat type is characterized by localized, dense stands of mule-fat (*Baccharis salicifolia*).

1.2.1.8 Southern Willow Scrub

Southern willow scrub habitat on the NASA-administered property is characterized by arroyo willow (Salix lasiolepis) intermixed with occasional red willow (Salix laevigata) and narrowleaf willow (Salix exigua). This habitat type is uncommon on the site, covering only 1 acre (less than 1 percent). Southern willow scrub occurs in localized patches around scattered ponds and detention basins and along portions of the seasonal drainages within the site.

1.2.1.9 Sandstone Rock Outcrops

Approximately 85 acres (19 percent) of the NASA-administered property is composed of sandstone outcrops. In many areas the outcrops are devoid of vegetation, while in other areas, the rocks are covered with a diverse assemblage of lichens. In some areas, scattered vascular plants are present. Common plants associated with these rock outcrops include bushy spikemoss (*Selaginella bigelovii*), lanceleaf liveforever (*Dudleya lanceolata*), chalk dudleya (*Dudleya pulverulenta*), cliffbrake (*Pellaea* spp.), orange bush monkey flower (*Mimulus aurantiacus*), and Santa Susana tarweed (*Deinandra minthornii*).

1.2.1.10 Ruderal

Ruderal habitat is common around developed areas and areas that have been subject to human disturbance. Ruderal habitats cover approximately 17 acres (4 percent) of the site. Common species observed in these areas include telegraphweed (*Heterotheca grandiflora*), black mustard (*Brassica nigra*), Maltese star-thistle (*Centaurea melitensis*), silver bird's-foot trefoil (*Acmispon argophyllus*), stork's bill (*Erodium* spp.), and common deerweed.

1.2.1.11 Developed

Developed areas include paved roads, parking areas, buildings, test structures, and other developments. Approximately 58 acres, or 13 percent, of the NASA-administered property have been developed.

1.2.2 Climate and Hydrology

Regional climate data were obtained from the Western Regional Climate Center (2011) and the Natural Resources Conservation Service (NRCS) (2002) for Canoga Park, which is approximately 7 miles southeast of SSFL. Climate data are provided in Appendix A. Average temperatures range from a low of about 39 degrees Fahrenheit (°F) in December and January to a high of 95°F in August. Average annual rainfall is approximately 17 inches. The majority of the precipitation, 87 percent of the total, falls between November and March. The growing season,

defined as having a 50-percent probability of temperatures at or above 32°F, extends from March 6 through November 28, for a total of 267 days (NRCS, 2002).

Precipitation has been measured at SSFL at two onsite monitoring stations since 1960. Precipitation at SSFL is normally in the form of rain, although snow occasionally has fallen during winter months. Precipitation at the site averaged approximately 18.5 inches per year between 1960 and 2008. Annual precipitation has ranged from a low of 6.15 inches in 2007 to a maximum of 41.24 inches in 1998. There was no measurable precipitation in the 2 weeks immediately prior to the wetland delineation field survey, and regional rainfall during December was approximately 40 percent of the average. Overall rainfall in the region between November 1 and December 31, 2011, was approximately 30 percent below the average for this time of year, due largely to slightly above average rainfall during November.

Area I and the northern portion of Area II are located in the 41,142-acre Simi-Valley Hydrologic Sub-Area, which is part of the Calleguas-Conejo Hydrologic Area in the Calleguas Watershed (Hydrologic Unit Code [HUC] 18070103) (CalWater, 2004). Drainage in this area flows north and connects to the drainage in Meier Canyon, which subsequently discharges into Arroyo Simi. Arroyo Semi flows west into Arroyo Las Posas, a tributary to Calleguas Creek, which flows into the Pacific Ocean. Appendix B provides the watershed areas and streams included in the National Hydrology Dataset (NHD) on the NASA-administered property of SSFL.

The southern part of Area II is located in the 184,398-acre Bull Canyon Hydrologic Sub-Area, which is part of the San Fernando Hydrologic Area in the Los Angeles Watershed (HUC 18070105) (CalWater, 2004). Most of the surface water in this area runs off the southern property boundary into the Southwestern Drainage (referred to as Bell Creek on the U.S. Geological Survey [USGS] Calabasas topographic quadrangle map), which subsequently discharges into the Los Angeles River, which flows into the Pacific Ocean (Appendix B).

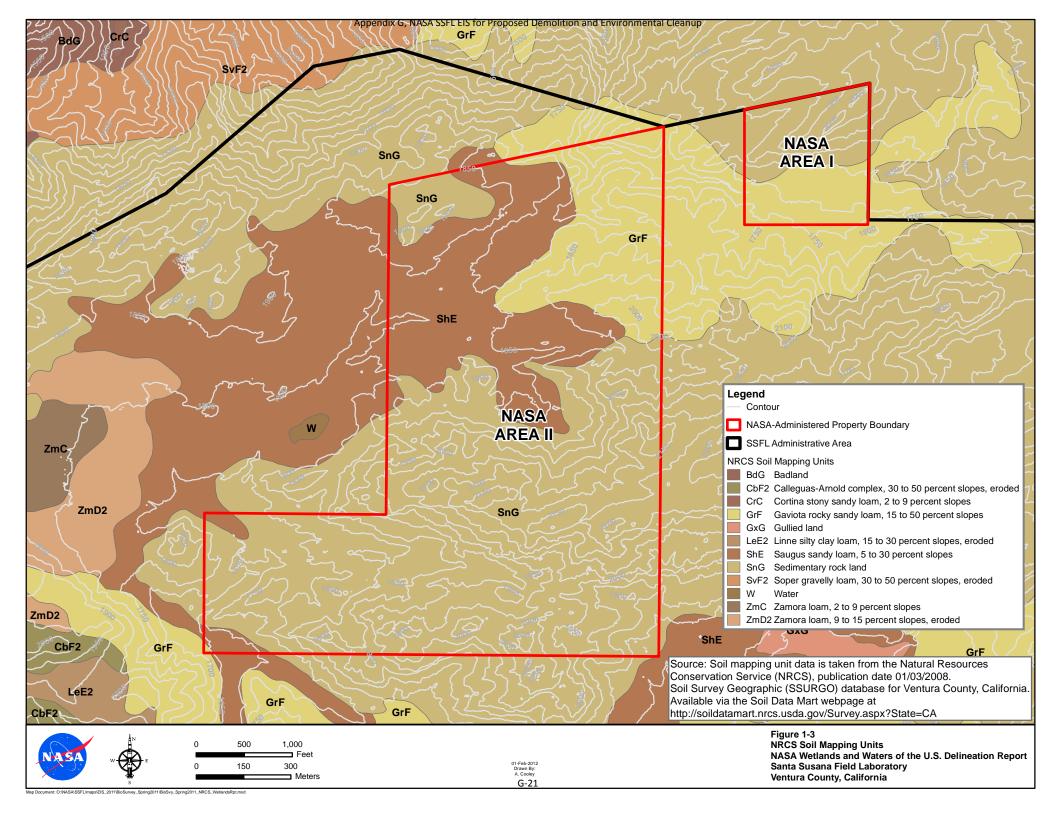
1.2.3 Soils

Information about soil types within the wetland study area was obtained from the Soil Survey for Ventura County, Web Soil Survey (NRCS, 2012a) and official NRCS (2012b) soil series descriptions. Three NRCS-mapped soil types occur within the NASA-administered property (NRCS, 2012a). These soil types are described generally in the following text; their distribution on the property is shown in Figure 1-3. The soil colors described in the following sections are all for moist soils. Appendix C contains additional soil information.

GrF–Gaviota rocky sandy loam, 15- to 50-percent slopes. This soil-mapping unit occurs in the southern half of Area I and in the northeastern corner of Area II. These soils formed in material weathered from hard sandstone or meta-sandstone and are found on hills and mountains. These soils have a very shallow or shallow-to-lithic (bedrock) contact. In a typical profile the surface layer to a depth of 10 inches is a brown (7.5 YR 4/4) gravelly loam underlain by hard meta-sandstone. These soils are well to excessively well-drained with very low to very high runoff and moderately rapid permeability.

ShE–Saugus sandy loam, 5- to 30-percent slopes. This soil mapping unit occurs in the northwestern and southwestern portions of Area II. This unit consists of deep, well-drained soils that formed from weakly consolidated sediments found on dissected terraces and foothills. In a typical profile the soil is a dark grayish brown (10YR 4/2) loam in the upper 25 inches with gravel content ranging from 5 to 15 percent (increasing with depth). These soils have medium to rapid runoff and moderate permeability.

SnG–Sedimentary rock land. This soil mapping unit occurs in the northern half of Area I and in the northwestern corner and southern half of Area II. This mapping unit consists mostly of exposed sedimentary rock with very thin, discontinuous areas of soil. There is little available information about this mapping unit; however, the potential for erosion is expected to be relatively low, with rapid runoff and very low permeability.



SECTION 2

Methods

A wetland delineation field survey was completed between January 3 and 6, 2012, by CH2M HILL wetland ecologists Russell Huddleston and Steve Long. The purpose of the survey was to identify the limits of wetlands and other waters on the 451.2 acres of NASA-administered property at SSFL (Figure 1-2). The following subsections describe the prefield investigations, field sampling procedures, methods used to delineate and map the wetland boundaries, and wetland classifications.

2.1 Prefield Investigation

Prior to conducting the field work, relevant information pertaining to site conditions was reviewed. The following materials (provided in the appendixes, as indicated) were included in this data review:

- USGS Calabasas quadrangle topographic map and the NHD (Appendix B)
- NRCS-mapped soils and soil series descriptions (Figure 1-3; Appendix C)
- The National Wetland Inventory (NWI) (Appendix D)

2.2 Wetland Delineation

Wetlands are defined as areas that are "inundated by surface water or groundwater with a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas" (Title 40 *Code of Federal Regulations* [CFR], Section 230.3, and Title 33 CFR, Section 238). The survey methodology followed the *Wetland Delineation Manual* (Environmental Laboratory, 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE, 2008).

Wetland determination data points were established at 10 locations, including 5 wetland data points and 5 upland data points (see the figures in Section 3). Sample points were located in areas that were considered to be representative of the wetland boundary being delineated. Appendix E includes the wetland determination data sheets. The following subsections describe the field methods used during the wetland delineation.

2.2.1 Vegetation

At each sample point, plant species were identified and the percent cover was visually estimated and recorded. Herbaceous vegetation was sampled in an approximately 5-foot radius around the sample point. Taxonomic designations follow *The Jepson Manual: Vascular Plants of California* (Baldwin et al., 2012). The *National List of Plant Species that Occur in Wetlands* (Reed, 1988) was used to evaluate the wetland indicator status of each plant species identified. Dominant species included the most abundant species whose cumulative cover accounted for at least 50 percent of the total cover, and any single species that accounted for at least 20 percent of the total vegetative cover. Appendix F provides a list of plant species observed at the sample points and of other common species observed throughout the wetland study area during the field survey.

2.2.2 Soils

Descriptions of soils were made by examining test pits that had been excavated using a tile spade that ranged in depth from 5 to 24 inches. In some areas, the depth of excavation was limited by shallow sandstone contact. At each data point, soil morphological features such as texture, color, and redoximorphic features (if present) were noted. Soil texture was estimated in the field by feel (Thien, 1979), and moist soil colors were determined using

Munsell color charts. In areas where no hydric soil indicators were observed, hydric conditions were assumed to be present where the following conditions existed:

- Dominant vegetation was composed entirely of obligate and facultative wetland plant species.
- There was evidence of seasonal wetland hydrology.
- There was a noticeable difference between the wetland and adjacent upland habitat.

2.2.3 Hydrology

The presence of wetland hydrology was determined based on current as well as previous field observations of saturation and/or inundation, water staining, sediment deposits, and drift deposits. Seasonal rainfall, site drainage, landscape position, and general site topography also were taken into consideration while making wetland hydrology determinations.

2.2.4 Wetland and Water Boundary Mapping

A Trimble Geo-XT global positioning system (GPS) device was used to map the limits of the wetland boundaries. Wetland boundaries were determined in the field based on observations of hydrophytic vegetation, evidence of wetland hydrology, and onsite microtopography. Because most of the soils lacked evidence of hydric indicators, soil characteristics generally were not useful in differentiating the wetland boundaries.

2.3 Delineation of Nonwetland Waters of the United States

Nonwetland waters of the U.S. include such things as rivers, streams, lakes, and ponds. In the absence of adjacent wetlands, the jurisdiction of the USACE extends to the limits of the ordinary high-water mark, which is defined as "the line on the shore established by fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of the soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas" (33 CFR 328.3 [e]).

Linear features such as creeks and drainages were delineated by walking the channel bed, to the extent possible, and noting the characteristics of the feature such as substrate, in channel and adjacent vegetation, evidence of flow and hydrologic modifications such as culverts or weirs. To the extent possible, the channel bed was mapped in the field with a Trimble Geo-XT. The ordinary high water was determined and measured at representative cross sections (reference the Section 3 figures) based on observed water staining, drift and debris deposits, sediment deposits, scouring, and other indicators of ordinary high-water flows. Stream data sheets are provided in Appendix F and representative site photographs are provided in Appendix G. In total, 54 stream data sheets were completed within the NASA-administered property. The locations where stream sample points were established corresponded generally to the upper; middle, and lower ends of a particular stream segment (reach), adjusting for other significant features such as tributaries and obstructions (dams or diversions).

Nonlinear features including ponds and impoundments were delineated based on the extent of the ordinary high-water mark as determined by indicators such as water staining and sediment deposits. Emergent wetland vegetation was present in some areas but occurred below the limits of the ordinary high water, and therefore, was not considered to be adjacent. The limits of the ordinary high water were then mapped using a Trimble Geo-XT.

2.4 Classification

Classification of wetlands and other waters identified during the survey follows the *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin et al., 1979). This classification methodology was developed by the U.S. Fish and Wildlife Service as part of the NWI program. The hierarchical classification includes systems, subsystems, and classes to generally categorize the various aquatic habitats. Modifiers are used to denote specific water regimes and/or highly altered areas (excavated or impounded wetlands). Additional details regarding the classification of wetlands identified on the NASA-administered property are provided in Section 3.

SECTION 3

Results

3.1 Survey Conditions

No significant recent disturbance was observed; however, the rainfall between November 1 and December 31, 2011, was approximately 30 percent below average. Therefore, the wetlands and drainages might have been drier than would normally be expected for this time of year. In most areas, the ordinary high-water marks clearly were expressed as water marks and/or drift lines. Additionally, the drainages generally had clearly expressed and well-defined channels. For these reasons, the dry seasonal conditions did not preclude an effective delineation of the wetland boundaries and ordinary high-water marks.

3.2 Wetlands and Waters

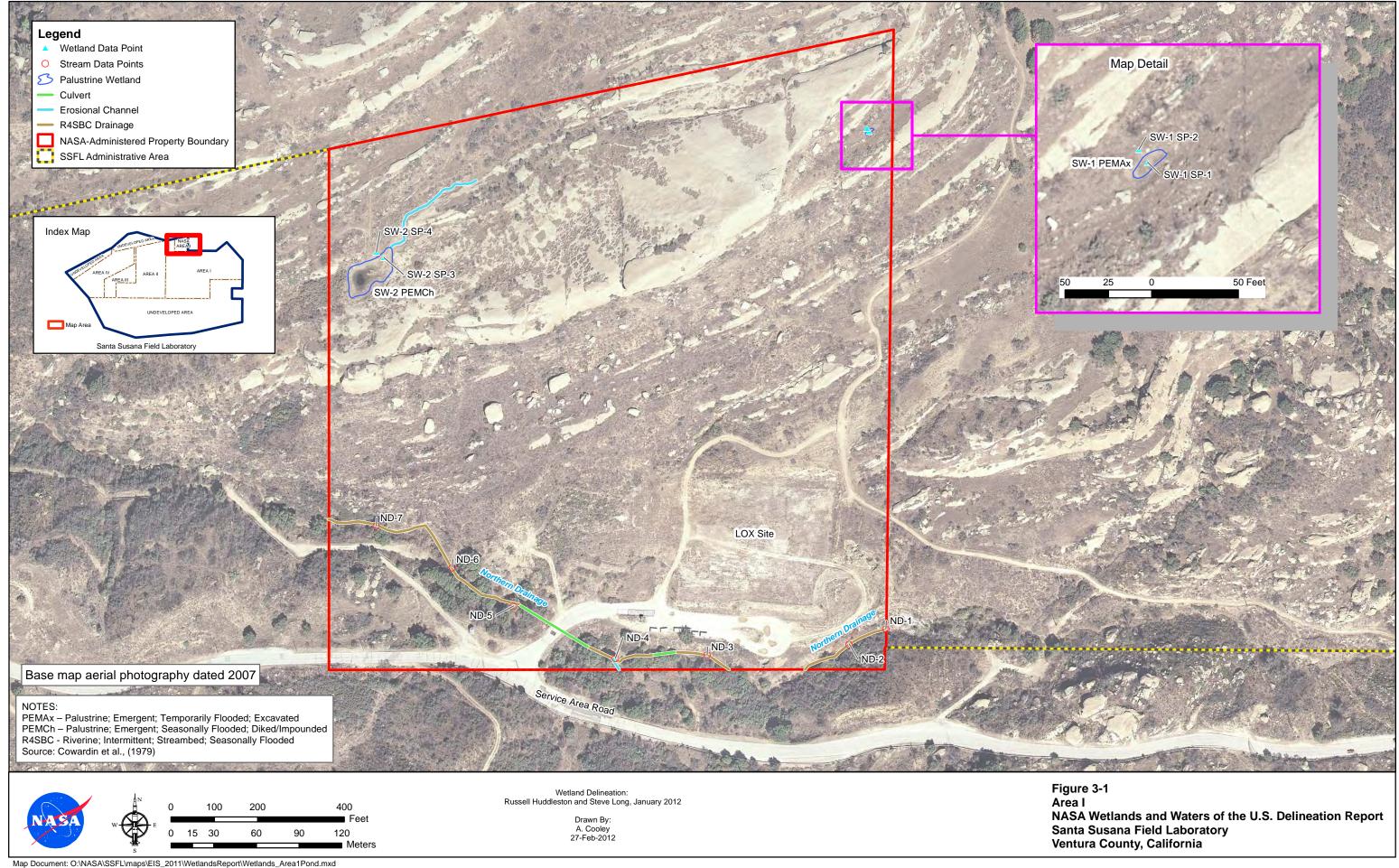
As listed in Table 3-1, 1.348 acres of Palustrine wetlands and 1.879 acres of Riverine wetlands were identified within the 451.2-acre NASA-administered property at SSFL. An additional 0.439 acre of other features (such as swales, asphalt drainage ditches, and overflow culverts) were identified in this area, as well. The wetland locations within the study area are shown in Figures 3-1 through 3-6. Descriptions of the wetlands and other features are provided in the following subsections.

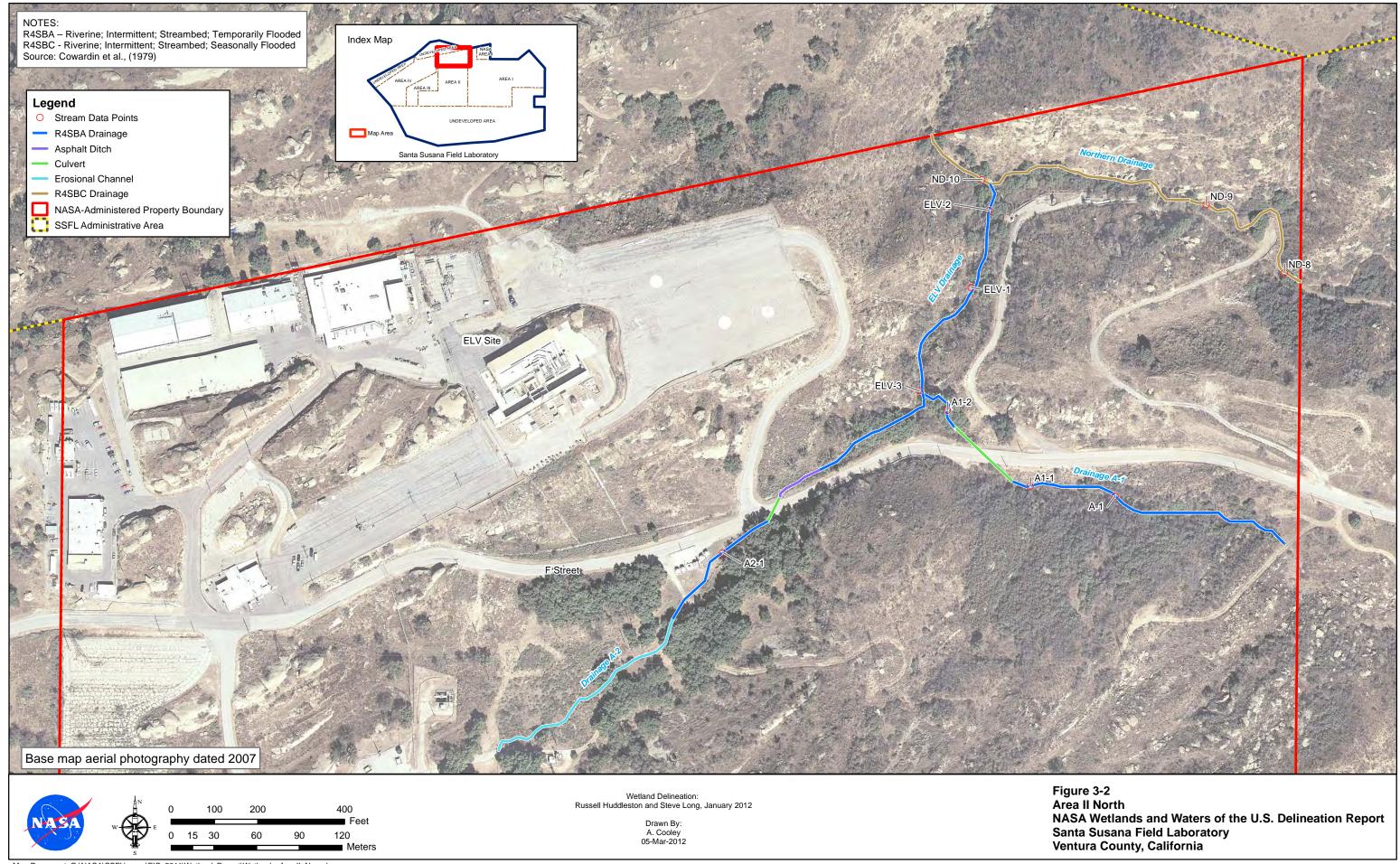
3.2.1 Palustrine Wetlands

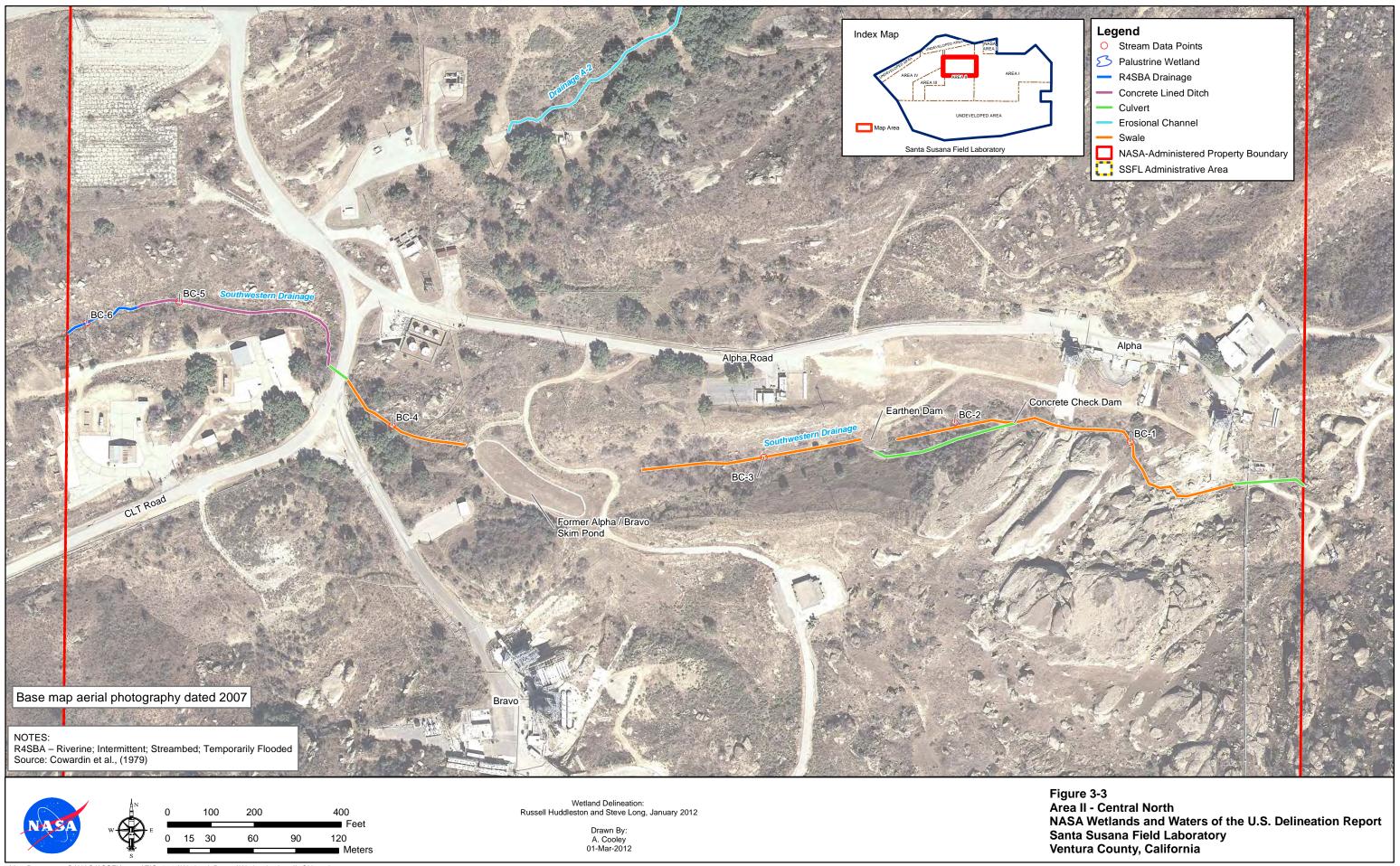
Wetlands classified as part of the Palustrine (P) system are nontidal, freshwater wetlands that might be vegetated with trees, shrubs, herbaceous vegetation or mosses, and lichens. Also included are wetlands lacking such vegetation but with all of the following four characteristics: 1) the total area is less than 20 acres; 2) there are no active wave-formed or bedrock shoreline features; 3) water depth in the deepest part of basin is less than 6 feet at low water; and 4) salinity due to ocean-derived salts is less than 0.5 per mil"/per thousand (‰) (Cowardin et al., 1979). Palustrine wetlands identified on the NASA-administered property fall into two classes: Emergent and Unconsolidated Bottom. The Emergent Class includes wetlands that are characterized by more than 30-percent cover of erect, rooted, herbaceous plants adapted to grow under flooded and/or saturated conditions. The Unconsolidated Bottom Class includes wetlands that are characterized by cobble-gravel, sand, or mud substrates and have less than 30-percent vegetative cover. Water regimes of the Palustrine wetlands identified in the survey area include permanently flooded, seasonally flooded, and temporarily flooded. Descriptions of the Palustrine wetlands are provided in the following subsections.

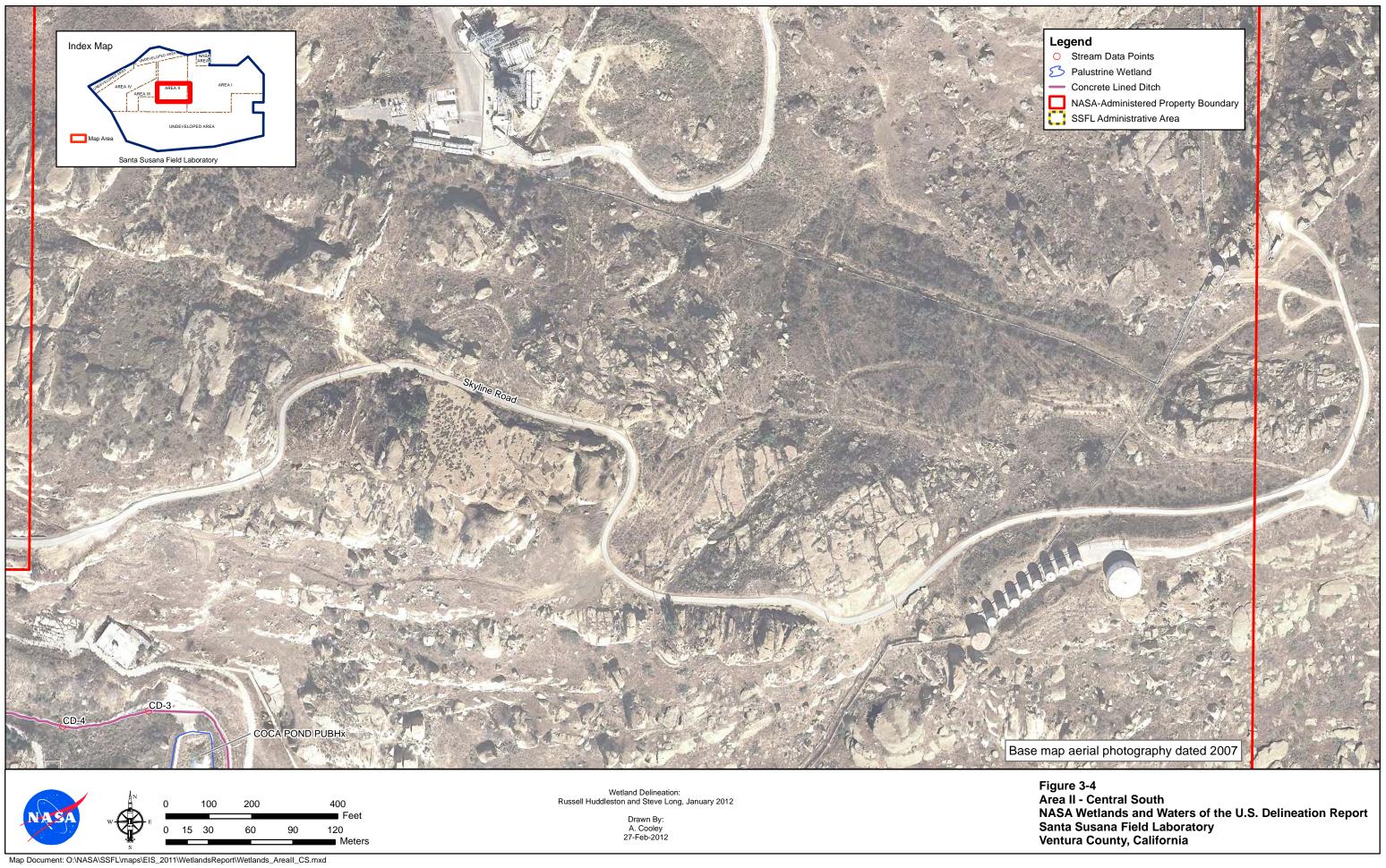
3.2.1.1 Area I SW-1 (PEMAx)

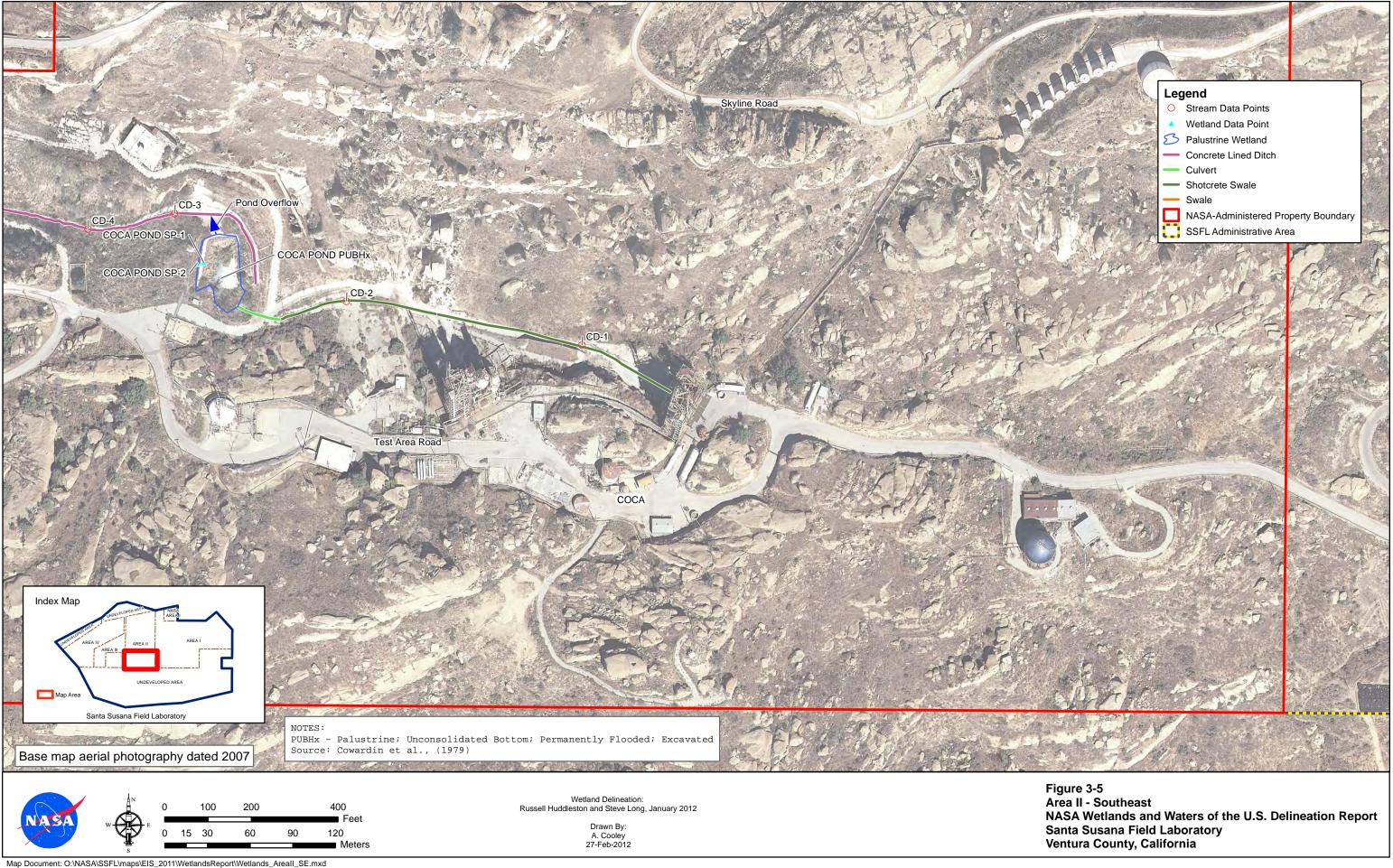
In the northeastern corner of Area I there is a small (150 square foot) depressional basin that appears to have been excavated. Vegetation observed in the basin during the January 2012 survey included scattered annual plant seedlings of scarlet pimpernel (*Anagalllis arvensis*), smooth cat's ear (*Hypochaeris glabra*), longbeak stork's bill, and black mustard. During the April 2011 botanical surveys, aquatic vegetation observed in this area included water pygmyweed (*Crassula aquatica*), slender woollyheads (*Psilocarphus tenellus*), toad rush (*Juncus bufonius*), and hyssop loosestrife (*Lythrum hyssopifolia*). At the edge of the basin, the surface soil is a brown (10 YR 5/3) sandy loam to a depth of 1 inch, underlain by a mixture of light yellowish-brown (10 YR 6/4) sand and brown (10 YR 4/3) fine sandy loam to a depth of 10 inches. Sandstone rock was encountered at a depth of 10 inches. The small basin was dry at the time of the January 2012 survey, but seasonal precipitation was below the average for the time of year. No definitive evidence of wetland hydrology or hydric soils was observed in this area; however, there is a notable change in the vegetation relative to the surrounding areas, a shallow topographic basin with what appears to be sandstone bedrock at a depth of 10 inches, and past observations of wetland vegetation. Taken together, these characteristics suggest that temporary seasonal ponding is likely to occur under more typical seasonal rainfall conditions.











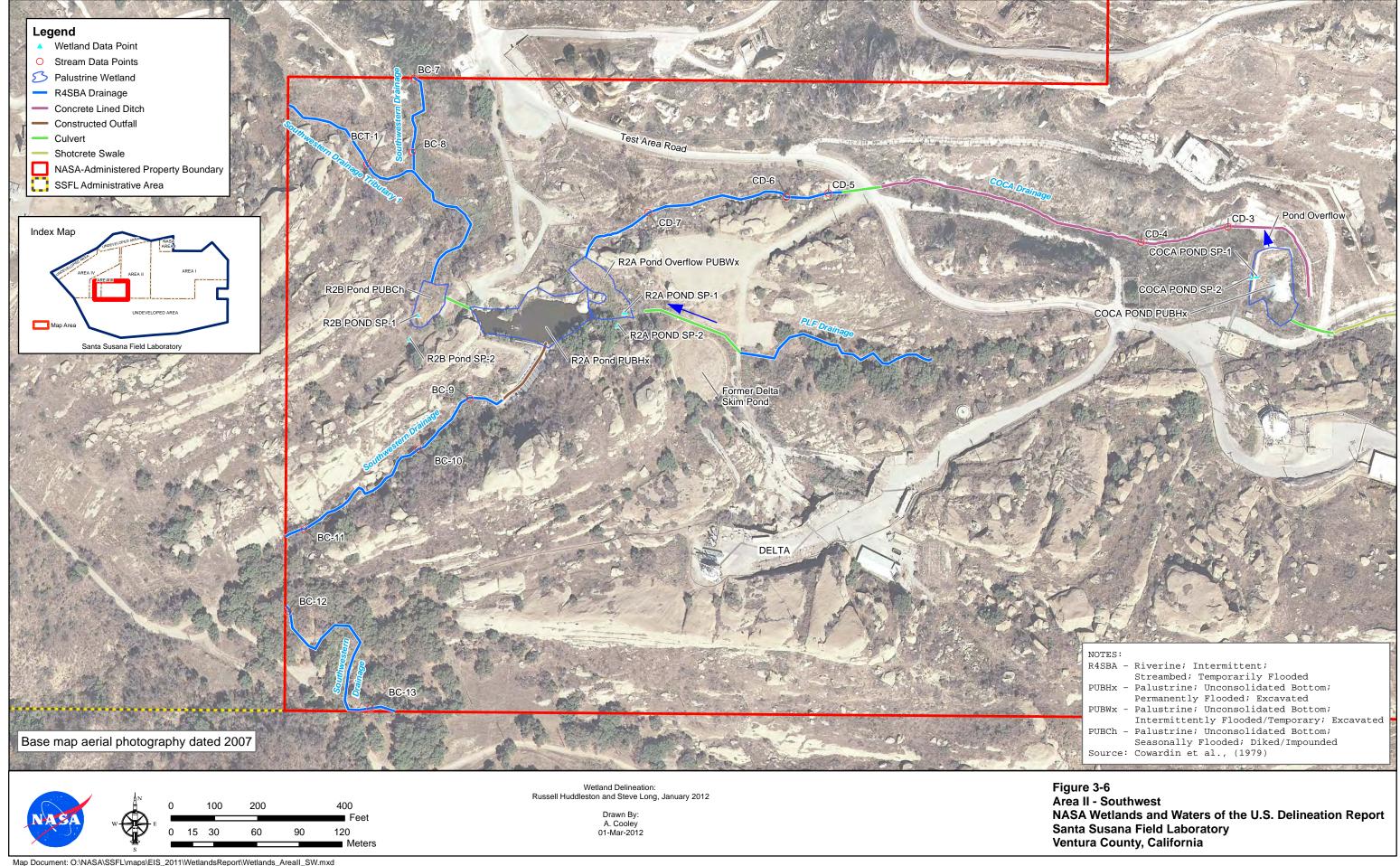


TABLE 3-1 Summary of Wetland Features Wetland Delineation for the NASA-Administered Portions of SSFL

Feature ID	Acreage
Palustrine Wetlands	
SW-1 (PEMAx)	0.003
SW-1 (PEMCh)	0.152
R2A Pond (PUBHx)	0.511
R2A Pond Overflow (PUBWx)	0.226
R2B Pond (PEMCh)	0.129
Coca Pond (PUBHx)	0.327
Total Palustrine Wetlands	1.348
Riverine Wetlands	
Northern Drainage (R4SBC)	0.488 (3,193 LF)
Northern Drainage Natural Channel	0.465 (2,176 LF)
Northern Drainage Culverts	0.023 (1,017 LF)
ELV Drainage (R4SBA)	0.146 (976 LF)
ELV Natural Channel	0.138 (862 LF)
Asphalt Drainage Ditch	0.008 (114 LF)
Southwestern Drainage (R4SBA)	0.586 (8,826 LF)
Southwestern Drainage Nature Drainage	0.394 (8,049 LF)
Southwestern Drainage Concrete Ditch	0.100 (542 LF)
Southwestern Drainage Culvert	0.004 (65 LF)
Southwestern Drainage Constructed Outfall	0.088 (170 LF)
Southwestern Drainage Tributary (R4SBA)	0.034 (371 LF)
Coca Drainage (R4SBA)	0.479 (1,899 LF)
Coca Drainage Natural Channel	0.203 (655 LF)
Coca Drainage Concrete Ditch	0.265 (1,155 LF)
Coca Drainage Culverts	0.011 (89 LF)
PLF Drainage (R4SBA)	0.040 (758 LF)
PLF Drainage Natural Channel	0.029 (511 LF)
PLF Drainage Culverts	0.011 (247 LF)
Drainage A-1 (R4SBA)	0.060 (911 LF)
Drainage A-1 Natural Channel	0.050 (724 LF)
Drainage A-1—Culvert	0.010 (187 LF)
Drainage A-2 (R4SBA)	0.046 (935 LF)
Drainage A-2 Natural Channel	0.030 (324 LF)
Drainage A-2 Erosional Feature	0.013 (547 LF)
Drainage A-2 Culvert	0.003 (64 LF)
Total Riverine Wetlands	1.879 (17,869)

TABLE 3-1
Summary of Wetland Features
Wetland Delineation for the NASA-Administered Portions of SSFL

Feature ID	Acreage			
Other Features				
Southwestern Drainage Swale (Alpha)	0.157 (6,860 LF)			
Southwestern Drainage Swale Culverts	0.013 (218 LF)			
Southwestern Drainage Swale Overflow Culvert	0.024 (344 LF)			
Coca—Shotcrete Swale	0.236 (1,027 LF)			
Coca—Shotcrete Swale Culverts	0.009 (68 LF)			
Total Other Features	0.439 (8,517 LF)			

Notes:

ELV = Expendable Launch Vehicle

LF = linear foot

PLF = Propellant Load Facility

Surrounding vegetation is characterized by scattered coastal sagebrush, chamise, slender oat, longbeak stork's bill, black mustard, Sandberg's bluegrass (*Poa secunda*), and *Cryptantha* sp. The surface soil in the adjacent area is a brown (10 YR 4/3) loamy fine sand to a depth of 19 inches, and there was no evidence of wetland hydrology.

3.2.1.2 Area I SW-2 (PEMCh)

A second, larger constructed wetland feature, known locally as "horse pond," is near the northwestern corner of Area I (Figure 3-1). The NWI describes the pond as a permanently flooded, excavated wetland with Aquatic Bed vegetation, with adjacent areas mapped as saturated Palustrine Scrub-Shrub wetlands (Appendix C). Field observations indicate that this wetland is more accurately classified as a seasonally flooded Palustrine Emergent wetland that has been created by an impoundment. No adjacent Scrub-Shrub wetlands were identified in this area.

The 0.15-acre wetland is located near the base of a large sandstone outcrop. The basin appears to have been excavated, and an earthen berm has been constructed along the western edge that impounds surface water drainage from the hill slope above. An erosional channel, resulting from channelized runoff, extends approximately 250 feet to the northeast of the wetland (Figure 3-1). Vegetation within the wetland basin is dominated by annual rabbitsfoot grass (*Polypogon monspeliensis*), with lesser amounts of water-starwort (*Callitriche marginata*), tall flatsedge (*Cyperus eragrostis*), rough cocklebur (*Xanthium strumarium*), scarlet pimpernel, purslane speedwell (*Veronica peregrina* subsp. *xalapensis*), and pale spikerush (*Eleocharis macrostachya*). Surface soil is a dark grayish-brown (10YR 4/2), fine sandy loam to a depth of 2 inches underlain by a dark brown (10 YR 3/1) loamy fine sand with less than 2 percent yellowish-red (5 YR 5/6) inclusions in the soil matrix to a depth of 16 inches. Some brown (10 YR 5/3) sand also was observed on the soil ped surfaces between 2 and 9 inches. From 16 to 19 inches, the soil is a dark brown (10YR 4/3) sand. At the time of the January 2012 field survey, some shallow surface water was present in the lowest part of the basin, and a shallow water table was present about 18 inches below the surface, near the outer edge of the basin. Seasonal saturation and inundation were observed in this area during botanical surveys conducted in April and June 2011. Other hydrologic indicators included water marks on the adjacent sandstone rocks and drift deposits.

Vegetation in the adjacent areas includes laurel sumac, chamise, thickleaf yerba santa, black sage, and Sandberg's bluegrass, with sparse amounts of curly dock (*Rumex crispus*) and scarlet pimpernel. A dense thicket of poison oak is present on the earthen berm along the western side of the basin. Surface soil is a dark grayish-brown (10 YR 4/2) fine sandy loam to a depth of 1 inch that is underlain by a mixture of dark grayish-brown (10 YR 4/2) and yellowish-red (5 YR 5/6) fine sandy loam to a depth of 6 inches. From 6 to 17 inches, the soil is a mixture of dark brown (10 YR 4/3), dark yellowish-brown (10 YR 4/6), and gray (10 YR 5/1) loamy fine sand. Soils in this area are likely the result of spoils created during the excavation of the pond area. No evidence of wetland hydrology

was observed. The wetland/upland edge is defined by a relatively abrupt topographic break, change in the dominant vegetation, and evidence of ordinary high water such as water marks and drift deposits.

3.2.1.3 R2B Pond (PUBCh)

The 0.13-acre R2B pond is in the southwestern portion of Area II (Figure 3-6). The pond was mapped by the NWI together with the R2A pond as a permanently flooded, excavated Palustrine Unconsolidated Bottom wetland (Appendix C). Field observations as well as topographic and hydrologic maps indicate that this smaller pond was created by impounding the Southwestern Drainage. Although this pond is flooded for much of the year, no surface water was observed in the basin during the August 2011 botanical survey. Therefore, this feature is more accurately classified as a seasonally flooded Palustrine Aquatic Bed wetland that is the result of an impoundment. The R2B pond physically is separated from the R2A pond by a concrete apron and earthen dam, and it appears to serve as a settling pond prior to discharging, via a 36-inch-diameter culvert, into the larger R2A pond to the east.

The bottom of the pond is covered with fallen dead stems of southern cattail (*Typha domingensis*), but most of the pond is characterized by open water. Sparse (senesced) southern cattail and tule (*Schoenoplectus* sp.) stems are present along the southern and western edges of the pond, but they provide only minimal cover. Arroyo willow (*Salix lasiolepis*) and mule fat also are present around the edges of the pond. Soils are very shallow to bedrock (5 inches) and are of dark grayish-brown (10YR 4/2) fine sandy loam. No redoximorphic features were observed. The pond partially was flooded at the time of the January 2012 field survey and had an estimated depth of 24 inches. Water staining and sediment deposits on the concrete apron and drift deposits on the mule fat branches indicate that ordinary high water appears to be around 4 feet deep.

Vegetation in the adjacent uplands includes arroyo willow, mule fat, coyotebrush, poison oak, orange bush monkey-flower, ripgut brome, soft brome, and plumeless Italian thistle (*Carduus pycnocephalus*). The surface soil is a dark grayish-brown (10 YR 4/2) loamy fine sand to a depth of 18 inches. No redoximorphic features were observed, and there was no evidence of wetland hydrology. The wetland/upland edge is defined by changes in the dominant vegetation, presence and absence of ordinary high-water marks, and a relatively gradual transition to bedrock outcrop that surrounds the wetland on the western, southern, and eastern sides.

3.2.1.4 R2A Pond (PUBHx/PUBWx)

The 0.74-acre R2A pond is in the southwestern portion of Area II (Figure 3-6). This feature is mapped together with the R2B pond by the NWI as a permanently flooded, excavated Palustrine Unconsolidated Bottom wetland (Appendix C).

The R2A pond is a large constructed pond that receives inflows from the R2B pond via a 36-inch-diameter culvert on the western side and two ephemeral drainages on the eastern side (Figure 3-6). Water levels within the pond actively are managed through a system of pumps and large-volume plastic pipes (intake and outtake) used to transfer water between the R2A pond and the larger Silvernale pond, located to the north-northeast, outside the NASA-administered property. The water transfers are used to minimize surface water discharges into the Southwestern Drainage below the R2A pond. In the event that both the Silvernale and R2 ponds exceed their water storage capacities, there is an overflow spillway and constructed outfall along the southern side of the pond designed to capture sediment before the water is discharged into the downstream section of the Southwestern Drainage.

The western part of the pond was flooded with several feet of water at the time of the January 2012 survey. During previous biological surveys, in 2010 and 2011, surface water was observed at various levels, but the basin was never completely dry. With the exception of a few small patches of narrow-leaf cattail, the western part of the pond generally lacks emergent vegetation. The extent of the ordinary high water in this area was mapped based on water marks on the surrounding sandstone rocks.

The eastern portion of the pond was dry at the time of the January 2012 survey, and no surface water was observed in this part of the pond during any of the 2011 spring and summer botanical surveys. This part of the pond appears be used only for excess water storage, and therefore, was considered to be only intermittently flooded. Extensive dead tule stems litter the bottom of the pond in this area, suggesting that at one time dense

emergent vegetation was present. Currently, vegetation is limited to a few small, scattered mule fat shrubs and occasional tall flat sedge. No live rhizomes or erect, senesced tule stems were present. The upper 2 inches of the soil consist of a very dark grayish-brown (10 YR 3/2) mixture of layered organic material, fine sand, and silt. From 2 to 6 inches, the soil is a mixed very dark grayish-brown (10 YR 3/2) and yellowish-brown loamy fine sand that is underlain by a very dark grayish-brown (10 YR 3/2) fine sandy loam with approximately 2-percent black (10 YR 2/1) and 8-percent dark yellowish-brown (10 YR 4/4) inclusions in the matrix. Although the eastern part of the pond was dry at the time of the survey and appears to be only intermittently flooded, water stains on the adjacent rocks were used to map the extent of the previous ordinary high-water level in this area.

Vegetation in the areas around the pond includes coast live oak, arroyo willow, mule fat, coyotebrush, poison oak, ripgut brome, and branching phacelia (*Phacelia ramosissima*). Surface soil is a very dark grayish-brown (10 YR 3/2) loamy fine sand to a depth of 2 inches underlain by a mixture of dark gray (10YR 4/1) and dark yellowish-brown (10YR 4/4) loamy fine sand to a depth of 14 inches. Between 14 and 24 inches, the soil is a brown (10 YR 4/3) loamy fine sand. No redoximorphic features were observed, and there was no evidence of wetland hydrology.

3.2.1.5 Coca Pond (PUBHx)

The Coca Pond is in the southeastern portion of Area II (Figures 3-5 and 3-6). This feature is mapped as a permanently flooded, excavated Palustrine Unconsolidated Bottom wetland by the NWI (Appendix C).

The 0.33-acre Coca Pond is a constructed pond at the downslope end of a shotcrete swale originating at the Coca test stands to the east (Figure 3-5). The shotcrete swale terminates in a settling basin southeast of the pond, on the southern side of a paved access road. Two 36-inch-diameter culverts that connect to the Coca pond are located in the bottom of the settling basin (Figure 3-5). These culverts were sealed closed at the time of the January 2012 site visit. An overflow discharge on the northern side of the pond empties into a concrete-lined ditch that conveys water west, where it passes beneath Test Area Road and enters a natural ephemeral drainage leading into the northeastern corner of the R2A pond (Figure 3-6).

Along the western side of the pond, some organic soils have accumulated along the concrete apron. In this area, as in others, primarily along the northern side of the pond, southern cattail is present, but it provides less than 30-percent cover. The organic soils are a black (10 YR 2/1) fine sandy loam to a depth of 10 inches with no redoximorphic features. Most of the pond is characterized by open water that was estimated to be between 3 to 4 feet deep at the time of the January 2012 survey. Surface water has been observed in this pond at various times throughout the year during previous biological surveys. The extent of the ordinary high-water mark was established based on water staining on the concrete lining and rocks around the pond.

Characteristic vegetation in the adjacent area includes laurel sumac, thickleaf yerba santa, common deerweed, and branching phacelia. Surface soil is a dark yellowish-brown (10 YR 4/4) mixed with a small amount of very dark grayish-brown (10 YR 3/2) sandy loam to a depth of 10 inches. From 10 to 19 inches, the soil is a light olive brown (2.5 YR 5/4) sand. No redoximorphic features were observed, and there was no evidence of wetland hydrology.

3.2.2 Riverine Features

Wetlands classified as part of the Riverine (R) system include wetlands that are contained within a channel, with the exception of channelized wetlands dominated by trees, shrubs, or persistent emergent vegetation and channels containing ocean-derived salts in excess of 0.5 ‰. Under this system, a channel is defined as "an open conduit either naturally or artificially created which periodically or continuously contains moving water, or which forms a connecting link between two bodies of water" (Cowardin et al., 1979). All of the Riverine wetlands identified on the NASA-administered property are in the Intermittent Subsystem, which includes channels that contain flowing water for only part of the year. When water is not flowing, it might remain in isolated pools or surface water might be absent.

The Riverine wetlands identified on the NASA-administered property are included in the Stream Bed Class, a broad classification that includes a variety of substrates depending on the gradient of the channel, the velocity of the water, and the sediment load of the stream. Common stream bed substrates include bedrock rubble, cobblegravel, sand, and mud. Although not specifically included in the classification system, for the purpose of this

report, sections of natural drainages that have been concrete lined were included in the Stream Bed Class. Water regimes associated with the Riverine Intermittent wetlands identified in the survey area include seasonally flooded and temporarily flooded. Descriptions of the Riverine wetlands are provided in the following subsections.

3.2.2.1 Northern Drainage (R4SBC)

The Northern Drainage passes through the southern portion of Area I and the northeastern portion of Area II (Figures 3-1 and 3-2). This drainage feature is shown as a blue line stream on the USGS Calabasas topographic quadrangle map and also is included in the NHD as an intermittent stream (Appendix D). The NWI has mapped this area as a temporarily flooded Palustrine Scrub-Shrub wetland (Appendix C). According to onsite staff, water often flows through this area for several months; therefore, this water feature is more appropriately classified as a seasonally flooded Riverine Intermittent Streambed wetland.

In the southeastern corner of Area I, the channel is confined by steep side slopes ranging from approximately 8 to 10 feet high. The approximately 8-foot-wide channel bed is characterized by a rocky-cobble substrate with some sand and gravel. Vegetation is largely absent with the exception of sparse scattered herbaceous species such as annual rabbitsfoot grass (Polypogon monspeliensis), plumeless Italian thistle, and curly dock. The channel was dry at the time of the January 2012 survey, but seasonal rainfall was below the average for this time of year. Evidence of flow observed during the survey included drift and debris deposits approximately 24 inches above the channel bottom in some areas, as well as the general absence of upland vegetation. At the western end of this reach, water flows through a 48-inch-diameter culvert under an old and abandoned unpaved roadway. The channel characteristics generally are similar downstream of the culvert, with steep banks and an approximately 8-footwide channel, but the substrate becomes more sandy and gravelly, with scattered cobble and sandstone rocks. Vegetation essentially is absent except for scattered seedlings of plumeless Italian thistle and black mustard. A small erosional channel, approximately 2 feet wide and along the southern bank, flows directly in the stream in this area (Figure 3-1). West of the erosional channel the stream enters a 52-inch-diameter culvert under the gravel access road to the Liquid Oxygen (LOX) site (Figure 3-1). East of the culvert the channel bed widens to an average of 12 feet and has a sandy substrate with gravel, cobble, and sandstone boulders present in scattered locations. As with other sections of this drainage, vegetation in this reach is sparse and includes scattered plumeless Italian thistle, smilograss (Piptatherum miliaceum), annual rabbitsfoot grass, curly dock, and mule fat.

Coast live oak riparian vegetation is present along the upper banks of the channel throughout Area I. Coast live oak is the sole dominant tree in this area. One arroyo willow tree (approximately 5 inches in diameter at breast height) also is present along the drainage in Area I. Common shrubs along the upper banks include toyon (Hertermeles arbutifolia), chamise, poison oak, mule fat, coastal sagebrush, thickleaf yerba santa, Mendocino bush mallow, hoaryleaf ceanothus (Ceanothus crassifolius), American black elderberry (Sambucus nigra ssp. caerulea), and chaparral current (Ribes malvaceum). Herbaceous species include smilograss, branching phacelia, black mustard, plumeless Italian thistle, and bedstraw (Galium sp.).

In the northeastern corner of Area II, the channel width ranges between 6 and 14 feet (average width of 9 feet), with defined side banks in most areas. The channel substrate along the eastern boundary of the site is sandy, with scattered cobble and sandstone rock. As the channel continues to the west, the substrate becomes rockier, with some sections of the channel characterized by large sandstone boulders. Throughout Area II, vegetation is absent to sparse and includes scattered mule fat, annual rabbitsfoot grass, plumeless Italian thistle, smilograss, curly dock, and orange bush monkey flower. The entire reach of the channel through Area II was dry during the January 2012 surveys, but there was evidence of flow, including drift and debris deposits and an absence of vegetation. No culverts are present in this section of the drainage. There is one ephemeral tributary (the Expendable Launch Vehicle [ELV] Drainage) that enters the stream east of the ELV Site (Figure 3-2).

Coast live oak riparian woodland is present along the upper banks of the channel throughout Area II. Coast live oak is the dominant tree species, but scattered arroyo willow and California laurel (*Umbellularia californica*) trees are present in some areas. Shrub species along the upper banks include toyon, heart-leaved penstemon (*Keckiella cordifolia*), poison oak, California blackberry (*Rubus ursinus*), orange bush monkey flower, birchleaf mountain mahogany (*Cercocarpus betuloides*), and black sage. Common herbaceous species include smilograss, plumeless Italian thistle, and branching phacelia.

3.2.2.2 ELV Drainage (R4SBA)

The ELV Drainage is east of the ELV Site and helicopter landing area, in the northeastern part of Area II. This drainage is a direct tributary to the Northern Drainage (Figure 3-2). Upstream of the confluence with the Northern Drainage, the channel bed width ranges from approximately 4 to 10 feet and is characterized by a sandy-gravel substrate, devoid of vegetation. The upper section of this drainage, parallel to F Street, has been lined with asphalt. Large sandstone rocks and boulders also occur in some sections of the channel. Abundant downed woody debris is present in the upper reaches of the channel, particularly in the section that parallels F Street. Flows in this area appear to be temporary, short-duration events in response to storm events. Evidence of flow in this area included some areas of scouring and debris deposits.

Common vegetation along the upper slopes of the channel includes coast live oak, California laurel, poison oak, Mendocino bush mallow, hairy ceanothus (*Ceanothus oliganthus*), chamise, toyon, laurel sumac, coastal sagebrush, canyon sunflower (*Venegasia carpesioides*), orange bush monkey flower, chaparral current, California wildrose (*Rosa californica*), smilograss, plumeless Italian thistle, and branching phacelia. Two additional channels, Drainage A-1 and Drainage A-2, also flow into this feature (Figure 3-2).

3.2.2.3 Drainage A-1 (R4SBA)

Drainage A-1 is in the northeastern part of Area II and is a tributary to the ELV Drainage (Figure 3-2). On the southern side of F Street are a large amount of boulder riprap and a 29-inch plastic culvert. In the immediate vicinity of the riprap and culvert, the area is a low topographic swale. The only defined drainage feature in this area is a narrow (1- to 2-foot-wide) sandy channel with scattered cobbles that extends east through relatively dense chaparral vegetation (Figure 3-2). It is likely that this area receives additional overland stormwater flows from the hill slope to the south. On the northern side of the road, the channel is approximately 7.5 feet wide with a sandy-cobble substrate, with some asphalt debris also present. No vegetation was present in the channel north of F Street. Evidence of flow in this area included a relatively defined, unvegetated channel and sparse debris deposits. It is likely that this drainage conveys only temporary, short-duration surface flow in response to major storm events.

Vegetation along the channel includes coast live oak, Mendocino bush mallow, chaparral current, laurel sumac, coyotebrush, thickleaf yerba santa and black sage, branching phacelia, and plumeless Italian thistle.

3.2.2.4 Drainage A-2 (R4SBA)

Drainage A-2 is on the southern side of F Street and is tributary to the ELV Drainage via a 24-inch-diameter culvert (Figure 3-2). The channel immediately south of the road is approximately 6 feet wide and has a defined bed and bank, but as it continues south, it gradually becomes a much smaller discontinuous erosional feature. The channel on the southern side of F Street has a sandy substrate that is largely devoid of vegetation with the exception of scattered small poison oak and orange bush monkey flower plants growing along the upper edges of the banks in the area near the road. On the northern side of the road, the culvert discharges into an asphalt drainage ditch. No evidence of recent flow was noted in the channel at the time of the survey.

Adjacent vegetation includes coast live oak, poison oak, plumeless Italian thistle, giant ryegrass (*Elymus condensatus*), branching phacelia, ripgut brome, and two-color rabbit tobacco (*Pseudognaphalium biolettii*).

3.2.2.5 Southwestern Drainage (R4SBA)

The Southwestern Drainage originates just beyond the western edge of the Alfa test stand, where it traverses from east to west through the central-north portion of Area II and around the northern side of the Storage Propellant Area (SPA) site (Figure 3-3). In this area the drainage is indicated as a blue line stream (called Bell Creek) on the Calabasas USGS topographic quadrangle maps and also is shown as an intermittent stream in the NHD. The NWI maps also indicate sections of the drainage as seasonally flooded Palustrine Scrub-Shrub wetlands (Appendix C). The upper reaches of the drainage have been highly altered by culverts, weirs, and earthen dams. In this area there is no defined channel, and no ordinary high-water-mark indicators were observed during the January 2012 survey.

The eastern section of the drainage originates at a 24-inch-diameter culvert outfall near the Alfa test stands (Figure 3-3). At the outfall, more than half of the culvert was filled with sediment and there is no defined channel or evidence of scouring immediately downstream of this location. Vegetation below the outfall is dominated by common iceplant (*Mesembryanthemum crystallinum*), with scattered black mustard and plumeless Italian thistle intermixed.

West of the culvert outfall there is no defined bed and bank feature; rather, the drainage is a characterized low sandy topographic swale that lacks evidence of flowing water, but vegetation within the swale includes riparian species such as mule fat and arroyo willow. Many of the willows were burned and dead as a result of the 2005 Topanga Canyon Fire, and overall, the willows and mule fat appeared to be in poor condition throughout this area.

Upland species including common iceplant, plumeless Italian thistle, ripgut brome, crimson fountain grass (*Pennisetum setaceum*), slender oat and Maltese star-thistle (*Centaurea melitensis*) also were abundant throughout the eastern section of the swale.

Southwest of the westernmost Alfa test stand is a concrete check dam along the swale feature (Figure 3-3). On the southern side of the check dam is a 36-inch-diameter corrugated metal pipe outflow that runs from the top of the check dam west along the hillside on the southern side of the swale (Figure 3-3). A second culvert, with an apparently inoperable flow valve and also located at the check dam, appears to connect to the downstream swale below the dam. Beyond the check dam, the drainage continues along a weakly expressed sandy swale that lacks a defined bed and bank. Most arroyo willows downstream of the dam were burned in the 2005 fire, and no resprouting or regeneration was evident. Most of the swale downstream of the dam is chocked with dead woody debris, with scattered mule fat and abundant plumeless Italian thistle.

An earthen dam is approximately 275 feet downstream (west) of the concrete check dam (Figure 3-3). The culvert that runs along the southern side of the swale from the check dam discharges down a concrete spillway on the western side of the earthen dam. There is also a low-flow release valve at the base of the earthen dam, although the valve appeared to be inoperable at the time of the survey. As with the other sections of the Southwest Drainage through the Alfa site, the drainage downstream of the earthen dam is a low topographic swale with no defined bed and bank channel. Vegetation below the earthen dam is a mixture of mule fat, poison oak, and plumeless Italian thistle.

Approximately 500 feet west of the earthen dam, the swale terminates in a broad flat area east of an unpaved road and the former (now capped) Alfa/Bravo skim pond. Immediately west of the former skim pond is a concrete headwall and two 24-inch-diameter culverts, both filled more than half way with sediment. The culvert outfalls were not found during the January 2012 survey, but presumably they drain into the sandy, swale that continues from this area west to CLT IV Road. Vegetation within the swale feature west of the double culverts includes arroyo willow, mule fat, coyotebrush, poison oak, Mendocino bush mallow, Douglas's sagewort (*Artemisia douglasiana*), plumeless Italian thistle, and branching phacelia.

At CLT IV Road, the swale terminates at a 50-inch-diameter culvert that passes under the road. On the western side of the road, the culvert discharges into a concrete-lined drainage channel that runs along the northern side of the SPA site (Figure 3-2). The first approximately 50 feet of the concrete drainage channel in this area is nearly completely filled with soil. Slumped soils also were noted in other areas of the channel north of the SPA site. The soil in the concrete channel appears to have come from the SPA site and might be the result of erosion from firefighting activities during the 2005 Topanga Canyon fire. Vegetation along the concrete-lined channel includes thickleaf yerba santa, laurel sumac, coyotebrush, hoaryleaf ceanothus, chamise, poison oak, and mule fat.

The concrete channel terminates approximately 450 feet west of the CLT VI Road (Figure 3-3). West of the concrete-lined drainage channel, the natural channel is approximately 6 feet wide and has a sandy-rocky substrate with some gravel. Evidence of ordinary high-water flows such as drift lines, sediment deposits, and scoring were observed in this section of the drainage. Vegetation generally is absent in the bed of the channel, with the exception of the scattered annual rabbitsfoot grass and plumeless Italian thistle. The natural drainage channel continues west for less than 200 feet before exiting the NASA-administered property (Figure 3-3).

Outside of the NASA-administered property, the drainage turns south and passes through the Silvernale Pond before it continues southward toward the R2B Pond. At the point where drainage re-enters the NASA-administered property, the channel is approximately 5 feet wide with a sandy-gravel cobble substrate that is largely devoid of vegetation other than occasional seedlings of plumeless Italian thistle, black mustard, and blessed milkthistle (*Silybum marianum*). Evidence of ordinary high water in this area consisted primarily of a defined bed and bank channel, some scouring along the channel, and a general absence of upland vegetation. Vegetation along the sides of the channel includes coast live oak, laurel sumac, thickleaf yerba santa, coyotebrush, and a few small arroyo willow seedlings and saplings. The channel immediately north of the R2B pond was inaccessible because of a dense thicket of poison oak.

As described previously, the Southwest Drainage is diverted into the R2B and R2A ponds, where water storage actively is regulated through a system of pumps and pipes to minimize outflows from the NASA-administered property. A constructed discharge designed to capture sediments is located along the southern side of the R2A pond and leads back into the natural drainage channel in the southwestern corner of Area II (Figure 3-6). Downstream of the constructed outfall, the channel is approximately 10 feet wide devoid of vegetation, and consists of a sand-gravel-cobble substrate with some large sandstone boulders. Vegetation along the upper banks of the channel includes coast live oak, mule fat, coyotebrush, poison oak, heart-leaved penstemon, laurel sumac, hoaryleaf ceanothus, thickleaf yerba santa, and chaparral current. Herbaceous vegetation is generally sparse and consists of smilograss and branching phacelia.

Approximately 280 feet of the channel in this section downstream of the R2A Pond was inaccessible because of large sandstone boulders within the channel. The channel area downstream of the large boulders is similar to the area upstream. Scattered vegetation in the sandy-gravel channel in this area includes Douglas' sagewort, curly dock, smilograss, and plumeless Italian thistle. A small section of the channel meanders west, off of the NASA-administered property (Figure 3-6). Near the point where the drainage re-enters the property, the channel broadens slightly to approximately 14 feet, and the substrate becomes slightly more cobblely. In some areas of the channel, smilograss is locally abundant. Along the southwestern property boundary, the channel makes a sharp (90-degree) turn to the east, resulting in a highly eroded bank. The channel in this area is approximately 10 feet wide with a sand-gravel-cobble substrate. Scattered vegetation within the channel includes smilograss, black mustard, plumeless Italian thistle, and California blackberry. Vegetation along the sides of the channel in the southwestern corner of Area II includes coast live oak, California sycamore (*Platanus racemosa*), poison oak, laurel sumac, and creeping snowberry.

3.2.2.6 Southwestern Drainage Tributary (R4SBA)

A small tributary to the Southwestern Drainage originates from west of the NASA-administered Area II near the former Systems Test Laboratory (STL)-IV site (Figure 3-6). The channel is 4 feet wide and has a sandy substrate devoid of vegetation. Evidence of flow includes a well-defined bed and back channel debris deposits and the absence of vegetation. Vegetation along the channel includes coast live oak, coyotebrush, hoaryleaf ceanothus, chaparral current, chamise, plumeless Italian thistle, and black mustard.

3.2.2.7 Coca Drainage (R4SBA)

The Coca drainage originates at the base of the Coca test stands, where the eastern section is characterized by a shotcrete swale that drains into a retention basin connected via culverts to the Coca Pond (Figure 3-5). This feature is shown as a blue line on the USGS Calabasas quadrangle map and is included as an intermittent steam in the NHD and NWI.

To the north and west of the Coca Pond, the channel is contained within an approximately 10-foot-wide concrete-lined ditch. The ditch continues to Test Area Road, where water is conveyed through two culverts (42- and 24-inch diameters), as shown in Figure 3-6. At the culvert outfall, on the western side if the road, the natural channel is approximately 10 feet wide and characterized by a sandstone bedrock bed with some sand and gravel. Sparse mule fat and scattered black mustard and plumeless Italian thistle are present in the channel in this area. As the channel continues west, the substrate becomes more sandy and gravely, with some large sandstone boulders, and is devoid of vegetation. A few plunge pools with approximately 6 inches of water were observed in this area

during the January 2012 survey. Just upstream of the R2A pond, the channel width broadens to approximately 14 feet and is characterized by a sand-and-gravel substrate devoid of vegetation. The channel ultimately discharges into the northern end of the R2A pond overflow area (Figure 3-6).

Vegetation along the concrete-lined portion of the drainage ditch is characterized by common deerweed, Eastern Mojave buckwheat (*Eriogonum fasciculatum* var. *fasciculatum*), black mustard, coyotebrush, thickleaf yerba santa, Mendocino bush mallow, poison oak, laurel sumac, and mule fat. West of Test Area Road, vegetation along the channel is characterized by scattered coast live oak trees as well as thickleaf yerba santa, laurel sumac, chaparral current, orange bush monkey flower, coyotebrush, branching phacelia, plumeless Italian thistle, black mustard, smilograss, and two-color rabbit tobacco.

3.2.2.8 PLF Drainage (R4SBA)

This small drainage feature originates at the base of a large sandstone cliff in the northeastern portion of the Delta site (Figure 3-6). The upstream part of the channel is 1 to 2 feet wide and 6 to 12 inches deep. As the channel continues west, it broadens to 3 feet in some areas and becomes more swale-like. The substrate is primarily sand with a few scattered cobbles, and is devoid of vegetation. At the western terminus, the drainage feature empties into a concrete apron and 24-inch-diameter culvert that eventually discharges near the eastern end of the R2A pond. This channel flows through a live oak woodland with an understory of poison oak, chaparral current, coastal sagebrush, canyon sunflower, branching phacelia, ripgut brome, smilograss, and plumeless Italian thistle.

3.3 Nonwetland Features

A number of features were investigated during the survey that were not considered to be waters of the U.S. Such features included constructed stormwater swales associated with developed areas, culverts at road crossings that were not associated with defined drainage channels, and discontinuous erosional channels and weakly expressed upland swale on the hill slopes. Additionally, former skim ponds that have been capped and a former (now dry) basin that had been used to burn off excess fuels were not considered to be waters of the U.S.

3.4 Preliminary Jurisdictional Determination

The USACE ultimately is responsible for determining the limits of waters of the U.S. subject to regulation under the federal CWA. The results and conclusions presented in this wetland delineation are intended to assist the USACE with its determination of jurisdictional waters of the U.S. The results and conclusions presented in this report are preliminary, pending verification and subsequent approval by the USACE.

The small excavated wetland in the northeastern part of Area I and the larger impounded wetland and associated erosional channel in the northwestern part of Area 1 appear, on the basis of the site investigation, to be isolated. There does not appear to be any significant nexus between these constructed basins and any waters of the U.S. Therefore, these wetlands might not be considered jurisdictional waters of the U.S. subject to regulation under Section 404 of the federal CWA.

The jurisdictional status of the section of the Southwest Drainage through the Alfa site (Figure 3-3) is uncertain. This area lacks a defined bed and bank and there was no evidence of an ordinary high-water flow throughout this section. However, this area appears to be a natural drainage, has been mapped as a blue line on the USGS Calabasas topographic quadrangle, and is included as an intermittent stream in NHD. Although it appears that the natural hydrology has been altered significantly in this area, it could still be considered a water of the U.S. because it is considered part of the Southwestern Drainage, and remnants of the natural drainage are still present. In contrast, the easternmost section of the Coca drainage characterized by a shotcrete swale has been altered so dramatically from its original condition that it is unlikely that this section would be considered a water of the U.S. The cement-lined drainage that originates at the Coca Pond and extends west, eventually becoming a natural drainage, is likely to be considered jurisdictional.

Other drainage features identified on the NASA-administered property include extant natural drainages, some of which have been realigned and lined with concrete, but that appear to be natural tributary drainages that would be jurisdictional, and therefore, subject to regulation under Section 404 of the CWA. The R2A, R2B, and Coca ponds appear to have been created along the natural drainage channels and therefore might be considered either impoundments of waters of the U.S. or adjacent to waters of the U.S.

SECTION 4

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Appendix A Climate Data

APPENDIX A

Canoga Park Pierce Coll, California (041484)

Period of Record Monthly Climate Summary

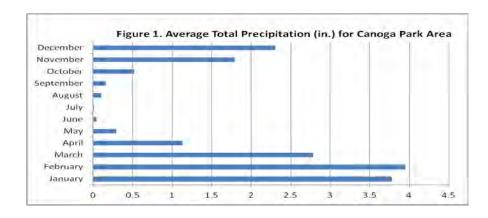
Period of Record: 7/ 1/1949 to 8/10/2011

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
Average Max. Temperature (F)	67.9	70.0	72.3	76.8	81.1	87.4	94.9	95.4	91.7	84.0	74.8	68.8	80.4
Average Min. Temperature (F)	39.3	40.7	41.9	44.6	49.1	53.0	57.0	57.3	54.6	49.0	42.6	38.8	47.3
Average Total Precipitation (in.)	3.78	3.95	2.78	1.13	0.29	0.04	0.01	0.10	0.16	0.52	1.79	2.31	16.86
Average Total Snow Fall (in.)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Average Snow Depth (in.)	0	0	0	0	0	0	0	0	0	0	0	0	0

Percent of possible observations for period of record.

Max. Temp.: 99.9% Min. Temp.: 99.9% Precipitation: 99.7% Snowfall: 99.9% Snow Depth: 99.9% Check <u>Station Metadata</u> or <u>Metadata graphics</u> for more detail about data completeness.

Western Regional Climate Center, wrcc@dri.edu



Appendix G, NASA SSFL EIS for Proposed Demolition and Environme	ental Cleanup
	Annendiy P
	Appendix b
	Appendix B Soil Descriptions



APPENDIX B

Soil Official Series Descriptions

Gaviota Series

LOCATION GAVIOTA CA
Established Series
Rev. GWH/CAF/KP
10/2007

The Gaviota series consists of very shallow or shallow, well drained soils that formed in material weathered from hard sandstone or meta-sandstone. Gaviota soils are on hills and mountains and have slopes of 2 to 100 percent. The average annual precipitation is about 20 inches and the mean annual temperature is about 60 degrees F.

TAXONOMIC CLASS: Loamy, mixed, superactive, nonacid, thermic Lithic Xerorthents

TYPICAL PEDON: Gaviota gravelly loam, grass range. (Colors are for dry soil unless otherwise noted.)

A1--0 to 6 inches; brown (7.5YR 5/4) gravelly loam, brown (7.5YR 4/4) moist; weak medium subangular blocky structure; slightly hard, friable, slightly sticky and slightly plastic; many very fine roots; common very fine tubular pores; neutral (pH 7.0); clear smooth boundary.

A2--6 to 10 inches; brown (7.5YR 5/4) gravelly loam, brown (7.5YR 4/4) moist; massive; slightly hard, friable, slightly sticky and slightly plastic; few very fine roots; common very fine tubular pores; neutral (pH 6.8); abrupt wavy boundary.

R--10 to 17 inches; pale brown (10YR 6/3) hard meta-sandstone.

TYPE LOCATION: Stanislaus County, California; nine miles west of the town of Westley, California; 1,700 feet north and 500 feet east of the southwest corner of section 6, T. 5 S., R. 6 E., MDB&M; USGS Solyo, California Quadrangle, NAD 27.

RANGE IN CHARACTERISTICS: Depth to a lithic contact of hard rock is 6 to 20 inches. The soils become moist below a depth of 6 inches some time between mid-October and mid-December and remain moist all the time in some parts below 6 inches until early April or late May. The mean annual soil temperature is 59 to 64 degrees F. and the soil temperature does not go as low as 41 degrees F. at any time. Texture throughout is sandy loam, fine sandy loam, loam, gravelly sandy loam, gravelly fine sandy loam, and gravelly loam. Clay content is 10 to 18 percent. Rock fragment content is less than 25 percent. Sand content is more than 40 percent of the fine earth fraction. Coarse and very coarse sand content is less than 20 percent.

The A horizon has color of 10YR 6/2, 6/3, 6/4, 5/2, 5/3, 5/4, 5/6, 5/8, 4/3; 2.5Y 6/2, 6/4, 5/2; 7.5YR 5/2, 5/4 or 6/4. Moist values are 4 throughout or if less than 4 they occur only in the upper part or have dry values of 6 or more. Reaction is moderately acid to neutral. Some pedons have a C horizon that differs from the A horizon principally by being one value unit lighter.

COMPETING SERIES: These are the <u>Daulton</u>, <u>Exchequer</u> (CA), <u>Ocraig</u> (CA), <u>Snook</u> (CA) and <u>Whiterock</u> (CA) series. Daulton soils have moist value of 3 and have a massive and hard epipedon. Exchequer soils have less than 50 percent sand in the fine earth fraction. Ocraig soils are neutral, have greater than 20 percent coarse and very coarse sand content. Snook soils are dry in all parts from early June to mid October. Whiterock soils have 25 to 50 percent sand and a mean annual soil temperature of 63 to 67 degrees F.

GEOGRAPHIC SETTING: Gaviota soils are on hills and mountains. Slope is 2 to 100 percent. These soils formed in material weathered from sandstone and meta-sandstone. Elevation is 200 to 4,400 feet. Rock outcrops are commonly associated with this soil and occupy from less than 2 percent to 50 percent of the surface area. The climate is dry subhumid with hot dry summers and cool moist winters. Mean annual precipitation is 10 to 30 inches. Mean January temperature is about 42 degrees F. and about 56 degrees F. along the coast of California; mean July temperature is about 75 degrees F.; mean annual temperature is about 56 to 65 degrees F. The frost-free season is 175 to 350 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the <u>Altamont</u>, <u>Los Gatos</u>, <u>Los Osos</u>, <u>Vallecitos</u> and <u>Wadesprings</u> soils. Altamont soils, on uplands, hills and mountains, have a fine particle-size control section. Los Gatos soils, on mountains, are moderately deep and have an argillic horizon. Los Osos soils, on uplands, have an argillic horizon and a paralithic contact at a depth of 20 to 40 inches. Vallecitos soils, on hills, have an argillic horizon and a clayey particle-size control section. Wadesprings soils, on uplands, have an argillic horizon and magnesic mineralogy.

DRAINAGE AND PERMEABILITY: Well and excessively well drained; very low to very high runoff; moderately rapid permeability.

USE AND VEGETATION: Used mostly for livestock grazing. Some of the less sloping areas are cropped to dryland grain. Natural vegetation is California sage, chamise, manzanita, purple needlegrass and annual grasses.

DISTRIBUTION AND EXTENT: Mostly in the California Coast Ranges. The soils are extensive. MLRA 15, 20.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Davis, California

SERIES ESTABLISHED: Stanislaus County (Newman Area), California, 1941.

REMARKS: Soils in the Amargosa series as recognized in the Antelope Valley Area, California are not included in the Gaviota series. Soils formed in material weathered from granite are now excluded from the Gaviota series.

The revision made on 09/96 moves the type location to better represent the series as mapped for the Gaviota series.

CEC/Clay ratio estimated from similar soils with laboratory data in the W. Stanislaus Soil Survey Area.

Runoff terminology adjusted 4/96 to adjective criteria of the Soil Survey Manual, 10/93.

Competing series updated 01/2003.

Warmer January temperatures occur along the southern Coastal range. These were phased until a possible later decision to split these out as separate series.

National Cooperative Soil Survey U.S.A.

SAUGUS SERIES

LOCATION SAUGUS CA
Established Series
Rev. GAW/RCH/LCL/ET
03/2003

The Saugus series consists of deep, well drained soils that formed from weakly consolidated sediments. Saugus soils are on dissected terraces and foothills and have slopes of 9 to 50 percent. The mean annual precipitation is about 16 inches and the mean annual air temperature is about 63 degrees F.

TAXONOMIC CLASS: Coarse-loamy, mixed, superactive, nonacid, thermic Typic Xerorthents

TYPICAL PEDON: Saugus loam, brush and grass. (Colors are for dry soil unless otherwise stated.)

A1--0 to 15 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak fine subangular blocky structure; hard, friable, slightly sticky and slightly plastic; common very fine medium and coarse roots; common very fine, few fine tubular and common very fine interstitial pores; about 5 percent gravel by volume; neutral (pH 6.8); gradual smooth boundary. (8 to 17 inches thick)

C1--15 to 25 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, common coarse roots; few very fine tubular, common very fine interstitial pores; about 15 percent gravel by volume; slightly acid (pH 6.5); gradual smooth boundary. (10 to 14 inches thick)

C2--25 to 42 inches; grayish brown (10YR 5/2) loam, dark grayish brown (10YR 4/2) moist; weak medium subangular blocky structure; hard, friable, slightly sticky and slightly plastic; few very fine, common fine and few coarse roots; few very fine tubular, common very fine interstitial pores; contains about 10 percent gravel by volume; slightly acid (pH 6.5); diffuse smooth boundary. (16 to 25 inches thick)

C3--42 to 50 inches; grayish brown (10YR 5/2) weakly consolidated sediments that crush to gravelly heavy sandy loam, dark grayish brown (10YR 4/2) moist; massive; hard, friable, slightly sticky and slightly plastic; few very fine interstitial pores; about 25 percent gravel and 5 percent cobblestones; slightly acid (pH 6.3).

TYPE LOCATION: Los Angeles County, California; in Romero Canyon; NW1/4 NW1/4 section 27, T.5N., R.17W.

RANGE IN CHARACTERISTICS: Depth to a paralithic contact is 40 to 56 inches. Saugus soils are on complex slopes of 9 to 50 percent. The mean annual soil temperature at a depth of 20 inches is 60 degrees F. and the soil temperature is not below 47 degrees F. at any time. Soil between depths of about 5 and 15 inches is continuously dry in all parts from late April or May until late October to early December and is moist in some or all parts all the rest of the year. The soil profile is loam or sandy loam throughout and the 10 to 40 inch control section has less than 18 percent clay. Rock fragments range from 1 to 35 percent and are mostly gravel and a few cobblestones. Usually the amount of rock fragments increases with depth, though in some pedons the immediate surface has a partial layer of fragments. The profile is slightly acid to slightly alkaline and in many pedons the lower part is less acid.

The A horizon is light brownish gray, grayish brown, yellowish brown, brown or pale brown in 10YR or 2.5Y hue when dry. The moist value is 4 or 5. In some pedons the upper 1 to 4 inches is gray, dark gray or dark grayish brown. The upper 7 inches of the A horizon has 0.4 to 1.0 percent organic matter.

The C horizon above the paralithic contact has a color similar to the A horizon or it has one unit higher value.

COMPETING SERIES: These are the <u>Escondido</u>, <u>Hanford</u>, <u>Honcut</u>, <u>Pollasky</u>, <u>Pfeiffer</u>, <u>San Andreas</u>, and <u>Vista</u> series. Escondido and Vista soils have a cambic horizon. Hanford and Honcut soils are on smooth slopes of less than 9 percent and they lack a paralithic contact. Pfeiffer and San Andreas soils have a mollic epipedon. Pollasky soils have a paralithic contact at depths of less than 40 inches.

GEOGRAPHIC SETTING: The Saugus soils are on slopes of dissected terraces and foothills at elevations of 600 to 2,500 feet. Slopes range from 9 to 50 percent. The soils formed in material weathered from weakly consolidated sediments mostly from granitic and closely related rocks. The climate is dry subhumid mesothermal with warm dry summers and cool moist winters. The mean annual precipitation is 14 to 20 inches all in the form of rain. Mean annual temperature is about 63 degrees F., average January temperature is about 54 degrees F., and average July temperature is about 73 degrees F. The freeze-free season is about 250 to 300 days.

GEOGRAPHICALLY ASSOCIATED SOILS: These are the <u>Castaic</u>, <u>Gaviota</u>, <u>Metz</u>, <u>San Andreas</u>, and <u>Sorrento</u> soils. Castaic soils have more than 18 percent clay and have a fine-silty control section. Gaviota soils have a lithic contact less than 20 inches below the surface. Metz soils are sandy and are stratified with layers of finer texture.

DRAINAGE AND PERMEABILITY: Well drained; medium to rapid runoff; moderate permeability.

USE AND VEGETATION: Used for grazing, wildlife, watershed, and small amounts used for industry and urbanization. Native vegetation is chamise and other shrubs plus minor amounts of perennial grasses. Naturalized grasses and forbs make up a small to large portion of the vegetation.

DISTRIBUTION AND EXTENT: Foothills in the western part of southern California. The soils are of moderate extent.

MLRA SOIL SURVEY REGIONAL OFFICE (MO) RESPONSIBLE: Davis, California

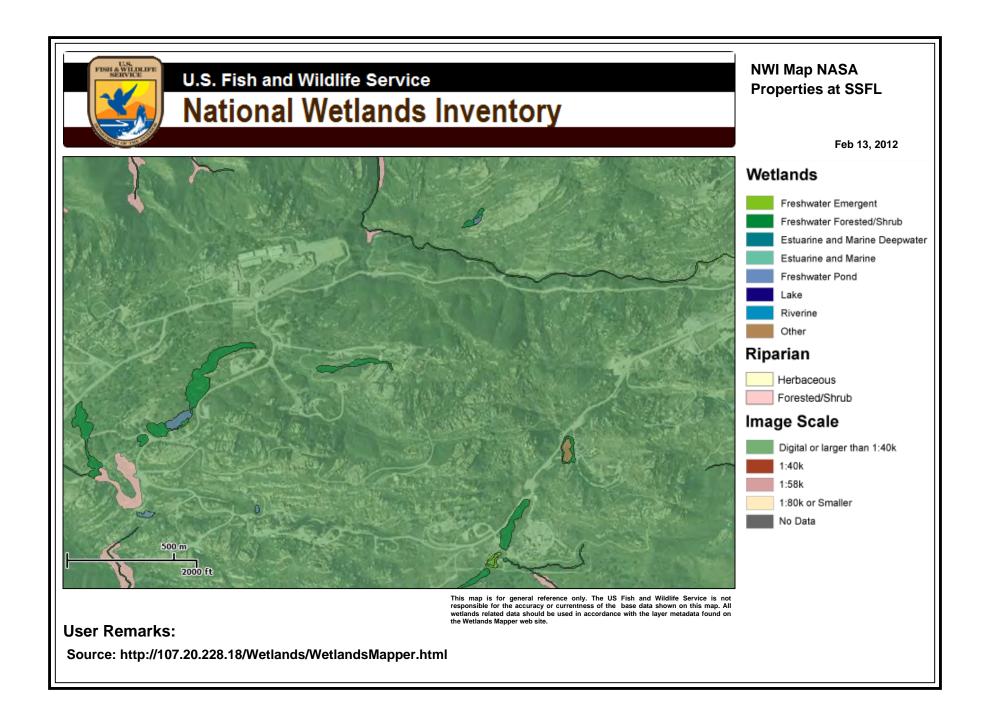
SERIES ESTABLISHED: San Bernardino County (Southwestern Part), California, 1972.

REMARKS: The activity class was added to the classification in February of 2003. Competing series were not checked at that time. - ET

OSED scanned by SSQA. Last revised by state on 10/75.

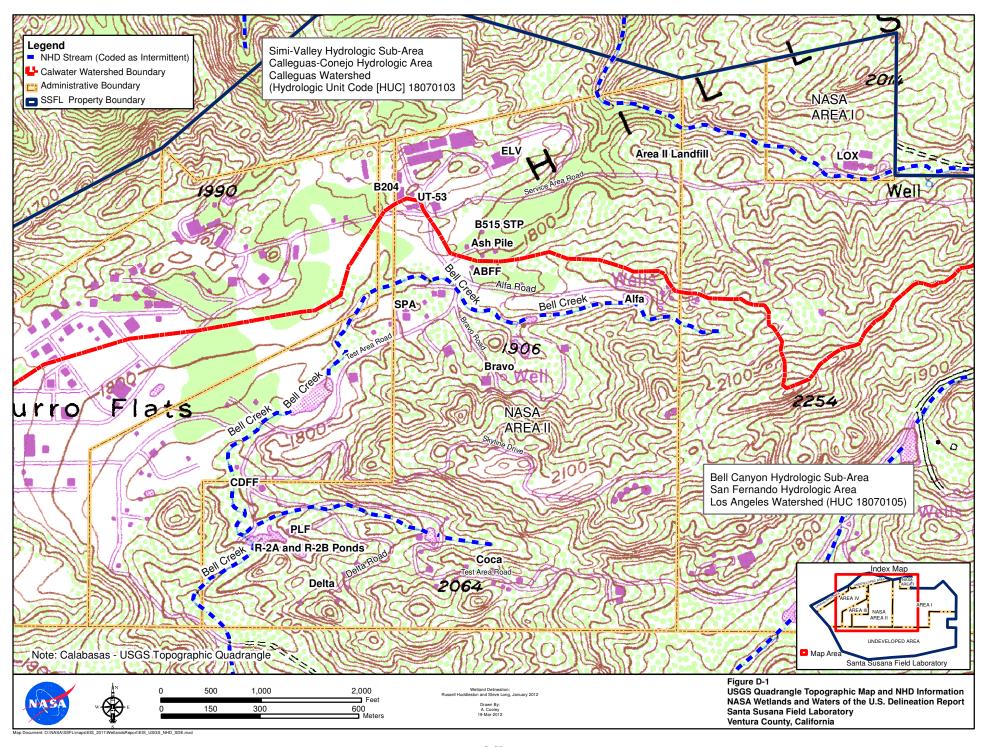
National Cooperative Soil Survey U.S.A.

National Wetland	Appendix C Inventory Map



Appendix D USGS Quadrangle Topographic Map and NHD Information





Appendix G, NASA SSFL EIS for Proposed Demolition and Environmental Cleanup

Appendix E Wetland Determination Data Sheets

Project/Site: SSFL -COCA P	City/County: V	ENTURA CO. Sampling Date: 1/3/2012
Applicant/Owner:		State: CA Sampling Point: COCA SP-1
nvestigator(s): R. I+UDPLESTOP, S.LO	NG Section, Township	p, Range: 02 N 17W SEC 30 (SBM)
andform (hillslope, terrace, etc.):	Local relief (conc	ave, convex, none): CONCAVE Slope (%): 0-2
		36" Long: 118" 42' 02, 091 Datum: WGS 84
		NWI classification: PUBHX
Are climatic / hydrologic conditions on the site typical		
Are Vegetation, Soil, or Hydrology		Are "Normal Circumstances" present? Yes 🔀 No
Are Vegetation, Soil, or Hydrology		(If needed, explain any answers in Remarks.)
SUMMARY OF FINDINGS – Attach site	map showing sampling po	int locations, transects, important features, etc.
Hydric Soil Present? Yes Wetland Hydrology Present? Yes	No within a W	npled Area Vetland? Yes No
Remarks: BELOW AVE PATE FALL VEGETATION – Use scientific names of	2 7 2 2 2	
7EGETATION - Use scientific flames of	Absolute Dominant Indic	ator Dominance Test worksheet:
Tree Stratum (Plot size:)	% Cover Species? Stat	Number of Dominant Species
1		That Are OBL, FACW, or FAC:/ (A)
2		Total Number of Dominant
		Species Across All Strata: (B)
4		Percent of Dominant Species
Sapling/Shrub Stratum (Plot size:	= Total Cover	That Are OBL, FACW, or FAC: 100% (A/B)
1		Prevalence Index worksheet:
2		Total % Cover of: Multiply by:
3		OBL species x 1 =
4		FACW species x 2 =
5		FAC species x 3 =
Herb Stratum (Plot size: 0.5m 2)	= Total Cover	FACU species x 4 =
1. TIPHA DOMINGERSIS	60% 4 08	UPL species x 5 =
2		Column Totals: (A) (B)
3		Prevalence Index = B/A =
4		Hydrophytic Vegetation Indicators:
5		
6		Prevalence Index is ≤3.0¹
7		Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet)
8		Problematic Hydrophytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)	= Total Cover	
		¹ Indicators of hydric soil and wetland hydrology must
1		be present, unless disturbed or problematic.
	= Total Cover	Hydrophytic Vegetation
% Bare Ground in Herb Stratum 40 %	6 Cover of Biotic Crust	Present? Yes X No
TIPHA and AROU	ND EDGES OF I	THE PORD -MOST OF
THE MANY IS	area materic	

Depth Matrix	Redox Features		200.20
(inches) Color (moist) %		oc ² Texture	Remarks
0-10 10782/1 100		- FSL	VFr, CRUMB
			FIBRIC -MM
			MIXED WIGOSE SAND
			ATSURFACE
Type: C=Concentration, D=Depletion, RM	M=Reduced Matrix, CS=Covered or Coated S	and Grains. ² Lo	cation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to a			for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox (S5)	1 cm l	Muck (A9) (LRR C)
Histic Epipedon (A2)	Stripped Matrix (S6)		Muck (A10) (LRR B)
Black Histic (A3)	Loamy Mucky Mineral (F1)		ed Vertic (F18)
Hydrogen Sulfide (A4)	Loamy Gleyed Matrix (F2)	Red F	arent Material (TF2)
Stratified Layers (A5) (LRR C)	Depleted Matrix (F3)	Other	(Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark Surface (F6)		
Depleted Below Dark Surface (A11)	Depleted Dark Surface (F7)		
Thick Dark Surface (A12)	Redox Depressions (F8)		of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools (F9)		hydrology must be present,
Sandy Gleyed Matrix (S4)		unless	listurbed or problematic.
Restrictive Layer (if present):			
Type: NE			
			Description Van X
SEDIMENTS	ACCUMULATED AT BA EL OF THE POND OHO	SE OF CR	Present? Yes NoNo
Remarks: SEDIMENTS BELOW THE LEVE	ACCUMULATED AT BA	SE OF CR	
Remarks: SEDIMENTS BELOW THE LEVE IYDROLOGY	ACCUMULATED AT BA	SE OF CR	
Remarks: SEPIMENTS BELOW THE LEW IYDROLOGY Wetland Hydrology Indicators:	ACCUMULATED AT BA	SE OF CR	MENT SLOPE
Remarks: SEPIMENTS BELOW TITE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ACCUMULATED AT BA	SE OF CR	
Remarks: SEPIMENTS BELOW THE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ACCUMULATED AT BA	Second	MENT SLOPE
Remarks: SEPIMENTS BELOW TITE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one require	ACCUMULATED AT BA	Second	ndary Indicators (2 or more required)
Remarks: SEDIMENTS BELOW TITE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Y Surface Water (A1)	ACCUMULATED AT BA EL OF THE POND OHO ed; check all that apply) Salt Crust (B11)	Second	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine)
Remarks: SEDIMENTS BELOW THE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir Y Surface Water (A1) High Water Table (A2)	ACCUMULATED AT BA EL OF THE POND OHO ed; check all that apply) Salt Crust (B11) Biotic Crust (B12)	Secondary	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
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Remarks: SEDIMENTS BELOW THE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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)	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S	Secon	ndary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Remarks: SEDIMENTS BELOW THE LEVE IYDROLOGY Wetland Hydrology Indicators: Primary Indicators (minimum of one requir 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 (ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S B7) Thin Muck Surface (C7)	Second Se	Indary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
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Remarks: SELOW TITE LEVE SELOW TITE LEVE SELOW TITE LEVE Wetland Hydrology Indicators: Primary Indicators (minimum of one required by Surface Water (A1)	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S B7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Secondary Control of C	Indary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
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Remarks: SEPIMENTS	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S B7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches): No Depth (inches):	Secondary Company Comp	Indary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orainage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: SEPIMENTS BELOW THE LEVEL SECON THE LEVEL Wetland Hydrology Indicators: Primary Indicators (minimum of one required of the second of t	ed; check all that apply) Salt Crust (B11) Biotic Crust (B12) Aquatic Invertebrates (B13) Hydrogen Sulfide Odor (C1) Oxidized Rhizospheres along Liv Presence of Reduced Iron (C4) Recent Iron Reduction in Tilled S B7) Thin Muck Surface (C7) Other (Explain in Remarks) No Depth (inches): No Depth (inches):	Second Se	Indary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (CS) Shallow Aquitard (D3) FAC-Neutral Test (D5)

roject/Site:SFL - CocA	c	ity/County:	VER	TURA LC.	Sampling Date: 1/3/20
pplicant/Owner:				State:	Sampling Point: CCC+ 5P-
nvestigator(s): P. Huppuesten, s. Lon	6 s	ection, Tow	nship, Rar	nge: 02N 17N	SEC 30 (58M)
andform (hillslope, terrace, etc.): TERRACE	ı	ocal relief (concave, o	convex, none): North	Slope (%): 6 -
ubregion (LRR):					
oil Map Unit Name: SPE SEPIMENTAP	7 Roce	e un	D	NWI classific	ation: NONE
re climatic / hydrologic conditions on the site typical for th		To Comment			
re Vegetation, Soil, or Hydrology					resent? Yes K No
re Vegetation, Soil, or Hydrology				eded, explain any answer	
BUMMARY OF FINDINGS – Attach site map					
			, , , , , , , , , , , , , , , , , , , ,		, , , , , , , , , , , , , , , , , , , ,
Hydrophytic Vegetation Present? Yes N		Is the	Sampled		60. 5
Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N	No X	withi	n a Wetlan	nd? Yes	_ No_X
Remarks: BELOW AVE PAINFAIL					
/EGETATION – Use scientific names of plan	nts.				1794
Tree Stratum (Plot size:)	Absolute % Cover	Dominant Species?		Dominance Test work	
1				Number of Dominant Sp That Are OBL, FACW, of	
2.					
3.				Total Number of Domin- Species Across All Stra	
4.					
		= Total Cov	er	Percent of Dominant Sp That Are OBL, FACW, 6	
Sapling/Shrub Stratum (Plot size: 2m ²)	-4			The Manager of the San A	
1. MALOSOMA LAURINA		7		Prevalence Index work	
2. ERIODICTYON CRASSIFOLIUM			PL	Total % Cover of:	
3.					x1 =
5			_	DOMESTIC AND A STATE OF THE PARTY OF THE PAR	x3=
		= Total Cov	Jer .	FACU species	
Herb Stratum (Plot size: /m²)					x5=
	90%			•	(A) (B)
2. PHACKEN RAMOSISSIMA	5%		M		
3					= B/A =
4				Hydrophytic Vegetation	
5		- 30		Dominance Test is	
6				Prevalence Index is	s ≤3.0° ptations¹ (Provide supporting
7					s or on a separate sheet)
8					phytic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)	-	= Total Cov	/ег		
1,				¹ Indicators of hydric soi	il and wetland hydrology must
2.				be present, unless distr	irbed or problematic.
		= Total Cov	/er	Hydrophytic	
% Bare Ground in Herb Stratum 572_ % Cove	er of Biotic Cr	ust		Vegetation Present? Ye	s No_X_
Remarks:		7.57		10	- 110

SOIL

Sampling Point: COCA 59-2

(inches)	Color (moist)	_%	Color (moist)	_%	Type	Loc2	Texture	Remarks
0-16	10484/4	95%	-	-	-	-	SL	VFR-SOFT, WM SBK
	104/2 3/2	5%	_	-	126	4		PARTING TO CRUMB
								F-Fi Gravel / COARSES
					-			
	-			-				VF Med-Fi Roots S
10-19	2.575/4	100%	<u> </u>				SAMD	TR FINE POOTS UFF
								GRAN - VWSBK
Type: C=Co	oncentration, D=Dep	letion, RM=F	Reduced Matrix, C	S=Covere	d or Coate	d Sand G	rains. ² Lo	 cation: PL≃Pore Lining, M=Matrix.
	Indicators: (Applic							for Problematic Hydric Soils ³ :
Histosol	(A1)		Sandy Red	dox (S5)			1 cm l	Muck (A9) (LRR C)
Histic Ep	oipedon (A2)		Stripped M	latrix (S6)			2 cm	Muck (A10) (LRR B)
Black His			Loamy Mu	cky Minera	al (F1)		Redu	ced Vertic (F18)
	n Sulfide (A4)		Loamy Gle				A COLUMN TO THE REAL PROPERTY OF THE PARTY O	Parent Material (TF2)
	Layers (A5) (LRR	C)	Depleted N				Other	(Explain in Remarks)
	ick (A9) (LRR D)		Redox Dar					
	d Below Dark Surface	e (A11)	Depleted [
The second secon	ark Surface (A12)		Redox Dep		(F8)			of hydrophytic vegetation and
	fucky Mineral (S1)		Vernal Poo	ols (F9)				hydrology must be present,
and the second s	Sleyed Matrix (S4)						unless	disturbed or problematic.
	Layer (if present):							
Туре:								
Depth (inc		BE P	inc assoc	-147 8 ,	D w	int j		Present? Yes No _X MIYED , SOME FINE CRIVES
Depth (inc Remarks:	APPEARS TO	BE P	inc Assoc	CIATE,	D w	int s		THE STATE OF THE STATE OF
Depth (inc	APPEARS TO		nc assoc	-1478	D w	int j		THE STATE OF THE STATE OF
Depth (inc Remarks:	GY drology Indicators:				D w	int j	Par P	MIXED, SOME FINE CRIVELS
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic	GY drology Indicators:		check all that app	ply)	D w	int j	Seco	MISED, SOME FINE CRIVES indary Indicators (2 or more required)
Depth (inc Remarks: IYDROLO Wetland Hyc Primary Indic Surface	GY drology Indicators: cators (minimum of o		check all that app	oly) st (B11)	D w	int j	Second Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine)
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa	GY drology Indicators: cators (minimum of o		check all that app Salt Crus Biotic Cru	ply) st (B11) ust (B12)		int s	Second Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatio	GY drology Indicators: cators (minimum of o	one required	check all that app Salt Crus Biotic Cru Aquatic I	oly) st (B11) ust (B12) nvertebrate	es (B13)	int s	Second - 1	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M	GY drology Indicators: cators (minimum of of other (A1) ater Table (A2) on (A3) larks (B1) (Nonriver	one required	check all that app Salt Crus Biotic Cru Aquatic II	piy) st (B11) ust (B12) nvertebrate n Sulfide C	es (B13) odor (C1)		Sec	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatio Water M	GY drology Indicators: cators (minimum of of of other (A1) ater Table (A2) on (A3) darks (B1) (Nonriver of the other (B2) (Nonriver of the other (B2) (Nonriver of the other (B2) (Nonriver of the other the other (B2) (Nonriver of the other the other of the other (B2) (Nonriver of the other the other of t	one required rine) nriverine)	check all that app Salt Crus Biotic Cru Aquatic II Hydroger Oxidized	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe	es (B13) Odor (C1) eres along	Living Roo	Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Depth (inc Remarks: IYDROLO Wetland Hyd Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep	GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver at Deposits (B2) (No	one required rine) nriverine)	check all that app Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe o of Reduc	es (B13) odor (C1) eres along ed Iron (C-	Living Roo	Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
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Depth (inc Remarks: IYDROLO Wetland Hyd Surface High Wa Saturatio Water M Sedimer Drift Dep Surface Inundation	GY drology Indicators: eators (minimum of of other (A1) ater Table (A2) on (A3) larks (B1) (Nonriver nt Deposits (B2) (Nonriver coosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial	ine) nriverine)	check all that app Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduce con Reduce	es (B13) odor (C1) eres along ed Iron (C- tion in Tille (C7)	Living Roo	Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Depth (inc Remarks: IYDROLO Wetland Hyd Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundatic Water-S	GY drology Indicators: eators (minimum of of other (A1) ater Table (A2) on (A3) darks (B1) (Nonriver nt Deposits (B2) (Nonriver soil Cracks (B6) on Visible on Aerial stained Leaves (B9)	ine) nriverine)	check all that app Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduc	es (B13) odor (C1) eres along ed Iron (C- tion in Tille (C7)	Living Roo	Second	endary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
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Depth (incomplete in the complete in the compl	GY drology Indicators: cators (minimum of o Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present?	one required rine) nriverine) rine) Imagery (B7	check all that app Salt Crus Biotic Cru Aquatic li Hydroger Oxidized Presence Recent Ir Thin Muc	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe of Reduct ck Surface xplain in Re	es (B13) odor (C1) eres along ed Iron (C- tion in Tille (C7)	Living Roo	Second	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
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Depth (incept of the property	GY drology Indicators: cators (minimum of of other Table (A2) on (A3) darks (B1) (Nonriver of the Deposits (B2) (Nonriver of the Deposits (B3) (Nonriver of the Deposits (B4) (Nonriver of	ine) ine) inriverine) irine) Imagery (B7	check all that apy Salt Crus Biotic Cru Aquatic II Hydroger Oxidized Presence Recent Ir Other (Ex	ply) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe of Reduct on Reduct ch Surface xplain in Re nches): nches):	es (B13) odor (C1) eres along ed Iron (C- tion in Tille (C7) emarks)	Living Root 4) d Soils (Co	Second Se	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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Depth (incept of the property	GY drology Indicators: cators (minimum of of other (A1) ater Table (A2) on (A3) darks (B1) (Nonriver nt Deposits (B2) (No cosits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial tained Leaves (B9) vations: er Present? Present? pillary fringe) corded Data (strean	rine) Imagery (B7 /es N /es N	scheck all that approximate and selection of the control of the co	oly) st (B11) ust (B12) nvertebrate n Sulfide C Rhizosphe e of Reduct ck Surface xplain in Re nches):	es (B13) odor (C1) eres along ed Iron (C- tion in Tille (C7) emarks)	Living Root 4) d Soils (Co	Second Se	endary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)

Project/Site: SSFL AREA I		City/Coun	ity: UEN	TURA	_ Sampling Date: _	1/4/2012
Applicant/Owner:				State: CA		
nvestigator(s): R. ItuDDLESTON, S. LONG	5 .	Section, T	Township, Ran	nge: 02 N 176	N SECZO	(5BM)
andform (hillslope, terrace, etc.): HILL SCOPE			The state of the s			
Subregion (LRR):						
Soil Map Unit Name: Sn G SEDIMENTARY						
Are climatic / hydrologic conditions on the site typical for the						
Are Vegetation, Soil, or Hydrology						No
Are Vegetation, Soil, or Hydrology 💉						777
SUMMARY OF FINDINGS – Attach site map					1.4 1. 1.4 1.4 1.7	atures, etc.
Hydrophytic Vegetation Present? Yes	No X				#.C-	
Hydric Soil Present? Yes	No ×		the Sampled	Area nd? Yes	w ×	
Wetland Hydrology Present? Yes	No_×	W	ithin a vyeuai	Id? 195	NO _/-	
Remarks: 3610W ANE EANNEAUL TO		- 50	nst con	-STRUCTED BA	Mis	w.
VEGETATION – Use scientific names of pla	Absolute	Domins	ant Indicator	Dominance Test wo	rke heat	
Tree Stratum (Plot size:)			s? Status	Number of Dominant		
1. pare				That Are OBL, FACW		(A)
2				Total Number of Dom	ninant >	
3				Species Across All St		(B)
4		- Total	7	Percent of Dominant		, ,
Sapling/Shrub Stratum (Plot size: 2)	-	= Total	Cover	That Are OBL, FACW	/, or FAC:	(A/B)
1. POPE				Prevalence Index we	orksheet:	
2				Total % Cover of		
3				OBL species		
4		-		FACW species		
5/		T 6-1	GUAG.	FACIL appoins		
Herb Stratum (Plot size: EMPE 3454)	2	_= Total	Cover	FACU species		
1. AMAGALLIS ARVENSIS	3%	4	FAC	Column Totals:		
2. HYPOCHAERIS GLABZA	270	7	NL			
3. ERODIUM BOTRYS	276	7	ML		ex = B/A =	
4. BRASSIEA MIGRA	1%		ML	Hydrophytic Vegeta		
5		-		Dominance Test		
6		-		Prevalence Index	x is ≤3.0° daptations¹ (Provide	eupporting
7		-			rks or on a separate	
8	87	= Total	Course	Problematic Hyd	rophytic Vegetation	1 (Explain)
Woody Vine Stratum (Plot size:)		_ = 10tai	Cover			
1. / NONE				Indicators of hydric s		
2/				be present, unless di	sturbed or problema	atic.
-91		_ = Total		Hydrophytic Vegetation		
TOTAL STATE OF THE	ver of Biotic C	rust		Present?	Yes No _2	
Remarks: SEEDLINGS ONLY 1783	s mmE	OF	YEAR			
3220011-03 01-1 /1013	2		12410			
- MOSS COURRS MUCH o	F THE	501	45 11	THIS MAGA		

Sampling Point: SW-1 SP-1

Depth	Matrix	0/		Features	1 - 2	Parada.
(inches)	Color (moist)	%_	Color (moist)		Loc ² Texture	The Association of the Control of th
0-1	107P5/3	100			- SL	FR, WMSBK, F.VF ROOTS
						5%; TRACE FINE GRAVE
1-10	1048 6/4	60%			5AND	TRACE F. 20075
	10784/3	40%			FSL	UFR WMSBK - PARTS
		1				TO GRAN.
	-	4		E9		70 0.00
			FACENSION-3-	FR, WMSBK		
	Carry Carry Carry	-	Some of the same of	TR UF ROOK		
				=Covered or Coated		² Location: PL=Pore Lining, M=Matrix.
		cable to all	LRRs, unless other			tors for Problematic Hydric Soils ³ :
Histoso			Sandy Redo			cm Muck (A9) (LRR C)
	pipedon (A2)		Stripped Ma			cm Muck (A10) (LRR B)
	listic (A3)			ky Mineral (F1)	7.00	educed Vertic (F18)
The second second second	en Sulfide (A4)	^		red Matrix (F2)		ed Parent Material (TF2)
	ed Layers (A5) (LRR	C)	Depleted Ma	77 - 77 - 74 - 74 - 74 - 74 - 74 - 74 -	_ 0	ther (Explain in Remarks)
	luck (A9) (LRR D)	- (A11)		Surface (F6)		
	ed Below Dark Surface (A12)	ce (ATT)		ark Surface (F7) ressions (F8)	3Indion	itors of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pools			and hydrology must be present,
	Gleyed Matrix (S4)		veinal Fools	s (1 3)		ess disturbed or problematic.
	Layer (if present):				1	or distance of properties.
	SAMPSTONE	ROCK				
Type	שיוטונקטותב					
Remarks:		incite.	AN EXCAVA			Soil Present? Yes No X
Remarks:	APPEARS T SIPE - B	restE.	AN EXCAVA	OILS APPEA	- SOILS &	REPURD on MORNIA
Remarks:	APPEARS 1 SIPE - B	PRITE,	AN EXCAVA	OILS APPEA	- SOILS &	REPURD ON MORNIA
Remarks:	APPEARS 1 SIPE - B OGY ydrology Indicators	ABRU	AN EXCAVA. I INCH SC PT TRANSI	770~ 70 S	- SOILS B UP MIXED ANDSTONE	REPORTED OF PORTS ZOUR 6-80' 865
Remarks: IYDROLO Wetland H Primary Ind	APPEARS 7 STPE - B OGY ydrology Indicators	ABRU	AN EXCAVA: I INCIT SO IPT TRANSI d; check all that apple	770~ 70 S	- SOILS B MIXED ANDSTONE	REPORTED OF PORTS ROCK 6-90' 865 Secondary Indicators (2 or more required)
Remarks: YDROLO Wetland H Primary Ind	APPEARS 1 SIPE - B OGY ydrology Indicators	ABRU	AN EXCAVA. I INCH SC PT TRANSI	770~ 70 S	- SOILS B MIXED ANDSTONE	REPORTED OF PORTH ROCK 6-80' 865
Remarks: IYDROL(Wetland Hy Primary Ind Surface	APPEARS 7 STPE - B OGY ydrology Indicators	ABRU	AN EXCAVA: I INCIT SO IPT TRANSI d; check all that apple	770~ 70 S) (B11)	- SOILS B MIXED ANDSTONE	REPORTED OF FORTH ROCKE 6-90' 865 Secondary Indicators (2 or more required)
Remarks: IYDROL(Wetland Hy Primary Ind Surface	APPEARS 7 STRE - B OGY ydrology Indicators licators (minimum of e Water (A1) Jater Table (A2)	ABRU	AN EXCAVA: I INCIT SO IPT TRANSI d; check all that apple _ Salt Crust _ Biotic Crus	770~ 70 S) (B11)	- SOILS B MIXED ANDSTONE	REPAIRED ON MORTH ZOUL 6-\$6' 865 Secondary Indicators (2 or more required) Water Marks (81) (Riverine)
YDROLO Wetland Hy Primary Ind Surface High W Satural	APPEARS 7 STRE - B OGY ydrology Indicators licators (minimum of e Water (A1) Jater Table (A2)	ABRU	AN EXCAVA: I INCIT SO IPT TRANSI d; check all that apple Salt Crust Biotic Crus Aquatic Inc	770~ 70 Si (B11) st (B12)	- SOILS B MIXED ANDSTONE	REPUTED OF FORTH ZOUL 6-\$6' \$65 Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
YDROLO Wetland H Primary Ind Surface High W Satural Water	APPEARS 7 STRE - B OGY ydrology Indicators licators (minimum of the Water (A1) Jater Table (A2) tion (A3)	ABRU	AN EXCAVA I INCIT SO IPT TRANSI d: check all that apple Salt Crust Biotic Crust Aquatic Inc Hydrogen	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1)	- SOILS B FR MIXED ANDSTONE S	REPUTED OF FORTH ROCK 6-80' 865 Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime	APPEARS 7 STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive	A BRU cone requires prine) conriverine)	AN EXCAVA PT TRANS d; check all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized F	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1)	- SOILS BY MIXED ANDSTONE Support of the support o	REPUTED OF FORTH RECORD OF FORTH RECOR
YDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime	APPEARS 7 STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) Jater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No	A BRU cone requires prine) conriverine)	d; check all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized F Presence	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4)	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPAIRED OF PORTH RECORD OF PORTH RECO
YDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De	APPEARS STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6)	ABRU one requirer prine) prine) prine)	d; check all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized R Presence of Recent Iro	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPUTED OF FORTH RECORD OF FORTH RECOR
YDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De	APPEARS 7 STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial	ABRU cone required crine) conriverine) erine) Imagery (B	AN EXCAVA PT TRANS d; check all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized F Presence of Recent Iro Thin Muck	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled is Surface (C7)	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPUTED OF PORTY Recondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Surface Inunda Water-	APPEARS 7 STPE - B OGY ydrology Indicators licators (minimum of a Water (A1) later Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9)	ABRU cone required crine) conriverine) erine) Imagery (B	AN EXCAVA PT TRANS d; check all that apply Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized F Presence of Recent Iro Thin Muck	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPUTED OF PORTY ZOCK 6-PS' 865 Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De Surface Inunda Water- Field Obse	APPEARS STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) Jater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations:	ABRU one requirement orine) orine) orine) arine) Imagery (B	AN EXCAVA I INCIT SO IPT TRANSI d; check all that apple Salt Crust Biotic Crust Aquatic Inc Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled : Surface (C7) plain in Remarks)	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPUTED OF PORTY Recondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water Sedime Drift De Surface Inunda Water- Field Obse	APPEARS STPE - B STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) Jater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present?	ABRU cone requires crine) conriverine) crine) limagery (B	d: check all that apply Salt Crust	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) on Reduction in Tilled in Surface (C7) plain in Remarks)	- SOILS BY MIXED ANDSTONE S ving Roots (C3)	REPUTED OF PORTY Recondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Satural Water I Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table	APPEARS STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present? e Present?	ABRU Cone require crine)	d: check all that apply Salt Crust	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled is Surface (C7) blain in Remarks) ches):	- SOILS BER MIXED ANDSTONE Soils (C6)	REPAIRED on PORTY RECORD 6-96' 86S Recondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
YDROLO Wetland Hi Primary Ind Surface High W Satural Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I	APPEARS 7 STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive e ont Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present?	ABRU Cone require crine)	d: check all that apply Salt Crust	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled is Surface (C7) blain in Remarks) ches):	- SOILS BER MIXED ANDSTONE Soils (C6)	REPAIRED OF PORTY Recondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
YDROLO Wetland Hy Primary Ind Surface High W Saturat Water Sedime Drift De Surface Inunda Water- Field Obse Surface Water Table Saturation I	APPEARS STPE - B STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present? e Present? apillary fringe)	ABRU Cone require crine)	d: check all that apply Salt Crust	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) in Reduction in Tilled is Surface (C7) blain in Remarks) ches):	- SOILS & MIXED ANDSTONE ving Roots (C3) Soils (C6)	REPORTED OF PORTY RECORD Secondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturat Water Surface Water Table Saturation I (includes ca	APPEARS STPE - B STPE - B OGY ydrology Indicators licators (minimum of e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) ecorded Data (stream	ABROSTINES CONTINUE OF THE OF	AN EXCAVA PT TRANS d: check all that apple Salt Crust Biotic Crust Aquatic Int Hydrogen Oxidized R Presence of Recent Iro Thin Muck Other (Exp. No X Depth (inc. No X Depth (inc. Depth (inc. Depth (inc.)	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) on Reduction in Tilled 3 surface (C7) plain in Remarks) ches): ches): ches):	- SOILS BER MIXED ANDSTONE ving Roots (C3) Soils (C6) Wetland Hydroctions), if available	REPORTED or PORTY RECONDENS NOTE OF THE PROPERTY SECONDARY INDICATORS (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
Remarks: IYDROLO Wetland Hy Primary Ind Surface High W Saturai Water Sedime Drift De Surface Inunda Water- Field Obse Surface Wa Water Table Saturation I (includes ca Describe R	APPEARS STPE - B STPE - B OGY ydrology Indicators licators (minimum of a Water (A1) Jater Table (A2) tion (A3) Marks (B1) (Nonrive ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations: ater Present? Present? Present? apillary fringe) ecorded Data (stream SHALLOW	ABRO in one required orine) orine) orine) Imagery (B Yes Yes Yes m gauge, mo	AN EXCAVA I INCIT SO IPT TRANSI di check all that apple Salt Crust Biotic Crust Aquatic Inc Hydrogen Oxidized F Presence of Recent Iro Thin Muck Other (Exp	y) (B11) st (B12) vertebrates (B13) Sulfide Odor (C1) Rhizospheres along Li of Reduced Iron (C4) on Reduction in Tilled : Surface (C7) plain in Remarks) ches): ches): photos, previous insper	- SOILS BY MIXED ANDSTONE ving Roots (C3) Soils (C6) Wetland Hydroections), if available	REPORTED OF PORTH RECORDED OF PORTH RECORD OF PORTH RECORDED OF PORTH RECORDED OF PORTH RECORDED OF POR

pplicant/Owner: NASA					
vestigator(s): R. Huppueston, S. Len					
andform (hillslope, terrace, etc.):					
ubregion (LRR):	Lat: _39	14. 23	.680	Long: 118 41 07-	394" Datum: w65 84
oil Map Unit Name: Sn & SEDIMENTAT	ry Roce	c Ut	フ	NWI classification	HONE
e climatic / hydrologic conditions on the site typical for t					
re Vegetation, Soil, or Hydrology	_significantly	disturbed?	Are "	Normal Circumstances" prese	nt? Yes X No 3
re Vegetation, Soil, or Hydrology					
UMMARY OF FINDINGS – Attach site ma					
Hydrophytic Vegetation Present? Yes	No X	la sh	e Sampled	West	
Hydric Soil Present? Yes		10 111		nd? Yes	No X
Wetland Hydrology Present? Yes		With	iii a vveuai	iur ies	NO Z
EGETATION – Use scientific names of pla	ants.				
Tree Stratum (Plot size:)	Absolute % Cover			Dominance Test workshe	
1. Par	76 COVE	Opecies:	Status	Number of Dominant Species That Are OBL, FACW, or Face	
					io (A)
				Total Number of Dominant Species Across All Strata:	3 (B)
4.					
		= Total Co	ver	Percent of Dominant Species That Are OBL, FACW, or Face	
Sapling/Shrub Stratum (Plot size: 2m)	-				
ARTEMESIA CALIFORNICA				Prevalence Index worksh	
2. ADENO STEMA FASOLULATA		7_	pr	Total % Cover of: OBL species	
3 4.				FACW species	
· · · · · · · · · · · · · · · · · · ·		-		FAC species	
5		= Total Co	ver	FACU species	
Herb Stratum (Plot size: 2 m				UPL species	
1. AUGNA BARBATA	15%			Column Totals:	
EROPIUM BOTHYS					
BRASSICA MIBRA				Prevalence Index = E	
. PEA SP. (CL SECUPDA)				Hydrophytic Vegetation I	
CRYPTATAL SP	-		Contract of the Contract of th	Dominance Test is >50 Prevalence Index is ≤3	
S				Morphological Adaptat	
7			\leftarrow		on a separate sheet)
B	Z	- 7-1-10-		Problematic Hydrophyl	ic Vegetation¹ (Explain)
Woody Vine Stratum (Plot size:)		= Total Co	ver		
1				¹ Indicators of hydric soil an	
2.				be present, unless disturbe	d or problematic.
		= Total Co	ver	Hydrophytic	
% Bare Ground in Herb Stratum 7802 % Co	ver of Biotic C	rust		Vegetation Present? Yes	No_X
Remarks:	77.474.010	77560		7 CTV-2007	
150000007001					

Sampling Point: 5W-1 5P-Z

(inches)	Matrix			x Features				2000
	Color (moist)	%	Color (moist)	_%_	Type ¹	Loc²	Texture	Remarks
0-11	10784/3	100	-		_		LFS	VF-LOOSE VW MSBK
								PARTS TO GRAP.
							-	F-FI ROOTS 45%
11-19	107F4/3	100		_	_		UFS	FR -NO ROCTS
,,,,,,		-			_			MM ABK
			-					
Type: C=C	Concentration, D=Dep	letion, RM=F	Reduced Matrix, CS	=Covered	or Coate	d Sand G	Frains. 2	ocation: PL=Pore Lining, M=Matrix.
lydric Soil	Indicators: (Applic	able to all L	RRs, unless other	wise not	ed.)		Indicato	rs for Problematic Hydric Soils ³ :
Histoso	I (A1)		Sandy Red	ox (S5)			1 cn	n Muck (A9) (LRR C)
_ Histic E	pipedon (A2)		Stripped Ma	atrix (S6)			2 cm	n Muck (A10) (LRR B)
Black H	listic (A3)		Loamy Muc	ky Minera	I (F1)		Red	luced Vertic (F18)
Hydroge	en Sulfide (A4)		Loamy Gley	ed Matrix	(F2)		Red	Parent Material (TF2)
_ Stratifie	d Layers (A5) (LRR (C)	Depleted M	atrix (F3)			Oth	er (Explain in Remarks)
1 cm M	uck (A9) (LRR D)		Redox Dark	Surface	(F6)		-	
Deplete	ed Below Dark Surfac	æ (A11)	Depleted D	ark Surfac	æ (F7)			
	ark Surface (A12)	-	Redox Dep	ressions (F8)		3Indicate	ors of hydrophytic vegetation and
	Mucky Mineral (S1)		Vernal Pool					nd hydrology must be present,
	Gleyed Matrix (S4)							s disturbed or problematic.
The state of the s	Layer (if present):						1	0,0000
Type:		COUNTER	450					
	NAME OF THE OWNER OWNER OF THE OWNER OWNE	, . ,					15.44.6	oil Present? Yes No
Depth (in	ncnes):		_				Hydric S	oil Present? Yes No
ACRES SELE			-					
YDROL C	OGY							
	OGY ydrology Indicators:							
Wetland Hy			check all that app	ly)			Se	condary Indicators (2 or more required)
Wetland Hy Primary Indi	ydrology Indicators: icators (minimum of c						Se	
Wetland Hy Primary Indi	ydrology Indicators: icators (minimum of c water (A1)		Salt Crust	(B11)			Se	Water Marks (B1) (Riverine)
Wetland Hy Primary Indi Surface High W	ydrology Indicators: icators (minimum of c water (A1) /ater Table (A2)		Salt Crust Biotic Cru	(B11) st (B12)	ne (B13)		Se	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Wetland Hy Primary Indi Surface High W Saturat	ydrology Indicators: icators (minimum of c water (A1) /ater Table (A2) tion (A3)	one required;	Salt Crust Biotic Cru Aquatic In	(B11) st (B12) vertebrate			Se	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Wetland Hy Primary Indi Surface High W Saturat Water M	ydrology Indicators: icators (minimum of c water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	one required;	Salt Crust Biotic Cru Aquatic In Hydrogen	(B11) st (B12) vertebrate Sulfide O	dor (C1)			Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime	ydrology Indicators: icators (minimum of o water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	one required; rine) onriverine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I	(B11) st (B12) vertebrate Sulfide O Rhizosphe	dor (C1) eres along		Se	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime	ydrology Indicators: icators (minimum of c water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver	one required; rine) onriverine)	Salt Crust Biotic Cru Aquatic In Hydrogen	(B11) st (B12) vertebrate Sulfide O Rhizosphe	dor (C1) eres along			Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De	ydrology Indicators: icators (minimum of o water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No	one required; rine) onriverine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduce	dor (C1) eres along ed Iron (C	4)		Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface	ydrology Indicators: icators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver	one required; rine) onriverine) orine)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct	dor (C1) eres along ed Iron (Ca ion in Tille	4)	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat	ydrology Indicators: icators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonrives ent Deposits (B2) (No eposits (B3) (Nonrive e Soil Cracks (B6) tion Visible on Aerial	rine) prine) prine) prine) Imagery (B7	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Thin Muck	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct s Surface	dor (C1) eres along ed Iron (C4 ion in Tille (C7)	4)	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S	ydrology Indicators: icators (minimum of c e Water (A1) /ater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver e Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9)	rine) prine) prine) prine) Imagery (B7	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct s Surface	dor (C1) eres along ed Iron (C4 ion in Tille (C7)	4)	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S Field Obse	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) ition (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver the Soil Cracks (B6) tion Visible on Aerial Stained Leaves (B9) ervations:	rine) onriverine) erine) Imagery (B7	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Thin Muck Other (Ex	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduce on Reduct c Surface plain in Re	dor (C1) eres along ed Iron (C4 ion in Tille (C7)	4)	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S Field Obse	ydrology Indicators: icators (minimum of of the Water (A1) /ater Table (A2) Ition (A3) Marks (B1) (Nonriver ent Deposits (B2) (No eposits (B3) (Nonriver the Soil Cracks (B6) Ition Visible on Aerial Stained Leaves (B9) irvations:	rine) porriverine) prine) Imagery (B7)	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Thin Muck Other (Ex	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re	dor (C1) eres along ed Iron (C- ion in Tille (C7) emarks)	t) d Soils (C	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S Field Obse	ydrology Indicators: icators (minimum of content of con	rine) prine) prine) lmagery (B7) Yes N	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Thin Muck Other (Ex	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct on Reduct c Surface plain in Re uches): uches):	dor (C1) ares along ed Iron (C- tion in Tille (C7) amarks)	t) d Soils (C	poots (C3)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3)
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Wetland Hy Primary Indi Surface High W Saturat Water M Sedime Drift De Surface Inundat Water-S Field Obse Surface Wa Water Table Saturation F (includes ca Describe Re	ydrology Indicators: icators (minimum of content of con	rine) prine) prine) Imagery (B7) Yes N Yes N	Salt Crust Biotic Cru Aquatic In Hydrogen Oxidized I Presence Recent Iro Thin Muck Other (Ex	(B11) st (B12) vertebrate Sulfide O Rhizosphe of Reduct c Surface plain in Re uches): uches): uches):	dor (C1) eres along ed Iron (C- ion in Tille (C7) emarks)	4) d Soils (C	poots (C3) C6)	Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9) Shallow Aquitard (D3) FAC-Neutral Test (D5)
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pplicant/Owner: NASA vestigator(s): P. ItuDDLESTON, S.Lon					Sampling Point: 5w-Z 5f
andform (hillslope, terrace, etc.):					
ubregion (LRR):					
oil Map Unit Name: Sn 6 SEDIMENTARY	Rocce	Uni)	NWI classific	ation: <u>PABHY</u>
e climatic / hydrologic conditions on the site typical for thi	s time of yea	r? Yes	No	(If no, explain in R	emarks.)
re Vegetation, Soil, or Hydrology s	significantly o	disturbed?	Are "	Normal Circumstances* p	resent? Yes 🗶 No
re Vegetation, Soil, or Hydrology r	naturally prol	blematic?	(If ne	eded, explain any answe	rs in Remarks.)
UMMARY OF FINDINGS – Attach site map	showing	samplin	g point k	ocations, transects	, important features, et
Hydrophytic Vegetation Present? Hydric Soil Present? Wetland Hydrology Present? Yes N	lo		ne Sampled nin a Wetlar		
Remarks: BELOW AVE RAINFALL				OF YEAR	
EGETATION – Use scientific names of plan			-		
EGETATION - 030 SCIONAINO NAMES OF PIAN		Dominant	Indicator	Dominance Test work	sheet:
Tree Stratum (Plot size:) 1	% Cover			Number of Dominant S That Are OBL, FACW,	pecies ,
					Harris and the second
3.				Total Number of Domin Species Across All Stra	
4				Percent of Dominant Si	nacine
One the state of t	_	= Total Co	over	That Are OBL, FACW,	or FAC: 100% (A/E
Sapling/Shrub Stratum (Plot size:)				Prevalence Index wor	kcheet:
		-			Multiply by:
					x1=
					x2=
5.					x3=
		= Total Co	over	FACU species	x 4 =
Herb Stratum (Plot size: /m	10%			UPL species	x5=
POUTPOGON MONSPELIENSIS	170	7_	FACUT	Column Totals:	(A) (B
AMAGALIS ARVENSIS	172		FACE	Prevalence Index	= B/A =
ELECCHARIS MACROSTACITYA			OBL	Hydrophytic Vegetati	
		-		➤ Dominance Test is	
5			_	Prevalence Index i	
7.					ptations ¹ (Provide supporting
				data in Remark	s or on a separate sheet)
		= Total Co	over	Problematic Hydro	phytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)			1.3%		
1				'Indicators of hydric so be present, unless dist	il and wetland hydrology must
2					and or problemation.
	-	= Total C	over	Hydrophytic Vegetation	
% Bare Ground in Herb Stratum % Cove	er of Biotic C	rust		Present? Ye	es <u>X</u> No
Remarks:			4	2.2	
VECETATION CRAZED (HORSE	THIS	TIME	or Y	FATE	

	cription. (Describe	to the debt	h needed to doc	anionic che m	laivatoi	01 001111111	uie absenc	• • • • • • • • • • • • • • • • • • • •
Depth (inches)	Matrix	%		lox Features		Loc ²	Tarana	Binish
(inches)	Color (moist)	Francisco Contraction	Color (moist)		Type ¹	LOC	Texture	Remarks
0.6	107 84/2	100	~		_		FSL	FR WMSBK, M-F 700TS
2-9	107R 3/1	90%	57R 5/6	42%	-	M	LFS	MMSBK FR TR UF ROOTS
	107R 5/3	10%				_	SAND	or 180 suppaces
9-16	10783/1	98%	57R5/6	12%	c	1	LFS	MMSBK, FR
	104F 5/3	2%					SAND	OF PED SURFICES
16-19	10VP 4/3	100%		-	-		SIND	LOUSE, MS, No POOTS
Type: C=0	Concentration, D≃Dep	letion, RM=	Reduced Matrix, (CS=Covered	or Coate	d Sand G	rains. ² L	ocation: PL=Pore Lining, M=Matrix.
Black H Hydrog Stratifie 1 cm M Deplete Thick E Sandy Sandy Restrictive	Epipedon (A2) Histic (A3) Jen Sulfide (A4) Jen Sulfide (A4) Jed Layers (A5) (LRR 0) Jed Below Dark Surface Dark Surface (A12) Mucky Mineral (S1) Jelyed Matrix (S4) Je Layer (if present):	e (A11)	Loamy Mi Loamy Gl Depleted Redox Da Depleted Redox Da Vernal Po		(F2) F6) e (F7) F8)		Redu Red Red Other	Muck (A10) (LRR B) aced Vertic (F18) Parent Material (TF2) If (Explain in Remarks) Its of hydrophytic vegetation and d hydrology must be present, disturbed or problematic. Its Present? Yes X No X PEPOX BUT USSS
Remarks:	2-9" SM	5016	CLEARL	7 INC				ON POSITION IN
Remarks:	BASIN AND	5016	CLEARL	7 INC			BASED	
Remarks:	BASIN AND	EVIZ	CLEARL	7 INC				ON POSITION IN
Remarks: 7 IYDROL(Wetland H	アナタマ 2 プ アストア タマル DGY ydrology Indicators:	- SOILS	S CLEARI DENCE O	y inv			HOH	ON POSITION IN WATER
Remarks: 7 IYDROL Wetland H Primary Inc.	DGY ydrology Indicators:	- SOILS	CLEARI PENCE O	oply)			HOH	on Pasition IN WATER ondary Indicators (2 or more required)
YDROL(Wetland H Primary Inc. Surface	DGY ydrology Indicators: dicators (minimum of co	- SOILS	CLEARI PENCE of check all that ap Salt Cru	oply) st (B11)			HOH	ondary Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROL(Wetland H Primary Inc Surface High W	DGY ydrology Indicators:	- SOILS	CLEARL PENCE of : check all that ap Salt Cru Biotic C	eply) st (B11) rust (B12)	DINA		HOH	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
YDROL(Wetland H Primary Inc Surface High W Satura	DGY ydrology Indicators: dicators (minimum of complete the complete that is the complete that it is the complete	SOIL S	CCEARL PENCE of : check all that ap — Salt Cru — Biotic Co — Aquatic	oply) st (B11)	8 (B13)		HOH	ondary Indicators (2 or more required) Water Marks (B1) (Riverine)
YDROL(Wetland H Primary Inc Surfac High W Satura	DGY ydrology Indicators: dicators (minimum of context) Water (A1) Vater Table (A2) tion (A3)	SOIL SOIL S	CLEARL DENCE O : check all that ap Salt Cru Biotic Cr Aquatic Hydroge	oply) st (B11) rust (B12) Invertebrates en Sulfide Oc	8 (B13) dor (C1)	Py_	<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
YDROL(Wetland H Primary Inc Surface High W Satura Water Sedime	DGY ydrology Indicators: dicators (minimum of control	Sort	CLEARL CHECK all that ap Salt Cru Biotic Ci Aquatic Hydroge Oxidized	oply) st (B11) rust (B12) Invertebrate:	s (B13) dor (C1) res along	Living Ro	<u>Sec</u>	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
IYDROL(Wetland H Primary Inc Y Surfac High W Satura Water Sedim Drift Do	DGY ydrology Indicators: dicators (minimum of context) Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver	Sort	check all that ap Salt Cru Biotic Cr Aquatic Hydroge Oxidized	eply) st (B11) rust (B12) Invertebrate: en Sulfide Oct d Rhizospher e of Reduce	s (B13) dor (C1) res along d Iron (C	Living Roo	Sec 	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
IYDROL Wetland H Primary Inc Y High W Satura Water Sedim Surfac	DGY ydrology Indicators: dicators (minimum of context) e Water (A1) Vater Table (A2) tion (A3) Marks (B1) (Nonriver ent Deposits (B2) (Nonriver)	one required	check all that ag Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presenc	eply) st (B11) rust (B12) Invertebrates en Sulfide Oct	s (B13) dor (C1) res along d Iron (C	Living Roo	Sec 	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)

Water Table Present?

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

Wetland Hydrology Present? Yes _

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

Remarks:

						1/2012
s s	ection, Town	nship, Rar	ige: 02 P /	TW SEC Z	0 (58	M)
E	ocal relief (concave, c	onvex, none):	ME	_ Slope (%):	5%
Lat: 34 °	14' 20.	777	Long: 118° 4/	20.857	Datum: W	65 84
PT ROCK	e un	~D	NWI cla	assification:	PSSB	
or this time of year	r? Yes	No	(If no, explai	n in Remarks.)		
					es 🗶 N	lo
						s. etc.
	Is the	Sampled	Area		215	
	within	a Wetlan	d? Yes	No_	<u>×</u>	
or This T	ME OF	754R				
plants.						
000000000000000000000000000000000000000			Dominance Test	worksheet:		
% Cover	Species?	Status		NOT A STATE OF THE PERSON AND A STATE OF THE	0	321
			That Are OBL, FA	ACW, or FAC:		_ (A)
					Z	
		_	Species Across A	III Strata:		_ (B)
	= Total Cov	or			09	(A (D)
10000			That Are OBL, FA	ACW, or FAC:	010	(A/B)
30%	7	NL	Prevalence Inde	x worksheet:		
			Total % Cov	er of:	Multiply by:	
		-				_
	= Total Cov	er				=
40%		NL				_
			Column Totals:	(A)	-	— (B)
			Prevalence	Index = B/A =		
12.1			Hydrophytic Ve	getation Indicate	ors:	
			Dominance	Test is >50%		
			Prevalence I	ndex is ≤3.01		
			Morphologic	al Adaptations ¹ (I	Provide suppo	orting
	= Total Cov	er	Problematic	nyuropnytic veg	etation (Expi	airi)
			1 Indicators of hyd	tric soil and watts	and hydrology	muet
						must
	= Total Car	95	Hydrophytic			
			Vegetation	100		
Cover of Biotic Cr	ust	-	Present?	Yes	No X	
	Lat: 34 PY POUND or this time of year significantly do naturally probable nap showing some No X PATE THE STATE STA	Section, Town Local relief (c Lat: 34°14' 20. Y ROWE WT or this time of year? Yes significantly disturbed? naturally problematic? nap showing sampling No	Section, Township, Rank Local relief (concave, or Lat: 34°14′ 20.777 PT POUR LATID or this time of year? Yes Nosignificantly disturbed? Are " naturally problematic? (If ne nap showing sampling point to No Is the Sampled within a Wetlan No Within a Wetlan No	Local relief (concave, convex, none):	Section, Township, Range: 22 17 8 56 2 Local relief (concave, convex, none): 10 56 2 Lat: 34°14′ 20.777 Long: 118° 41′ 20.857 Proceed 17 NWI classification: 118° 41′ 20.857 No	significantly disturbed? Are "Normal Circumstances" present? Yes ★ Namap Showing sampling point locations, transects, important features is the Sampled Area within a Wetland? Yes No ★ No

	cription: (Describe to	the dept	h needed to docu	ument the in	dicator	or confirm	the absence	e of indi	cators.)	
Depth	Matrix			lox Features						
(inches)	Color (moist)	%	Color (moist)		Type ¹	Loc ²	Texture		Remarks	
0-1	10484/2	100%	(=)		_		FSL	FR	UM ABK, F-	M ROOTS
1-6	107/24/2	70%	1048576	30%	c	M	FSL	FR	um SBK, VF	-Fi
		_			_				Zoof:	5 1%
6-17	10784/3	70%	107F 5/1	5%		4	LFS	FR	WMSBK	
	-		10784/6	25%	_ c	<u> </u>	+			
	oncentration, D=Deple					ed Sand G			PL=Pore Lining, M=M	
	Indicators: (Applicat	ble to all			d.)				oblematic Hydric Soil	s":
Histosol			Sandy Re						9) (LRR C)	
	pipedon (A2)			Matrix (S6)	/E43				10) (LRR B)	
	istic (A3) en Sulfide (A4)			ucky Mineral eyed Matrix				Doront M	ac (F18) laterial (TF2)	
	d Layers (A5) (LRR C)			Matrix (F3)	(1 2)		4		n in Remarks)	
	uck (A9) (LRR D)			irk Surface (I	F6)		0	i (Evbian	in itematics/	
	d Below Dark Surface	(A11)	The table of the	Dark Surface						
	ark Surface (A12)	V 7		pressions (F			3Indicato	rs of hydr	ophytic vegetation and	
	Mucky Mineral (S1)		Vernal Po	Service and the second of the	٠,				gy must be present,	
	Gleyed Matrix (S4)			0.0 (1.0)				-77 (4) - 7 (4)	d or problematic.	
	Layer (if present):				- 11		1			
LUDUITE .	man of such a fact of the such desired and the such as									
	ME								nt? Yes X N	
Туре:	ches):						Hydric Se	nil Prese		0
Type:	ches):					7. 55 e. 1	1			
Type:	- 50165 POSS	nger nga ng M	EXCAUATION POND	ED TO -SAM INTOPO	er pre pro	Poir Poir	E IEI	ULAR BOVE		
Type: Depth (in Remarks:	ches):	ibuy npri no M	EXCAUATA POND BONPANT	ED TO -SAM INIDE	er pre pro	goor Porr	E IEI	ULAR BOVE	IE OHUM	
Type: Depth (in: Remarks: YDROLO Wetland Hy	ches):	NO M	80rpArt	IFIDE	er pre	poir Poir	E IEI VEORT	ULAR BONE HTTOR	ie open I presery	
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary India	ches):	NO M	i; check all that ap	<i>IFTDE®</i>	EN PIE PIPT	goir Poir	E IEI VEORT	BOVE ATTOM	OF OHENM I PRESENT Indicators (2 or more re	
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary Indic Surface	ches):	NO M	i; check all that ap	<i>ply</i>) st (B11)	Er PUE PHY	goir goir	E IEI VEORT	Condary Is	DE SHOW A PLES RAY A P	quired)
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa	ches):	NO M	i; check all that ap Salt Cru Biotic Cr	ply) st (B11) rust (B12)	PIPT	port Port	E IEI VEORT	condary Ir Water M	dicators (2 or more relarks (B1) (Riverine)	quired)
Type: Depth (in Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatia	ches): - 5016 \$ 9055 MA OGY drology Indicators: cators (minimum of on Water (A1) ater Table (A2) on (A3)	o M	d; check all that ap Salt Cru Biotic Cr Aquatic	ply) st (B11) rust (B12) Invertebrates	s (B13)	HAN U	E IEI VEORT	condary Ir Water M Sedimer Drift Dep	adicators (2 or more relarks (B1) (Riverine) ont Deposits (B2) (Riverine)	quired)
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M	GY drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriverin	ne required	d; check all that ap Salt Cru Biotic Cr Aquatic Hydroge	ply) st (B11) rust (B12) Invertebrates	s (B13) lor (C1)	ne	E IEI VEORT	condary In Water M Sediment Drift Dep	adicators (2 or more relarks (B1) (Riverine) to Deposits (B2) (Riverine) to Patterns (B10)	quired)
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatia Water Mater Mat	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriverin	ne)	i; check all that ap Salt Cru Biotic Cr Aquatic Hydroge Oxidized	pply) st (B11) rust (B12) Invertebrates en Sulfide Od	s (B13) lor (C1) res along	TIC	E IEI VEORT	condary In Water M Sedimer Drift Dep Drainage Dry-Sea	adicators (2 or more relarks (B1) (Riverine) to Deposits (B3) (Riverine) to Patterns (B10) son Water Table (C2)	quired)
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturatia Water Mater Mat	GY drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriverin	ne)	i; check all that ap Salt Cru Biotic Cr Aquatic Hydroge Oxidized	ply) st (B11) rust (B12) Invertebrates	s (B13) lor (C1) res along	TIC	E IEI VEORT	condary In Water M Sedimer Drift Dep Drainage Dry-Sea Crayfish	ndicators (2 or more relarks (B1) (Riverine) on Deposits (B2) (Riverine) on Patterns (B10) son Water Table (C2) Burrows (C8)	quired)
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary Indic Surface High Wa Saturati Water M Sedimer Drift De	drology Indicators: cators (minimum of one Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonriverin	ne)	i; check all that ap Salt Cru Biotic Cr Aquatic Hydroge Oxidized	pply) st (B11) rust (B12) Invertebrates en Sulfide Od	s (B13) lor (C1) res alon d Iron (C	g Living Ro	Sec. (C3)	condary In Water M Sedimer Drift Dep Drainage Dry-Sea Crayfish	adicators (2 or more relarks (B1) (Riverine) to Deposits (B3) (Riverine) to Patterns (B10) son Water Table (C2)	quired)
Type: Depth (in: Remarks: YDROLO Wetland Hy Primary India Surface High Wa Saturati Water M Sedimel Drift Del Surface	ches): - 5016 \$ Poss. When the possible of t	ne)	i; check all that ap Salt Cru Biotic Cr Aquatic Hydroge Oxidized Presence	pply) st (B11) rust (B12) Invertebrates en Sulfide Od d Rhizospher e of Reduce	s (B13) lor (C1) es along d Iron (Con in Till	g Living Ro	Sec. (C3)	condary Ir Water M Sedimer Drift Dep Drainage Dry-Sea Crayfish Saturation	ndicators (2 or more relarks (B1) (Riverine) on Deposits (B2) (Riverine) on Patterns (B10) son Water Table (C2) Burrows (C8)	quired)

Remarks:

Yes ____ No _ Depth (inches):

Yes ____ No __ Depth (inches):

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

Water Table Present? Saturation Present? (includes capillary fringe)

Wetland Hydrology Present? Yes

THE RESERVE THE PARTY OF THE PA					pling Point: _£	
	_ Lat: 34°	13' 35.861"	Long: - 118	42 19.	140 Datum:	W688
SEDIMENTAR	7 Rock	UND	NW.	/I classification:		45
the site typical for thi	s time of year?	Yes No_	× (If no, ex	plain in Remark	(S.)	
						No
						tures, etc
					-	201.00 1.500
		within a Wetlan	d?	Yes	No	
			2.2			
o pero		= - Inon	er pan	7011027	min.	
fic names of plan						
Y	% Cover S	Dominant Indicator Species? Status				
		200.00			s C Z	(A)
			100000000000000000000000000000000000000		Ÿ	
			The state of the s		7	(B)
	1 - 3					(0)
- 7		Total Cover			c. 100	(A/B)
2m2)						(700)
LICIFOLIA	5/6	7 FACW			2,5%	
			THE STATE OF THE STATE OF			
	3/6=	Total Cover				
41205175	5	Y FACE				
The state of the s			Column Tota	Is:	(A)	(B)
			Prevale	ence Index = B	/A =	
			Dominar	nce Test is >50°	%	
			The second second		Sec.	
	10		Morphol	ogical Adaptatio	ons' (Provide s	supporting
	5%:	Total Cover	Problem	atic Hydrophyti	c Vegetation (Explain)
			5.00			
			be present, t	mess distorbed	or probleman	L.
	=	Total Cover				
% Cov	er of Biotic Cru	st	Present?	Yes	+ No	
DEAD :	STEMS	or sei	e pus	THROW	OHEUT	
			e 700	15/-		
	TERRICE SEDIMENTAP In the site typical for this or Hydrology	TERRICE Lot: 34° SEDIMENTARY ROCK In the site typical for this time of year? or Hydrology significantly distor Hydrology naturally proble Attach site map showing satisfies the problem of	Local relief (concave, o Lat: 34° 13' 35.861" SEDIMENTARY ROCK LAND In the site typical for this time of year? Yes No or Hydrology significantly disturbed? Are "to relydrology naturally problematic? (If ner Attach site map showing sampling point to Yes No Yes No Is the Sampled within a Wetlan Yes No Within a Wetlan RHINFALL TO RATE - IHCH ROCOVER Species? Status Absolute Dominant Indicator % Cover Species? Status	Lat: 34° 13' 35. 861" Long: -118 SEDIMENTARY ROCK LAND NW In the site typical for this time of year? Yes No (If no, ex or Hydrology significantly disturbed? Are "Normal Circums or Hydrology naturally problematic? (If needed, explain a Attach site map showing sampling point locations, training the sampled Area within a Wetland? Yes No site the Sampled Area within a Wetland? Yes No Secret To RATE - IMCHAY MA Absolute Dominant Indicator Number of Data Are OBI That Are	Local relief (concave, convex, none):	Attach site map showing sampling point locations, transects, important feat Yes No Is the Sampled Area within a Wetland? Yes No No Species? Status Absolute Dominant Indicator % Cover Species? Status Absolute Dominant Indicator % Cover Species? Status Absolute Dominant Indicator % Cover Species? Status Total Number of Dominant Species That Are OBL, FACW, or FAC: Z Total Number of Dominant Species That Are OBL, FACW, or FAC: Z Total Number of Dominant Species That Are OBL, FACW, or FAC: Z Total Number of Dominant Species That Are OBL, FACW, or FAC: Z Fercent of Dominant Species That Are OBL, FACW, or FAC: Joe OBL, FACW, or FAC:

US Army Corps of Engineers

Arid West - Version 2.0

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3	u	12	

Sampling Point: ZZA -5P- I

Depth (inches)	Color (moist)	%	Color (moist)	ox Features %	Type	Loc	Texture	Remarks
0-2"	ICYR3/2	100%		-			Oi .	FINELY LAYERED
								CREATIC MATTERIAL
								M FINE SAND / SILT
2-6"	1C7 × 3/2	60%					LFS	- MIXED SAND, LOOSE
	1077 5/4	40%					LFS	MASSINE
							-	
6-19"	1CY \$3/2	90%	10782/1	2%		<u>M</u>	FSL	MMSBK, FZ
			1C78.4/4.	8%	-	P/PL		
	oncentration, D=De					ed Sand G		ocation: PL=Pore Lining, M=Matrix.
	Indicators: (Appli	cable to all			ia.)			rs for Problematic Hydric Soils3:
_ Histosol			Sandy Rec					Muck (A9) (LRR C)
	oipedon (A2)		Stripped N		1541			Muck (A10) (LRR B)
_ Black His				cky Mineral	2000			uced Vertic (F18)
	n Sulfide (A4)	CI		eyed Matrix	(1-2)			Parent Material (TF2)
	Layers (A5) (LRR	C)		Matrix (F3)	Ee\		Othe	r (Explain in Remarks)
	ick (A9) (LRR D)	00 (411)		rk Surface (Dark Surfac				
	d Below Dark Surfa	(A11)		pressions (F			3 _{Indicator}	rs of hydrophytic vegetation and
	ark Surface (A12) fucky Mineral (S1)		Vernal Po		3/			d hydrology must be present,
	Sleyed Matrix (S4)		vental Po	us (Fa)				disturbed or problematic.
	Layer (if present):				-		uness	distarbed of problematic.
	POPE							
Depth (Inc			_				11	oil Present? Yes X No
	- PEPCK DAN	with	FACE 6	SAPET		mean.	ma ner	12 INCITES 15 Mark POOT
	,	with	ANNECS &	SAPET			ma ner	
YDROLO		with	+ 872 p	SAPET		mean.	ma ner	
		cut.	+ 872 p	SAPET		mean.	ma ner	
Vetland Hy	GY	CH.	+ 8% pi	SPECT PO		mean.	ns ner	
Vetland Hyd	GY drology Indicators	CH.	+ 8% pi	SAFET Per		mean.	ns ner	S Mark 12007
Vetland Hyd Primary Indic Surface	GY drology Indicators cators (minimum of	CH.	# 872 pri	SAFET Per		mean.	ns ner	condary Indicators (2 or more required) Water Marks (B1) (Riverine)
Vetland Hyd Primary Indic Surface High Wa	GY drology Indicators calors (minimum of Water (A1) tler Table (A2)	CH.	d; check all that app	ply)	re i	mean.	ns ner	condary Indicators (2 or more required) Water Marks (81) (Riverine) Sediment Deposits (82) (Riverine)
Primary Indic Surface High Wa	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3)	Cat -	d; check all that app	ply) st (B11) ust (B12) invertebrate	s (B13)	mean.	ns ner	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Netland Hyd Primary Indic Surface High Wa Saturatio	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive	Cat -	d; check all that app	ply) st (B11) ust (B12) invertebrate n Sulfide Oc	s (B13)	- 84 (14)	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Primary Indice Surface High Wa Saturatic Water M Sedimer	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (N	cat -	d; check all that app	ply) st (B11) ust (B12) invertebrate n Sulfide Oc	s (B13) dor (C1) res along	Living Ro	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (Noposits (B3) (Nonriv	cat -	d: check all that apply Saft Crus Saft Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence	ply) st (B11) ust (B12) Invertebrate in Sulfide Oci Rhizospheie	s (B13) dor (C1) res along d Iron (C	Living Ro	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Primary Indic Surface High Wa Saturatic Water M Sedimer Drift Dep Surface	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6)	cone required erine) onriverine)	d: check all that apply a solid crus Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent Ii	ply) st (B11) ust (B12) Invertebrate in Sulfide Oci Rhizospheie of Reduce	s (B13) dor (C1) res along d Iron (Con in Tillo	Living Ro	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Vetland Hydromary Indice Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundation	GY drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) on Visible on Aerial	cone required erine) onriverine) erine)	d: check all that app Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent In	ply) st (B11) ust (B12) Invertebrate in Sulfide Oci Rhizospheie of Reduce ron Reduction	s (B13) dor (C1) res along d Iron (C on in Tilla C7)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Netland Hyderimary Indice Surface High Wa Saturatice Water M Sedimer Drift Dep Surface Inundatic Water-S	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial stained Leaves (B9)	cone required erine) onriverine) erine)	d: check all that apply a solid crus Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent Ii	ply) st (B11) ust (B12) Invertebrate in Sulfide Oci Rhizospheie of Reduce ron Reduction	s (B13) dor (C1) res along d Iron (C on in Tilla C7)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Netland Hyderimary Indice Surface High Wa Saturatice Water M Sedimer Drift Dep Surface Inundatic Water-S Field Observing	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations:	one required one required onriverine) erine) I imagery (B	d: check all that app Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent In Thin Muc	ply) st (B11) ust (B12) invertebrate in Sulfide Ox Rhizosphete of Reduce ron Reducti ck Surface (xplain in Re	s (B13) dor (C1) res along d Iron (C on in Tillo (C7) marks)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Wetland Hyderimary Indice Surface High Waler M Sedimer Drift Dep Surface Inundation Water-S Field Observal	GY drology Indicators calors (minimum of Water (A1) aler Table (A2) on (A3) larks (B1) (Nonrive at Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present?	cone required prine) contiverine) erine) limagery (Bi	d; check all that app Saft Crus Biotic Crus Aquatic I Hydroget Oxidized Presence Recent In Thin Muc	ply) st (B11) ust (B12) Invertebrate in Sulfide Oc Rhizospheie of Reducet ck Surface (xplain in Re	s (B13) dor (C1) res along d Iron (C on in Tilli C7) marks)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Wetland Hydeling Surface High Waler M Sedimer Drift Dep Surface Inundation Water-S Field Observibutes Water Table	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present?	one required onriverine) erine) I Imagery (B: Yes	d; check all that apply a Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent II Thin Muc Other (E	ply) st (B11) ust (B12) invertebrate in Sulfide Oci Rhizospheie of Reduce ron Reduction ck Surface (explain in Re inches): inches):	s (B13) dor (C1) res along d Iron (C on in Tilli C7) marks)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Vetland Hyderimary Indice Surface High Waler M Sedimer Drift Dep Surface Inundation Water-S Field Observing Nater Table Saturation Preserving	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aeria tained Leaves (B9) vations: er Present? Present?	one required onriverine) erine) I Imagery (B: Yes	d; check all that app Saft Crus Biotic Crus Aquatic I Hydroget Oxidized Presence Recent In Thin Muc	ply) st (B11) ust (B12) invertebrate in Sulfide Oci Rhizospheie of Reduce ron Reduction ck Surface (explain in Re inches): inches):	s (B13) dor (C1) res along d Iron (C on in Tilli C7) marks)	Living Ro	Sec 	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Netland Hyderimary Indices Surface High Wasaturatices Water M Sedimer Drift Dep Surface Inundatices Water-SField Observibutes Vater Table Saturation Princludes capital	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present?	cone required erine) onriverine) erine) Hangery (B) Yes Yes Yes	d; check all that app Salt Crus Biolic Cru Aquatic I Hydroget Oxidized Presence Recent II Thin Muc Other (E)	ply)	s (B13) dor (C1) res along d Iron (C on in Tillo (C7) marks)	Living Ro	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Surface High Wa Saturatic Water M Sedimer Drift Dep Surface Inundatic Water-S Field Obsert Surface Water Water Table Saturation Princludes cap Describe Rec	GY drology Indicators cators (minimum of Water (A1) alter Table (A2) on (A3) larks (B1) (Nonrive at Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations: er Present? Present? present?	cone required erine) onriverine) erine) Hangery (B) Yes Yes Yes	d; check all that app Salt Crus Biolic Cru Aquatic I Hydroget Oxidized Presence Recent II Thin Muc Other (E)	ply)	s (B13) dor (C1) res along d Iron (C on in Tillo (C7) marks)	Living Ro	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyderimary India Surface High Waler M Sedimer Drift Dep Surface India Water-S Field Obsert Surface Water Water Table Saturation Princludes cap Describe Rec	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive at Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? resent? pillary fringe) corded Data (streat	cone required erine) onriverine) erine) Yes Yes m gauge, mo	d: check all that app Salt Crus Biotic Cru Aquatic I Hydrogei Oxidized Presence Recent In Thin Muc Other (E	ply) st (B11) ust (B12) Invertebrate n Sulfide Ox Rhizosphet e of Reduce ron Reducti ck Surface (xplain in Re inches): inches): inches):	s (B13) dor (C1) res along d Iron (C con in Tille C7) marks)	Living Ro	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Wetland Hyde Primary Indices Surface High Was Saturation Prift Dep Surface Inundation Water-Surface Water Table Saturation Princludes car Describe Remarks:	GY drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonrive nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aeria stained Leaves (B9) vations: er Present? Present? resent? pillary fringe) corded Data (streat	cone required si: one required prine) onriverine) limagery (Bi) Yes Yes m gauge, mo	d: check all that apply a safe control of the contr	ply) st (B11) ust (B12) Invertebrate in Sulfide Oc Rhizosphere of Reduce ron Reduction ck Surface (explain in Re inches): inches): inches): inches):	s (B13) dor (C1) res along d Iron (C on in Tille C7) marks)	Living Rock4) ed Soils (Ci	Seconds (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

roject/Site: <u>CSF4 RZA - POWD</u> pplicant/Owner: <u>MASA</u>		only/ Coding			Sampling Date: 1/5/201 Sampling Point: 1224-57-
westigator(s): R. Huppus star, S.Len					
				2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	
andform (hillslope, terrace, etc.): TERN-CE				and the same of the same of the same of	
ubregion (LRR):	3 2 2 2 2 2				
oil Map Unit Name: SUG - SEPIMENTAR	7 soul	e u	~ワ	NWI class	sification:
e climatic / hydrologic conditions on the site typical for this	time of yea	r? Yes_	No _	(If no, explain i	n Remarks.)
re Vegetation, Soil, or Hydrologys	ignificantly (disturbed?	Are *	Normal Circumstance	es" present? Yes 🗡 No
re Vegetation, Soil, or Hydrology n	aturally pro	blematic?	(If ne	eded, explain any ans	swers in Remarks.)
UMMARY OF FINDINGS - Attach site map	showing	samplin	g point l	ocations, transe	cts, important features, etc
Hydrophytic Vegetation Present? Yes N Hydric Soil Present? Yes N Wetland Hydrology Present? Yes N	•	22.2	ne Sampled nin a Wetlar		NoX
Remarks: BELOW ANE RAIN FAR	e.C.				
EGETATION – Use scientific names of plan				•	
Tree Stratum (Plot size: 10m²)	Absolute % Cover	10 15 month (500)	Indicator Status	Dominance Test w	
1. GUERCUS ACRIFOLIA	111111			Number of Dominar That Are OBL, FAC	
2.	1				
3.				Total Number of Do Species Across All	
4					
Sapling/Shrub Stratum (Plot size: 5m²)	70%	= Total C	over	Percent of Dominar That Are OBL, FAC	
1. CUERCUS AGRIFOLIA	Zolo	4	NL	Prevalence Index	worksheet:
2. BACCHARIS SALISIFOLIA	70%		FAW	Total % Cover	of: Multiply by:
3. BACCHAPOIS PILVLAPOIS	10%		M	OBL species	×1=
4. TOXICODERDIREN DIVERSILOBU	110%		ML	FACW species	x2=
5				A Committee of the Comm	x 3 =
Herb Stratum (Plot size: /m²)	60%	= Total C	over	by the first state of the property of the same of	x4=
1. Browns DIATPRUS	10%	Y	w.	The second of th	x5=
2. PHACELIA RAMOSISSIMA		Y		Column Totals:	(A)(B)
3.	10-0	-/-		Prevalence in	ndex = B/A =
4. PIPTATHERUM MILIACEUM	1%		NL	Hydrophytic Vege	2227 - 22 - 22
5. CIRSIUM OCLIDENTALE	1%		NL	Dominance Te	st is >50%
6. CARPHUS PTCNOCEPHACUS			ML	Prevalence Inc	lex is ≤3.0 ^t
7					Adaptations* (Provide supporting
8				2 Control 22 Control 22 Control	narks or on a separate sheet)
	- so	= Total C	over	Problematic Hy	ydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size:)	20%			Daniel and the same	
1					c soil and wetland hydrology must disturbed or problematic.
2		-			
% Bare Ground in Herb Stratum ~ % % % Cove	r of Biotic C	= Total C	200	Hydrophytic Vegetation Present?	Yes No _
Damadai /				7,100	NAME OF THE OWNER OWNER OF THE OWNER
LEST LITTER ABUT	PANT	TAR	offer	AREA.	

US Army Corps of Engineers

Arid West - Version 2.0

	ription: (Describe	to the dept				or confirm	m the absenc	e of indicators.)
Depth inches)	Color (moist)	%	Color (moist)	x Feature	Type	Loc ²	Texture	Remarks
O-Z	107F 3/2	100%	Color (moist)		1100		LFS	
0-2	1011-12	10076	-	-		-	47	VW-FINE SBK -> GRAND.
2		709						UFR-SO ZUZ FINE POUTS
2-14"	16794/1		MIKED	-		-	LES	WMSBK VFR, COARSE
_	10784/4	30%				-	-	TO UF ROCTS 5%
14-24	10784/3	100%					LES	MASSINE, GRAP
							· / 	1%. F-11 POOTS
Type: C=C	oncentration, D=De	oletion RM=	Reduced Matrix C	S=Covere	ed or Coate	ed Sand G	Grains ² L	ocation: PL=Pore Lining, M=Matrix.
	Indicators: (Applie					ou ound c		rs for Problematic Hydric Soils ³ :
Histosol	A CALL TO SERVICE AND		Sandy Red				1 cm	Muck (A9) (LRR C)
	pipedon (A2)		Stripped M	La Petra XV				Muck (A10) (LRR B)
	stic (A3)		Loamy Mu					uced Vertic (F18)
	en Sulfide (A4)		Loamy Gle					Parent Material (TF2)
Stratifier	Layers (A5) (LRR	C)	Depleted M	latrix (F3)			Othe	er (Explain in Remarks)
	ick (A9) (LRR D)		Redox Dar	k Surface	(F6)			
Depleter	d Below Dark Surfa	ce (A11)	Depleted D					
Thick Da	ark Surface (A12)		Redox Dep	ressions	(F8)		3Indicator	rs of hydrophytic vegetation and
	Mucky Mineral (S1)		Vemal Poo	ls (F9)			wetlan	d hydrology must be present,
The second second	Sleyed Matrix (S4)						unless	disturbed or problematic.
Restrictive	Layer (if present):							
Charles and a second								
Type:	NE		-				1	and the second
Type: Depth (in	mE ches): 72	y"	_				Hydric Sc	oil Present? Yes No
Type:		y"					Hydric Sc	oil Present? Yes No
Type: Depth (in		y"		-			Hydric Sc	oil Present? Yes No
Type: Depth (in		y"					Hydric So	oil Present? Yes No
Type: Depth (in		y"					Hydric Sc	oil Present? Yes No
Type:	ches): 724						Hydric Sc	oil Present? Yes No
Type:	ches):	35					4	
Type:	ches): 724	35	; check all that app	ly)			4	condary Indicators (2 or more required)
Type:	ches):	35	f; check all that app	1723.7 07			4	
Type:	ches): Ze GY drology Indicators calors (minimum of	35	F 5.37 1 70 10	(B11)			4	condary Indicators (2 or more required)
Type:	oGY drology Indicators calors (minimum of Water (A1) ater Table (A2)	35	Sall Crus	(B11) st (B12)	les (B13)		4	condary Indicators (2 or more required) Water Marks (B1) (Riverine)
Type:	oGY drology Indicators calors (minimum of Water (A1) ater Table (A2)	s: one required	Salt Crus Biotic Cru	(B11) st (B12) ivertebral			4	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Type:	oGY drology Indicators calors (minimum of Water (A1) alter Table (A2) on (A3)	s: one required	Salt Crus Biotic Cru Aquatic Ir Hydrogen	(B11) st (B12) ivertebrat Sulfide (ı Living Ro	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive	one required erine) portiverine)	Salt Crus Biotic Cru Aquatic Ir Hydrogen Oxidized	(B11) st (B12) ivertebral Sulfide (Rhizosph	Odor (C1)		Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10)
Type:	drology Indicators calors (minimum of Water (A1) alter Table (A2) on (A3) darks (B1) (Nonrive nt Deposits (B2) (No	one required erine) portiverine)	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence	(B11) st (B12) overtebrate Sulfide (Rhizosph of Reduc	Odor (C1) eres along	(4)	Sec	wondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2)
Type:	drology Indicators calors (minimum of Water (A1) alter Table (A2) on (A3) darks (B1) (Nonrive nt Deposits (B2) (Nonrive posits (B3) (Nonrive	one required erine) onriverine) erine)	Sall Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In	(B11) st (B12) ivertebral Sulfide (Rhizosph of Reduction Reduction	Odor (C1) eres along ed Iron (C tion in Tille	(4)	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial	one required erine) onriverine) erine)	Sall Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In Thin Muc	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduce Reduce Surface	Odor (C1) eres along ed Iron (C tion in Tille (C7)	(4)	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) darks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9)	one required erine) onriverine) erine)	Sall Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent In	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduce Reduce Surface	Odor (C1) eres along ed Iron (C tion in Tille (C7)	(4)	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial stained Leaves (B9) vations:	one required erine) onriverine) erine)	Sall Crus Biotic Cru Aquatic Ir Hydrogen Oxidized Presence Recent Ir ') Thin Muc Other (Ex	(B11) st (B12) svertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R	Odor (C1) eres along ed Iron (C tion in Tille (C7) temarks)	A) ed Soils (C	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) vations:	one required erine) onriverine) erine) i Imagery (B7	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent In 7) Thin Muc Other (Ex	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R	Odor (C1) eres along æd Iron (C tion in Tille (C7) temarks)	:4) ed Soils (C	Sec	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial Stained Leaves (B9) vations: ler Present?	one required erine) contiverine) erine) i Imagery (Bi	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent In Thin Muc Other (Ex	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R	Odor (C1) eres along ed Iron (C tion in Tille (C7) temarks)	(A) ed Soils (C	Doots (C3)	wondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial stained Leaves (B9) vations: ler Present?	one required erine) contiverine) erine) i Imagery (Bi	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent In 7) Thin Muc Other (Ex	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R	Odor (C1) eres along ed Iron (C tion in Tille (C7) temarks)	(A) ed Soils (C	Doots (C3)	condary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3)
Type:	drology Indicators calors (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive Int Deposits (B2) (Nonrive Int Deposits (B3) (Nonrive Int Deposits (B3) (Nonrive Int Deposits (B6) (Nonrive Int Depos	one required prine) pontiverine) di imagery (Bi yes yes yes	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent In Thin Muc Other (Ex	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R aches): aches):	Odor (C1) eres along sed Iron (C tion in Tilk (C7) temarks)	(A) ed Soils (C	Sec 	wondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)
Type:	drology Indicators cators (minimum of Water (A1) ater Table (A2) on (A3) Marks (B1) (Nonrive nt Deposits (B2) (Nonrive Soil Cracks (B6) ion Visible on Aerial stained Leaves (B9) vations: ler Present?	one required prine) portiverine) di Imagery (Bi Yes Yes Yes	Sall Crus Biotic Cru Aquatic Ir Hydroger Oxidized Presence Recent In Thin Muc Other (Ex	(B11) st (B12) avertebral Sulfide (Rhizosph of Reduc on Reduc k Surface plain in R aches): aches):	Odor (C1) eres along sed Iron (C tion in Tilk (C7) temarks)	(A) ed Soils (C	Sec 	wondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C9 Shallow Aquitard (D3) FAC-Neutral Test (D5)

oject/Site: SSFL PZB Portoplicant/Owner: NASA	City/		State: A Samplir	
vestigator(s): R. HUDDLESTON, S. L.	CNE SOM			
· · ·				
ndform (hillslope, terrace, etc.): TERNYCE				
bregion (LRR):				
il Map Unit Name: <u>SuG - SERIMENT</u>	ARY ROCK	e ump	NWI classification:	MONE
e climatic / hydrologic conditions on the site typical for t	this time of year?	Yes No _	(If no, explain in Remarks.))
e Vegetation, Soil, or Hydrology				The second secon
Vegetation, Soil, or Hydrology	_ naturally problem	natic? (If ne	eded, explain any answers in Rer	marks.)
JMMARY OF FINDINGS - Attach site ma	p showing sa	mpling point l	ocations, transects, impo	rtant features, etc
Hydrophytic Vegetation Present? Yes	No		No.	
Hydric Soil Present? Yes X		Is the Sampled		
Wetland Hydrology Present? Yes		within a Wetlai	nd? Yes X No	` —
Remarks: BELOW AVE RAINFALL POND	- TE PA	ME -	constitucted im	POUNDMENT
EGETATION – Use scientific names of pla	ants.		~~	
P. D. J. Maria		ominant Indicator	Dominance Test worksheet:	
Tree Stratum (Plot size:)	% Cover St	ecies? Status	Number of Dominant Species That Are OBL, FACW, or FAC:	_Z(A)
			That Are OBL, FACW, or FAC:	(A)
3.		· · · · · · · · · · · · · · · · · · ·	Total Number of Dominant	3 (8)
			Species Across All Strata:	
Y		Total Cover	Percent of Dominant Species That Are OBL, FACW, or FAC:	66% (A/B
Sapling/Shrub Stratum (Plot size: 2 m 2)			mat Are ODL, FACW, OF FAC.	(A/B
SALIX LASIOLE PIS			Prevalence Index worksheet:	
BACCHARIS SALICIFOLIA	20%	7 FACEN	Total % Cover of:	
8			OBL species	737
l			FACW species	
·	40% =		FACILITIES	
Herb Stratum (Plot size:)	40/0=	Iotal Cover	FACU species UPL species	
1. BRASSICA MIGRA	27	y NL	Column Totals:	
2			Column rotals.	(0)
3			Prevalence Index = B/A	
			Hydrophytic Vegetation India	ators:
5			★ Dominance Test is >50%	
5			Prevalence Index is ≤3.0 ^t	
7			Morphological Adaptations data in Remarks or on	(Provide supporting
3			Problematic Hydrophytic V	D. T. B. C. LOBY SERVED STREET, S.
Woody Vine Stratum (Plot size:)	2/0=	Total Cover		-30-0000
1			¹ Indicators of hydric soil and w	etland hydrology must
2.			be present, unless disturbed or	
	-	Total Cover	Hydrophytic	
% Bare Ground in Herb Stratum 95% % Co	over of Biotic Crus	ACTION AND ACTION AND ACTION	Vegetation	No
	TVOLOT DIOTIC CIUS		Present? Yes X	_ No
Remarks: SPARSE BRASSICA CO-	mine .	NE THE	E BAGES - BLT	land
WATER LEVEL IN PER		TIME :	e men	
	1		2 CALLY	

G-87

rofile Desc	ription: (Describe	to the depti	needed to doc	ument the indicator or	confirm the absence	Sampling Point: /CZB - 5 of indicators.)
Depth	Matrix			dox Features		
inches)	Color (moist)	%	Color (moist)		Loc ² Texture	Remarks
1-5"	2.574/2	100%			- F5L	MOIST, SOFT WMSBLE
						8% POOTS FLM
			-			
				CS=Covered or Coated:		cation: PL≃Pore Lining, M=Matrix.
dric Soil I	Indicators: (Applic	able to all L	RRs, unless ot	nerwise noted.)	Indicators	for Problematic Hydric Soils ³ :
_ Histosol	(A1)		Sandy R	edox (S5)		Muck (A9) (LRR C)
	pipedon (A2)			Matrix (S6)		Muck (A10) (LRR B)
	stic (A3)			lucky Mineral (F1)		ced Vertic (F18)
The second secon	in Sulfide (A4) d Layers (A5) (LRR (-1		leyed Matrix (F2) Matrix (F3)	100000000000000000000000000000000000000	arent Material (TF2) (Explain in Remarks)
	ick (A9) (LRR D)	-)		ark Surface (F6)	Z Other	(Explain in Remarks)
The second second	Below Dark Surfac	e (A11)		Dark Surface (F7)		
	ark Surface (A12)	- 10.55.00		epressions (F8)	3Indicators	of hydrophytic vegetation and
	Mucky Mineral (S1)		Vemal P	ools (F9)		hydrology must be present,
						my broken ji mest be present,
_ Sandy G	Sleyed Matrix (S4)					disturbed or problematic.
estrictive l	Layer (if present):					
estrictive l		SArroste	re Bourse	Z		
testrictive I	Layer (if present):	SAMOSTE	re Bourpe)	2	unless	
estrictive I	Layer (if present): BEDROCUL/ ches): 4-5"	· · · · · · · · · · · · · · · · · · ·			unless o	I Present? Yes X No
Type: Depth (in	Layer (if present): BEDROCUL/ ches): 4-5"	· · · · · · · · · · · · · · · · · · ·			unless o	disturbed or problematic.
estrictive I Type: Depth (in	Layer (if present): BEDROCK! ches): 4-5" APPR:×	1% 16	CYR8/1 /	N LLUSIONS	Hydric Soll	I Present? Yes X No
estrictive I Type: Depth (in	Layer (if present): BEDEOCULI Ches): 4-5" APPROX TIMS LO	1% 16 CATRON	CYRB/I	NILUSIONS E COARSE S	Hydric Soil NOTED IN NOTED IN	I Present? Yes X No
estrictive I Type: Depth (inverses) emarks:	APPROXY THE LO	1% 16 CATION	CYRB/I	NILUSIONS E COARSE S	Hydric Soll	I Present? Yes X No
estrictive I Type: Depth (incernarks:	APPROXY THE LO	1% 16 CATRON	CYRB/I	NILUSIONS E COARSE S	Hydric Soil NOTED IN NOTED IN	I Present? Yes X No
Type: Depth (invernants:	APPROXY THE LO	1% 16 C476N 75 B	CYRB/I	NILUSIONS E COARSE S	Hydric Soil NOTED IN NOTED IN	I Present? Yes X No
Type: Depth (invernance:	Layer (if present): BEDEOCULI Ches): 4-5" APPROX TIMS LO INFILATE!	1% 16 CATION 75 BO	TRACE	NILUSIONS E COARSE S T IS WITH	Hydric Soli NATED , N AND, NO ,	I Present? Yes X No
Type: Depth (invernarks: DROLO Setland Hydrimary Indicators)	Layer (if present): BEDROCK / Ches): 4 - 5 " APPROX THS LO IMPLATE: GY drology Indicators:	1% 16 CATION 75 BO	TRACE POINT	NILUSIONS E COARSE S T IS WITH	Hydric Soli NATED , N NATED , N N N N N N N N N N N N N N	Present? Yes X No
Type: Depth (incernarks: DROLO Setland Hydrimary Indic_ Surface	APPROXIMATE THE COMPANY APPROXIMATE APPRO	1% 16 CATION 75 BO	CYRB/I TRACE T POIN check all that a Salt Cri	PICLUSIONS E COARSE S T IS WITH	Hydric Soll NATED , N Seco	I Present? Yes X No No No Present? Yes X No
Depth (incernarks: DROLO etland Hydrimary India Surface	APPROXY APPROXY APPROXY THS LO IMPLATE: GY drology Indicators: cators (minimum of co Water (A1) ater Table (A2)	1% 16 CATION 75 BO	cyrell / TRACE T Point check all that a Salt Cn Biotic Co	POLUSIONS E COARSE S T IS WITH	Hydric Soll NATED , NO , NAT	I Present? Yes X No No No Present? Yes X No
Depth (incernarks: Depth (incernarks: DROLO etland Hydrimary Indice Surface High Wa Saturation	APPROXY APPROXY APPROXY THS LO IMPLATE: GY drology Indicators: cators (minimum of co Water (A1) ater Table (A2)	1% 18 C4-76 N 7-S 80 One required	check all that a Salt Cri Biotic C	POLUSIONS COARSE S T IS WITH POPLY JUST (B11) Crust (B12)	Hydric Soll NATED IN NATED IN NATED IN Second Second Second	I Present? Yes X No
Depth (incernarks: Depth (incernarks: DROLO Type: Depth (incernarks: Depth (APPROXY APPROXY APPROXY THS LO IMPLATE: GY drology Indicators: cators (minimum of c) Water (A1) ater Table (A2) on (A3)	1% 18 C476N 75 80 One required	check all that a Salt Cri Biotic C Aquatic Hydrog	pply) ust (B11) crust (B12) en Sulfide Odor (C1)	Hydric Soll NATED IN NATED IN NATED IN Second Sec	I Present? Yes X No
Depth (incernarks: Depth	APPROXY APPROXY APPROXY THS LO IMPLATED GY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver	C476N C476N C75 B4 One required	; check all that a Salt Cri Biotic Ci Aquatic Hydrog Oxidize	pply) ust (B11) crust (B12) en Sulfide Odor (C1)	Hydric Soll NETED , NO , NATED , NO , NATED , NO , NATED , NO , Second Sec	I Present? Yes X No X N
Depth (incernarks: Depth	APPROXY APPROXY APPROXY THS LO IMPLATED GY drology Indicators: cators (minimum of co Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver int Deposits (B2) (No	C476N C476N C75 B4 One required	; check all that a Salt Cri Biotic C Aquatic Hydrog Oxidize Presen	E COARSE S T IS WITTH pply) ust (B11) crust (B12) Invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Lir	Hydric Soll NETED IN NATED IN Second Second Ving Roots (C3) _ C	I Present? Yes X No THE 56/L IN HYNDRIC 56/L OF ParD Inday Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Ordinage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8)
Depth (incernarks: Depth (incernarks: DROLO Vetland Hydrimary India Surface High Water M Sediment Drift Depth Surface	APPR CATALOR OF THE LOCATOR OF THE L	c476 N 7.5 B one required ine) rine)	check all that a check all that a Salt Cri Biotic C Aquatic Hydrog Oxidize Present Recent	poly) ust (B11) invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Lir ce of Reduced Iron (C4)	Hydric Soll N-TED , No , Second and No , Sec	I Present? Yes X No THE 5elL IN HYDIRIC 5elL OF PanD Inday Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Oralinage Patterns (B10) Ory-Season Water Table (C2)
Depth (incernarks: Depth	APPR CATALOR APP APPR CATALOR A	c476 N 7.5 B one required ine) rine)	check all that a check all that a Salt Cri Biotic C Aquatic Hydrog Oxidize Present Recent Thin Mi	pply) ust (B11) crust (B12) en Sulfide Odor (C1) d Rhizospheres along Lice of Reduced Iron (C4) Iron Reduction in Tilled 3	Hydric Soll N-TED , No , N-TED , No , N-TED , No , N-TED , No , Second Sec	I Present? Yes X No THE 5elL IN HYDIRIC 5elL OF PanD Inday Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Ordinage Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C3)
Depth (incernarks: Depth	APPR CX TIMS LO INFORMATION APPR CX TIMS LO INFORMATION GY drology Indicators: cators (minimum of of Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver Int Deposits (B2) (No posits (B3) (Nonriver Soil Cracks (B6) on Visible on Aerial stained Leaves (B9)	c476 N 7.5 B one required ine) rine)	check all that a check all that a Salt Cri Biotic C Aquatic Hydrog Oxidize Present Recent Thin Mi	pply) ust (B11) invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Lir ce of Reduced Iron (C4) Iron Reduction in Tilled 3 uck Surface (C7)	Hydric Soll N-TED , No , N-TED , No , N-TED , No , N-TED , No , Second Sec	I Present? Yes X No THE 5elL IN HYDIRIC 5elL Mary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orange Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C: Shallow Aquitard (D3)
Depth (inverse in a constructive in a constructi	APPR CX APPR CX THS CO IN PLATE: GY drology Indicators: cators (minimum of c) Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial stained Leaves (B9) vations:	c4-76-14 7-5 8-4 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8-5 2-5 8	check all that and check all that all that and check all that and chec	pply) ust (B11) invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Lir ce of Reduced Iron (C4) Iron Reduction in Tilled 3 uck Surface (C7)	Hydric Soll NATED , NO PARTO , N	I Present? Yes X No THE 5elL IN HYDIRIC 5elL Mary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orange Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C: Shallow Aquitard (D3)
PROLO Petland Hydrimary Indic Surface High Water M Sedimer Surface Inundati Water-Sield Obser	APPR CX APPR CX THS CO APPR CX THS CO IN PLATE! GY drology Indicators: cators (minimum of c) Water (A1) ater Table (A2) on (A3) larks (B1) (Nonriver nt Deposits (B2) (No posits (B3) (Nonrive Soil Cracks (B6) on Visible on Aerial clained Leaves (B9) vations: er Present?	c476 M C476 M C5 84 One required ine) rine) Imagery (B7	check all that a check all that a Salt Cri Biotic C Aquatic Hydrog Oxidize Present Recent Thin Mi Other (I	pply) ust (B11) trust (B12) en Sulfide Odor (C1) d Rhizospheres along Li ce of Reduced Iron (C4) Iron Reduction in Tilled 3 uck Surface (C7) Explain in Remarks)	Hydric Soll NATED , NO PARTO , N	I Present? Yes X No THE 5elL IN HYDIRIC 5elL Mary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orange Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Shallow Aquitard (D3)
Depth (incemarks: /DROLO /etland Hydrimary India _ Surface _ High Water M _ Sedimer X Drift Depth (incemarks: Surface S	Layer (if present): BEDROCK / Ches): 4 - 5 " APPR < X THS LO IN PLATE! GY drology Indicators: cators (minimum of of of other (A1) ater Table (A2) on (A3) larks (B1) (Nonriver (A3) larks (B3) (Nonriver (B3) (No	one required ine) rine) tmagery (B7	check all that a check all that a Salt Cn Biotic C Aquatic Hydrog Oxidize Present Recent Thin Mi Other (i	poly) po	Hydric Soll NATED IN NATED IN NATED IN Second Sec	I Present? Yes X No X N
PROLO Petland Hydrimary Indic Surface High Water M Sedimer Surface Inundati Water-S ield Observariace Water Table alteration P	Layer (if present): BEDROCK / Ches): 4 - 5 " APPR < X THS LO IN PLATE! GY drology Indicators: cators (minimum of of of other (A1) ater Table (A2) on (A3) larks (B1) (Nonriver (A3) larks (B3) (Nonriver (B3) (No	one required ine) rine) tmagery (B7	check all that a check all that a Salt Cn Biotic C Aquatic Hydrog Oxidize Present Recent Thin Mi Other (i	pply) pply) pst (B11) crust (B12) invertebrates (B13) en Sulfide Odor (C1) d Rhizospheres along Lice of Reduced Iron (C4) Iron Reduction in Tilled Suck Surface (C7) Explain in Remarks)	Hydric Soll NATED IN NATED IN NATED IN Second Sec	I Present? Yes X No THE 5elL IN HYDIRIC 5elL Mary Indicators (2 or more required) Nater Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Orift Deposits (B3) (Riverine) Orange Patterns (B10) Ory-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C5) Shallow Aquitard (D3)

2 be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No	pplicant/Owner: MASA			State: 4 Sampling Point: R2B-5
thregion (LRR): Lat: 34" 13' 55. 223" Long: 186				The second secon
See climate Provided Provid	andform (hillslope, terrace, etc.): TEPRACE	Lo	cal relief (concave, c	onvex, none): NOPE Slope (%): 0-5
e climátic / hydrologic conditions on the site typical for this time of year? Yes	bregion (LRR):	Lat: 34 1.	3' 35. 223"	Long: -118 42 25.335" Datum: W65
e climatic / hydrologic conditions on the site typical for this time of year? Yes	il Map Unit Name: Suc - SEDIMENTAR	7 Pour	UND	NWI classification:
e Vegetation Soil or Hydrology significantly disturbed? Are "Normal Circumstances" present? Yes No vegetation Soil or Hydrology naturally problematic? (If needed, explain any answers in Remarks.) UMMARY OF FINDINGS – Attach site map showing sampling point locations, transects, important features, epydrophylic Vegetation Present? Yes No Walland Hydrology Multiply Dr. Old Stratum (Plot size: Zor You Hydrophytic Vegetation Indicators: Dominance Test worksheet: Number of Dominand Species That Are Olls, FACW, or FAC: C. (A. A. Carrawas Prevoce Plantus Sold FACW, or FAC: C. (A. A. Carrawas Prevoce Plantus Sold FACW, or FAC: C. (A. Carrawas Prevoce Plantus Sold FACW, or FAC: Column Totals: (A. Carrawas Prevoce Plantus Sold FACW, or FAC: Column Totals: (A. Carrawas Prevoce Plantus Sold FACW, or FAC: Column Totals: (A. Carrawas Prevoce Plantus Sold FACW, or FAC: Column Totals: (A. Carrawas Prevoce Plantus Sold FACW, or Prevalence Index is \$3.0) Morphological Adeptations' (Provide supporting data in Remarks or on a separate sheet) Prevolental Chydrophytic Vegetation Present? Yes No Pr	e climatic / hydrologic conditions on the site typical for th	nis time of year?	YesNo_/	(If no, explain in Remarks.)
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, ethydrophytic Vegetation Present? Yes No X within a Wettand? Westand Hydrology Present? Yes No X within a Wettand? Westand Hydrology Present? Wes No X within a Wettand? Wes N				
UMMARY OF FINDINGS — Attach site map showing sampling point locations, transects, important features, ethydrophylic Vegetation Present? Yes No Welland Hydrology Present? Yes No Welland Hydr				
Hydrophytic Vegetation Present? Yes No Water Hydrophytic Vegetation Present? Yes No Water Hydros Soil Present? Yes No Water Hydrophytic Vegetation No Water Hydrophytic Vegetation Present? Yes No Water Present? Y				
Weltand Hydrology Present? Yes No X Within a Wetland? Yes No X Withi	UMMARY OF FINDINGS – Attach site map	showing sa	impling point lo	ocations, transects, important features, et
Weltand Hydrology Present? Yes No X Within a Wetland? Yes No X Withi	Hydrophytic Vegetation Present? Yes	No ★		
Remarks:			The state of the s	
EGETATION - Use scientific names of plants. Absolute			within a Wetlan	id? Yes No Z
EGETATION – Use scientific names of plants. Tree Stratum (Plot size:				
Absolute % Cover Species? Status Dominant Indicator Species Status Species Status	BELLEN TRUBILITIE PLANT	FALL T	2 DATE	
Absolute % Cover Species? Status Dominant Indicator Species Status Species Status				
Absolute % Cover Species? Status Dominant Indicator Species Status Species Status				
Species Status Species Species Status Species Species Status Species Status Species Species Species Species Species Species Status Species	EGETATION – Use scientific names of pla	nts.		
That Are OBL, FACW, or FAC: C (A Total Number of Dominant Species Across All Strate: 4 (B Sapling/Shrub Stratum (Plot size: 2m²) = Total Cover 1. BACEN ARIS PLUMAS 5% YM 2. MINUMS ANE MINUMS Z% YM 3. OBL species x1 = FACW species x2 = FACW species x2 = FACW species x2 = FACW species x3 = FACU species x4 = UPL species x4 = UPL species x5 = 1. BROWN FACW TOTALS 2. CARDINGS PROPAGES TOZ YM-FALL 2. CARDINGS PROPAGES TOZ YM-FALL 3. CENTANTEN MENTENSIS TML 4. UILLA VILLOSA TML 5. EROPIUM BETHYS TML 4. UILLA VILLOSA TML 5. EROPIUM BETHYS TML 6. Prevalence Index estation's (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) Woody Vine Stratum (Plot size: 10 / 1 / 1 / 1 / 2 / 2 / 2 / 2 / 3 / 3 / 3 / 3 / 3 / 3	Tree Stratum (Plot size:		And the state of t	A CONTRACTOR OF THE PROPERTY O
Total Number of Dominant Species Across All Strata: 4 (B) Sapling/Shrub Stratum (Plot size: 2m²) 1. BACK HARLS PILLURIS 5½ Y NL 2. MINULUS AUR MINULUS 7½ Y NL 3. WALL MARLS PILLURIS 7½ Y NL 3. WALL MARLS PILLURIS 7½ Y NL 3. WALL MARLS PILLURIS 7½ Y NL 4. WALL MARLS PILLURIS 7½ Y NL 5. FACW species X 2 = FACW species X 3 = FACW species X 3 = FACW species X 3 = FACW species X 4 = WPL species X 5 = Column Totals: (A) (C) 2. WARDING PILLOSA 7 Y NL 4. WILL VILLOSA 7 Y NL 5. ERCDIUM BETRYS 7 YL 6. Whydrophytic Vegetation Indicators: Dominance Test is >50% Prevalence Index is \$3.0° Prevalence Index is \$3.0° Problematic Hydrophytic Vegetation (Explain) Woody Vine Stratum (Plot size:) 1. Whydrophytic Vegetation (Explain) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **Woody Vine Stratum (Plot size:) **Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic. **PROPRIOR OF TABLE Y (B. A. M.		70 GOVEL S	pecies: Qualus	
Species Across All Stratus: 4 (B Sapling/Shrub Stratum (Plot size: 2m²) 1. BACK ARTS PRULATIS 2. MI, MULUS AUF ANTICUS 3. CENTANERS PROCEPHANS 2. CARDINUS PROCEPHANS 3. CENTANERA MEUTENS 4. ULLA VILLOSA 4. ULLA VILLOSA 5. ERCPIUM Berry S 6. Total Cover Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) 1. Provalence Index worksheet: Total % Cover of: Multiply by: OBL species x1 = FACW species x2 = FACW species x2 = FAC species x3 = FACU species x4 = UPL species x4 = UPL species x5 = Column Totals: (A) (Company of the properties of the provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation '(Explain) Vegetation Prosent: "Yes No Present?" Yes No Present? Yes No Present?" Yes No Present? The properties across All Stratus (B Percent of Dominant Species That Are OBL, FACW, or FAC: (A) Authorized Cover of Biotic Crust Provide Adaptation Stratum (Bot size: 1) Indicators of hydric soil and welland hydrology must be present, unless disturbed or problematic.				That Ale Obe, I Act, of I Ac (A)
Sapling/Shrub Stratum (Plot size: Zm²) = Total Cover That Are OBL, FACW, or FAC: C (A 1. BACH ARIS FILLUARIS SS Y ML 2. MI MULUS FUR FURFICUS ZZ Y NL 3. OBL species X1 = FACW species X2 = FACW species X3 = FACW species X3 = FACW species X3 = FACW species X4 = Multiply by: 1. BROWLES MANDEWS HERDERY ST YM FACU TOTAL SPECIES X4 = MULTIPLE SPECIES X4 = MULTIPLE SPECIES X5 = Column Totals: (A) (COVERNATION SPECIES X5 = MULTIPLE SPECIES				Total Number of Dominant
Sapling/Shrub Stratum (Plot size: Zm² = Total Cover Percent of Dominant Species That Are OBL, FACW, or FAC: C (A In Are OBL, FACW, or FAC: C				Species Across All Strata:
BALL ALLS AUL AND CLUS AUL AND CLUS AUL AND CLUS			Total Cover	Percent of Dominant Species
BALL ALLS AUL AND CLUS AUL AND CLUS AUL AND CLUS	Sapling/Shrub Stratum (Plot size: Zm 2)		Total Cover	That are OBL, FACW, or FAC: (Ar
OBL species x1 = 4.	1. BACCHARIS PILLUARIS	5/6	y M	Prevalence Index worksheet:
### FACW species	2. MIMULUS AUX ANTICUS	2%	7 NL	Total % Cover of: Multiply by:
FAC species x3 = FACU species x4 = UPL species x5 = 1. Rectus Properties Total Cover Herb Stratum (Plot size: /m²)	3			OBL species x 1 =
Herb Stratum (Plot size: /m² T/b = Total Cover FACU species x 4 =	4			FACW species x 2 =
Herb Stratum (Plot size: /m²) 1. 3 Paratus Plandprus / Harbraganus 70% y mt-Fallu 2. CARDUUS PronocePHATUS 70% y mt-Fallu 3. CENTANTEA MENTENSIS T ML Prevalence Index = B/A = Hydrophytic Vegetation Indicators: 4. UILIA VILLOSA T MENTENSIS T ML Dominance Test is >50% 6. Prevalence Index is ≤3.0° — Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) 7. Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet) Problematic Hydrophytic Vegetation (Explain) 1. Problematic Hydrophytic Vegetation (Explain) **Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic. **Hydrophytic Vegetation Present? Yes No Present? Yes Yes No Present? Yes Yes No Present? Yes	5,			
1. Browns PIAmprus Herbergens 70% M-FAIR 2. CARDRUS PYCNOCEPHAZUS ZOZ Y FL 3. CENTAURFA MEUTENSIS T NL Prevalence Index = B/A =	1.2	7%=	Total Cover	
2. CARDUUS PYCNOCEPHALUS ZOZ Y FL 3. CENTAURA MELITENSIS T FL 4. UILIA VILLOSA T FL 5. ERCPIUM BETRYS T FL 6. Prevalence Index = B/A =	Herb Stratum (Plot size: ////	-109	W FALLE	
Prevalence Index = B/A =		The second second	1000	Column Totals: (A) (B
4. ULLA VILLOSA 5. ERCONOM BETRYS 7. Dominance Test is >50% — Prevalence Index is ≤3.0° — Morphological Adaptations¹ (Provide supporting data in Remarks or on a separate sheet) — Problematic Hydrophytic Vegetation¹ (Explain) 1				Prevalence Index = R/A =
5				
Prevalence Index is ≤3.0° Morphological Adaptations' (Provide supporting data in Remarks or on a separate sheet)	**			
7		700		The state of the s
8				
Woody Vine Stratum (Plot size:) 1	Y			
Woody Vine Stratum (Plot size:) 1	0	+90% -	Total Cover	Problematic Hydrophylic Vegetation¹ (Explain)
2 be present, unless disturbed or problematic. Hydrophytic Vegetation Present? Yes No Pomerts:	Woody Vine Stratum (Plot size:)	1_10.0	Total Cover	
2 = Total Cover Hydrophytic Vegetation Present? Yes No Xes No Xes Yes	1			Indicators of hydric soil and wetland hydrology must
% Bare Ground in Herb Stratum 10% % Cover of Biotic Crust Vegetation Present? Yes No				be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum		-	Total Cover	
Parmarke:	% Bare Ground in Herb Stratum 10% % Co.	ver of Biolic Cor	et —	Vegetation Ves No X
Remarks.		ver or bload ord	**	71030KI 103 103
VEGETATION - MISTY HERBACEOUS SEEPHINGS	Remarks.	Leri	ZAIENIC	SEEPHINGS

US Army Corps of Engineers

24.6.	h needed to docume		or or connr	n the absence	e of indicators.)
Depth Matrix (inches) Color (moist) %	Color (moist)	Features Type	Loc2	Texture	Remarks
U-6" 1CYPY/Z 100%	-	7 1100		LFS	ACAMA TO AS
00 101112 10.18				LIS	WASBK, WFR
	*				5% POOTS UF-M
6-18" 10774/2 100%			-	LFS	CMSBIC FR
					TRACE VF ROCTS
Type: C=Concentration, D=Depletion, RM=			aled Sand G		ocation: PL=Pore Lining, M=Matrix.
Hydric Soil Indicators: (Applicable to all I					s for Problematic Hydric Soils ³ :
Histosol (A1)	Sandy Redox	1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			Muck (A9) (LRR C)
Histic Epipedon (A2) Black Histic (A3)	Stripped Mat				Muck (A10) (LRR B)
Hydrogen Sulfide (A4)		y Mineral (F1) ed Matrix (F2)			pced Verlic (F18)
Stratified Layers (A5) (LRR C)	Depleted Ma				Parent Material (TF2) r (Explain in Remarks)
1 cm Muck (A9) (LRR D)	Redox Dark			01116	(Cxpair in Nemarks)
Depleted Below Dark Surface (A11)		rk Surface (F7)			
Thick Dark Surface (A12)	Redox Depre			3Indicator	s of hydrophytic vegetation and
Sandy Mucky Mineral (S1)	Vernal Pools	(F9)			d hydrology must be present,
				and a ma	disturbed or problematic.
Sandy Gleyed Malrix (S4)				uniess	disturbed of problematic.
				uniess	distances of problematic.
				uniess	distance of problematic.
Restrictive Layer (if present): Type:			cur gragu		il Present? Yes No _K
Restrictive Layer (if present): Type:			6-167		-
Restrictive Layer (if present): Type:					
Restrictive Layer (if present): Type:					-
Restrictive Layer (if present): Type:	d; check all that apply)		Hydric So	-
Restrictive Layer (if present): Type:	d; check all that apply			Hydric So	il Present? Yes No _K
Restrictive Layer (if present): Type:		B11)		Hydric So	ondary Indicators (2 or more required)
Restrictive Layer (if present): Type:	Salt Crust (B11))	Hydric So	ondary Indicators (2 or more required) Water Marks (B1) (Riverine)
Restrictive Layer (if present): Type:	Salt Crust (B11) (B12) erlebrates (B13		Hydric So	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S	B11) (B12) erlebrates (B13 Sulfide Odor (C1)	Hydric So	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust Aquatic Inv Hydrogen S Oxidized R	B11) (B12) erlebrates (B13 Sulfide Odor (C1) ng Living Ro	Hydric So	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv (Hydrogen S Oxidized R	B11) (B12) erlebrates (B13) Sulfide Odor (C1 hizospheres alo) ng Living Ro (C4)	Hydric So Secondary ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o	B11) t (B12) erlebrates (B13) Sulfide Odor (C1 hizospheres alo if Reduced Iron) ng Living Ro (C4)	Hydric So Secondary ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror	B11) It (B12) It (B12) It (B13) Sulfide Odor (C1 It (C1) It (C) ng Living Ro (C4) illed Soils (C	Hydric So Sec ots (C3) ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Patterns (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror	B11) I (B12) I (B12) I (B13) I) ng Living Ro (C4) illed Soils (C	Hydric So Sec ots (C3) ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Shallow Aquitard (D3)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror	B11) c(B12) erlebrates (B13) Sulfide Odor (C1 hizospheres alouf Reduced Iron Reduction in Ti Surface (C7) lain in Remarks)) ng Living Ro (C4) illed Soils (C	Hydric So Sec ots (C3) ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Shallow Aquitard (D3)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence o Recent Iror Thin Muck	B11) I (B12) erlebrates (B13) Sulfide Odor (C1 hizospheres alo If Reduced Iron Reduction in Ti Surface (C7) Iain in Remarks)) ng Living Ro (C4) illed Soils (C	Hydric So Sec ots (C3) ots (C3)	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Shallow Aquitard (D3)
Restrictive Layer (if present): Type:	Salt Crust (Biotic Crust (Aquatic Inv Hydrogen S Oxidized R Presence of Recent Iror Thin Muck S Other (Expl	B11) I (B12) erlebrates (B13) Sulfide Odor (C1 hizospheres alo I Reduced Iron I Reduction in Ti Surface (C7) Iain in Remarks) hes): hes):) ng Living Ro (C4) illed Soils (C	Hydric So Sec ots (C3) ots (C3) land Hydrolo	ondary Indicators (2 or more required) Water Marks (B1) (Riverine) Sediment Deposits (B2) (Riverine) Drift Deposits (B3) (Riverine) Drainage Pattems (B10) Dry-Season Water Table (C2) Crayfish Burrows (C8) Saturation Visible on Aerial Imagery (C) Shallow Aquitard (D3)

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А	Appendix G, NASA SSFL EIS for Proposed Demolition and Environmental Cleanup	

Appendix F Stream Data Sheets

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cature Name NORTHERN				Point ~0 - (
GPS Location: 34° 14′ 12.	27	5" 118° 41	10	26.777"
Seomorphic Feature		*		
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
☐ Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch		Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:		
★ Intermittent		Flowing Water (Depth)
☐ Ephemeral	A	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	M	Litter, debris and or clay deposits	A	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes: - BLUE LINE ON · MITO INT. STREE · NWI - PSSA		65 TOPO - CAL	18	ASAS QUAD
- DEFT IDEBPAS 1	PRI	ESENT 28"	AR	BUE THE

Chamal	Channe		
Channel	L.narac	teris	HCS
e itemitie	October of the		

Channel Width	7.3 FT	
Channel Depth		INCISED CITAMPEL
Low Flow Width	6 FT	THEISED CHARGE
Low Flow Depth	Z.3 FT	
Channel Substrate (check all tha		
		B to the same
Sand	☑ Cobble	☐ Silt / Clay
☑ Gravel	₩ Rock	SCMF SAMPSTONE
ROCKY SUBSTRATE	MY SAND AND GRA	TUEL BOULPERS
Vegetation Characteristics of	Channel or Basin	
Vegetated Channel or Basin?	☐ Yes ☒ No	
Dominant / Characteristic Specie	s	
Vegetation Adjacent to Chann		
Dominant / Characteristic Specie	S	
HETERMELES A	RBUTIFOLIA, SI	AMBUCUS MIGRA,
QUERCUS AGRIF	OUA, CEANOTH	US CRASSIFOLIUS
		ICTYON GRASSIFOLIUM
		DUUS PYCHOCEPHALL
		IBES MALVACEUM,
A RITEMESIA		
		DEEPLY INCISED
	IER & FEET ST	
The state of the s		
	· ·	
	·	

Project: NASA - Santa Susana Field	d Lab	Date:
Observers: Russell Huddleston an	d Steve Long	
Feature Name NoR 71HE	RN PRHNAGE Sam	nple Point NP - Z
GPS Location: 34° 14'	11.926" 118"	41' 07. 789"
Geomorphic Feature		
River	☐ Lake	☐ Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:	
Intermittent	☐ Flowing Water (Depth)
☐ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	□ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	Algae or alga mat	☐ . Other (Specify)
Notes: . BLUE LINE	EN USGS CALAB	BASAS QUAD
· MITD INT	STREAM	
- DRIFT /DEBACIS OF	ROCUS WITH	IN CHANNEL
		181

Channel Char	acter	STICS
--------------	-------	-------

Channel Characteristics					
Channel Width	9 FT				
Channel Depth	1-2 F	7	(4)		
Low Flow Width	SFT				
Low Flow Depth	6 incit	ES			
Channel Substrate (check all tha	t apply)	7			
Sand			□ s	Silt / Clay	
Gravel	⊠ Rock			Other	
RULLY - BOUDE	R/COBBL	E WS	CME S	TND / GR	SUEL
Vegetation Characteristics of					
Vegetated Channel or Basin?	✓ Yes	□ No	Tarm	45%	CONER
Dominant / Characteristic Specie	es.		1-1112		Largi
ARDINE OU.	Nor Coul	41,115			
CARDUUS PYC					
POLT POGON M	IONSPEL1	ENS15			
RUMEX CRIS	PUS				
Vegetation Adjacent to Chann	el				
Dominant / Characteristic Specie	s				
PHACELIA RAMO	1-5" DBH) 051551 MA,	CAR			
QUERCUS AGRI			BANK	MCN6 S.	SLOPE
Notes: LARGE, DERPU BANKS OVER 1-2 FEET OF	7 INCISE	D CHA	HMEL	-some	ARFA
-SUPE - WE	RECUS A				

Project: NASA - Santa Susana Fiel	d Lab	Date: 1/4/2012
Observers: Russell Huddleston ar		
Feature Name NoRTHER GPS Location: 34° 14'	N DRAINAGE Sai	mple Point NP - 3
GPS Location: 34° 14'	11.651" 118	" 41' 11.688"
Geomorphic Feature		
River	☐ Lake	Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
☐ Irrigation Channel	Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	□ Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:_)
Intermittent	☐ Flowing Water (Depth_)
☐ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	Algae or alga mat	Other (Specify)
Notes: BLUE CIME . NITD INT	STREAM USGS	CALABASAS QUAT
· NWI - PSSA		* * * * * *
- SPARSE LITTER	I DEBRIS DE	EPOSITS
Service Control		
A		1 1 1 1
	V.	

Channel Characteristics

Channel Width	8 FT	
Channel Depth	IFT	¥
Low Flow Width	5.5 FT	* *
Low Flow Depth	46 INCH	
Channel Substrate (check a	II that apply)	
⊠ Sand	☐ Cobble	☐ Silt / Clay
₩ Gravel	Rock	☐ Other
	16RAVEL SUB	STRATE
Vegetation Characteristic	A DOMEST AND THE RESTORED TO T	3/101/6
Vegetated Channel or Basin	THE RESERVE THE PROPERTY OF THE PARTY OF THE	No
	-	No
Dominant / Characteristic S	pecies	
Vegetation Adjacent to C	hannel	
Dominant / Characteristic S	pecies	
AUERIUS A	CRIECUIA - SC	ATTERED MONG TOP OF
		אוויאבוייט אונייאל אבן טי
CHANNEL	BANKS	
ERIODICT YOR	CRASSIFOCIU	M , PHACEUA RAMOSISSIMA.
		UUS PYCNOCEPHALUS,
10000		
		XI COPEMPRON DIVERSILOBUM
Notes: BRASSICA	MIGTER	
WEALLE EX	PRESSED SA	ND - GRAVEL CHANNEL
	EPLT INCISED	
		6" DIAM CHUERT
		WITH SEPIMENT
CULVERT	rue of perp	ING BEILIND
COURT		

Feature Name NORTHERN	DRAINAGE Sai	mple Point ND - 4
GPS Location: 34° 14′ //.	562" 118° 41'	14.209"
Geomorphic Feature		
River	☐ Lake	Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	☐ Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	☐ Rock Basin
Excavated Ditch	Unvegetatted Depression	□ Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:_)
Intermittent	☐ Flowing Water (Depth)
☐ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: BLUE LINE: - NIHD INT. S - NWI - PSSA		S CALABASAS QUAD
· SPARSE LITTER / D. · WATER STAINING		

	Channe	Charac	teristics
--	--------	--------	-----------

01	0	
Channel Width	8 FT	
Channel Depth	1 FT	
Low Flow Width	3.5FT	
Low Flow Depth	6 INCITES	
Channel Substrate (check all that	apply)	
Sand		☐ Silt / Clay
☑ Gravel	Rock	Other
MOSTRY SAND/GRA	WEL W/ SOME	COBBLE, SANDSTONE ROLL
Vegetation Characteristics of		
Vegetated Channel or Basin?	Yes No	45% TOTAL COVER
Dominant / Characteristic Specie	s	SEEDUNGS
BRASSICA NIGH	ZA	
CARDUUS PYCI	POCEPHALUS	
211-201-27		
Vegetation Adjacent to Chann	el	
Dominant / Characteristic Specie		
		Color Bullion Durch School
CUERCUS AGRIFO	UA AND HET	EROMBUES ARBUPFOUA
ALONG UPPE	R EDGES OF	THE CHANNEL
ADENOSTOMA FA	SCICULATUM.	BRASSICA MIGRA.
GAYUM SP, CATE		
	4	-PAMEUR S
PIPTATHERUM ,	MILACEUM	
Notes:		
		O SZ INCH DIAM
		6 INCIPES DEEP
2000	ruses orde,	o helps her
- SMALL TRIBUTA	BY EROSIONS	TE CITANNEL
SOUTH OF THE	S POINT - CH	ANNEL 12-16 INCHES
WIPE, LESS T		

	servers: Russell Huddleston and			anda Daint Al D -
·ca	ture Name NORTHERN S Location: 34° 14′ 12	7	1111 10°	apie roint 17 01811
GP9	S Location: 39 19 12	. /	91 110	91 11,010
Зес	omorphic Feature			
)	River		Lake	☐ Swale
X	Stream	0	Pond	☐ Erosional Channel
)	Canal		Impoundment	☐ Gully
1	Irrigation Channel		Playa	☐ Depressional Basin
ב	Drainage Channel		Constructed Basin	☐ Rock Basin
ב	Excavated Ditch		Unvegetatted Depression	□ Other:
App	parent Hydrologic Regime		A 8.3	
ב	Perennial		Standing Water (Depth:)
X	Intermittent		Flowing Water (Depth	j
3	Ephemeral	M	Dry at time of the survey	
Ind	ictors			
ם	Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	☐ Natural / irrigation / manmaditch flowing into feature
Ģ	presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
	Presence of hydric soil with or without hydrophytic vegetation	×	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or
0	Absence of vegetation or interruption of upland vegetation		Algae or alga mat	stippled blue area on map) Other (Specify)
Not	tes:			
	- BLUE LINE STR			CALABASAS QUA
	· NUI PSSA	EA	M	¥ ** **
	· SPARSE LITTER	1	DEBRIS, WI	RALL LINES

Channel Width	11.5 FT	
Channel Depth	NIFT	
Low Flow Width	9FT	
Low Flow Depth	LIFT	
Channel Substrate (check all tha	at apply)	
☑ Sand	☐ Cobble	☐ Silt / Clay
☐ Gravel	Rock	Other
SAMPY CHANNE	L W/ SCATTERED	SAMPSTONE ROCK
Vegetation Characteristics of		5/11/p3/01/6 /-000
Vegetated Channel or Basin?	Yes No	4 5% TUTAL COVER
Dominant / Characteristic Specie	es	SEEPLINGS
	ALCOHOLO I LOS	MOSTLY
PIPTATHERUM	MILACEUM	jacojej
PIPTATHERUM	MILACEUM	jacojej
	MILACEUM	jacojej
PIPTATHERUM Vegetation Adjacent to Change Dominant / Characteristic Specie	MILACEUM nel es	
PIPTATHERUM Vegetation Adjacent to Chang Dominant / Characteristic Specie CWERUS AGRI	MILACEUM nel es I FOLIA - AZCNG	UPPER SLOPES
Vegetation Adjacent to Change Dominant / Characteristic Specie WERCUS AGRI PABES MALVA	MILACRUM nel es FOLIA - ALCNG FEUM, TOXICOD	UPPER SLOPES ENDRON DIVERSILUBUR
Vegetation Adjacent to Change Dominant / Characteristic Specie WERCUS AGRI PABES MALVA	MILACEUM nel es I FOLIA - AZCNG	UPPER SLOPES ENDRON DIVERSILUBUR
Vegetation Adjacent to Change Dominant / Characteristic Specie WERCUS AGRI PABES MALVA	MILACRUM nel es FOLIA - ALCNG FEUM, TOXICOD	UPPER SLOPES ENDRON DIVERSILUBUR
Vegetation Adjacent to Change Dominant / Characteristic Specie WERCUS AGRI PABES MALVA	MILACRUM nel es FOLIA - ALCNG FEUM, TOXICOD	UPPER SLOPES ENDRON DIVERSILUBUR
Vegetation Adjacent to Change Dominant / Characteristic Specie WERCUS AGRI PABES MALVA	MILACRUM nel es FOLIA - ALCNG FEUM, TOXICOD	UPPER SLOPES ENDRON DIVERSILUBUR
Vegetation Adjacent to Channel Dominant / Characteristic Specie WERUS AGRI PIBES MALVA SAMBULUS M Notes: SAMPLE P	MILACRUM nel es FOLIA - ALCNG FEUM, TOXICOD	UPPER SLOPES ENDRON DIVERSILUBUR RAMOSESSIMA
PIPTATHERUM Vegetation Adjacent to Chann Dominant / Characteristic Specie CUERCUS AGRI PIBES MALVA SAMBUCUS N Notes: SAMPLE P SZ -1 NCH DIA	MILACEUM nel es I FOLIA - AZCNG EEUM, TOXICOP IIGRA, PHACELIA	UPPER SLOPES ENDRON DIVERSILUBUR RAMOSESSIMA IN STREAM OF

PS Location: 34° 14′ 13, eomorphic Feature	PRAINAGE San	nple Point <u>PP - 6</u> '18. 709"
PS Location: 34° 14′ 13, eomorphic Feature	612" 118° 41	18.709"
eomorphic Feature		- 1 TO THE CO. T. C.
River		
TAIVOI	☐ Lake	☐ Swale
Stream	□ Pond	☐ Erosional Channel
Canal	☐ Impoundment	☐ Gully
Irrigation Channel	☐ Playa	☐ Depressional Basin
Drainage Channel	☐ Constructed Basin	☐ Rock Basin
Excavated Ditch	Unvegetatted Depression	□ Other:
pparent Hydrologic Regime	- :	
Perennial	☐ Standing Water (Depth:)
Intermittent	☐ Flowing Water (Depth	
I Ephemeral	Dry at time of the survey	
dictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
otes:		a audi
. BLUE LINE ON	USGS CALABASA	Savary
· MITD INT. STR.	EAM	
· NWI - PSSA		

Channel Width	12 FT			
Channel Depth	1-2FT			
Low Flow Width	8 FT			
Low Flow Depth	6 INCITES			
Channel Substrate (check a	AMERICAN AND ADMINISTRATION OF THE PARTY OF			
Sand	△ Cobble	☐ Silt / Clay		
☐ Gravel	A Rock W/ SCME COBBLES / 18	Other SAMPSTONE BOULPERS		
Vegetation Characteristic	Albert and the control of the	com 5		
Vegetated Channel or Basin		6 5% TOTAL		
Dominant / Characteristic S	pecies	COVER		
PONT POGON	MONSPELIENSIS PYCHOCEPHALUS			
PONT POGON	MONSPELIENSIS PYCNOCEPHALUS			
CARPUUS ?	MONSPELIENSIS PYCNOCEPHALUS hannel			
POW POGON CAR PUUS 7 Vegetation Adjacent to C	MONSPELIENSIS PYCNOCEPHALUS hannel	SLOPES		
POW POGON CARPUUS 1 Vegetation Adjacent to C Dominant / Characteristic S WERCUS AG	MONSPELIENSIS PYCNOCEPHALUS hannel pecies RIFCUA - UPPER	SLOPES		
Vegetation Adjacent to Continuant / Characteristic S WERCUS AG TOXICODE PD	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		
Vegetation Adjacent to Continuant / Characteristic S WERCUS AG TOXICODE PD	MONSPELIENSIS PYCNOCEPHALUS hannel pecies RIFCUA - UPPER	SLOPES		
POW POGON CARPUUS 1 Vegetation Adjacent to C Dominant / Characteristic S WERCUS AG TOXICODE PD	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		
POW POGON CARPUUS 1 Vegetation Adjacent to C Dominant / Characteristic S WERCUS AG TOXICODE PD	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		
POW POGON CARPUUS 1 Vegetation Adjacent to C Dominant / Characteristic S WERCUS AG TOXICODE PD	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		
POW POGON CARPUUS I Vegetation Adjacent to Cl Dominant / Characteristic S CUERCUS AG TOXICODEND PHACELIA	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		
POW POGON CARPUUS I Vegetation Adjacent to Cl Dominant / Characteristic S CUERCUS AG TOXICODEND PHACELIA	MONSPELIENSIS PYCHOCEPHALUS hannel pecies PIFCUA - UPPER	SLOPES		

SACIARID REGION DATA SHEET

Stream Canal Irrigation Channel Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Lake Pond Impoundment Playa Constructed Basin Unvegetatted Depression Standing Water (Depth: Flowing Water (Depth) Dry at time of the survey	
River Stream Canal Irrigation Channel Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Pond Impoundment Playa Constructed Basin Unvegetatted Depression Standing Water (Depth:	□ Erosional Channel □ Gully □ Depressional Basin □ Rock Basin □ Other:
Stream Canal Irrigation Channel Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Pond Impoundment Playa Constructed Basin Unvegetatted Depression Standing Water (Depth:	□ Erosional Channel □ Gully □ Depressional Basin □ Rock Basin □ Other:
Canal Irrigation Channel Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Impoundment Playa Constructed Basin Unvegetatted Depression Standing Water (Depth.	Gully Depressional Basin Rock Basin Other:
Irrigation Channel Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Playa Constructed Basin Unvegetatted Depression Standing Water (Depth:	Depressional Basin Rock Basin Other:
Drainage Channel Excavated Ditch Perennial Intermittent Ephemeral	Constructed Basin Unvegetatted Depression Standing Water (Depth:	Rock Basin Other:
pparent Hydrologic Regime Perennial Intermittent Ephemeral	Unvegetatted Depression Standing Water (Depth:	Other:
pparent Hydrologic Regime Perennial Intermittent Ephemeral	Depression Standing Water (Depth:	:)
Perennial [Intermittent] Ephemeral]	Flowing Water (Depth_	
Intermittent [Flowing Water (Depth_	
l Ephemeral)	/	
4	Dry at time of the survey	у
4 5		
dictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to she with steep side	elf Natural / irrigation / manmadditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	Algae or alga mat	Other (Specify)
otes:		
· BLUE LINE ON · NITP INT. STI · NWI - PSSA	USGS CALAB	ASAS QUAD
, NWI - Pes A		

Channe	Charac	teris	tics

Channel Width	IZFT		
Channel Depth	NIFT		
Low Flow Width	6FT		
Low Flow Depth	6 INCHES		
Channel Substrate (check all tha	t apply)		
⊠ Sand		☐ Silt / Clay	
⊠ Gravel	Rock	□ Other	
SANDY CHANNEL	w/ som	E GRAVELS / COBBLE	
Vegetation Characteristics of			
Vegetated Channel or Basin?	₩ Yes	□ No	
Dominant / Characteristic Specie	es		
BACCHARIS SA	LICIFOU	4 - SPARSE 25% COVER	
CARDUUS PYCA PUMEX CRISP Vegetation Adjacent to Chann	us	TOPAL COVER	
Dominant / Characteristic Specie	es		
QUERCUS AGRIF	FOUA -	UPPER SLOPES	
ARTEMISIA DO	UGLA SIA	NA	
MALALOTHAM	NUS FAS	CICULATUS	
PIPTATHERUM	MILACE	um .	
PHACELIA RAMO			
BRASSICA MIGI			
Notes:	<u> </u>		
×	4		
-			

GPS Location: AREA 1 - ER	. , 0	"" san	ipie	Point
GPS Location:	4	19 22,412	10	91 10.110
Geomorphic Feature				
River		Lake		Swale
Stream		Pond	M	Erosional Channel
☐ Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
☐ Drainage Channel		Constructed Basin		Rock Basin
☐ Excavated Ditch	0	Unvegetatted Depression	D	Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:		
Intermittent		Flowing Water (Depth)
M Ephemeral	M	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	0	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	M	Other (Specify)
Notes: - DEFINED CO				TO EROSION/
upscepe pur of		- CHANNE		
SCUTIFUEST INT	0	IMPOUNDM	E	NT FEATURE

Channel	Charac	teristics
---------	--------	-----------

Channel Width	ZFT - ZYZ FT
Channel Depth	5 INCHES - IFT DEEP
Low Flow Width	
Low Flow Depth	2-3, NCITES
Channel Substrate (check all that	apply)
X Sand	☐ Cobble ☐ Silt / Clay
☐ Gravel	⊠ Rock
SANDY WI SOM	E SANDSTONE BEDROCK
Vegetation Characteristics of C	
Vegetated Channel or Basin?	☐ Yes No
Dominant / Characteristic Species	
Vegetation Adjacent to Channe	
Dominant / Characteristic Species	
	CRASSIFOLIUM,
APRNOSTOMA F	ASICULATUM, MALOSOMA LAURINA,
EROPUM BOTR	ASICULATUM, MALOSOMA LAURINA, 75, CENTAURFA MELITENSIS
POA SECUNDA	
Notes:	
-	V

Project: NASA - Santa Susana Field	Lab	Date: 1/4/2012
Observers: Russell Huddleston and	Steve Long	
Feature Name Northern	PRANAGE Sample	Point_ND -8
GPS Location: 34° 14' 16	.403" 118° 41'	32.614"
Geomorphic Feature		
River	☐ Lake	Swale
X Stream	□ Pond □	Erosional Channel
Canal	☐ Impoundment ☐	Gully
☐ Irrigation Channel	☐ Playa ☐	Depressional Basin
☐ Drainage Channel	☐ Constructed Basin ☐	Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:)
Mark Intermittent	☐ Flowing Water (Depth	
☐ Ephemeral	Dry at time of the survey	
Indictors		, (
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: . BLUE LINE ON	US65 CALABASAS	QUAD
. NITO INT. STR	EAM	
· NWI - PSSA		
- DISTINCT CUT BA	NUS ARENG WHA	NNEC
· DRIFT / BEBRIS	DEPOSITS	,

Chan		CL				-	ina
Chan	nei	U	ıaı	aci	er	ISI	ICS

Channel Width	6 FT
Channel Depth	I FT
Low Flow Width	3FT
Low Flow Depth	6 IPCHES
Channel Substrate (check a	
⊠ Sand	M Called D City Color
	Cobble STORES Silt / Clay
☐ Gravel	Rock - SABOUR OTHER OTHER
SAMPY SUBS	TRATE W/ SOME COBBLE / ROCKS
Vegetation Characteristic	es of Channel or Basin
Vegetated Channel or Basin	n? X Yes No
Dominant / Characteristic S	pecies
24	
BACCHARIS S	SALICIFOLIA - LESS THAN 5% COVER
	PLYOCEPHALUS TOTAL LESS THAN 5%
CARPUUS POR PROPERTY OF CARPUUS POR PROPERTY OF CARPUUS POR PROPERTY OF CARPUUS ACCEPTUS ACCE	PCNOCEPHALUS TOTAL LESS THAN 5% ISPUS hannel Species SPIFOLIA EPIS - ONE TREE/SHRUB W/MUNTIPLE
CARPUUS PY PUMEX CR Vegetation Adjacent to C Dominant / Characteristic S GUERUS AC SAUX LASION STRMS -	HENOCEPHALUS TOTAL LESS THAN 5% CONER. HANNEL Species SPIFOLIA
CARPUUS POR CARPUUS POR CARPUUS POR CARPUUS POR CARPUUS POR CARPUS	PCNOCEPHALUS (TOTAL LESS THAN 5%) ISPUS hannel species SPIFOLIA EPIS - ONE TREE/SHRUB W/MUNTIPLE ALL LESS THAN 3" DBH RON PIVERSILOBUM
CARPUUS POR CARPUUS POR CARPUUS POR CARPUUS POR CARPUUS POR CARPUUS ACCORPANS -	PENOCEPHALUS (TOTAL LESS THAN 5%) ISPUS hannel species SPIFOLIA EPIS - ONE TREE/SHRUB W/MUNTIPLE ALL LESS THAN 3" DBH
CARDUUS PY PUMEX CR Vegetation Adjacent to C Dominant / Characteristic S GUERUS AC SAUX LASION STRAS PATRITES CF	PCNOCEPHALUS (TOTAL LESS THAN 5%) ISPUS hannel species SPIFOLIA EPIS - ONE TREE/SHRUB W/MUNTIPUE ALL LESS THAN 3" DBH RON PIVERSILOBUM

Feature Name Northern GPS Location: 34° 14′ 17	. 9	42" 118° 4	//	34.771"
Geomorphic Feature				
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
☐ Irrigation Channel		Playa		Depressional Basin
☐ Drainage Channel		Constructed Basin		Rock Basin
☐ Excavated Ditch	۵	Unvegetatted Depression	0	Other:
Apparent Hydrologic Regime				
☐ Perennial		Standing Water (Depth:		
Intermittent		Flowing Water (Depth)
■ Ephemeral	A	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	×	Litter, debris and or clay deposits	M	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes:				*
· BLUE LINE OF · NITD INTER · NWI - PSSA	MI	ISGS CALABAS	AS	m aut D

Channel Width	10 FT	
Channel Depth	1.5-ZFT	£.
Low Flow Width	YFT	
Low Flow Depth	L6 INCIT	
Channel Substrate (check a	ill that apply)	
☐ Sand	☐ Cobble	☐ Silt / Clay
☐ Gravel	Rock	☐ Other
SANDST	ONE BEDROCK	/ BOULDERS
Vegetation Characteristic	and the state of t	
Vegetated Channel or Basin	1?	No
Dominant / Characteristic S		7.5
Vegetation Adjacent to C	hannel	
Vegetation Adjacent to C	4	
Dominant / Characteristic S	pecies	ELLA CORDIFOLIA
Dominant / Characteristic S	pecies UFOUA, KECKI	ELLA CORDIFOLIA,
Dominant / Characteristic S GUERULS A 61 SALVIA MEL	PERA, BRASS	SICA MIGRA
Dominant / Characteristic S QUEPUS A 61 SALVIA MED PHACELIA R	PERA, BRASS AMOSISSIMA, C	ARDUUS PYCNOCEPHARUS
Dominant / Characteristic S QUEPUS A 61 SALVIA MED PHACELIA R	PERA, BRASS	ARDUUS PYCNOCEPHARUS
Dominant / Characteristic S QUERUS A 61 SALVIA MEN PHACELIA R PIPTATHERN	PERA, RECKI AFERA, BRASS AMOSISSIMA, C M MILEACEUR	ARDUUS PYCNOCEPHARUS
Dominant / Characteristic S QUERULS A 61 SALVIA MED PHACELIA R PIPTATHERO Notes: Down S SAND STONE	SPEAT OF THE	ARDUUS PYCNOCEPHARUS
Dominant / Characteristic S GUERUS A 61 SALVIA MEN PHACELIA R PIPTATHERN Notes: DOWN S SAND STONE FOR APPR	STREAM OF THE BCULPETS 11 STREAM OF THE BCULPETES 11	SICA MIGRA ARDUUS PYCNOCEPHANUS 1 S POINT VERY LARGE
Dominant / Characteristic S QUERUS A 61 SALVIA MED PHACELIA R PIPTATHERU Notes: DOWN SANDSTONE FOR APPR	STREAM OF THE BCULPERS TO THE	SICA MIGRA ARDUUS PYCNOCEPHALUS I S POINT VERY LARGE N THE CHANNEL

Project: NASA - Santa Susana Field	d Lab	Date: 1/4/2012
Observers: Russell Huddleston and		
Feature Name NORTHERN	DRAINAGE SE	ample Point ND-10 3°41' 40, 599"
GPS Location: 34° 14′	18.352" 118	3°41' 40,599"
Geomorphic Feature		
River	☐ Lake	☐ Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	☐ Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:)
Intermittent	☐ Flowing Water (Depth_)
☐ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to she with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	 Natural line, stain or mineral (salt) deposit 	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: BLUE LINE	or uses can	4BASAS QUAD
· NHD INT. S	TREAM	
· NWI - PSSA	4	
		1

Channel Width	7FT	
Channel Depth	1-2FT	to .
Low Flow Width		
Low Flow Depth	SFT NO INCH	tes
Channel Substrate (check all th		
Ճ Sand	☑ Cobble	☐ Silt / Clay
☐ Gravel	A Rock	☐ Other
	1	BUE AND SOME SAND
Vegetation Characteristics of		ONE AND SOME SAND
Vegetated Channel or Basin?		
Dominant / Characteristic Speci		10
	IFOLIA, UMB	BELLULARIA CALIFORN LIA, RUBIS URSINUS,
Dominant / Characteristic Special PRESS AGE	IFOLIA, UMB	BELLULARIA CALIFORN IA, RUBIS URSINUS, RUB W MUNTIPLE STEMS L 3" DBH
Dominant / Characteristic Special Parties ACTO ACTO MELE SAUX LASIOLE	INFOLIA, UMB S ARBUTTFOL PIS & SMALL SIT	RUB WY MULTIPLE STEPS
Dominant / Characteristic Special Parties ACTO ACTO MELE SAUX LASIOLE	INFOLIA, UMB S ARBUTTFOL PIS & SMALL SIT	L 3" DBH
Dominant / Characteristic Special PIPTATHERUM Notes:	INFOLIA, UMB S ARBUTTFOL PIS & SMALL SIT MILACEUM,	POUT POGON MONSPELLE
Dominant / Characteristic Special Conference ACTO HETEROMEUE SAUX LASIOLE PIPTATHERUM Notes:	INFOLIA, UMB S ARBUTTFOL PIS & SMALL SIT MILACEUM,	POY POGON MONSPEHL

GPS Location: 34° 14' 16.	AI	NAGE Sam	ple	Point ELV -1
GPS Location: 34° 14' 16.	02	3" 118" 91	4	11. 2//
Geomorphic Feature				
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
☐ Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
☐ Excavated Ditch	۵	Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:		
Intermittent		Flowing Water (Depth		
E phemeral	M	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	0	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes: NOT SHOWN AS	1	BLUE LINI	5	
NO STRONG EUIDI				
SCHEWHAT DE				

Channel Width	4 FT	
Channel Depth	NIFT	
Low Flow Width	3FT	
Low Flow Depth	6 INCHES	
Channel Substrate (check a	Il that apply)	
Sand	☐ Cobble	☐ Silt / Clay
☐ Gravel	☐ Rock	M Other SANDSTONE BOULDERS
Vegetation Characteristic	s of Channel or Basin	
Vegetated Channel or Basin	? Yes X	lo
Dominant / Characteristic S	pecies	
Vegetation Adjacent to Continuant / Characteristic Sources AGR	pecies	MARIA CALIFORNICA,
Dominant / Characteristic S WERUS AGR MALA COTH AMA	pecies UFOLIA, UMBELLI MS FASICULATUS	
Dominant / Characteristic S WERCUS AGR MALA COTH AMA ITERT ERMELE	pecies UFOLIA, UMBELLO MS FASICULATUS, S ARBUTTFOLIA,	ALARIA CALIFORNICA, ADENOSTOMA FASICULATUR CEANOTHUS CRASSIFOLUS,
Dominant / Characteristic S WERCUS AGR MALA COTH AMA INTERTERMENE TOX/CODENDRON	Pecies AFOLIA, UMBELLO MS FASICULATUS, S AFBUTTFOLLA, DIVERSILOBUM, MOSI 551MA, VEN.	
Dominant / Characteristic S CUERCUS AGR MALA COTH AMA ITERT ERMELE TOX/CODENDRON PHACIELIA RAN LEYMUS CON!	Pecies AFOLIA, UMBELLO MS FASICULATUS, S AFBUTTFOLLA, DIVERSILOBUM, MOSI 551MA, VEN.	CEANOTHUS CRASSIFOLUS, CARDUUS PYCHOCEPHAUS, EGASIA CARPESIOIDES
Dominant / Characteristic S CUERCUS AGR MALA COTH AMA ITERT ERMELE. TOX/CODENDRON PHACIELIA RAN LEYMUS CONS Notes: - MORE DO LCTS CF DOC	PECIES LIFOLIA, UMBELLO MS FASICULATUS, S APBUTTFOLIA, DIVERSILOBUM, MOSI 551MA, VEN DENSATUS EUELOPED CHA	CEANOTHUS CRASSIFOLUS, CARDUUS PYCHOCEPHAUS, EGASIA CARPESIOIDES THEL UPSLOPE DEBRIS IN THE

eature Name <u>ELU DRAII</u>			nle	Point FLV - Z
GPS Location: 34° 14′ 17			· pic	11.018
ars Location:		10 NO N		77. 510
Seomorphic Feature				
River		Lake		Swale
S Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch		Unvegetatted Depression	0	Other:
Apparent Hydrologic Regime				
☐ Perennial		Standing Water (Depth:		
☐ Intermittent		Flowing Water (Depth		
Z Ephemeral	M	Dry at time of the survey		
ndictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes: NOT A BLUE LIN	JE.	FEATURE		
1-51 To Bece CIT)	- Lew
NO EVIDENCE OF	R	ecept pieu		

Channel Width	NIOFT			
Channel Depth	IFT			
Low Flow Width	2.5 FT			
Low Flow Depth	6 I PCITES			
Channel Substrate (check al	I that apply)			
Sand	☐ Cobble	☐ Silt / Clay		
Gravel	A Rock	M Other SAMPSTONE BOULDERS		
Vegetation Characteristics				
Vegetated Channel or Basin	? 🔲 Yes 🔉 No			
Dominant / Characteristic Sp	pecies			
		4		
Vegetation Adjacent to Ch	annel			
Vegetation Adjacent to Ch	annel	LARIA CAUFORNICA.		
Vegetation Adjacent to Ch Dominant / Characteristic Sp ないたといる AGE!	ecies FOUA, UMBELLU	ARIA CAUFORNICA,		
Vegetation Adjacent to Ch Dominant / Characteristic Sp QUERCUS AGRI TOXICO DENDRO	ecies FOUA, UMBELLU	, ROSA CALIFORNICA,		
Vegetation Adjacent to Ch Dominant / Characteristic Sp QUERUS AGRI TOXICO DENDEO IHERT EROM SA	ecies FOLIA, UMBELLUI NO PIVERSILOBUM	, ROSA CAMPORNICA,		
Vegetation Adjacent to Ch Dominant / Characteristic Sp QUERCUS AGRI TOXICO DENDZO IHERT EROM ES MALA-COTHAM A	PIVEZ SILOBUM	, ROSA CAMPORNICA,		
Vegetation Adjacent to Ch Dominant / Characteristic Sp QUERUS AGRI TOXICO DENDZO IHERT EROM ES MALA COTHAM A	annel Decies FOUA, UMBELLUE N PIVERSILOBUM LES ARBUTTFOUL UUS FASICULATE	, ROSA CAMPORNICA,		

SACIARID REGION DATA SHEET

eature Name <u>ELV</u> DRA		46E Sam	ple	Point <u>FLV-3</u> 42.620"
SPS Location: 34 6 14 13	. 6	51" 118° 41	/	42.620"
eomorphic Feature				
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch	٥	Unvegetatted Depression		Other:
pparent Hydrologic Regime				
Perennial		Standing Water (Depth:)
Intermittent		Flowing Water (Depth)
© Ephemeral	A	Dry at time of the survey		
ndictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmad ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
lotes: NOT A BUE U	WE	E		
- Ne EVIDENCE OF	12	PECENT FLC	,	N THIS
ARRA, LOW TOPOD	RA	PITIC AREA	- 5	SWALE LIKE

Channel Width	TFT	
Channel Depth	IFT	
Low Flow Width	3.5 FT	
Low Flow Depth	46/MCHES	
Channel Substrate (check all tha		
Sand	☐ Cobble	☐ Silt / Clay
Gravel	Rock Roc	BOULDER
Vegetation Characteristics of	Channel or Basin	
Vegetated Channel or Basin?	☐ Yes 🗡 No	
Dominant / Characteristic Specie	es	
Vegetation Adjacent to Chann	nel	
Dominant / Characteristic Specie	es COLA, MACACOTT	HAMPUS FASICULATUM MALVACEUM
Dominant / Characteristic Specie	es FOLLA, MALACOTT LRINA, RIBES	MALUACEUM,
MALOSOMA LAW ARTEMESIA C	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS
Dominant / Characteristic Specie OUFIZCUS AGRIF MALOSCMA LAW ARTEMESIA C	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS
Dominant / Characteristic Specie WERCUS AGRIF MALOSCMA LAW ARTEMESIA C PHACACEA RAMO	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS
Dominant / Characteristic Specie WERCUS AGRIF MALOSCMA LAW ARTEMESIA C PHACACEA RAMO	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS
Dominant / Characteristic Specie OUFICUS AGRIF MALOSCMA LAW ARTEMESIA C	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS
Dominant / Characteristic Specie WERCUS AGRIF MALOSCMA LAW ARTEMESIA C PHACACEA RAMO	ES FOLLA, MALACOTT PINA, PIBES ALIFORNICA,	MALVACEUM, MIMULUS AURANTIAMS

eature Name DRAINAGE		+ -1 Sam	ple	Point A1-1 41' 39.657"
GPS Location: 34° 14	11	1. 482" 118	•	41' 39.657"
Seomorphic Feature				
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch	0	Unvegetatted Depression	0	Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:)
1 Intermittent		Flowing Water (Depth		
S Ephemeral	M	Dry at time of the survey		
ndictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	0	Natural / irrigation / manmad ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	0	Algae or alga mat		Other (Specify)
lotes: NO BLUE LINE				
- TOPOGRAPHIC LO	w	AREA - PIP	-12	AP / CHUERT
				All the second s

Channel Characterist	ics		
Channel Width	ZFT		
Channel Depth	1.5 FT	E 161	
Low Flow Width	1.5 FT		
Low Flow Depth	66 INCHES		
Channel Substrate (che	eck all that apply)		
Sand	Cobble (SPARSE)	☐ Silt / Clay	
☐ Gravel	☐ Rock	Other_	

Vegetation	n Charac	teristics	of	Channel	or	Basin
------------	----------	-----------	----	---------	----	-------

Vegetated Channel or Basin?	☐ Yes	No No	
Dominant / Characteristic Species	3 7 = 1		

Vegetation Adjacent to Channel

			MS FASICULATUM,
RIBES 1	MALVACEUM	, CARDUUS	PYCHOCEPHALUS
PHACELI	A RAMOSIS	SIMA	

				WI RIP-RAP	
INC	11	DIAM	CULVERY	CPUSTIC PIPE) UNDER

Feature Name DRAINAGE		A-I Sam	ple	Point A1 - 2
GPS Location: 34° 14'	13	. 533" 118"	4	11' 42.086"
Geomorphic Feature		- Y		
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch		Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:)
Intermittent		Flowing Water (Depth		
E phemeral	12	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes:				
NO BLUE LINE		r Carlos		
Law TOPOGRAPITIE	_ 5	WACK, WEA	w	M EXPRESSED
CHANNEL			White I	

	11.2	
01	Charac	
nanna	narac	POPIOPIOP
Undine	Lulaiau	LEHBULD

	8 FT	
Channel Depth	IFT	
Low Flow Width	3FT	
Low Flow Depth	46 INCHES	
Channel Substrate (check all tha	at apply)	
X Sand	△ Cobble	☐ Silt / Clay
☐ Gravel	☐ Rock	Other_ASPHANT DEBRAS
Vegetation Characteristics of	Channel or Basin	
Vegetated Channel or Basin?	☐ Yes 💆 No	
Dominant / Characteristic Speci	es	
Vegetation Adjacent to Chan	nel	
Vegetation Adjacent to Chani Dominant / Characteristic Speci		
Dominant / Characteristic Speci	es	
Dominant / Characteristic Speci	es ERA	
Dominant / Characteristic Speci SALVIA MEUFE BACUTARIS PIL	es ZA ULARIS	
Dominant / Characteristic Speci SALVIA MEHFE BACUTARIS PIL MALOS CMA U	es ZA ULARIS	
Dominant / Characteristic Speci SALVIA MEUFE BACCITARIS PIL MALOS OMA L ERIODICTTON	ERA ULARIS AURINA CRASSIFOLIU REAM OF 29	INCH DIAM
Dominant / Characteristic Speci SALVIA MEUFE BACCITARIS PIL MALOS OMA L ERIODICTTON	es PA ULARIS AURINA URASSIFOLIU	INCH DIAM

Feature Name DRM ~AGE	A-2. Sa	mple Point A2
GPS Location: 34° 14′ 09	.789" 118°	41'47.834"
Geomorphic Feature		
River	☐ Lake	☐ Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	☐ Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
Trainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:_	
☐ Intermittent	☐ Flowing Water (Depth_	
⊠ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shell with steep side	f Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: NOT A BLUE		
NO EVIDENCE OF	PRIENT FLOW	IN THIS APRA

Channal	Charac	Laviation
Channel	Unarac	teristics

Channel Width	GFT - NFAR	ROAD - NAPPROUS DS
Channel Depth	2-4 FT.	
Low Flow Width		
Low Flow Depth		
Channel Substrate (check	all that apply)	
Sand	Cobble	☐ Silt / Clay
	-	
☐ Gravel	Rock	Other
Vegetation Characteristi	cs of Channel or Basin	
Vegetated Channel or Basi	n? Yes No	
Dominant / Characteristic S	Species	
TOXICODEN	DRON DIVERSILO	BUM 2 UPPER EPGES SOF CHANNEL
44. 44.11.11.5	AUT ANTIA CUE	\$
7.77.102202	7121/2/17 /171 0213	J OF CHATTEL
Dominant / Characteristic S		EMPRON DIVERSILOBUM,
		EYMUS CONDENSATUS
DHA ELLA B	AMOSISSIMA, BRO	MUS DIANDBUS
r spullocarri	THALLUM BIOLET	
		PIAM CMP AT
ROAD - CI	HANNELS BECOM	IES SMYNER
	E NARROW TO	
	re cottante	A DISCONTINUOUS
	ROAD CMP EM	PRES INTO
	T PRAINAGE	

S Location: AVE PONT:	34 13 58.097	
omorphic Feature		118 41 36.895"
omer pine i outare		
River	☐ Lake	☐ Swale
Stream	☐ Pond	☐ Erosional Channel
Canal	[mpoundment]	☐ Gully
Irrigation Channel	Playa	Depressional Basin
Drainage Channel	☐ Constructed Basin	☐ Rock Basin
Excavated Ditch	Unvegetatted Depression	Other:
parent Hydrologic Regime		
Perennial	☐ Standing Water (Depth:).
Intermittent	☐ Flowing Water (Depth_)
Ephemeral	Dry at time of the survey	
dictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to she with steep side	Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	□ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	on Algae or alga mat	Other (Specify)
CALABASAS QUAD;	NHD STREAM -	TOPO MAP FOR THE IMPOUNDED AREAS
SHOWN AS PSSC 0	IN NWI (FORESTE	ED/ SHEUB WETHOND)

AL	01	x
Channel	Unarac	teristics

Channel Width	5.5 FT	JUST BEFORE ENTERS
Channel Depth	2.5 FT) 24" CMP AT WEST
High Water Line Width		END OF THE PROJ.
High Water Line Depth		ARFA
Channel Substrate (check all that	apply)	
Sand	☐ Cobble	☐ Silt / Clay
Gravel	Rock	Other
Vegetation Characteristics of (Channel or Basin	
Vegetated Channel or Basin?	☐ Yes	Ø No
Dominant / Characteristic Specie	s	
ADENOSTEMA FASCI	S FOUIA, TOX ICULATUM,	MALACOTHAMMS FASCICULAMS
		FAST OF ALPHA TEST
		PRE - ABOUT 60% FILLED
		E MESEMBRYANTHEMUM
		OR OHUM - SOME BACKARIS
SACICIFORA, SAC	1X LASIOLE	EPS WI BRASSICA MIGRA AND
CARDUUS gro	NO CEPHACE	S, BRONUS PIAMPPUS, AVENUA, ETC.

Project: NASA - Santa Susana Field	Lab	_ Date: _1/5/ Zol2
bservers: Russell Huddleston and		CONCRETE
eature Name _ BELL CREEK		e Point IMPOURPMENT
PS Location: 34° 13′ 58	.837" 118° 41'	40.151"
eomorphic Feature		
River	☐ Lake	3 Swale
Stream	☐ Pond ☐	Erosional Channel
Canal	☑ Impoundment □	Q Gully
Irrigation Channel	☐ Playa	Depressional Basin
Drainage Channel	☐ Constructed Basin	Rock Basin
Excavated Ditch	Unvegetatted Depression	Other:
pparent Hydrologic Regime		
Perennial	☐ Standing Water (Depth:)
Intermittent	☐ Flowing Water (Depth	
M Ephemeral	Dry at time of the survey	
ndictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: SHOWN AS A BU THE CALABASAS QUI WETLAND; NHD ST	AD; NWI (PSSC) FO	
NO EVIDENCE OF .	RECENT OHNM	FLOWS

Channel Width	
Channel Depth	N 15' WIDE (NO MEASUREMENT TAKEN)
	~ 2 FEET TO TOP OF IMPUMPMENT
High Water Line Width	
High Water Line Depth	
Channel Substrate (check al	I that apply)
Sand	☐ Cobble ☐ Silt / Clay
☐ Gravel	□ Rock □ Other
Vegetation Characteristics	s of Channel or Basin
Vegetated Channel or Basin	? Yes No
Dominant / Characteristic Sp	
24-114-15 2	4
	questican & From IMPOURDMENT
SAUX LASIOL	EPIS -) BALL TO 24" CMP
	DISCITAROE
12001	T VPUND UPDERSTEPT ITERBS - WILLOWS
-14001-111714	1 OF UTTO SEPERATORY IT BILLS - WILLIAMS
	1 1-0-4
IF POOR COMP.	1710N - 85-90% DEAD IN SOME AREAS
IF POOR COMP.	nannel
Vegetation Adjacent to Ch Dominant / Characteristic Sp	pecies
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLA	nannel pecies LARIS, MILOSOMA LAURIMA,
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLA	pecies
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLA	nannel pecies LARIS, MILOSONA (AURINA, TA, CARDUNS PYCNO CEPHACUS
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCIJAPIS PLO AVENA BARBA	nannel pecies LARIS, MILOSOMA LAURIMA, TA, CARDUNS PYCNO CEPHANIS 15LITENSIS
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCIJAPIS PLO ANEMA BARBA	nannel pecies LARIS, MILOSONA (AURINA, TA, CARDUNS PYCNO CEPHACUS
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCIJAPIS PLO ANEMA BARBA	nannel pecies LARIS, MILOSOMA LAURIMA, TA, CARDUNS PYCNO CEPHANIS 15LITENSIS
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCIJARIS ALV AVENA BARBA CENTAUREA M SMALL QUERC	nannel pecies LARIS, MILOSOMA LAURIMA, TA, CARDUNS PYCHO CEPHACUS 15LITEMSIS US AGRIFOLIA
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLU AVENA BARBA CENTAUREA P SMALL QUERC	nannel pecies LARIS, MILOSONA LAURIMA, TA, CARDUNS PTONO CEPHARUS 16LITENSIS US AGRIFOLIA THE CARDINA THE CARDINA
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLOS ANEMA BARBAN CENTAUREA P SMALL QUERC Notes: UERY WEA DIMMAGE CH	nannel pecies LARIS, MALOSONA LAURINA, TA, CARDUNS PYCNO CEPHARUS IELITENSIS US AGRIFOLA THUR EXPRESSED I INTERM TIENT ANNEL FROM CULERT OUTEAU DOWN
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLU AVENA BARBA CENTAUREA P SMALL QUERC Notes: VERY WEA TO THE CO	nannel pecies LARIS, MILOSONIA LAURIMA, TA, CARDUNS PYCNO CEPHARUS IELITENSIS US AGRIFOLIA LUS AGRIFOLIA LUS EXPRESSED I INTERMITTENT ANNEL FROM CULERT OLITARI DOWN ONCRETE IMPONNOMENT - MOSTLY
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLU AVENA BARBA CENTAUREA P SMALL QUERC Notes: VERY WEA TO THE CO	nannel pecies LARIS, MALOSONA LAURINA, TA, CARDUNS PYCNO CEPHARUS IELITENSIS US AGRIFOLA THUR EXPRESSED I INTERM TIENT ANNEL FROM CULERT OUTEAU DOWN
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLU AVENA BAPBA CENTAUREA P SMALL QUERC Notes: VERY WEA DRANAGE CH TO THE CO NO REFINE	Decies LARIS, MALOSONA LAURINA, TA, CARDUNS PYCHO CEPHACUS IELITEPSIS US AGRIFOLA MANGE FROM CUVERT OUTFALL DOWN ONCRETE IMPOUNDMENT - MOSTLY D CHANNEL AT IMPOUNDMENT - ONE PUNS ALONG
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLU ANDMA BARBAN CENTAUREA P SMALL QUERC Notes: VERY WEA TO THE CO NO DEFINE TWO CULVERTS THE SOUTH -	nannel pecies LARIS, MALOSOMA LAURIMA, TA, CARDUNS PYCHO CEPHACUS IELITEMSIS US AGRIFOLIA WHY EXPRESSED I INTERMITTENT ANNEL FROM CUVERT OUTEAU DOWN CHANNEL IMPONDMENT - MOSTLY D CHANNEL AT IMPOUNDMENT - ONE PUNS ALONG TOP SCOPE OF THE DRAINAGE - TIFE
Vegetation Adjacent to Ch Dominant / Characteristic Sp BACCHAPIS PLOS BACCHAPIS PLOS AVENA BAPBAN CENTAUREA P SMALL QUERC NO REFINE TWO CULVERIS THE SOUTH - SECOND C	Decies LARIS, MALOSONA LAURINA, TA, CARDUNS PYCHO CEPHACUS IELITEPSIS US AGRIFOLA MANGE FROM CUVERT OUTFALL DOWN ONCRETE IMPOUNDMENT - MOSTLY D CHANNEL AT IMPOUNDMENT - ONE PUNS ALONG

eature Name BELL CREE				
SPS Location: AUE POSITION: 34° 13' 58.906 1180 41' 40.784"				
eomorphic Feature				
River	☐ Lake	☐ Swale		
≦ Stream	Pond	☐ Erosional Channel		
Canal	Impoundment	Gully		
Imigation Channel	☐ Playa	Depressional Basin		
Drainage Channel	☐ Constructed Basin	Rock Basin		
☐ Excavated Ditch	Unvegetatted Depression	Other:		
Apparent Hydrologic Regime				
Perennial	☐ Standing Water (Depth:			
Intermittent	☐ Flowing Water (Depth_)		
≦ Ephemeral	Dry at time of the survey			
Indictors				
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shell with steep side	f Natural / irrigation / manmade ditch flowing into feature		
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features		
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)		
 Absence of vegetation or interruption of upland vegetation 	☐ Algae or alga mat	Other (Specify)		
Notes: SHOWN AS A BU				
FOR THE CALABASAS	ant); NWI (PS	SC) FORESTED / SORUB		
WETHAD AND NAD	STRAM			
		IN THIS AREA		

Channal	Charan	Anzinbian
Channel	Charac	teristics

Channel Width	NO DEFINED	BED / BANK
Channel Depth	CHANNEL PR	
ligh Water Line Width		
ligh Water Line Depth		
Channel Substrate (check all that	apply)	
⊠ Sand	☐ Cobble	☐ Silt / Clay
☐ Gravel	□ Rock	Other
- Clavel	- Nook	- Outoi
Vegetation Characteristics of C	Channel or Basin	
/egetated Channel or Basin?	Yes No	
Dominant / Characteristic Species	s	
		فيستان خاريت م
		B FILLED WITH
DEAD / FACET	WOODY DEBRIS	- APPRAJES MOSTEY
SALIK LASIOZEPIS	- BURNED IN	V ZOOS FIFE
ALMOST NO RE	ELENERATION	
DENSE CARDUUS PT		a " CILATINEL"
Vegetation Adjacent to Channe		
Dominant / Characteristic Species		
an mongrape, space as an aspects		
BACCHARIS PILNIA	215	
MALOSOMA LAUZI	MA	
QUERUS AGRIFOR	A (FEW SMALL	C TREES)
SPARSE BACCHARL	S SALICIFOLIA	Arond LOWER SLOPES
AVENA BARBATA, B	REMUS SPR CEA	TAURES MELITERSIS
Notes: SOULD NOT		
ABUNDANT FAL		
EVIDENCE	OF RECENT	THE AND NO
THIS SECTION	J - DOWN STREAM	TO EXECUTEN PAN
STRUCTURE		

Observers: Russell Huddleston and	4 Stor	yo Long	
Feature Name <u>BELL CREE</u>			DOWP STREAM
GPS Location: 34° 13' 58	. 55	2 118 41	43.905
Geomorphic Feature			
River		Lake	☐ Swale
Stream		Pond	☐ Erosional Channel
Canal	X	Impoundment	Gully
Irrigation Channel		Playa	☐ Depressional Basin
☐ Drainage Channel		Constructed Basin	☐ Rock Basin
☐ Excavated Ditch		Unvegetatted Depression	□ Other:
Apparent Hydrologic Regime			
Perennial		Standing Water (Depth:_	y
Intermittent		Flowing Water (Depth)
Ephemeral	M	Dry at time of the survey	
Indictors			
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	Other (Specify)
Notes: SHOWN AS A BU	E	LINE ON THE	E USSS TOPO MAP
FOR THE CALABASA			
SHOUB WETCHND;			, , , , , , , , , , , , , , , , , , , ,
NO EUIDENCE OF	= 3	PECENT FL	ew of citard
IN THIS AREA			

Observation	MI	A LOCAL CO.
Channel	Charac	teristics

Channel Width	NO DEFINED BED-BANK
Channel Depth	FEATURE IN THIS AREA
High Water Line Width	DOWN STREAM OF EARTHEN
High Water Line Depth	PAM
Channel Substrate (check all that	t apply)
Sand	☐ Cobble ☐ Silt / Clay
☐ Gravel	☐ Rock ☐ Other
Vegetation Characteristics of	Channel or Basin
Vegetated Channel or Basin?	Yes 🗆 No
Dominant / Characteristic Specie	es
PARILADIC CA-	UIECLIA
BACCHARIS SAC	
TOXICOPENDREN	J PIVERSIL CBUM
CARDUUS PYCHO	CEPHALUS
CARPUUS PYCHO	PCEPHARUS
CARPUUS PYCHO	CEPHARUS
CARPUUS PYCHO	CEPHARUS
CARPUUS PYCHO	CEPHARUS
Vegetation Adjacent to Chann Dominant / Characteristic Specie	nel
Vegetation Adjacent to Chann Dominant / Characteristic Specie	nel es
Vegetation Adjacent to Chann Dominant / Characteristic Specie	nel
Vegetation Adjacent to Chann Dominant / Characteristic Specie	CENTAUREA MELATENSIS, BROMUS STR.
Vegetation Adjacent to Chann Dominant / Characteristic Specie BEASSICA WIGEA,	CENTAUREA MELATENSIS, BROMUS STR.
Vegetation Adjacent to Chann Dominant / Characteristic Specie BRASSICA WIGRA, -ARTEMESIA CAUFOR ERIOGONUM FASCICO	CENTAUREA MELATENSIS, BROMUS STR. PRICA DIATUM CONTSE SUMBRET
Vegetation Adjacent to Chann Dominant / Characteristic Specie **BRASSICA MIGRA, **ARTEMESIA CAUFOR **ERIOGONUM FASCICU **BACCHARIS PILULAP	CENTAUREA MELATENSIS, BROMUS SAP. ENICA JUATUM SPARSE, SCATTERED SHOURS
Vegetation Adjacent to Chann Dominant / Characteristic Specie BRASSICA WIGRA, -ARTEMESIA CAUFOR ERIOGONUM FASCICU	CENTAUREA MELATENSIS, BROMUS SAP. ENICA JUATUM SPARSE, SCATTERED SHOURS
Vegetation Adjacent to Chann Dominant / Characteristic Specie **BRASSICA MIGRA, **ARTEMESIA CAUFOR **ERIOGONUM FASCICU **BACCHARIS PILULAR	CENTAURES MELATENSIS, BROMUS STR. ENICA ULATUM IS SPARSE, SCHIEFER SHRUBS
Vegetation Adjacent to Chann Dominant / Characteristic Specie BRASSICA WIGRA, ARTEMESIA CAUFOR ERICCONUM FASCICU BACCHARIS PILUUAR MACA COTHAMPUS MACOSOMA LAURINA	CENTAURES MELATENSIS, BROMUS STR. ENICA ULATUM IS SPARSE, SCHIEFER SHRUBS
Vegetation Adjacent to Chann Dominant / Characteristic Specie BEASSICA WIGEA, ARTEMESIA CALIFOR ERIOGONUM FASCICU BACCHAPIS PILUAP MACA COTHAMNUS MACOSOMA LAURINIA Notes: Daum STREAM	THE SPANED CHANNEL -NO BED BANK
Vegetation Adjacent to Chann Dominant / Characteristic Specie BRASSICA WIGRA, ARTEMESIA CAUFOR ERICCON UM FASCICU BACCHARIS PILUUAR MACA COTHAMNUS MACOSOMA LAURINIA Notes: Daup STRAM	THE SPANSE OF SETTINGS STR. SPANSE , SCHIEFER SHRUBS A OF DEFINED CHANNEL - NO BED BANK OHT BETWEEN 20PES - NO ENDENCE
Vegetation Adjacent to Chann Dominant / Characteristic Specie **BRASSICA MIGRA, **ARTEMESIA CALIFOR **ERIOGONUM FASCICO **BACCHARIS PILULAP **MACA COTHAMMUS **MACA COTHAMMUS **MACASOMA LAURINA Notes: **Daum STRAM IN **FLAT TOPOGRAFI **GRECENT	THE BETWEEN SOPES - NO ENDERVER THE PLANT OF THE PROPERTY OF
Vegetation Adjacent to Chann Dominant / Characteristic Specie **REASSICA MISRA, **ARTEMESIA CAUFOR **ERIOGON'UM FASCICU **BACCHARIS PILULAP **MACA COTHAMNUS **MACASOMA LAURINIA Notes: **Dawn STRAM **FLAT TERGRAM **FLAT TERGRAM **ARCHARIS \$ SALIO **BACCHARIS \$ SALIO **B	THE STANSON SALVENS STR. THE STANSON SALVENS STR. THE STANS SALVENS STR. THE STANSON SALVENS STR. THE STANSON SALVENS SALV
Vegetation Adjacent to Chann Dominant / Characteristic Specie **REASSICA MISRA, **ARTEMESIA CAUFOR **ERIOGON'UM FASCICU **BACCHARIS PILULAP **MACA COTHAMNUS **MACASOMA LAURINIA Notes: **Dawn STRAM **FLAT TERGRAM **FLAT TERGRAM **ARCHARIS \$ SALIO **BACCHARIS \$ SALIO **B	THE SET SAME LASSING STR. THE SET OF SAME LASSING STR. THE SPARSE, SCATTERED SPARSE, S

Project: NASA - Santa Susana Field	l Lab	Date: 1/5/2012
Observers: Russell Huddleston and	d Steve Long	
eature Name BELL CREE	Sa Sa	mple Point WEST, pour s
GPS Location: AVE POSITION:	34° 13′ 58. 550"	118° 41' 57,086" PON
eomorphic Feature		В
River	☐ Lake	☐ Swale
Stream	☐ Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
Irrigation Channel	☐ Playa	☐ Depressional Basin
Drainage Channel	☐ Constructed Basin	☐ Rock Basin
Excavated Ditch	Unvegetatted Depression	□ Other:
Apparent Hydrologic Regime		
Perennial	☐ Standing Water (Depth:	1
Intermittent	☐ Flowing Water (Depth_)
≦ Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shell with steep side	If Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	□ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: BLUE LINE ON	USGS TOPO MAP	FOR THE
CALABASAS QUA	D; NHP STEEN	fm; no NWI
FEATURE		
NO EVIPENCE OF	PECENT THE	ed .

01	ni.	
Channel	Charac	teristics

Channel Width	NO DEFINED CHANNEL
Channel Depth	OR BED-BANK IN THIS
High Water Line Width	AREA
High Water Line Depth	
Channel Substrate (check all that	at apply)
Sand	☐ Cobble ☐ Silt / Clay
☐ Gravel	☐ Rock ☐ Other
Vegetation Characteristics of	Channel or Basin
Vegetated Channel or Basin?	⊠ Yes □ No
Dominant / Characteristic Specie	es
BACCHARIS SALIC	HOLIA
CARDUUS TYCHO	CEPHAMIS
BACCHARIS PILLI	UFIS
TOXCO DENDRON	
PHACACEIA PA	
Dominant / Characteristic Specie	es
	S AT 50 INCH DIAM CMP TUST AREA - (UNDER ZCAD)
BEFORE SPA A	AREA - (UNDER READ)
BEFORE SPA A UPSTERAM OF	
SEFORE SPA A UPSTERAM OF ARTEMESIA DOUG FASCICULATUS	FREA - (UNDER READ) = CULVERT -SOME SALIX LASIONERIS, OFLASIANA WITH MALACOTHAMPUS 5, BACCHARIS SAUCIFOLIA - INTERMITTER
PAGCICULATUS Z FOOT WIPE Z	FREA - (UNDER READ) - CULVERT -SOME SALIX LASIOLEPIS, OFLASIANA WITH MALACOTHAMNUS

Project: NASA - Santa Susana Field	Lab		Date: 1/5/201Z
Observers: Russell Huddleston and	Stev	ve Long	130
Feature Name BELL CREEL	R.	- SPA Sam	ple Point CONCRETE UNED
GPS Location: ANE POSITION:			118° 42' 01.249
Geomorphic Feature	4'	01-469 118	° 42′ 03.118″
River		Lake	☐ Swale
✓ Stream		Pond	☐ Erosional Channel
☐ Canal		Impoundment	Gully
☐ Irrigation Channel		Playa	☐ Depressional Basin
☐ Drainage Channel		Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	0	Unvegetatted Depression	Other:
Apparent Hydrologic Regime			
☐ Perennial		Standing Water (Depth:)
☐ Intermittent		Flowing Water (Depth)
Ephemeral Ephemeral	×	Dry at time of the survey	
Indictors			
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	D	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	Other (Specify)
Notes: SHOWN AS A BU	VE O	LIVE ON THE	uses topa map for
THE CALABASAS	au	AD; NHD STRE	HM - WESTERN
PART OF THIS F	FA	TURE SHOWN ,	AS NWI-(PFOA)
FORESTED / SCP			
- SOME WATER STAINING	6	on concrete	

Channel Width	5.7FT - 10.8	fT .		
Channel Depth	25 INCITES			
High Water Line Width	1-3 FEET			
High Water Line Depth	Z prites			
Channel Substrate (check all tha				
Sand	☐ Cobble	☐ Silt / Clay		
Gravel	☐ Rock	SK Other CONCRETE		
Vegetation Characteristics of	Channel or Basin			
Vegetated Channel or Basin?	☐ Yes ☐ No)		
Dominant / Characteristic Speci	es			
Dominant / Characteristic Speci				
BACCHARIS PILLLA TEXICO DENDRON	A, ERIODICTYOR RIS, BACCHARIS MINERSILEBUM,			

eature Name BELL CRE	ELC - SPA S	Sample Point
GPS Location: 34° 14' oc	0. 432 118° 42	07.570
Geomorphic Feature		
River	☐ Lake	☐ Swale
Stream	☐ Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
Irrigation Channel	☐ Playa	Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	☐ Other:
Apparent Hydrologic Regime		
Perennial	☐ Standing Water (Dept	n:)
Intermittent	☐ Flowing Water (Depth)
E phemeral	Dry at time of the surve	ey
Indictors		
Standing or flowing water with no indication of recent precipitation	☐ Channel adjacent to sh with steep side	nelf Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	■ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or cla deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
 Absence of vegetation or interruption of upland vegetation 		Other (Specify)
Notes: SHOWN AS BLUE L	INE ON USGS	NUI (PFCA)-FORESTER
CALABASAS QUAD,	NHD STREAM;	MINI - (PFOA) - FORESTER
SHOWB WETTAND		

AL	01	L 1 1
Channel	Charac	reristics

Chamilei Characteristics		
Channel Width	6 FT	
Channel Depth	ZFT	
High Water Line Width	2.7 FT	
High Water Line Depth	4 INCITES	
Channel Substrate (check all		
Sand	☐ Cobble	☐ Silt / Clay
☑ Gravel	A Rock	Other
SAND / ROCK CHAN	NEL W/ SPARSE O	GRAVE!
Vegetation Characteristics	TO SELECT THE THE THE THE THE THE THE THE THE TH	
Vegetated Channel or Basin?	☐ Yes	0
Dominant / Characteristic Spe	ecies	
	A verificación villago	~
CARDUUS PYCHOCE	PHANUS SEEPHINGS	} LESS THAN 1% TUTAL
portposen mors) COVER
	acies	HARIS PLULAPIS ENED IN 2005 FIRE
MALACOTHAM MUS	FASCICULATUS	
CARDUUS PYCNO	CEPHALUS BRA	SSICA NIBEA
Gij pilit j	, , ,	
	South INTO S.	UNED DITENT - CONTINUES ILVERNACE POND OFF
-		

Stor	ve Long	
		onle Point BC-
./0/	110 40	23.273
	Lake	☐ Swale
	Pond	☐ Erosional Channel
	Impoundment	☐ Gully
	Playa	☐ Depressional Basin
	Constructed Basin	Rock Basin
	Unvegetatted Depression	□ Other:
	Standing Water (Depth:	
	Flowing Water (Depth)
M	Dry at time of the survey	
	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
	Algae or alga mat	Other (Specify)
WE	LINE STREAM	an usas 7080
LATS	SASAS QUAD,	ASSO SHOWN AS
-	NO NWI WA	PRED FRANCES
	1.161 0000000000000000000000000000000000	□ Pond □ Impoundment □ Playa □ Constructed Basin □ Unvegetatted Depression □ Standing Water (Depth:

AL	01	And the Street
Channel	Charac	teristics

Channel Depth FT High Water Line Width 30 (PCHES High Water Line Depth 1-2 NCHES Channel Substrate (check all that apply) Sand	Channel Width	5 FT			
High Water Line Depth 1-2 NCHES Channel Substrate (check all that apply) Sand	Channel Depth	70.00			
High Water Line Depth 1-2 PCIFES -2 Channel Substrate (check all that apply) Sand	High Water Line Width	30 Irate	A March of the March Control of the		
Channel Substrate (check all that apply) Sand	High Water Line Depth	177	7.10		
Gravel Rock Other SANDY W SPARSE GRAVEL MORE CORRUE POND STREAM Vegetation Characteristics of Channel or Basin Vegetated Channel or Basin? Yes No Dominant / Characteristic Species CARDIUS PYCNOCEPHANIS BRASSICA MIGRA CESS THAN 2% TOTAL SILYBUM MARIA NUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, ERIODICTION CRASSIFICIUM, CERNOTHUS SP., MALOSOMA LIMITIMA SOME CURRENTS AGRIFCILM, SHIX INSIGNERIS SARINGS THARBUA DAMOSISSIMA, BRASSICA MIGRA	Channel Substrate (check all t	4 17 W - 18 W			
Vegetation Characteristics of Channel or Basin Vegetated Channel or Basin? Dominant / Characteristic Species CARDUM S PYCNOCEPHAMS BRASSILA MIGRA SILYBUM MARIA NUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BASCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EPIODICTYCH CRASSIFCLIUM, CHARATHUS SP., MALOSOMA LIMIRINA SOME QUERUS AGRIFULA SHIX LASIMERIS SARINGS MARELIA RAMOSISSIMA, BRASSILA MIGRA	⊠ Sand	☐ Cobble	☐ Silt / Clay		
Vegetation Characteristics of Channel or Basin Vegetated Channel or Basin? Dominant / Characteristic Species CARDIUS PYCNOCEPHAUS BRASSICA MIGRA CESS THAN 2% TOTAL SILYBUM MARIA PUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EMONICTYON CRASSIFICIUM, CERNOTHUS SP., MALOSOMA LIMIENA SOME GULPLUS ASPIFALIA SHAY INSIGNERIS SARINGS PHAREMA PAMOSISSIMA, BRASSICA MIGRA	☑ Gravel	☐ Rock	Other		
Vegetation Characteristics of Channel or Basin Vegetated Channel or Basin? Dominant / Characteristic Species CARDIUS PYCNOCEPHAUS BRASSICA MIGRA CESS THAN 2% TOTAL SILYBUM MARIA PUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EMONICTYON CRASSIFICIUM, CERNOTHUS SP., MALOSOMA LIMIENA SOME GULPLUS ASPIFALIA SHAY INSIGNERIS SARINGS PHAREMA PAMOSISSIMA, BRASSICA MIGRA	SANDY WI SDAS	25F CRAVEL	" MORF (OSSIE DOWN) COR	-	
Vegetated Channel or Basin? Dominant / Characteristic Species CARDUUS PYCNOCEPHAUS BRASSICA MIGRA CESS THAN 2% TOTAL SILYBUM MARIANUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, ADENOSTEMA FASCICULATA, EMODICTYON CRASSIFCCIUM, CERNOTHUS SP., MALOSOMA LIMIENA SOME QUERENS AGRIFOLIA - SHILY IASIOLEPIS SARUNGS THARBUA ZAMOSISSIMA, BRASSICA MIGRA	the Anna Street Burkston and Land Land Land		THE CONNE POND SIDE	2721	
Dominant / Characteristic Species CARDUMS PYCNOCEPHAMS BRASSICA MIGRA CESS THAN 2% TOTAL SILYBUM MARIANUM COVER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EMODICTION CRASSIFCCIUM, CERNOTHUS SP., MAIOSOMA LIMEINA SOME OULPLUS AGRIFOLIA SHIX IASIOLERIS SARINGS THALEMA PAMOSISSIMA, BRASSICA MIGRA			O No		
CARDUMS PYCNOCEPHAND BRASSICA MIGRA COUER Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EMODICATION CRASSIFICLIUM, CERNOTHUS SP., MALOSOMA UMEINA SOME GUERUS AGRIFAIA SHIX IASIGERIS SARINGS PHALEMA RAMOSISSIMA, BRASSICA MIGRA			- 110		
BRASSICA MIGRA SILYBUM MARIRI NUM COUETE Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, ELIODICTYON CRASSIFCLIUM, CEMPOTHUS SP., MAIOSOMA LIMEINA SOME QUERCUS AGRIFOLIA - SAUX LASIONERIS SARINGS THACELLA ZAMOSISSIMA, BRASSICA MIGRA		Acres de			
Vegetation Adjacent to Channel Dominant / Characteristic Species BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, EPIONICTYCH CRASSIFECTIOM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFAIA - SALY LASICIERIS SARINGS THACELLA DAMOSISSIMA, BRASSILA MIGRA	CARDUUS PYCNO	CEPHAUS)			
Vegetation Adjacent to Channel Dominant / Characteristic Species **BACCHARIS SALICIFOLIA*, APENOSTEMA FASCICULATA, **ERIODICTTON CRASSIFCLIUM*, CEANOTHUS SP., MAIOSOMA LIMEINA SOME QUERUS AGRIFOLIA* SANX LASIONERIS SARINGS **PHALEIJA ZAMOSISSIMA*, **BRASSICA** NIGRA	BRASSICA NIGTE	4 20	ESS THAN 2% TOTAL		
Vegetation Adjacent to Channel Dominant / Characteristic Species **BACCHARIS SALICIFOLIA*, APENOSTEMA FASCICULATA, **ERIODICTYON CRASSIFCLIUM*, CEANOTHUS SP., MAIOSOMA LIMEINA SOME QUERUS AGRIFOLIA* SANX LASIONERIS SARINGS **PHALEIJA ZAMOSISSIMA*, BRASSICA NIGRA	SILYBUM MARI	ANUM)	COVETE		
Dominant / Characteristic Species BACCHARIS SALICIFOLIA, ADENOSTEMA FASCICULATA, ERIODICTYON CRASSIFICIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SAUX (ASSOCIEPIS SAPUNOS THACELLA ZAMOSISSIMA, BRASSICA MIGRA					
Dominant / Characteristic Species BACCHARIS SALICIFOLIA, ADENOSTEMA FASCICULATA, ERIODICTYON CRASSIFICIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SAUX (ASSOCIEPIS SAPUNOS THACELLA ZAMOSISSIMA, BRASSICA MIGRA					
Dominant / Characteristic Species BACCHARIS SALICIFOLIA, ADENOSTEMA FASCICULATA, ERIODICTYON CRASSIFICIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SAUX (ASSOCIEPIS SAPUNOS THACELLA ZAMOSISSIMA, BRASSICA MIGRA	The state of the s				
BACCHARIS SALICIFOLIA, APENOSTEMA FASCICULATA, ERIODICTION CRASSIFICIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SAUX LASIONERIS SARINGS PHACELIA ZAMOSISSIMA, BRASSICA MIGRA	Vegetation Adjacent to Cha	innel			
EPIODICTION CRASSIFCLIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SANX LASIONERIS SARVINGS PHACELIA RAMOSISSIMA, BRASSICA MIGRA	Dominant / Characteristic Spe	cies			
EPIODICTION CRASSIFCLIUM, CERNOTHUS SP., MAIOSOMA LAURINA SOME QUERCUS AGRIFOLIA - SANX LASIONERIS SARVINGS PHACELIA RAMOSISSIMA, BRASSICA MIGRA	BASCHARIS SALICI	FOLIA ADENO	STEMA EASCICULATA		
SOME QUERCUS AGRIFOLIA - SANX LASIONERIS SARVINGS PHACECIA ZAMOSISSIMA , BRASSICA MIGRA			Y ARE TO SEE THE SECOND		
PHACELLA RAMOSISSIMA, BRASSICA MIGRA				CKINA	
And the second s	some avereus AG	rifact saux	14SIONEPIS SAPUNGS		
	PHACELLA RAY	MOSISSIMA, BRA.	ISICA NIGRA		
Notes:	e e				
	Notes:				
	14/01-				

SACIARID REGION DATA SHEET

roject: NASA - Santa Susana Field			Date: 1/6 / 2012
bservers: Russell Huddleston and			7000 27.6
eature Name BELL CRE	Eu	Sam	iple Point
PS Location: 34° 13′ 3°	1.4	69" -118 96	2 25.316
eomorphic Feature			
River		Lake	☐ Swale
Stream		Pond	☐ Erosional Channel
Canal		Impoundment	☐ Gully
Irrigation Channel		Playa	☐ Depressional Basin
Drainage Channel		Constructed Basin	☐ Rock Basin
Excavated Ditch		Unvegetatted Depression	Other:
Apparent Hydrologic Regime			
Perennial		Standing Water (Depth:)
Intermittent		Flowing Water (Depth)
Ephemeral	M	Dry at time of the survey	
ndictors			
Standing or flowing water with no indication of recent precipitation	۵	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	Other (Specify)
Notes: SHEWN AS A BL	UE	LINE ON THE	E USGS TUPO MAP
FOR THE CALABASA.	Sq	WAD; NIFD	STREAM
NO NWI MAPPED			* * * * * * * * * * * * * * * * * * * *
FO SEL 108-2-72-50 1427 1-2-22 14-22			

Channel Characteristics

Channel Width	4.8 FT	
Channel Depth	8-18 inute:	\$
High Water Line Width	2.1 FT	
High Water Line Depth	3 INCITES	
Channel Substrate (check all	that apply)	
⊠ Sand	∠ Cobble	☐ Silt / Clay
	☐ Rock	☐ Other
	SUBSTRATE WY SE	
Vegetation Characteristics		ALSE CORNE
Vegetated Channel or Basin?		
	,= ,00	NO
Dominant / Characteristic Spe	ecies	
BRASSICA NIGH	24 >	LESS THAN 5% TOTAL
CAPDUUS PYCI	5	LESS THAN 5% TOTAL
CARDUUS PYCI	vocephacus J	COVER
Vegetation Adjacent to Cha	annel	
Dominant / Characteristic Spe	ecies	

APTEMESIA DOUGU	ASIANA, TOXICOP	ENDRON DIVERSILOBUM
ERIODICTYON CRA	SSIFOLIUM, BALLIT	ARIS SAUCIFOLIA
MALACOTHAMNUS	FASCICULATUS, O	EANOTHUS SP.
BRASSICA NIGRA,	THACEUA KAMOS	1551MA, BACCHARIS PILVLARI
SILYBUM MARIAN	UM - OCCASSIONAL	SAUX LASICLEPIS - 64" DI
Notes:		
		ED SAMDY CHANNEL
		PEASE ARTEMESIA
		BRASSICA WIGRA
		LULTEIS, TOXICOPENDRON
011,52511 - 2 NM	MEAKINAL GUE	RUMC APRIFICALIA

Project: NASA - Santa Susana Field	Lab		Date:1/3	1 2012
Observers: Russell Huddleston and	Steve Long			
Feature Name BELL CREE		Sam	ple Point	+ BC-9
GPS Location: 34° 13′ 33.	868" 11	8° 42' 2	3.679"	
Geomorphic Feature				
River	☐ Lake		☐ Swale	
∑ Stream	☐ Pond		☐ Erosional Chan	nel
Canal	☐ Impoundm	ent	☐ Gully	
☐ Irrigation Channel	☐ Playa		☐ Depressional B	asin
☐ Drainage Channel	☐ Constructe	ed Basin	☐ Rock Basin	
☐ Excavated Ditch	Unvegetat Depressio		Other:	
Apparent Hydrologic Regime				
☐ Perennial	☐ Standing \	Vater (Depth:)	
☐ Intermittent	☐ Flowing W	ater (Depth)	
Ephemeral HYDROLOGY MANAGED	The second secon	e of the survey	GLUERNACE	pard
Indictors				
Standing or flowing water with no indication of recent precipitation	Channel a with steep	djacent to shelf side	Natural / irrigati	on / manmade / o feature
presence of hydrophytic vegetation		e, stain or alt) deposit	Dated picture / showing / referridentifiable feat	ring to
Presence of hydric soil with or without hydrophytic vegetation	Litter, deb deposits	ris and or clay	Wetland symbol (presence of so blue line, solid, stippled blue ar	lid or dotted shaded or
Absence of vegetation or interruption of upland vegetation	☐ Algae or a	ilga mat	Other (Specify)	
Notes: - SHOWN AS BLUE				
CALABASAS QUAD; A	INI (PFO)	fores	TED/SCRUB	WERLAND
AND NHO STREAM				
SOME OUD DEFET LI EVIPENT	res IDE	BPIS W	equint	

01	01	
Channel	Charac	teristics

SACIARID REGION DATA SHEET

Channel Width	10 FT	
Channel Depth	14 INCHES	
High Water Line Width www power	3.7 FT	
High Water Line Depth Compress	4 INCITES	
Channel Substrate (check all that		
∑ Sand	Cobble	☐ Silt / Clay
₩ Gravel	Rock	M Other Bourners
SAND-GRAVEL - COBBLE	SUBSTRATE W/	SOME LARGE SAMBTONE BOMPER
Vegetation Characteristics of C	The second second	
Vegetated Channel or Basin?	☐ Yes No	
Dominant / Characteristic Species		
L		
Vegetation Adjacent to Channe		
Dominant / Characteristic Species		
BACCHARIS SALICIF	CLIA	
BACCHARIS PILULAR		
		CHERRY ACTION
TOXICOPENPRON D		QUERCUS AGRIFOLIA
ERICPICTYON (RAS		
PIPTATHERUM MIL		NA ZAMOSISSIMA
RIBES MALVAC	EUM	
Notes:		
		CH OF THIS AREA
		CENERALLY PEVELD
OF VEGETAT		

G-146

2

Lab	Date: _1/5/2012
l Steve Long	
en sw s	ample Point
.724" -118°	42° 25.084 BC
☐ Lake	Swale
Pond	☐ Erosional Channel
☐ Impoundment	☐ Gully
☐ Playa	☐ Depressional Basin
☐ Constructed Basin	Rock Basin
Unvegetatted Depression	□ Other:
☐ Standing Water (Depth	n:)
☐ Flowing Water (Depth)
Dry at time of the surve	ey
- PUMPING INTO	SILVERMANE POND
Channel adjacent to sh with steep side	nelf Natural / irrigation / manmade ditch flowing into feature
☐ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Litter, debris and or cla deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Algae or alga mat	Other (Specify)
WE LINE STRE	AM ON THE WAS
P - NWI (PFOA)	FORESTED / SCRUB
ess and wrong	e LINES
Canal Icus	
	Lake Pond Impoundment Playa Constructed Basin Unvegetatted Depression Standing Water (Depth Flowing Water (Depth Dry at time of the surve Pumping Impoundment Channel adjacent to sh with steep side Natural line, stain or mineral (salt) deposit Litter, debris and or cla deposits Algae or alga mat

Channel Chara	acteristics
---------------	-------------

Channel Width	10.5 FT	
Channel Depth	1 FT	
High Water Line Width Complete	5.75 FT	
High Water Line Depth Lew Plaw	2"	
Channel Substrate (check all that	apply)	
Sand	☑ Cobble	☐ Silt / Clay
☑ Gravel	Rock	D-Other BOULDER
Charles and the Control of the Contr	honnel or Pooin	E BOUDEZS
Vegetation Characteristics of C		
Vegetated Channel or Basin?	☐ Yes 🕺 No	
Dominant / Characteristic Species	1-	
Vegetation Adjacent to Channe		
Dominant / Characteristic Species		
QUERCUS AGRIFAL	4	
		Walter Orde
BACCITARIS PILVLAR	is, KEWIELLA (CRP, FOLIA,
MACOSOMA LAURINA,	BACCHARIS SAZ	ICIFOLA, CEAR OTHUS SP.
ARTEMESIA DOUG	LASIANA, TUXI	COPENPEON DIVERSILEBUM,
PHACALEIA RAM	251851 MA	

Notes: APPROX 45 P	EET DOWNSTREAM	OF THIS POINT
THE DRAINAGE	IS BLOCKED B	T LARGE SANDSTONE
		CODENDEN - COULD
NOT ACCESS	THIS SECTION	OF THE CREEK
-WATER FLOWS AS	ENNO / UNDER	BOULDERS THIS
-		

ituic ivanic	K SW	Sample Point 59 BC
S Location: 34° 13' 30		12' 28.210"
omorphic Feature		
River	☐ Lake	☐ Swale
Stream	Pond	☐ Erosional Channel
Canal	☐ Impoundment	Gully
Irrigation Channel	☐ Playa	☐ Depressional Basin
Drainage Channel	☐ Constructed Basin	☐ Rock Basin
Excavated Ditch	Unvegetatted Depression	Other:
parent Hydrologic Regime		
Perennial	☐ Standing Water (Dept	th;)
Intermittent	☐ Flowing Water (Depth	h)
Ephemeral	Dry at time of the surve	ey
MANACED HYPROLOG	7 - PUMPING TO	SILVERNACE POND
dictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to si with steep side	helf Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	☐ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
	Litter, debris and or cla	ay Wetland symbol on map (presence of solid or dotted
Presence of hydric soil with or without hydrophytic vegetation	doposia .	blue line, solid, shaded or stippled blue area on map)
보는 문 가게 되었다. [전소계를 하고 말 먹었다. 이번 경기에 되면 ### : 보고 있다면 되었다. 이번 보고 있다면 되었다. 이번 보고 있는 모든		blue line, solid, shaded or
without hydrophytic vegetation Absence of vegetation or interruption	n 🗖 Algae or alga mat	blue line, solid, shaded or stippled blue area on map) Other (Specify)
Absence of vegetation or interruption of upland vegetation ofes: SHCUP AS BUE	Algae or alga mat	blue line, solid, shaded or stippled blue area on map) Other (Specify)

01	01	
Channe	Charac	teristics

	9.7 FT	
Channel Depth	18 INCHES	
High Water Line Width Low Frew		
High Water Line Depth Lew PLEW	5 INCHES	
Channel Substrate (check all that a		
Sand	△ Cobble	☐ Silt / Clay
☐ Gravel	Nock Rock	M Other BOULDER
Vegetation Characteristics of Ch	hannel or Basin	
Vegetated Channel or Basin?	Yes 🗆	No
Dominant / Characteristic Species		
ARTEMESIA DOUGLA	SIANA	
PUMEX CRISPUS)	LESS MAN CO TITLE
	}	COVER
APTATTHERUM MILA	1	COVEIC
CARDUUS PYCNOCE	PHACUS)	
W. V. C. V. V. C. V. V.		
Vegetation Adjacent to Channel		
Dominant / Characteristic Species		
	EZSILO BUM	OVERUS AGRIFOLIA
TOXICODEMPREN DIV.	EZSILOBUM FALLEN TREE	OUERCUS AGRIFOLIA
TOXICODEMPREN DIV.	EZSILOBUM FALLEN TREE BIANCITE	W/ SMALL RESPRONTING
JOXICODEMPREN DIV.	FALLEN TREE BIMANCHE	5)
TOXICODEMPREN DIV. SAUX LASICLEPIS (MIMUUS ALRANTIA	FALLEN TREE BIRANCHE ALUS, ARTER	S) SESIA DOUGLASIANA,
TOXICODEMPREN DIV. SALIX LASICLEPIS (MIMULUS ALPANTIA PIPTATHERUM MILA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICOPEMPRON DIV. SALIX LASICLEPIS (MIMULUS ALRANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICODEMPREN DIV. SALIX LASICLEPIS (MIMULUS ALPANTIA PIPTATHERUM MILA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICODEMPREN DIV. SALIX LASICLEPIS (MIMULUS ALPANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICODEMPRENDING SALIX LASICLEPIS (MIMULUS ALRANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICODEMPRENDING SALIX LASICLEPIS (MIMULUS ALRANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICOPEMPRON DIV. SALIX LASICLEPIS (MIMULUS ALRANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,
TOXICOPEMPRON DIV. SALIX LASICLEPIS (MIMULUS ALRANTIA PIPTATHERUM MILA PHACELIA RA	FALLEN TREE BIRANCHE ACUS, ARTER ACOUM, RIBE	S) SESIA DOUGLASIANA,

SACVARID REGION DATA SHEET

eature Name BELL CREEL	c sw	Sample Point SP-4 BC-1
SPS Location: 34° 13′ 28	.989" 118° 4	12' 28.628"
eomorphic Feature		
River	Lake	Swale
Stream	☐ Pond	☐ Erosional Channel
Canal	☐ Impoundment	☐ Gully
Irrigation Channel	☐ Playa	☐ Depressional Basin
Drainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	☐ Other:
Apparent Hydrologic Regime		
Perennial	☐ Standing Water (Dep	oth:)
Intermittent	☐ Flowing Water (Dep	ath \
Z. Astronomical Company		
Ephemeral MANAGED HYDROLOG	Dry at time of the sur	
Ephemeral MANAGED HYDROLOG Indictors	Dry at time of the sur	Vey INTO SILVERNACE FOND
Ephemeral MANAGED MIDROLOG Indictors Standing or flowing water with no indication of recent precipitation	Dry at time of the sun PING Channel adjacent to:	shelf Natural / irrigation / manmade ditch flowing into feature Dated picture / account
Ephemeral MANAGED MIDROLOG Indictors Standing or flowing water with no indication of recent precipitation	Dry at time of the sun — PUMPING Channel adjacent to swith steep side Natural line, stain or	shelf Natural / irrigation / manmade ditch flowing into feature Dated picture / account showing / referring to identifiable features
Ephemeral MAPACED MIDROLOC Indictors Standing or flowing water with no indication of recent precipitation presence of hydrophytic vegetation Presence of hydric soil with or	Dry at time of the sun — PUMPING Channel adjacent to swith steep side Natural line, stain or mineral (salt) deposit Litter, debris and or or deposits	shelf Natural / irrigation / manmade ditch flowing into feature Dated picture / account showing / referring to identifiable features Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or
Ephemeral MANAGED MYDROLOG Indictors Standing or flowing water with no indication of recent precipitation presence of hydrophytic vegetation Presence of hydric soil with or without hydrophytic vegetation Absence of vegetation or interruption	Dry at time of the sun 7 - PUMPING Channel adjacent to swith steep side Natural line, stain or mineral (salt) deposit Litter, debris and or or deposits Algae or alga mat	shelf Natural / irrigation / manmade ditch flowing into feature Dated picture / account showing / referring to identifiable features Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map) Other (Specify)

Channal	Charan	Pariation
Channe	Charact	leristics

SACIARID REGION DATA SHEET

Channel Width	13. 7 FT		
Channel Depth	8/NOITE S		
High Water Line Width	MA		
High-Water Line Depth	MA		
Channel Substrate (check all tha			
☐ Sand	Cobble		☐ Silt / Clay
☑ Gravel	☐ Rock		Other
Vegetation Characteristics of	Channel or Basin		
Vegetated Channel or Basin?	Yes	□ No	
Dominant / Characteristic Speci	es		
PIPTATHERUM	MILACEUM	N75%	COVET
		WITHIN	THE CHANNEL
CARDUUS PYCH	0.6244		
Vegetation Adjacent to Chan Dominant / Characteristic Speci	nel es		
Vegetation Adjacent to Chan	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICO DENTRO	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICODENTRON	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICO DENTRO	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICODENTRON	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICODENTRON	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICODENTRON	nel es Foura		
Vegetation Adjacent to Change Dominant / Characteristic Speci QUERCUS AGRIF TOXICODENTRON	nel es Foura		

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2

Project: <u>NASA - Santa Susana Field</u>	l Lab		Date: 1/5/2012
Observers: <u>Russell Huddleston and</u>	d Stev		
cature Name <u>BELL</u> CREE	K		ple Point SPS BC
GPS Location: 34° 13′ Z	6.8	01" 118° 41	2' 26. 356"
Geomorphic Feature			
River		Lake	☐ Swale
Stream		Pond	☐ Erosional Channel
Canal		Impoundment	☐ Gully
Irrigation Channel		Playa	☐ Depressional Basin
Drainage Channel		Constructed Basin	☐ Rock Basin
Excavated Ditch		Unvegetatted Depression	Other:
Apparent Hydrologic Regime			
Perennial		Standing Water (Depth:)
Intermittent		Flowing Water (Depth)
☑ Ephemeral	M	Dry at time of the survey	
HIGHLY MANAGED	-Pu	MPING INTO	SILVERNACE POND
Indictors			
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	Other (Specify)
			is topo MAP FOR
THE CALABASAS Q	nes	D; NWI (PFOA	FORESTED/SCRUB
WETGND; NHD 3	STR	FAM	
NO EVIPENCE OF	= 12	ELENT FLOW	IN THIS ARES
		-147 T	77.00.0

15.0	9.4 FT	
hannel Depth	10 , MUTES	
igh Water Line Width Lew Rew		
igh Water Line Denth Low Free		
hannel Substrate (check all that a	pply)	
3 Sand	Cobble	☐ Silt / Clay
₫ Gravel	Rock	Other
egetation Characteristics of Cl	nannel or Basin	
egetated Channel or Basin?	Yes 🗆	l No
Oominant / Characteristic Species		*
SYMPHORICAR POS RIBES MALVACEUR	MOLLIS, POM	LESS THAT 10% TOTAL COVERT PLATAMUS RACEMOSA BUS URSINUS, GAYUM SP. LLA COFDIFOLIA, TATHERUM MILACEUM
阿 拉		
Notes:		

Project: NASA - Santa Susana Fie	ld Lab			Date: 1/6/2012
Observers: Russell Huddleston a	nd Stev	ve Long		
Feature Name BELL CREEK	CDFA	-TRIBUTARY Sam	ple	Point_ BCT-
GPS Location: 34° 13′ 3°	1.190	" 118° 42'	26.	.552
Geomorphic Feature				
River		Lake	0	Swale
X Stream		Pond		Erosional Channel
Canal		Impoundment	a	Gully
☐ Irrigation Channel		Playa		Depressional Basin
☐ Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch	ū	Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
☐ Perennial		Standing Water (Depth:)
☐ Intermittent		Flowing Water (Depth		-)
M Ephemeral	×	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation	A	Channel adjacent to shelf with steep side		Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
☐ Presence of hydric soil with or without hydrophytic vegetation	M	Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interrupti of upland vegetation	on 🗆	Algae or alga mat		Other (Specify)
Notes: TRIBLTAPY CHA				
SHOWN AS A BLUE				
- WELL DEFINED CH				
AND WRACKING	10	THE CHANNI	EL	

Channel	Charac	cte	ris	tics
			-	_

Channel Width	4 FT	
Channel Depth	12 - 24 /NCHE	<
High Water Line Width	2.3 FT	
High Water Line Depth	12 INCHES	
Channel Substrate (check all		
⊠ Sand	☐ Cobble	☐ Silt / Clay
☐ Gravel	Rock	Other_
Gravei	L ROCK	- Other
Vegetation Characteristics	of Channel or Basin	
Vegetated Channel or Basin?		
Dominant / Characteristic Spe		
Vegetation Adjacent to Cha Dominant / Characteristic Spe		
BACCHARIS PILL	LARIS, CEANOTITE	us sp
	eur, ADENOSTER	
	IA CARDUUS PYON	
BRASSICA NIGRA		
Notes:		
NAME OF TAXABLE		

SACIARID REGION DATA SHEET

eature Name 15 PLF				
GPS Location: AUE: 34° 1	3′	35. 238" 118"	4	12' 14.049"
Geomorphic Feature				
River		Lake		Swale
Stream		Pond	M	Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
☐ Drainage Channel		Constructed Basin	O	Rock Basin
☐ Excavated Ditch		Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:)
☐ Intermittent		Flowing Water (Depth	_	
≦ Ephemeral	Ø	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	0	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits		Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat		Other (Specify)
Notes: NOT SHOWN AS	A	BUE LINE OF	~	USES topo,
NOT IN NHD, NO	/	UNI MAPPED	w	ETHOR

n :			
nanna	Charact	PILOT	ICC
Guarine	Cildiac	ici ioi	1100

Channel Width	(1 2 - 3 67	-	
Channel Depth	(1) Z-3 FT		
High Water Line Width	72 -17		
Nigh Water Line Depth	-		
Channel Substrate (check all tha	at apply)		
14			Section 1
Sand	Cobble	u	Silt / Clay
Gravel	Rock		Other
SANDY CHAN	INEL W/ 50	ME (SPARSE)	COBBLE
Vegetation Characteristics of	Channel or Basin		
Vegetated Channel or Basin?	☐ Yes	No No	
Dominant / Characteristic Speci	es		
Vegetation Adjacent to Chan	nel		
Dominant / Characteristic Speci	es		
RIBES MALVACEUR	OUA TOXIC	COPENDEON	DIVERSILOBUM
RIBES MALVACEUR	1. VENECAS	IA CARPESIO	IDES
ARTEMESIA CAUF	ORNICA, PI	tacella Ran	OSISSIMA,
Bremus Durppen	S. PIPTATH	ERUM MILA	ceun.
CARDUNS PYCNO	CEIMALUS		
Notes: UPSTREAM PA	HET OF DRAI	MAGE AT U	HEE SAMPSTONE
ROCKS - 1-2 FOOT			
CHANNEL (SAN			
sugitary wil	DER -2-3 F	T DOWN ST	ector
AT EMP OF EX	POSICNAL TO	14.00	ALL CLOPESES
FLOW CHANNE			
CULVERT- DR			
ARFA		, , , , ,	

eature Name COCA DR	411	Sam	ple l	Point # CD-1
GPS Location: 34° 13′ 34	1. 9	72" 118° 41	' :	51.677"
eomorphic Feature				
River		Lake		Swale
Stream		Pond		Erosional Channel
Canal		Impoundment		Gully
Irrigation Channel		Playa		Depressional Basin
Drainage Channel		Constructed Basin		Rock Basin
Excavated Ditch	a	Unvegetatted Depression		Other:
Apparent Hydrologic Regime				
Perennial		Standing Water (Depth:)
☐ Intermittent		Flowing Water (Depth)
Ephemeral Ephemeral	X	Dry at time of the survey		
Indictors				
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side		Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit		Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	0	Litter, debris and or clay deposits	×	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	M	Other (Specify)
Notes: 5HOWP AS A BL	UE	LINE OF US	65	7.5 MIN
TOPO MAP FOR TH	E	CALABASAS Q	u A	D NOT SHOWN
IN THE NHD				
- SOME STAINING A				

AL	01			
Channel	Chai	acte	erisi	ICS

SACVARID REGION DATA SHEET

Channel Width	26 FT		
Channel Depth	z fT		
High Water Line Width Lew Free	4 FT		
High Water Line Depth Gen	1-2"		
Channel Substrate (check all that	apply)		
☐ Sand	☐ Cobble	☐ Silt / Clay	
☐ Gravel	☐ Rock	Other Gur	ITE
Vegetation Characteristics of C	Channel or Basin		
Vegetated Channel or Basin?	≱ Yes □	No	
Dominant / Characteristic Species	3		
BACCHARIS SACICIFO PIPTATHERUM MIL,			
Vegetation Adjacent to Channel	4		
Dominant / Characteristic Species	s		
MALOSOMA LAURIN	4		
BACCHARIS SALICI		111114816	
			3/1 -21
SALIX LASIOLEPIS		MGS SOUTH SIDE Z	5 DEN
TAVICADE LIDEAN DU	RASSIFULIUM		
	101		
ERIODICTY OF CA	elfoppion.		
	elfoppioom	MILACEUM	
ERIODICTYON CA AVENA BARBATA, Notes:	DIPTATHERUM		St. T
AVENA BARBATA, Notes: AREA HIGHLY	PIPTATHERUM ALEKED 37	CONSTRUCTION OF	
ERIODICTYON CA AVENA BARBATA, Notes:	PIPTATHERUM ALEKED 37	CONSTRUCTION OF	
AVENA BARBATA, Notes: AREA HIGHLY	PIPTATHERUM ALEKED 37	CONSTRUCTION OF	
ERIODICTYON CA AVENA BARBATA Notes: AREA HIGHLY	PIPTATHERUM ALEKED 37	CONSTRUCTION OF	

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2

Project: NASA - Santa Susana Field	Lab Date: 1/3/292
Observers: Russell Huddleston and	l Steve Long
Feature Name COCA DR	ANAGE Sample Point SPECO - 2
GPS Location: 34° 13′ 3	5,934" 118° 41' 58.161"
Geomorphic Feature	
River	☐ Lake ☐ Swale
Stream	□ Pond □ Erosional Channel
Canal	☐ Impoundment ☐ Gully
☐ Irrigation Channel	☐ Playa ☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin ☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression Other:
Apparent Hydrologic Regime	
☐ Perennial	☐ Standing Water (Depth:)
☐ Intermittent	☐ Flowing Water (Depth)
Ephemeral	Dry at time of the survey
Indictors	
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	□ Natural line, stain or mineral (salt) deposit □ Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat ☐ Other (Specify)
Notes: SHOWN AS BUE	LINE ON USES 7.5 MIN TOPO
QNAD: CALABASAS	- NOT INCLUDED IN NAD
· WATER STAINING IN GUNITE CHAN	AND CORROSION EVIDENT

Channel Characteristics

Channel Width	30 ft	
Channel Depth	z ft	
High Water Line Width Lew Flee	4.5ft	
High Water Line Depth Leugen	1-2 in	
Channel Substrate (check all th	at apply)	
☐ Sand	☐ Cobble	Sitt / Clay
☐ Gravel	Rock	M Other GUNITE

Vegetation Characteristics of Channel or Basin

Vegetated Channe	or Basin?	X Yes	☐ No		
Dominant / Chara	cteristic Species				
BACCITARIS	SALICIFOR	1A - 1	GENERAL	7 SPARS	E AND
		50	ATTERIED	IP OR	Acus BUT
		20	CALLY DI	erse 11	A FEW
		/	AREAS OF	THE	CHANNEL

Vegetation Adjacent to Channel

Dominant / Characteristic S	pecies
ERIODICTYON &	CRASSIFOLIUM CALIFORNICOM
M46050M4 L	
TOXICO DENDE	on DIVERSILCBUM
BACCHARUS	PILALIFEIS
CENTAUREA M	ELITENSIS, HETEROTHECA GRAPDIFLORA,
PENNISETUM S	ETACEUM, PSEUDOGRAPHALIUM BIOLETTI

Notes:

GUNITE CHANNEL THAT FLOWS WEST INTO COLA POND.

THE UPSTREAM PERSON OF THE CHANNEL NEAR THIS

POINT BLOWNED WITH SINGLE POW OF SAND BAGS

THE DOWNSTREAMS PORTON OF THE GUNITE CHANNEL

TERMINATES AT 3 CULVERTS - ONE CULVERT WITH

A CLOSED VALVE AND TWO CULVERS HAVE

BEEN SEALED WITH HEAVY RUBBER COVERS

NO INDICATION OF WATER PONDING BEHIND

THESE CULVERTS

Project: NASA - Santa Susana Field			Date: 1/3/2012
Observers: Russell Huddleston and			
eature Name <u>cocA</u> DR		San	nple Point _ CP 3 CD
GPS Location: 34° 13′	37.	907" 118°	42' 02.894"
Geomorphic Feature			
River		Lake	☐ Swale
Stream		Pond	☐ Erosional Channel
Canal		Impoundment	☐ Gully
Irrigation Channel		Playa	☐ Depressional Basin
☐ Drainage Channel		Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	0	Unvegetatted Depression	Other:
Apparent Hydrologic Regime			
Perennial		Standing Water (Depth:)
☐ Intermittent		Flowing Water (Depth)
Ephemeral	M	Dry at time of the survey	
Indictors			
Standing or flowing water with no indication of recent precipitation		Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation		Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation		Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation		Algae or alga mat	Other (Specify)
Notes: SHOWP AS BUE	~	INE ON USGS	7.5 MIN. TOPO MAP
			IN THE NHD
- CONSTRUCTED CON POND OVER FLOW HISIMY ALTERED A	Ar		

Channel Characteristics

Channel Depth High Water Line Width	4-4.5	FT		
ligh Water Line Width LOW				
Fices	5 ft			
High Water Line Depth PLOW	N 12 11	cites or L	ess	
Channel Substrate (check all that				
Sand	☐ Cobble		☐ Silt / Clay	
				_
☐ Gravel	☐ Rock		Other CONCRETE	=_
Vegetation Characteristics of C	Channel or Basir	1		
Vegetated Channel or Basin?	☐ Yes	No No		
Dominant / Characteristic Species	s			
				-
				-
Vegetation Adjacent to Channe	el			
Dominant / Characteristic Species	5			
ACMISPON GLABE	R (= laters	SCEPARINE		
MEMISTON GLABE	(-20,00		1	
ERIOGONUM FASO	CICULATUR	1		
BRASSICA MIGRA	2-5-5-			
BACCHARIS PILVLA	18,0			
	CRASSIFOCI	um		
ERIODICTYON CA	ELFERNIC	ups		
Notes: 500774 END				+
NO CULVERT E	NIDENT	AT STA	RT OF THE	
CONCRETE CHA	NNEL			
1008010 211 05	nameD	7/- 0	THE THE	
APPROX 2" OF S				5
CHANNEL - A				P
11				
NO EUDENU		COWING	WATER IN	

Project: NASA - Santa Susana Field	Lab	Date: 1/ 3/2012
Observers: Russell Huddleston and	l Steve Long	
Feature Name COCA DR	San San	aple Point 59-4 CD-
GPS Location: 34° 13′ 3	7. 543" 118° 4	12' 05. 274"
Geomorphic Feature		
River	☐ Lake	☐ Swale
Stream	☐ Pond	☐ Erosional Channel
☐ Canal	☐ Impoundment	☐ Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:_)
☐ Intermittent	☐ Flowing Water (Depth)
Ephemeral Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: SHOWN AS BUE	ELINE ON USGS	7.5 MIN JEPO
FOR THE CALABASA		INCLUDED IN
THE NHD		
- HIGHLY ALTERED OUTSEFLOW AND SITE	MATURAL DRAIN E DRAINAGE	AGE FOR COCA PONS

AL .	AL	A company of	
Channel	Charac	rerie	שחו
CHAINICI	Oliul do	CITO	1100

Channel Width	10.8 f	+		
Channel Depth	ZfT			
High Water Line Width Low	~3fT			
High Water Line Depth	1-2 INCI	HES		
Channel Substrate (check all that				
☐ Sand	☐ Cobble		☐ Silt / Clay	
				0.2
☐ Gravel	Rock		Other concre	ett
Vegetation Characteristics of C	hannel or Basin	1		
Vegetated Channel or Basin?	☐ Yes	≥ No		
Dominant / Characteristic Species		•		
Vegetation Adjacent to Channe	el			
Dominant / Characteristic Species				
TOXICODENDRON	DIVE 2511	281.20		
	Water Street,			
MALACOTHAMNUS	FASCICE	LARIS		
BACCIFARIS SAME	IFOCIA			
MALOSOMA LAUR	NA			
BACCITATES PICUL	A TOTAL OF			
BACCIATAINS FILLS	24351FOLIUI	4		
ERIODICTYON CA				
Notes: SAMPLE Perm	T DOWNST	REAM OF	SMALL DRA	NAGE
INCET - NO	SEDIMER	UT TIHIS	LOCATION, BU	1
LOTS OF LEAT	= UTTE	R -NO	EVIDENCE	OF
RECENT FL				
				_

SACVARID REGION DATA SHEET

Project: <u>NASA - Santa Susana Field</u>	Lab	Date: 1/3/2012
Observers: Russell Huddleston and		
Feature Name COCA DRA		
GPS Location: 34° 13′ 38.	609" 118° 42	2' 13.874"
Geomorphic Feature		
River	☐ Lake	☐ Swale
☑ Stream	Pond	☐ Erosional Channel
☐ Canal	☐ Impoundment	Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth	h:)
☐ Intermittent	☐ Flowing Water (Depth)
Ephemeral	Dry at time of the surve	ey
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to sh with steep side	nelf Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or cla deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)
Notes: SHOWN AS BUUE	LINE ON USGS	5 7.5 MIN TOPO FOR
THE CALABASAS MHD	and - NOT 1	NCLUPED IN THE
	e75, - some 417	MER / DEBEIS WEALLING
IN THE CHANNEL.	ABSENCE CF	LEAF LITTER

Channel Characteristics

10 ft		
10 INCHES		
ZFT		
750		
☐ Cobble	☐ Silt / Clay	
☑ Rock	Other	
A CONTRACTOR		
≱ Yes □ N	No	
10-15%		
CLIA - SPARSE	45%	
EPHALUS - S	PARSE	
		_
I		
SIFULIUM ERRALIA	ALCISOMA IALOLIA	
M, MIMULUS	AURANTIACUS	
1815, PHACEL	IA RAMOSISSIMA	
M BIOLETTII		
	A 107-11-11-11-11-11-11-11-11-11-11-11-11-11	
	L APPEARS MORE	
TE CHAILE	- MITTEN MINE	-
INTO RZA	gond	
	Corches Cobble Cobble	Cobble Silt/Clay Silt/Cl

Project: <u>NASA - Santa Susana Fiel</u>	d Lab	Date: _// 3/ 2012
Observers: Russell Huddleston an		
Feature Name COCA PR	Samp	ple Point -SP-6 CD-6
GPS Location: 34° 13° 3	8.504" 118° 4	2' 15.023"
Geomorphic Feature		
River	☐ Lake	Swale
☑ Stream	☐ Pond	☐ Erosional Channel
☐ Canal	☐ Impoundment	☐ Gully
☐ Irrigation Channel	☐ Playa	☐ Depressional Basin
☐ Drainage Channel	☐ Constructed Basin	☐ Rock Basin
☐ Excavated Ditch	Unvegetatted Depression	☐ Other:
Apparent Hydrologic Regime		
☐ Perennial	☐ Standing Water (Depth:)
☐ Intermittent	☐ Flowing Water (Depth)
Ephemeral Ephemeral	Dry at time of the survey	
Indictors		
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade / ditch flowing into feature
presence of hydrophytic vegetation	□ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features
Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)
Absence of vegetation or interruption of upland vegetation	Algae or alga mat	Other (Specify)
Notes: SHOWN AS A BLU	E WINE ON USGS	TOPO 7.5 MIN
GUAD: CALABASAS	- NOT INCLUPED	THA MI
- SMALL AMOUNT OF CHANNEL	LITTER / DEBRIS	WEALKING ,

PA1		01				
Char	nnei	Cha	raci	er	าเรอเ	9
Oliai	HIGH	Ulla	acı		SHO	

	12 ft		
Channel Depth	3 F+		
High Water Line Width Law PLEW	ZFT		
High Water Line Depth FLOW	16+		
Channel Substrate (check all that a	apply)		
Sand	☐ Cobble		☐ Silt / Clay
☑ Gravel	Rock		☐ Other
			SATD WI SOME GRAVE
Vegetation Characteristics of C			
Vegetated Channel or Basin?	☐ Yes	No No	
Dominant / Characteristic Species		1	
Vegetation Adjacent to Channe Dominant / Characteristic Species ESCIODICTY ON CRA	SSIFCLIU	м	
QUERCUS AGRIF	COLA		
BRASSICA MIGRA,	PHACEC	11 RAM	OSISSIMA,
			AS AURANTIACUS
Notes: NATURAL DR	EPHACUS,	CHANNE	AS AURANTIACUS
Notes: NATURAL DR	EPHALUS, 41NAGE BOUDERS	MIMULE CHAMPE PRESE	L - SEVERAZ NT WITHIN CHANNES
Notes: NATURAL DR	EPHALUS, 41NAGE BOUDERS	MIMULE CHAMPE PRESE	L - SEVERAZ NT WITHIN CHANNES
Notes: NATURAL DR	EPHALUS, 41NAGE BOUDERS	MIMULE CHAMPE PRESE	L - SEVERAZ NT WITHIN CHANNES
Notes: NATURAL DR	EPHALUS, 41NAGE BOUDERS	MIMULE CHAMPE PRESE	L - SEVERAZ NT WITHIN CHANNES

SACIARID REGION DATA SHEET

Observers: Russell Huddleston and	Steve Long			
Feature Name <u>coc4</u> <u>DRA</u>	NACE Sar	nple Point _ 5P - 7 - OD - 		
GPS Location:				
Geomorphic Feature				
River	☐ Lake	☐ Swale		
☑ Stream	☐ Pond	☐ Erosional Channel		
☐ Canal	☐ Impoundment	Gully		
☐ Irrigation Channel	☐ Playa	Depressional Basin		
☐ Drainage Channel	☐ Constructed Basin	Rock Basin		
☐ Excavated Ditch	Unvegetatted Depression	□ Other:		
Apparent Hydrologic Regime				
☐ Perennial	☐ Standing Water (Depth:_)		
☐ Intermittent	☐ Flowing Water (Depth)			
₩ Ephemeral	Dry at time of the survey			
Indictors				
Standing or flowing water with no indication of recent precipitation	Channel adjacent to shelf with steep side	Natural / irrigation / manmade / ditch flowing into feature		
presence of hydrophytic vegetation	☐ Natural line, stain or mineral (salt) deposit	Dated picture / account showing / referring to identifiable features		
☐ Presence of hydric soil with or without hydrophytic vegetation	Litter, debris and or clay deposits	Wetland symbol on map (presence of solid or dotted blue line, solid, shaded or stippled blue area on map)		
Absence of vegetation or interruption of upland vegetation	☐ Algae or alga mat	Other (Specify)		
Notes: SHOWN AS BLUE	LINE ON USG	5 7.5 MIN. 7080		
FOR THE CHABASAS	and - NOT	NCUDED IN THE		
MHD				
- NATURAL DRAINAGE	CHANNEL			

astronomic medical comments	14 Lt		
Channel Depth	1.5 FT		
High Water Line Width Low	ZET		
High Water Line Depth	6 INCITES		
Channel Substrate (check all tha			
☑ Sand	☐ Cobble		Silt / Clay
Gravel 10-15%	Rock		Other
Vegetation Characteristics of	Channel or Basin		
Vegetated Channel or Basin?	☐ Yes)	No	
Dominant / Characteristic Specie	es		
Vegetation Adjacent to Channe Dominant / Characteristic Specie ERIODICTYCH CRASS MALACOTHAMPUS	es	BACCHARIS	PILULARIS, S AMRANTIACUS,
Dominant / Characteristic Specie ERIODICTYCN CRASS MALACOTHAMPUS	FASCICULATI		
Dominant / Characteristic Specie ERIODICTYCN CRASS MALACOTHAMPUS	FASCICULATUM, SCICULATUM	CEANOTH	HUS CRASSIFOLIUS
Dominant / Characteristic Specie ERIODICTYCH CRASS MALACOTHAMPUS A DENOSTOMA FA	PAINAUE CH	M, PIPTATI	HERUM MILACEUM

Repr	Appendix Gesentative Photographs
•	<u> </u>

Appendix G, NASA SSFL EIS for Proposed Demolition and Environmental Cleanup

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G-1. Coca Pond view north. January 3, 2012.



G-3. Coca Pond SP-2 soil pit (out). January 3, 2012



G-2. Coca Pond view east of the stormwater basin just upstream from Coca Pond. January 3, 2012.



G-4. Coca Pond. Organic sediment accumulation at SP-1. January 3, 2012



G-5. Upper reaches of Coca Drainage. View upstream at Coca test stand at stream data point CD-1. January 3, 2012.



G-7. Bell Creek Tributary 3 (Drainage within Delta Area). View east (upstream) of plunge pools on stream that still had water at stream data point CD-6. January 3, 2012.



G-6. Bell Creek Tributary (Coca Drainage below Coca Pond). View east (downstream) of concrete lined ditch just below Coca Pond outlet at stream data point CD-3. January 3, 2012.



G-8. NASA Area 1. View west (uphill) of seasonal ponding feature SW-1 PEMAx. January 4, 2012



G-9. NASA Area 1. Seasonal ponding feature SW-1 P-1 soil pit (in). January 4, 2012.



G-11. NASA Area 1 Impoundment Pond (PEMCh). View west showing berm that creates the impoundment pond described on stream data sheet and wetland data sheet SW-2 in northwestern portion of property. January 4, 2012



G-10. NASA Area 1. Seasonal ponding feature SW-1 P-2 soil pit (out). January 4, 2012.



G-12. NASA Area 1 Impoundment Pond. SW-2 P-1 soil pit (in). January 4, 2012.



G-13. NASA Area 1 Impoundment Pond. SW-2 P-2 soil pit (out). January 4, 2012



G-15. NASA Area 2 Northeastern Drainage. View north (downstream) at stream data point SP-3. January 4, 2012



G-14. NASA Area 1 Lower Drainage. View west (downstream) at stream data point ND-4. January 4, 2012.



G-16. R2A Pond. View south. January 5, 2012



G-17. R2A Pond. Culvert and gated weir from R2A Pond. January 5, 2012



G-19. R2A Pond. Soil pit R2A SP-1 (in). January 5, 2012



G-18. R2A Pond. View north. January 5, 2012



G-20. R2A Pond. Soil pit R2A SP-2 (out). January 5, 2012



G-21. R2A Pond. R2A Pond Pump intake and piping for water transfers to and from Silvernale Pond. January 5, 2012



G-23. R2B Pond. Soil pit 1 R2B SP-1 (in). January 5, 2012



G-22. R2B Pond. Drift line of algal matting on R2B pond at 36 inches above current water level. January 5, 2012



G-24. R2B Pond. Location of soil pit R2B SP-2 (out) on western margin of pond. January 5, 2012



G-25. Bell Creek SW. View west (downstream) at stream data point BC-11. January 5, 2012.



G-27. Bell Creek at Alfa Site. Earthen dam along Bell Creek view west-northwest. January 5, 2012



G-26. Small concrete impoundment controlling flow along Bell Creek from Alfa site (view west). January 5, 2012



G-28. Bell Creek at Bravo Site. Culvert discharge below and north of capped pond outfall. January 5, 2012



G-29. Bell Creek at SPA Site. View west (downstream) at stream data point BC-6. January 6, 2012. [Designated in report as BC-6]



G-31. Bell Creek Tributary 1 near CDFF Site. Bell Creek at confluence. January 6, 2012



G-30. Bell Creek near CDFF Site. View north (upstream) at stream data point BC-8 above R2B Pond. January 6, 2012.



G-32. Bell Creek Tributary (PLF Site). View north into natural channel above CLORP leading to capped Delta Pond. January 6, 2012

Appendix G, NASA SSFL EIS for Proposed Demolitic	on and Environmental Cleanup
	Annondiy H
-	Appendix n
 	Appendix H Plant Species Observed

APPENDIX H

List of Plant Species Observed

APPENDIX H

List of Plant Species Observed

Scientific Name ¹	Common Name ²	Wetland Indicator Status ³	Habit and Origin⁴
	DICOTS	•	
AIZOACEAE			
Mesembryanthemum crystallinum	Common iceplant	NL	Herb (A/P); I
ADOXACEAE	•		
Sambucus nigra ssp. caerulea (Sambucus mexicana)	American black elderberry	FACU	Shrub/Tree; N
ANACARDIACEAE			
Malosoma laurina	laurel sumac	NI	Shrub; N
Toxicodendron diversilobum	Pacific poison oak	NI	Shrub; N
ASTERACEAE			
Artemisia californica	coastal sagebrush	NI	Shrub; N
Artemisia douglasiana	Douglas' sagewort	FAC+	Herb (P); N
Baccharis pilularis	coyotebrush	NI	Shrub; N
Baccharis salicifolia	mule-fat	FACW	Shrub; N
Carduus pycnocephalus	Italian plumeless thistle	NI	Herb (A); I
Centaurea melitensis	Maltese star-thistle	NI	Herb (A/B); I
Cirsium occidentale var. occidentale	cobwebby thistle	NI	Herb (B); N
Conyza canadensis	Canadian horeseweed	FAC	Herb (A/B); N
Heterotheca grandiflora	telegraphweed	NI	Herb (A/P); N
Hypochaeris glabra	smooth cat's ear	NI	Herb (A); I
Pseudognaphalium biolettii (Gnaphalium bicolor)	two-color rabbit-tobacco	NI	Herb/SS (B); N
Psilocarphus tenellus	slender woollyheads	FAC	Herb (A); N
Silybum marianum	blessed milkthistle	NI	Herb (A/B); I
Sonchus asper	spiny sowthistle	FAC	Herb (A); I
Sonchus oleraceus	common sowthistle	NI	Herb (A); I
Venegasia carpesioides	canyon sunflower	NI	SS/Shrub; N
Xanthium strumarium	rough cocklebur	FAC+	Herb (A); N
			•

APPENDIX H
List of Plant Species Observed

Scientific Name ¹	Common Name ²	Wetland Indicator Status ³	Habit and Origin⁴
BORAGINACEAE	1		-
Cryptantha sp.	cryptantha	NI	Herb (A); N
Eriodictyon crassifolium	thickleaf yerba santa	NI	Shrub; N
Phacelia cicutaria	caterpillar phacelia	NI	Herb (A); N
Phacelia ramosissima	branching phacelia	NI	Herb/SS (P); N
BRASSICACEAE			
Brassica nigra	black mustard	NI	Herb (A); I
CALLITRICHACEAE			
Callitriche marginata	Water starwort	OBL	Herb(A); N
CAPRIFOLIACEAE	,	,	
Lonicera subspicata	southern honeysuckle	NI	Shrub/Vine; N
Symphoricarpos mollis	creeping snowberry	NI	SS/Shrub; N
CRASSULACEAE			
Crassula aquatica	Crassula aquatica	OBL	Herb (A); N
FABACEAE			<u> </u>
Acmispon glaber (syn. Lotus scoparius)	common deerweed	NI	SS (P); N
Vicia villosa	winter vetch	NI	Herb (A/P); I
FAGACEAE			<u> </u>
Quercus agrifolia	California live oak	NI	Tree/Shrub; N
GERANIACEAE			
Erodium botrys	longbeak stork's bill	NI	Herb (A/B); I
GROSSULARIACEAE			
Ribes malvaceum	chaparral current	NI	Shrub; N
LAMIACEAE			
Salvia mellifera	black sage	NI	SS/Shrub; N
LAURACEAE			
Umbellularia californica	California laurel	FAC	Tree/Shrub; N
MALVACEAE			
Malacothamnus fasciculatus	Mendocino bushmallow	NI	SS/Shrub; N
MYRSINACEAE			
Anagallis arvensis	scarlet pimpernel	FAC	Herb (A/B); I
PHRYMACEAE			
Mimulus aurantiacus	orange bush monkeyflower	NI	Shrub/SS; N
		•	•

APPENDIX H
List of Plant Species Observed

Scientific Name ¹	Common Name ²	Wetland Indicator Status ³	Habit and Origin ⁴
PLANTAGINACEAE			
Keckiella cordifolia	heartleaf Keckiella	NI	Shrub/SS; N
Veronica peregrina	Purslane speedwell	OBL	Herb (A); N
PLATANACEAE			
Platanus racemosa	California sycamore	FACW	Tree; N
POLYGONACEAE			
Eriogonum fasciculatum var. fasciculatum	Eastern Mojave buckwheat	NI	SS/Shrub; N
Rumex crispus	curly dock	FACW	Herb (P); I
Rumex salicifolius	willow dock	OBL	Herb (P); N
RHAMNACEAE			
Ceanothus crassifolius	hoaryleaf ceanothus	NI	Shrub; N
Ceanothus oliganthus	hairy ceanothus	NI	Shrub; N
Ceanothus spinosus	redheart	NI	Shrub; N
ROSACEAE			
Adenostoma fasciculatum	chamise	NI	Shrub ; N
Cercocarpus betuloides	birchleaf mountain mahogany	NI	Shrub/Tree; N
Herteromeles arbutifolia	toyon	NI	Shrub ; N
Rosa californica	California wildrose	FAC+	Shrub; N
Rubus ursinus	California blackberry	FAC+	SS (P); N
RUBIACEAE			
Galium angustifolium	narrowleaf bedstraw	NI	Herb/SS (P); N
Galium aparine	stickywilly	FACU	Herb (A); N
Galium cliftonsmithii	Santa Barbara bedstraw	NI	Shrub; N
Galium nuttallii	climbing bedstraw	NI	SS/Shrub ; N
Galium parisiense	wall bedstraw	FACU	Herb (A);I
SALICACEAE			
Salix lasiolepis	arroyo willow	FACW	Tree/Shrub; N
	MONOCOTS		
CYPERACEAE			
Cyperus eragrostis	tall flatsedge	FACW	Graminoid (P); N
Eleocharis macrostachya	pale spikerush	OBL	Graminoid (P); N
Schoenoplectis sp.	tule	OBL	Graminoid (P); N

APPENDIX H

List of Plant Species Observed

Scientific Name ¹	Common Name ²	Wetland Indicator Status ³	Habit and Origin ⁴
JUNCACEAE			
Juncus bufonius	toad rush	FACW+	Graminoid (P); N
POACEAE			
Avena barbata	slender oat	NI	Graminoid (A); I
Bromus diandrus	ripgut brome	NI	Graminoid (A); I
Bromus hordeaceus	soft brome	NI	Graminoid (A); I
Bromus madritensis ssp. rubens	red brome	UPL	Graminoid (A); I
Leymus condensatus	giant ryegrass	FACU	Graminoid (P); N
Pennisetum setaceum	crimson fountaingrass	NI	Graminoid (P); I
Piptatherum miliaceum	smilograss	NI	Graminoid (P); I
Poa secunda	Sandberg bluegrass	NI	Graminoid (P); N
Polypogon monspeliensis	annual rabbitsfoot grass	FACW+	Graminoid (A); I
ТҮРНАСЕАЕ	<u> </u>	<u> </u>	·
Typha domingensis	southern cattail	OBL	Herb (P); N

Notes:

N = Native

I = Introduced (non-native species that have become naturalized)

(A) = Annual (B) = Biennial (P) = Perennial SS = Sub-Shrub

1Taxonomy follows the currently accepted nomenclature for plant species occurring in California as indicated on the Jepson On-Line Interchange for California Floristics (University of California, 2011).

2Species common name, origin and grow habitat from the U.S. Department of Agriculture's Plants Database (2011).

3 Wetland Indicator Status is taken from 1998 National List of Plants that Occur in Wetlands (Region 0: California) (Reed, 1988)

Wetland Indicator Status Codes:

OBL = Obligate Wetland. Occurs with an estimated 99 probability in wetlands

FACW = Facultative Wetland. Estimated 67 to 99 percent probability of occurrence in wetlands

FAC = Facultative. Equally likely to occur in wetlands and non-wetlands

NI = No indicator. Insufficient information available to determine an indicator status

FACU = Facultative Upland. Estimated 67 to 99 percent probability of occurrence in uplands

UPL = Obligate Upland. Occurs with an estimated 99 probability in uplands

- (+) = Positive sign indicates a frequency toward higher end of category (i.e., more frequently found in wetlands)
- (-) = Negative sign indicates a frequency toward lower end of category (i.e., more frequently found in uplands)

Appendix G, NASA SSFL EIS for Proposed Demolition and Environmental Cleanup
G2: U.S. Army Corps of Engineers- Los Angeles District Approved Jurisdictional
Determination Regarding Presence/Absence of Geographic Jurisdiction,
February 12, 2013



DEPARTMENT OF THE ARMY

Los Angeles District, Corps of Engineers Ventura Field Office 2151 Alessandro Drive, Suite 110 Ventura, CA 93001

February 12, 2013

REPLY TO
ATTENTION OF
Regulatory Division

Allen Elliot, SSFL Project Director National Aeronautics and Space Administration Office of Center Operations George C. Marshall Space Flight Center Marshall Space Flight Center, AL 35812

SUBJECT: Approved Jurisdictional Determination regarding presence/absence of geographic jurisdiction

Dear Mr. Elliot:

Reference is made to your request (File No. SPL-2012-00520-AJS) dated April 11, 2012 for an approved Department of the Army jurisdictional determination (JD) for the NASA-Administered Property at the Santa Susana Field Lab (at long: -118.698205, lat: 34.232447) located near the City of Simi Valley, Ventura County, California.

As you may know, the Corps' evaluation process for determining whether or not a Department of the Army permit is needed involves two tests. If both tests are met, then a permit is required. The first test determines whether or not the proposed project is located in a water of the United States (i.e., it is within the Corps' geographic jurisdiction). The second test determines whether or not the proposed project is a regulated activity under Section 10 of the River and Harbor Act or Section 404 of the Clean Water Act. As part of the evaluation process, pertaining to the first test only, we have made the jurisdictional determination below.

Based on available information, we have determined there are waters of the United States on the project site, as well as non-jurisdictional aquatic resources, in the locations depicted on the enclosed drawing. The Corps concurs with the findings and extent of waters of the United States and wetlands as presented in the "Wetlands and Waters of the United States, Delineation for the NASA-Administered Portions of the Santa Susana Field Laboratory, Ventura County, California" dated March 2012, with the exception of "SW-1 Pond," "Drainage A-1" and "PLF Drainage." These features consist of poorly defined swales or erosional features lacking an ordinary high water mark and thus not considered waters of the United States. The basis for our determination can be found in the enclosed JD form(s).

The aquatic resource identified as "SW-2 Pond" including the associated tributary drainage on the above drawing is an intrastate isolated water with no apparent interstate or foreign commerce connection. As such, this water is not currently regulated by the Corps of Engineers. This disclaimer of jurisdiction is only for Section 404 of the Clean Water Act. Other Federal, State, and local laws may apply to your activities. In particular, you may need authorization from the California State Water Resources Control Board and/or the U.S. Fish and Wildlife Service.

This letter contains an approved jurisdictional determination for the NASA-Administered Property at the Santa Susana Field Lab. If you object to this decision, you may -2-

request an administrative appeal under Corps regulations at 33 CFR Part 331. Enclosed you will find a Notification of Appeal Process (NAP) fact sheet (Appendix A) and Request for Appeal (RFA) form. If you request to appeal this decision you must submit a completed RFA form to the Corps South Pacific Division Office at the following address:

Tom Cavanaugh Administrative Appeal Review Officer, U.S. Army Corps of Engineers South Pacific Division, CESPD-PDS-O, 2042B 1455 Market Street, San Francisco, California 94103-1399

In order for an RFA to be accepted by the Corps, the Corps must determine that it is complete, that it meets the criteria for appeal under 33 C.F.R. Part 331.5, and that it has been received by the Division Office within 60 days of the date on the NAP. Should you decide to submit an RFA form, it must be received at the above address by April 13, 2013. It is not necessary to submit an RFA form to the Division office if you do not object to the decision in this letter.

This verification is valid for five years from the date of this letter, unless new information warrants revision of the determination before the expiration date. If you wish to submit new information regarding the approved jurisdictional determination for this site, please submit this information to Antal Szijj at the letterhead address April 13, 2013. The Corps will consider any new information so submitted and respond within 60 days by either revising the prior determination, if appropriate, or reissuing the prior determination. A revised or reissued jurisdictional determination can be appealed as described above.

This determination has been conducted to identify the extent of the Corps' Clean Water Act jurisdiction on the particular project site identified in your request. This determination may not be valid for the wetland conservation provisions of the Food Security Act of 1985. If you or your tenant are USDA program participants, or anticipate participation in USDA programs, you should request a certified wetland determination from the local office of the Natural Resources Conservation Service, prior to starting work.

If you have any questions, please contact Antal Szijj of my staff at 805-585-2147 or via email at Antal.J.Szijj@usace.army.mil.

Please be advised that you can now comment on your experience with Regulatory Division by accessing the Corps web-based customer survey form at: http://per2.nwp.usace.army.mil/survey.html.

Sincerely,

Aaron O. Allen

Chief, North Coast Branch

Regulatory Division

Enclosures

Cf: Steve Long, CH2M Hill

NOTIFICATION OF ADMINISTRATIVE APPEAL OPTIONS AND PROCESS AND REQUEST FOR APPEAL

Applicant: NASA		File Number: SPL-2012-520	Date: 12-Feb-2013	
Attac	ched is:	See Section below		
	INITIAL PROFFERED PERMIT (Standard	Permit or Letter of permission)	A	
	PROFFERED PERMIT (Standard Permit o	r Letter of permission)	В	
	PERMIT DENIAL		C	
X	APPROVED JURISDICTIONAL DETERMINATION		D	
	PRELIMINARY JURISDICTIONAL DET	ERMINATION	E	

SECTION I - The following identifies your rights and options regarding an administrative appeal of the above decision. Additional information may be found at http://www.usace.ormy.mil/gegy/pages/reg_minierials_asps or Corps regulations at 33 CFR Part 331.

- A: INITIAL PROFFERED PERMIT: You may accept or object to the permit.
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- OBJECT: If you object to the permit (Standard or LOP) because of certain terms and conditions therein, you may request that the permit be modified accordingly. You must complete Section II of this form and return the form to the district engineer. Your objections must be received by the district engineer within 60 days of the date of this notice, or you will forfeit your right to appeal the permit in the future. Upon receipt of your letter, the district engineer will evaluate your objections and may: (a) modify the permit to address all of your concerns, (b) modify the permit to address some of your objections, or (c) not modify the permit having determined that the permit should be issued as previously written. After evaluating your objections, the district engineer will send you a proffered permit for your reconsideration, as indicated in Section B below.
- B: PROFFERED PERMIT: You may accept or appeal the permit
- ACCEPT: If you received a Standard Permit, you may sign the permit document and return it to the district engineer for final
 authorization. If you received a Letter of Permission (LOP), you may accept the LOP and your work is authorized. Your
 signature on the Standard Permit or acceptance of the LOP means that you accept the permit in its entirety, and waive all rights
 to appeal the permit, including its terms and conditions, and approved jurisdictional determinations associated with the permit.
- APPEAL: If you choose to decline the proffered permit (Standard or LOP) because of certain terms and conditions therein, you may appeal the declined permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- C: PERMIT DENIAL: You may appeal the denial of a permit under the Corps of Engineers Administrative Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received by the division engineer within 60 days of the date of this notice.
- D: APPROVED JURISDICTIONAL DETERMINATION: You may accept or appeal the approved JD or provide new information.
- ACCEPT: You do not need to notify the Corps to accept an approved JD. Failure to notify the Corps within 60 days of the date
 of this notice, means that you accept the approved JD in its entirety, and waive all rights to appeal the approved JD.
- APPEAL: If you disagree with the approved JD, you may appeal the approved JD under the Corps of Engineers Administrative
 Appeal Process by completing Section II of this form and sending the form to the division engineer. This form must be received
 by the division engineer within 60 days of the date of this notice.

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	PRELIMINARY JURISDICTIONAL DETERMINATION: You do not need to respond to the Corps regarding the preliminary
JD.	The Preliminary JD is not appealable. If you wish, you may request an approved JD (which may be appealed), by contacting the
Cor	rps district for further instruction. Also you may provide new information for further consideration by the Corps to reevaluate the
JD.	

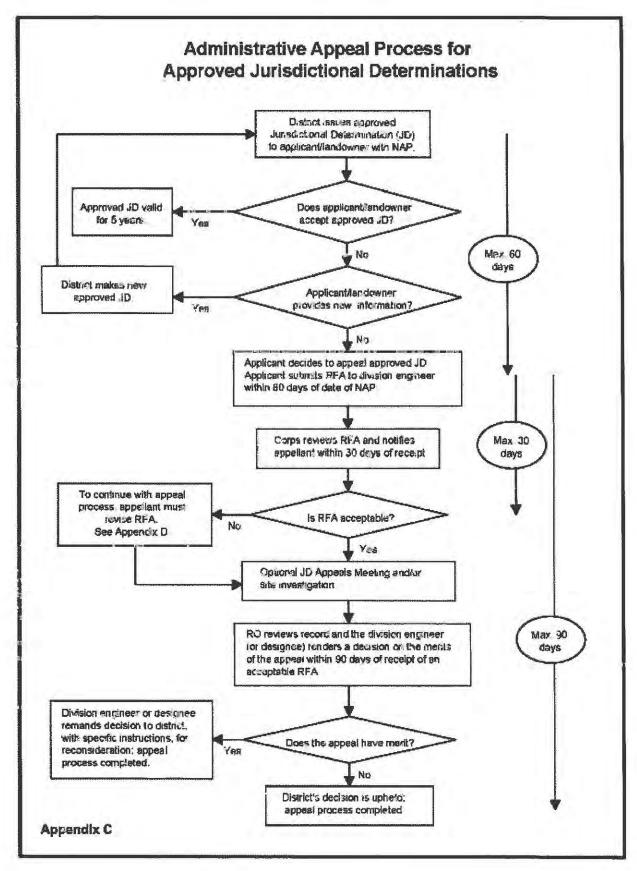
SECTION II - REQUEST FOR APPEAL OF OBJECTIONS TO AN INITIAL PROFFERED PERMIT

REASONS FOR APPEAL OR OBJECTIONS: (Describe your reasons for appealing the decision or your objections to an initial proffered permit in clear concise statements. You may attach additional information to this form to clarify where your reasons or objections are addressed in the administrative record.)

ADDITIONAL INFORMATION: The appeal is limited to a review of the administrative record, the Corps memorandum for the record of the appeal conference or meeting, and any supplemental information that the review officer has determined is needed to clarify the administrative record. Neither the appellant nor the Corps may add new information or analyses to the record. However, you may provide additional information to clarify the location of information that is already in the administrative record.

POINT OF CONTACT FOR QUESTIONS OR INFORMATION	
If you have questions regarding this decision and/or the appeal process you may contact: Antal Szijj, Senior Project Manager U.S. Army Corps of Engineers Los Angeles District, Ventura Field Office 2151 Alessandro Dr, Suite 110 Ventura, CA 93001 Phone: (805)-585-2147 Fax (805) 585-2154 Email: antal.j.szijj@usace.army.mil	If you only have questions regarding the appeal process you may also contact: Thomas J. Cavanaugh Administrative Appeal Review Officer, U.S. Army Corps of Engineers South Pacific Division 1455 Market Street, 2052B San Francisco, California 94103-1399 Phone: (415) 503-6574 Fax: (415) 503-6646 Email: thomas, j. cavanaugh@usace.army.mil
RIGHT OF ENTRY: Your signature below grants the right of en consultants, to conduct investigations of the project site during the notice of any site investigation, and will have the opportunity to provide the components of the project site of the	e course of the appeal process. You will be provided a 15 day

Signature of appellant or agent.



APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 01/14/2013 B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESPL-RG-N, Ventura Field Office; SSFL NASA Property Delineation; File no. SPL-2012-520-AJS: Southwestern Drainage tributary C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: CA. County/parish/borough; Ventura City: unincorporated (SSFL) Center coordinates of site (lat/long in degree decimal format): Lat. 32,2279° N. Long. 118,7080° W. Universal Transverse Mercator: Name of nearest waterbody: Bell Creek Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Los Angeles River Name of watershed or Hydrologic Unit Code (HUC): Los Angeles River (18070105) Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form. D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 09/12/2012 Field Determination. Date(s): Jan 2012 SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION. There ** "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters2 (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands

c. Limits (boundaries) of jurisdiction based on: Established by OHWM.
Elevation of established OHWM (if known):

Identify (estimate) size of waters of the U.S. in the review area:
 Non-wetland waters: 1300 linear feet: 2 width (ft) and/or

2. Non-regulated waters/wetlands (check if applicable);3

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.

Explain:

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

Supporting documentation is presented in Section III.F.

Wetlands:

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 374q and miles

Drainage area: 40 more

Average annual rainfall: 19 inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5-10 river miles from TNW.

Project waters are the striver miles from RPW.

Project waters are 3-10 aerial (straight) miles from TNW.

Project waters are 1 (or less) aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW5: Upper Southwestern Drainage flows into R2A Pond, thence to Bell Canyon Channel (natural), thence to the channelized section of lower Bell Canyon. The downstream TNW is upper end of the Los Angeles River, at the confluence of Bell Canyon Channel and Arroyo Calabasas. Tributary stream order, if known: General Tributary Characteristics (check all that apply): ☐ Natural
☐ Artifici Tributary is: Artificial (man-made). Explain: Manipulated (man-altered). Explain: culvert, shotcrete swales, water control weirs and impoundments present. Tributary properties with respect to top of bank (estimate): Average width: 4-5 feet Average depth: 1 feet Average side slopes: 4:1 Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel ☐ Muck ☐ Vegetation. Type/% cover: Bedrock Other, Explain: Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: some incision evident. Presence of run/riffle/pool complexes. Explain: n/a. Tributary geometry: Mandering Tributary gradient (approximate average slope): 1 % (c) Flow: Tributary provides for: Enhanced Cor-Estimate average number of flow events in review area/year: 2-5 Describe flow regime: ephemeral. Other information on duration and volume: Channel previously affected by discharges from SSFL test operations requiring cooling water (no longer conducted). Channel and downstream impoundments acted to collect cooling water discharges during rocket engine testing. Surface flow is: Confined. Characteristics: Subsurface flow: Unknown. Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM6 (check all indicators that apply): □ clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation the presence of wrack line shelving vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away multiple observed or predicted flow events sediment deposition water staining other (list): abrupt change in plant community ☐ Discontinuous OHWM, 7 Explain: If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): Mean High Water Mark indicated by: High Tide Line indicated by: oil or scum line along shore objects
fine shell or debris deposits (foreshore)
physical markings/characteristics
tidal gauges survey to available datum; physical markings; vegetation lines/changes in vegetation types. other (list):

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

⁷Ihid

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: water not present at time of delineation.

Identify specific pollutants, if known: heavy metals.

	(iv)		ogical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): lower reach support mulefat and arroyo willow.
		H	Wetland fringe. Characteristics:
		ш	Habitat for:
			Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings:
2.	Cha	iracte	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)	Phy	sical Characteristics:
	(-)		General Wetland Characteristics:
		(-)	Properties:
			Wetland size: acres
			Wetland type. Explain: .
			Wetland quality. Explain:
			Project wetlands cross or serve as state boundaries. Explain:
			The state of the s
		(b)	General Flow Relationship with Non-TNW:
			Flow is: Park 1 in Explain: surface water only present in impounded areas.
			Surface flow is: Piet List
			Characteristics
			Subsurface flow: First Lint Explain findings:
			Dye (or other) test performed:
			WALLEY BUT STORY MAN
		(c)	Wetland Adjacency Determination with Non-TNW:
			Directly abutting
			Not directly abutting
			Discrete wetland hydrologic connection. Explain:
			Ecological connection. Explain:
			Separated by berm/barrier. Explain: .
		(4)	Proximity (Relationship) to TNW
		(4)	Project wetlands are rick hand river miles from TNW.
			Project waters are Cick Link aerial (straight) miles from TNW.
			Flow is from: Pick Link.
			Estimate approximate location of wetland as within the *16k Lbs floodplain.
			Estimate approximate rotation of weathin the wife in noodplain.
	(ii)	Che	mical Characteristics:
		Cha	racterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
			characteristics; etc.). Explain:
		Iden	ntify specific pollutants, if known:
	(iii) Biol	logical Characteristics. Wetland supports (check all that apply):
			Riparian buffer. Characteristics (type, average width):2.
			Vegetation type/percent cover. Explain: .
			Habitat for:
			Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings: .
3.	Ch		eristics of all wetlands adjacent to the tributary (if any)
			wetland(s) being considered in the cumulative analysis: "in Livit
		App	proximately () acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and
 other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: The subject tributary is a small ephemeral drainage with a narrow (approx 2-3 foot) but well-defined ordinary high water mark. The channel itself is largely unvegetated, but adjacent uplands inloude coast live oak, ceanothus, coyotebrush and chamise. The tributary drains an area that supported the Systems Test Laboratory facilities. Flows are eventurally conveyed to the "southwestern drainage" prior to entering a secondary holding pond and thence to Bell Canyon Channel. The downstream TNW (upper reach of the Los Angeles River) is approximately 8 miles downstream. The total drainage area of the tributary represents approximately 0.002% of the watershed draining to the downstream TNW. Soil testing within the channel and surrounding watershed have revealed elevated levels of heavy metals (lead, cadmium, copper and/or mercury). Bell Canyon Channel, inclusive of the reach within the reivew area, is included on the list 303(d) impaired waterbodies due to bacterial contamination. The tributary therefore has a significant nexus to the downstream TNW by virtue of its potential to deliver contaminants downstream.
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands present are palustrine in nature as the result of impoundments of tributary. Flow and potential pollutants would be conveyed through wetland, therefore the wetlands in question have a significant nexus to the downstream TNW.

D.	DETERMINATIONS OF	JURISDICTIONAL FINDINGS.	THE SUBJECT WA	ATERS/WETLANDS ARE	(CHECK ALL
	THAT APPLY);				

1.	TNWs and Adjacent Wet	lands. Check all that app	ly and provide size estimates in review area:
	TNWs: linear feet	t width (ft), Or,	acres.
	Wetlands adjacent to Th	VWs: acres.	

2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that
	tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 1,300 linear feet; 3 width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: 0.64 acres.
7.	As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
DI	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, EGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY ICH WATERS (CHECK ALL THAT APPLY): 10

E.

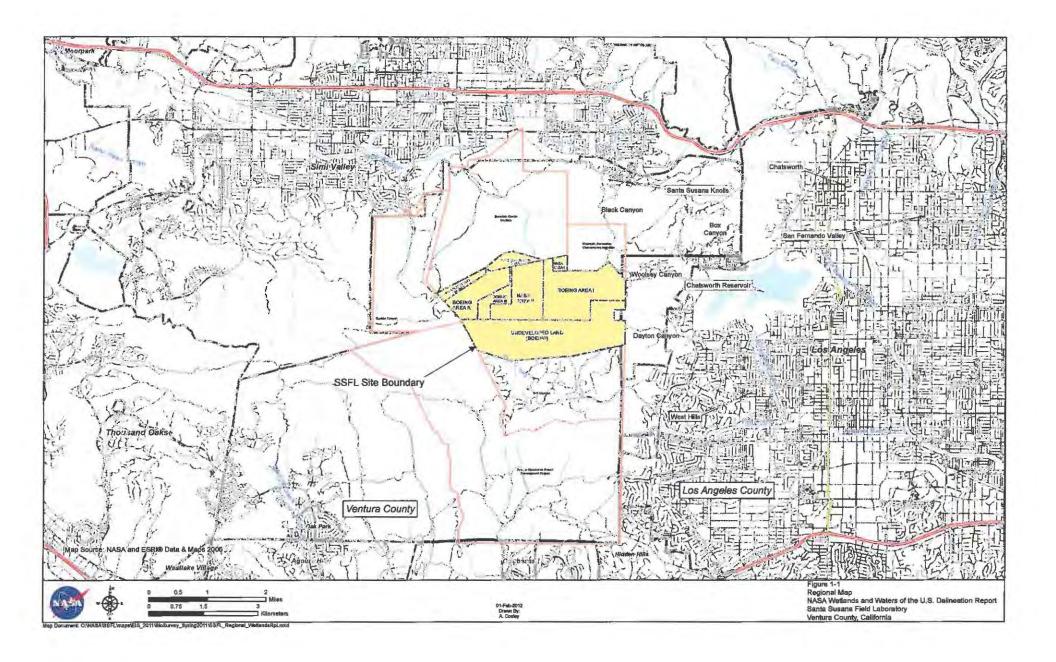
 $^{^8} See$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

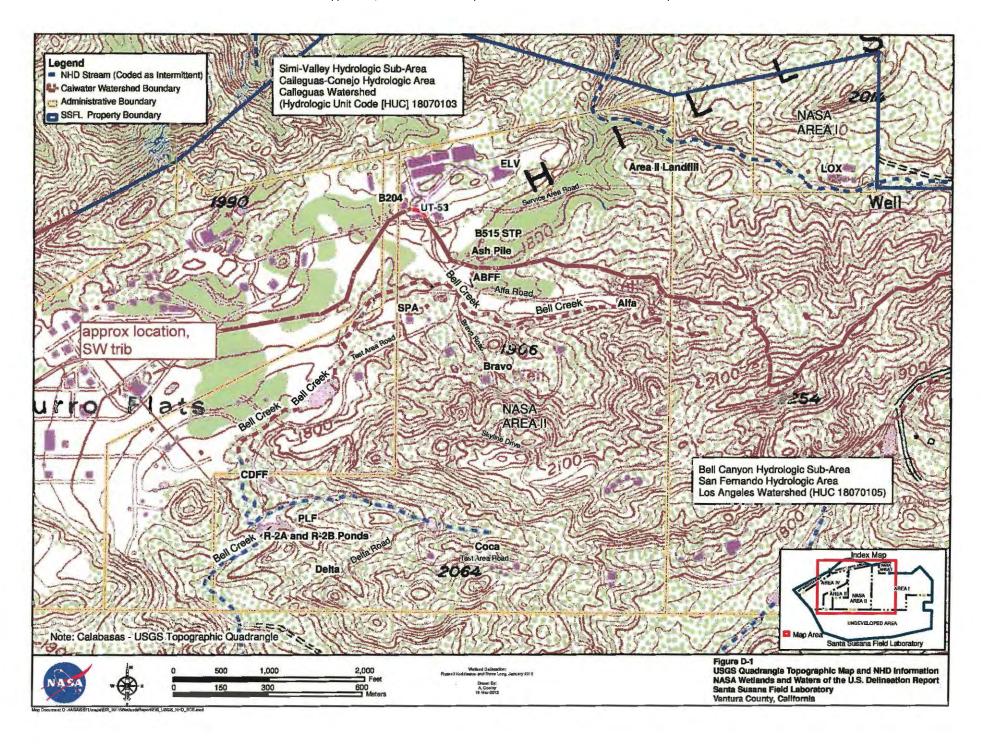
	which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: 0.155 acres. Other non-wetland waters: acres. List type of aquatic resource; Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTION IV: DATA SOURCES.
A.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date):

¹⁶ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

30	or Other (Name & Date):
8	Previous determination(s). File no. and date of response letter:
巴	Applicable/supporting case law: .
	Applicable/supporting scientific literature:
	Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject tributary is a small first order drainage channel with an average OHWM width of 2-3 feet. The drainage area is roughly 40 acres. Soil sampling within the drainage area has identified elevated levels of heavy metals and dioxin. Based on these results, the subject tributary appears to have a significant nexus to the downstream TNW (upper Los Angeles River, approximately 8 river miles downstream) based on the potential to deliver contaminants downstream.







APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 09/12/2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESPL-RG-N, Ventura Field Office; SSFL NASA Property Delineation; File no. SPL 2012-520-A.IS: Linner Rell Creek (aka Southwestern Drainage)

1 11	e in DALP-2012-Davistor, Oppor Detr Creek (and Doublin-Steel Diamage)
C.	PROJECT LOCATION AND BACKGROUND INFORMATION:
	State; CA County/parish/borough: Ventura City: unincorporated (SSFL)
	Center coordinates of site (lat/long in degree decimal format): Lat. 32,23245° N. Long. 118.6982° W. Universal Transverse Mercator:
	Name of nearest waterbody: Bell Creek
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Los Angeles River
	Name of watershed or Hydrologic Unit Code (HUC): Los Angeles River (18070105)
	Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
	Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
-	Office (Desk) Determination. Date: 09/12/2012
	Field Determination. Date(s): Jan 2012
SE	CCTION II: SUMMARY OF FINDINGS
A.	RHA SECTION 10 DETERMINATION OF JURISDICTION.
	ere mavigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the riew area. [Required]
	Waters subject to the ebb and flow of the tide.
	Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce Explain:
В.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
Th	ere waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]
	1. Waters of the U.S.
	a. Indicate presence of waters of U.S. in review area (check all that apply): 1
	TNWs, including territorial seas
	Wetlands adjacent to TNWs
	Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs
	Non-RPWs that flow directly or indirectly into TNWs
	Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
	Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
	Impoundments of jurisdictional waters
	Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (action at) sing of matous of the U.S. in the wayions appear

b. Identify (estimate) size of waters of the U.S. in the rev Non-wetland waters: 13200 linear feet: 5 width (ft) and/or 1.52 acres. Wetlands: 0.64 acres.

c. Limits (boundaries) of jurisdiction based on: Established by OHWM Elevation of established OHWM (if known):

2. Non-regulated waters/wetlands (check if applicable):3 Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

3 Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 377 June 10 des Drainage area: 1060 per col Average annual rainfall: 19 inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 1 (in less) river miles from TNW.

Project waters are 1 (in less) river miles from RPW.

Project waters are 1 (in less) aerial (straight) miles from RPW.

Project waters are 1 (in less) aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW5: Upper Southwestern Drainage flows into R2A Pond, thence to Bell Canyon Channel

(natural), thence to the channelized section of lower Bell Canyon. The downstream TNW is upper end of the Los Angeles River, at the confluence of Bell Canyon Channel and Arroyo Calabasas. Tributary stream order, if known: General Tributary Characteristics (check all that apply): Tributary is: ☐ Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: culvert, shotcrete swales, water control weirs and impoundments present. Tributary properties with respect to top of bank (estimate): Average width: 4-5 feet Average depth: 1 feet Average side slopes: ":1 Primary tributary substrate composition (check all that apply); Sands
Grave X Silts **⊠** Concrete Cobbles Gravel ☐ Muck Bedrock Vegetation. Type/% cover: Other, Explain: Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: some incision evident. Presence of run/riffle/pool complexes. Explain: n/a. Tributary geometry: Manademing Tributary gradient (approximate average slope): 1 % (c) Flow: Tributary provides for: I planted the Estimate average number of flow events in review area/year: Describe flow regime: ephemeral. Other information on duration and volume: Channel previously affected by discharges from SSFL test operations requiring cooling water (no longer conducted). Channel and downstream impoundments acted to collect cooling water discharges during rocket engine testing. Surface flow is: Discress and confined. Characteristics: Subsurface flow: Unknown, Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM6 (check all indicators that apply): clear, natural line impressed on the bank the presence of litter and debris changes in the character of soil destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away scour multiple observed or predicted flow events sediment deposition water staining abrupt change in plant community other (list): ☐ Discontinuous OHWM. Explain: If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply); Mean High Water Mark indicated by: High Tide Line indicated by: oil or scum line along shore objects survey to available datum; fine shell or debris deposits (foreshore) physical markings; physical markings/characteristics vegetation lines/changes in vegetation types. tidal gauges other (list):

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

Thid.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: water not present at time of delineation.

Identify specific pollutants, if known: heavy metals.

(iv	Bio	logical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width): lower reach support mulefat and arroyo willow.
	씜	Wetland fringe. Characteristics:
	П	Habitat for:
		Federally Listed species. Explain findings:
		Fish/spawn areas. Explain findings:
		Other environmentally-sensitive species. Explain findings:
		Aquatic/wildlife diversity. Explain findings:
2. Ch	aract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
(i)	Phy	sical Characteristics:
100		General Wetland Characteristics:
		Properties:
		Wetland size: 0.64 acres
		Wetland type. Explain: palustrine. Wetland quality. Explain: poor. formed as a result of 2 impoundments (0.51 and 0.13 acre respectively) intened to
collect	moff	from testing operations (no longer conducted). An additional impoundment area outside the review area (Boeing
		Iso present and likely supports similar degraded palustrine wetlands.
		Project wetlands cross or serve as state boundaries. Explain: n/a.
	(b)	General Flow Relationship with Non-TNW: Flow is: Explain: Surface water only present in impounded areas.
		Flow is: A present in the Explain: surface water only present in impounded areas.
		Surface flow is: Not present
		Characteristics
		C.1. C. C. I.I. C. F.
		Subsurface flow: Lakenton. Explain findings: Dye (or other) test performed:
	(c)	Wetland Adjacency Determination with Non-TNW:
		☑ Directly abutting
		Not directly abutting
		☐ Discrete wetland hydrologic connection. Explain: ☐ Ecological connection. Explain:
		Separated by berm/barrier. Explain:
		Beparade by being our in. Department
	(d)	Proximity (Relationship) to TNW
		Project wetlands are 5.10 river miles from TNW.
		Project waters are 5-10 aerial (straight) miles from TNW. Flow is from: Wetland to managable waters.
		Estimate approximate location of wetland as within the 2-year or floodplain.
		Estimate approximate totalist of westand as within the system in the hosephanic
(ii		emical Characteristics:
	Ch	aracterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
	Tale	characteristics; etc.). Explain: dry at time of delineation. ntify specific pollutants, if known: heavy metals detected downstream.
	Ide	miny specific politizants, it known: neavy metals detected downstream.
(i	ii) Bio	ological Characteristics. Wetland supports (check all that apply):
		Riparian buffer. Characteristics (type, average width):2.
sp. and	spar	se mulefat and arroyo willow.
		Habitat for: Federally Listed species. Explain findings:
		Fish/spawn areas. Explain findings:
		Other environmentally-sensitive species. Explain findings:
		Aquatic/wildlife diversity. Explain findings:
	02.77	A CONTRACTOR OF THE STATE OF TH
3. C		teristics of all wetlands adjacent to the tributary (if any) wetland(s) being considered in the cumulative analysis:
		proximately (.64) acres in total are being considered in the cumulative analysis.
		Burgarian and Burgarian and Carlo Control of the Co

For each wetland, specify the following:

Directly abuts? (Y/N) Size (in acres) Directly abuts? (Y/N) Size (in acres) y 0.13

Summarize overall biological, chemical and physical functions being performed: 1 very small impoundment area with managed hydrology. Dominated by Typha sp. and unvegetated open water (dry at time of delineation). A second, larger impoundment occurs immediately downstream also collecting flow from the COCA drain and PLV drain. Impoundments were originally constructed to collect runoff from testing operterations, which may also contain contaminants. An additional impoundment along flow route likely supports palustrine fringe wetlands, however this was outside the assessment area.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and
 other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The subject tributary is a small ephemeral drainage with a discontinuous ordinary high water mark averaging 4-5 feet in width. The tributary includes concrete-lined sections and flow control wiers. Historically, the channel functioned to collect and convey runoff from adjacent rocket engine test stands that require substantial amounts of cooling water during testing. Flows are eventurally conveyed to a holding pond off the NASA property (Boeing property) and thence to a secondary pond and thence to Bell Canyon Channel. The downstream TNW (upper reach of the Los Angeles River) is approximately 8 miles downstream. The total drainage area of the tributary represents approximately 2% of the watershed draining to the downstream TNW. Soil testing within the channel and surrounding watershed have revealed elevated levels of heavy metals (lead, cadmium, copper and/or mercury). Bell Canyon Channel, inleusive of the reach within the reivew area, is included on the list 303(d) impaired waterbodies due to bacterial contamination. The tributary therefore has a significant nexus to the downstream TNW by virtue of its potential to deliver contaminants downstream.
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands present are palustrine in nature as the result of impoundments of tributary. Flow and potential pollutants would be conveyed through wetland, therefore the wetlands in question have a significant nexus to the downstream TNW.
- D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

I,	TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area: TNWs: linear feet width (ft), Or, acres. Wetlands adjacent to TNWs: acres.				
2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:				
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters:				
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.				
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 10200 linear feet; 5 width (ft). Other non-wetland waters: acres. Identify type(s) of waters:				
4.	Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:				
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:				
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.				
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.				
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.				
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.				
	Provide estimates for jurisdictional wetlands in the review area: 0.64 acres.				
7.	As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).				

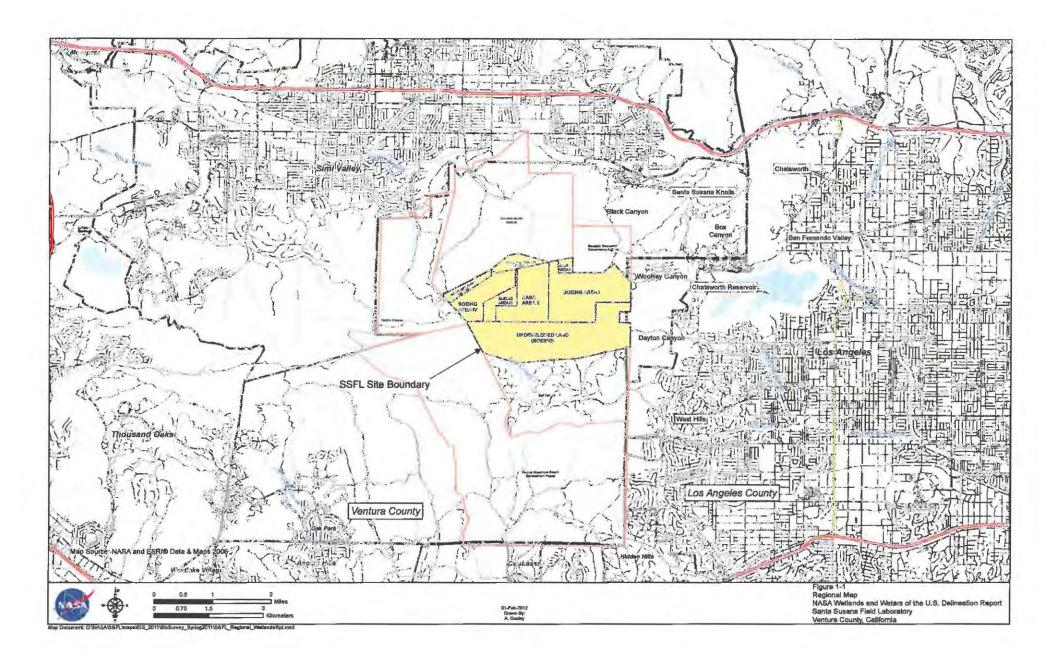
 $^{^8} See$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

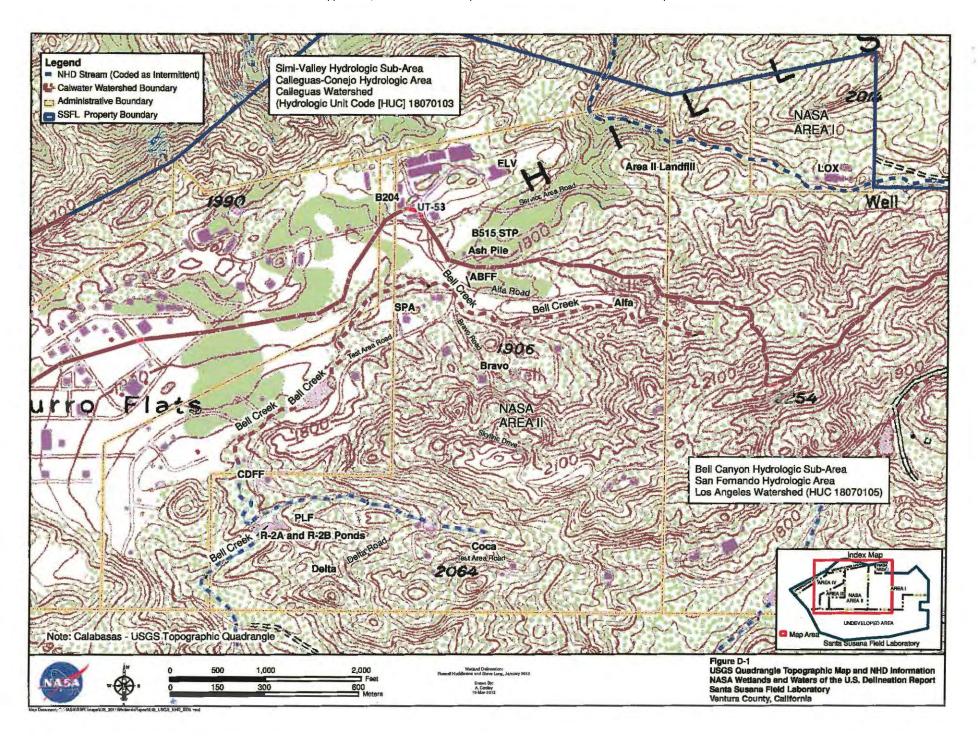
ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:					
Identify water body and summarize rationale supporting determination:					
Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.					
NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other; (explain, if not covered above):					
Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: 0.155 acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.					
Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.					
CTION IV: DATA SOURCES.					
SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name:					

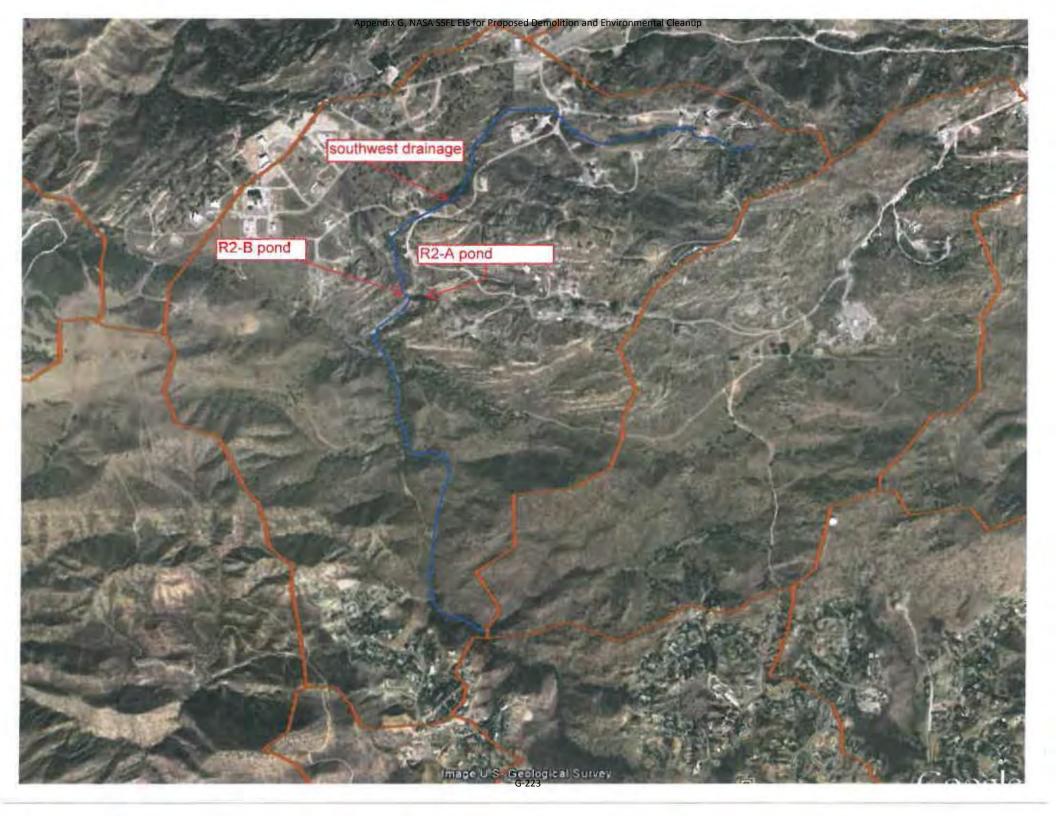
¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

	State/Local wetland inventory map(s):
123	FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	Photographs: Aerial (Name & Date):
9	or Other (Name & Date):
	Previous determination(s). File no. and date of response letter: .
13	Applicable/supporting case law: .
	Applicable/supporting scientific literature:
	Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject tributary is a small first order drainage channel with an average OHWM width of 4-5 feet. The drainage area is roughly 1,060 acres. Soil sampling within the drainage area has identified elevated levels of heavy metals and dioxin. Based on these results, the subject tributary appears to have a significant nexus to the downstream TNW (upper Los Angeles River, approximately 8 river miles downstream) based on the potential to deliver contaminants downstream.







APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 11/15/2012 B. DISTRICT OFFICE, FILE NAME, AND NUMBER:CESPL-RG-N, Ventura Field Office, SSFL NASA Property Delineation; file no. SPL-2012-520-AJS: SW-2 Pond C. PROJECT LOCATION AND BACKGROUND INFORMATION: State:CA County/parish/borough: Ventura City: unincorporated (SSFL) Center coordinates of site (lat/long in degree decimal format): Lat. 34.2389° N, Long. 118.6892° W, Universal Transverse Mercator: Name of nearest waterbody: SW-2 Pond Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: n/a (isolated) Name of watershed or Hydrologic Unit Code (HUC): Calleguas Creek (18070103) Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 01/09/2013

Field Determination. Date(s): 12/20/2012

SECTION I: BACKGROUND INFORMATION

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There we in "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required]

Waters subject to the ebb and flow of the tide.

Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There Are in "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]

1. Waters of the U.S.

a. Indicate presence of waters of U.S. in review area (check all that apply):

TNWs, including territorial seas
Wetlands adjacent to TNWs
Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs
Non-RPWs that flow directly or indirectly into TNWs
Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
Impoundments of jurisdictional waters
Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: linear feet: width (ft) and/or acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Fink 1 in Elevation of established OHWM (if known):

Non-regulated waters/wetlands (check if applicable):³

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: Pond appears to be isolated based on field observations and site topography.

Boxes checked below shall be supported by completing the appropriate sections in Section III below.

Supporting documentation is presented in Section III.F.

For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

TNW

Identify TNW:

Summarize rationale supporting determination:

Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody4 is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

General Area Conditions: Watershed size: lick Liet Drainage area: tick List Average annual rainfall: inches

Average annual snowfall: inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

Tributary flows directly into TNW.

☐ Tributary flows through First. 1 int tributaries before entering TNW.

Project waters are Fick List river miles from TNW. Project waters are Viel List river miles from RPW.

Project waters are Pick 1.14 aerial (straight) miles from TNW.

Project waters are Pick List aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain:

Identify flow route to TNW5:

Tributary stream order, if known:

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain:					
		Tributary properties with respect to top of bank (estimate): Average width: feet Average depth: feet Average side slopes: Variable.					
		Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain:					
		Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: Presence of run/riffle/pool complexes. Explain: Tributary geometry: I'll to Tributary gradient (approximate average slope): %					
	(c)	Flow: Tributary provides for: Interest the Estimate average number of flow events in review area/year: Inch List Describe flow regime: Other information on duration and volume: Surface flow is: Interest List. Characteristics: Subsurface flow: Interest List. Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank destruction of terrestrial vegetation the presence of wrack line sediment sorting sediment down, bent, or absent estimated down, estimated					
		☐ Discontinuous OHWM. Explain: If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): ☐ High Tide Line indicated by: ☐ Mean High Water Mark indicated by:					
		☐ oil or scum line along shore objects ☐ fine shell or debris deposits (foreshore) ☐ physical markings/characteristics ☐ tidal gauges ☐ other (list): ☐ unique of the survey to available datum; ☐ physical markings; ☐ vegetation lines/changes in vegetation types. ☐ vegetation lines/changes in vegetation types.					
(iii)	Cha	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: . ntify specific pollutants, if known:					

#

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

Thid.

	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft), Other non-wetland waters: acres. Identify type(s) of waters:
	Non-RPWs ³ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
	Impoundments of jurisdictional waters. As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
SUC	LATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, GRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY CH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. From which fish or shellfish are or could be taken and sold in interstate or foreign commerce, which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain:
7.7	Other factors. Explain: atify water body and summarize rationale supporting determination:

8See Footnote # 3.

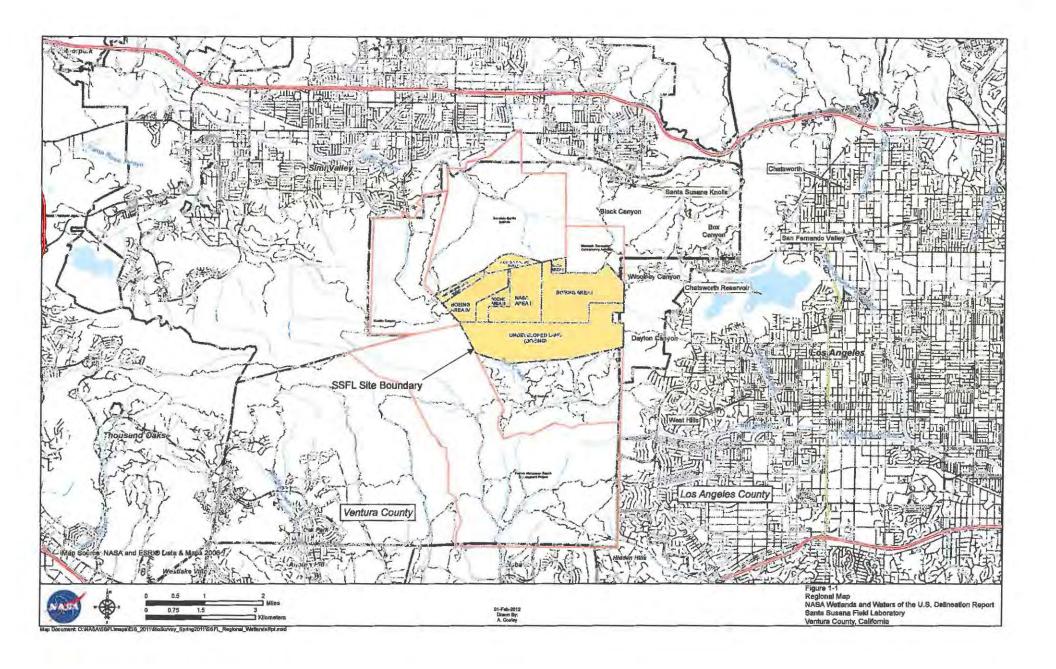
¹⁰ To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

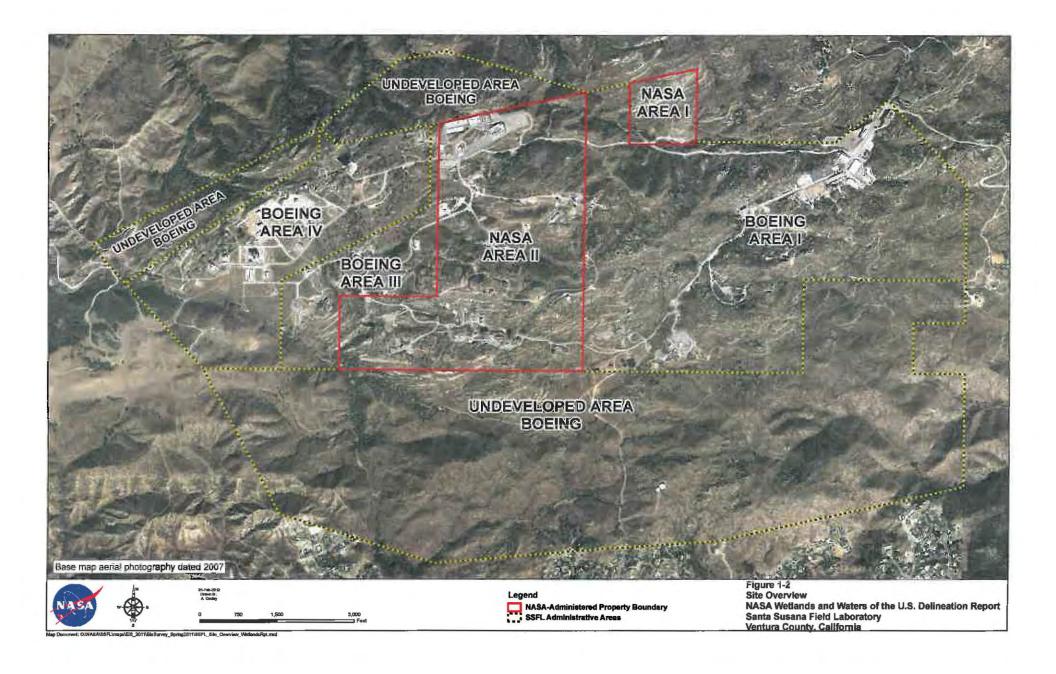
¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft), Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
	Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: 0.15acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTION IV: DATA SOURCES.
Α.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name; State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date):google earth, various dates. or Other (Name & Date):site photos 12/20/2012. Previous determination(s). File no. and date of response letter: Applicable/supporting case law:
	Applicable/supporting scientific literature: Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject pond appears to be an excavated feature approximately 0.15 acre in size that is seasonally ponded and supports wetland characteristics (classified as a seasonally flooded palustrine emergent wetland). There is no evidence indicating the pond overflows and connects with non-isolated drainage features which ultimately drain to a TNW or cross state lines. The pond is within the larger Calleguas Creek watershed and sits within an elevated plateau area surrounded by rock formations to the

north, east and south.. The drainage area of the pond is estimated to be approximately 20 acres. A small area of ponded water was evident within the larger feature during a 12/20/2012 site visit. No evidence of outflow (scour, debris deposits, etc) was observed. The nearest drainage feature, an ephemeral drainage channel ("northnern drainage") untimately draining to Calleguas Creek, is approximately 500 lateral feet and 100 vertical feet removed from the pond at its nearest point. No sources of interstate commerce were identified.







SW-2 pond drainage area (approx 20 acres)



SW-2 pond (12/20/2012)

APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 09/12/2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESPL-RG-N, Ventura Field Office; SSFL NASA Property Delineation:

File	no. SPL-2012-520-AJS: Northern Drainage
C,	PROJECT LOCATION AND BACKGROUND INFORMATION: State: CA County/parish/borough: Ventura City: unincorporated (SSFL) Center coordinates of site (lat/long in degree decimal format): Lat. 32.23245° N, Long. 118.6982° W Universal Transverse Mercator: Name of nearest waterbody: Northern Drainage Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lower Calleguas Creek Name of watershed or Hydrologic Unit Code (HUC): Calleguas Creek (18070103) Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D.	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY): Office (Desk) Determination. Date: 09/12/2012 Field Determination. Date(s): Jan 2012
SEC A.	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
	waters are inavigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the lew area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain:
B.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
The	ere : "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]
	1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands

b. Identify (estimate) size of waters of the U.S. in the review area:

Non-wetland waters: 3200 linear feet: 8width (ft) and/or

acres.

Wetlands: acres.

c. Limits (boundaries) of jurisdiction based on: Established by CHIVM. Elevation of established OHWM (if known):

Non-regulated waters/wetlands (check if applicable):3

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

Supporting documentation is presented in Section III.F.

² For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain: a small pond, approximately 0.15 acre in size and apparently excavated within the drainage area, was determined to be isolated. A separate JD form was prepared to address this pond.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 291 square miles

Drainage area: 400

Average annual rainfall: 19 inches

Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 5 tributaries before entering TNW.

Project waters are 15.30 river miles from TNW.

Project waters are 2-5 river miles from RPW.

Project waters are 2000 aerial (straight) miles from TNW.

Project waters are 2-5 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

Identify flow route to TNW⁵: Northern Drainage flows approximately 2.5 miles to Meier Creek, thence to Arroyo Simi, Arroyo Las Posas and Calleguas Creek. The downstream TNW is the upper limit of tidal influence on Calleguas Creek.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	Tributary stream order, if known:					
(b)	General Tributary Characteristics (check all that apply): Tributary is: Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: culverted road xings.					
	Tributary properties with respect to top of bank (estimate): Average width: 8 feet Average depth: 2 feet Average side slopes: 2:1.					
	Primary tributary substrate composition (check all that apply): Silts Sands Concrete Cobbles Gravel Muck Bedrock Vegetation. Type/% cover: Other. Explain;					
	Tributary condition/stability [e.g., highly croding, sloughing banks]. Explain: some incision evident. Presence of run/riffle/pool complexes. Explain: n/a. Tributary geometry: **Tributary geometry: **Tributary gradient (approximate average slope): 1 %					
(c)	Flow: Tributary provides for: Sepand 1500 Estimate average number of flow events in review area/year: 2-5 Describe flow regime: intermittent. Other information on duration and volume:					
	Subsurface flow: University Explain findings: Dye (or other) test performed:					
	Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. ⁷ Explain:					
	If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: oil or scum line along shore objects fine shell or debris deposits (foreshore) physical markings/characteristics physical markings; tidal gauges other (list):					
Cha	emical Characteristics: aracterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.) Explain: water not present at time of delineation. ntify specific pollutants, if known: heavy metals, dioxin.					

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

Third.

	(iv)	Biolo	ogical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width):				
			Wetland fringe. Characteristics:				
			Habitat for:				
			☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings:				
			Other environmentally-sensitive species. Explain findings:				
			Aquatic/wildlife diversity. Explain findings: .				
2.	Cha	racte	ristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW				
-							
	(i)	Physical Characteristics:					
			General Wetland Characteristics:				
			Properties: Wetland size: acres				
			Wetland size: acres Wetland type. Explain:				
			Wetland quality. Explain:				
			Project wetlands cross or serve as state boundaries, Explain:				
			General Flow Relationship with Non-TNW:				
			Flow is: 1 10 % 5.1 ht. Explain:				
			Surface flow is: Meli LLL:				
			Characteristics:				
			Salar Grand Control of the Control o				
			Subsurface flow: Pict List Explain findings: Dye (or other) test performed:				
			_ by ((at outer) that performed.				
		(c)	Wetland Adjacency Determination with Non-TNW:				
			☐ Directly abutting				
			□ Not directly abutting				
			Discrete wetland hydrologic connection. Explain:				
			Ecological connection. Explain:				
			Separated by berm/barrier. Explain:				
			Proximity (Relationship) to TNW				
			Project wetlands are Pick List river miles from TNW.				
			Project waters are I'm aerial (straight) miles from TNW.				
			Flow is from: Vick 1. At.				
			Estimate approximate location of wetland as within the Pleb List floodplain.				
	(ii)	Che	mical Characteristics:				
			acterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed				
			characteristics; etc.). Explain:				
		Iden	tify specific pollutants, if known:				
	(iii) Biol	ogical Characteristics. Wetland supports (check all that apply):				
			Riparian buffer. Characteristics (type, average width):				
			Vegetation type/percent cover. Explain: .				
			Habitat for:				
			Federally Listed species. Explain findings:				
			☐ Fish/spawn areas. Explain findings: ☐ Other environmentally-sensitive species. Explain findings:				
			Aquatic/wildlife diversity. Explain findings:				
3.	Ch		eristics of all wetlands adjacent to the tributary (if any)				
			wetland(s) being considered in the cumulative analysis: ***********************************				
		App	roximately () acres in total are being considered in the cumulative analysis.				

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and
 other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- 1. Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: The subject tributary is an ephemeral drainage with an ordinary high water mark of 6-10 feet in width. Estimated discharge volumes at Outfall 009 (which includes the subject tributary plus the contribution from the ELV tributary) is approximately 12 cfs for a 1-year, 24-hour flood event, 49 cfs for the 10-year event and 100 cfs for the 100-year event. The downstream TNW (upper limit of tidal influence on Calleguas Creek) is approximately 28 miles downstream. The total drainage area of the tributary represents approximately 0.21% of the watershed draining to the downstream TNW. Soil testing within the channel and surrounding watershed have revealed elevated levels of heavy metals (lead, cadmium, copper and/or mercury) as well as dioxin at one location. The tributary therefore has a significant nexus to the downstream TNW by virtue of its potential to deliver contaminants downstream.
- Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into
 TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its
 adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and	Adjacent Wetlands.	Check all that app	oly and provide size estimates in review area:
	TNWs:	linear feet	width (ft), Or,	acres.
	Watland	e adjacent to TNWe	acree	

2. RPWs that flow directly or indirectly into TNWs.

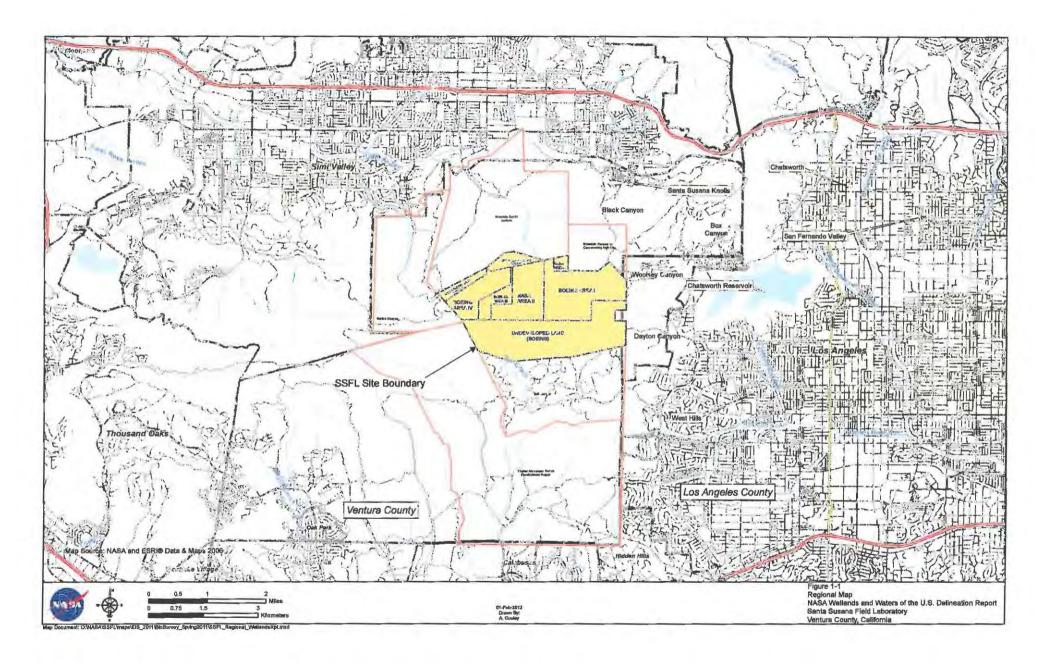
	 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are
	jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: .
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 3,000 linear feet; 8 width (ft). Other non-wetland waters: Identify type(s) of waters: .
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. ⁹ As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
DE	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, EGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY ICH WATERS (CHECK ALL THAT APPLY): ¹⁰

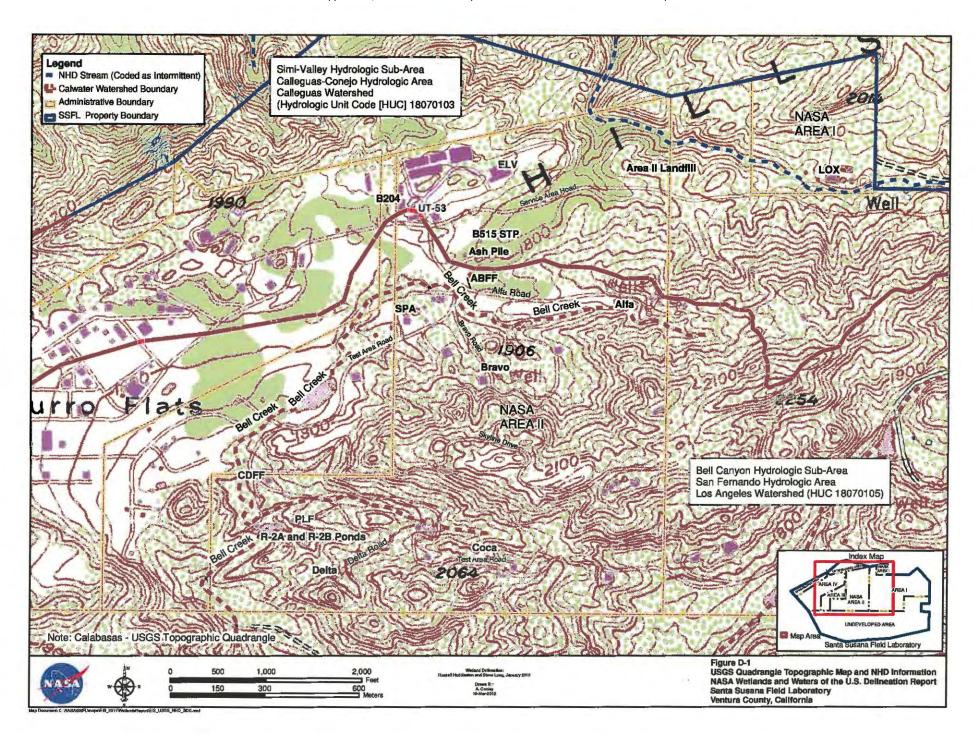
 ⁸ See Footnote # 3.
 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 10 Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

	which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: 0.15 acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SE	CTION IV: DATA SOURCES.
A.	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps:
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929) Photographs: Aerial (Name & Date): or Other (Name & Date): Previous determination(s). File no. and date of response letter: file no SPL-2009-412-AJS (4/27/2010).
	1 revious determination(s). The no. and date of response fetter, the no 51 to 2005-412-235 (4/2/12010).

Applicable/supporting case law:	
Applicable/supporting scientific litera	ture:
Other information (please specify):	

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject tributary is a small 2nd order drainage channel with an average OHWM width of 6 feet. The drainage area, including the two 1st order streams that feed into tributary 2 (tribs 3 & 4) is roughly 400 acres. Flows from the tributary pass through the Outfall 009 water quality sampling station installed by the applicant. Data from the sampling station (2004-2007) showed exceedences of permit limits of copper on one occasion, lead on 2 occasions and a dioxin congener on three occasions. Soil sampling within the drainage area has identified elevated levels of heavy metals and dioxin. Based on these results, the subject tributary appears to have a significant nexus to the downstream TNW (upper limit of tidal influence on Calleguas Creek) based on the potential to deliver contaminants downstream.







APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 01/15/2013

DISTRICT OFFICE, FILE NAME, AND NUMBER: CESPL-RG-N, Ventura Field Office; SSFL NASA Property Delineation; Fi

Fil	e no. SPL-2012-520-AJS: COCA Drainage
C	PROJECT LOCATION AND BACKGROUND INFORMATION:
	State: CA County/parish/borough: Ventura City: unincorporated (SSFL)
	Center coordinates of site (lat/long in degree decimal format): Lat. 32.23245° Long. 118.6982° Universal Transverse Mercator:
	Name of nearest waterbody: COCA drainage
	Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Los Angeles River
	Name of watershed or Hydrologic Unit Code (HUC): Los Angeles River (18070105)
	Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
	Check if other sites (e.g., offsite mitigation sites, disposal sites, etc) are associated with this action and are recorded on a different JD form.
D	REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
ъ.	Office (Desk) Determination. Date: 09/12/2012
	Field Determination. Date(s): Jan 2012
SE	CTION II: SUMMARY OF FINDINGS RHA SECTION 10 DETERMINATION OF JURISDICTION.
A.	RHA SECTION TO DETERMINATION OF JURISDICTION.
	ere "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the riew area. [Required]
	Waters subject to the ebb and flow of the tide.
	Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce
	Explain:
B.	CWA SECTION 404 DETERMINATION OF JURISDICTION.
Th	ere waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required]
	1. Waters of the U.S.
	a. Indicate presence of waters of U.S. in review area (check all that apply): 1
	TNWs, including territorial seas
	Wetlands adjacent to TNWs
	Relatively permanent waters ² (RPWs) that flow directly or indirectly into TNWs
	Non-RPWs that flow directly or indirectly into TNWs
	Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
	Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
	Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters
	Isolated (interstate or intrastate) waters, including isolated wetlands
	b. Identify (estimate) size of waters of the U.S. in the review area:
	Non-wetland waters: 2,000 linear feet: 5 width (ft) and/or 0.42 acres. Wetlands: 0.33 acres.
	W Change v.J. acres.

Non-regulated waters/wetlands (check if applicable):3 Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

c. Limits (boundaries) of jurisdiction based on: Established by (III 1341.

Elevation of established OHWM (if known):

Boxes checked below shall be supported by completing the appropriate sections in Section III below.
 For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

³ Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY);

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 37s quare many

Drainage area: 45

Average annual rainfall: 19 inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through 3 tributaries before entering TNW.

Project waters are 5 10 river miles from TNW.

Project waters are I for I a) river miles from RPW.

Project waters are 10 aerial (straight) miles from TNW.

Project waters are here aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW5: Upper Southwestern Drainage flows into R2A Pond, thence to Bell Canyon Channel

(natural), thence to the channelized section of lower Bell Canyon. The downstream TNW is upper end of the Los. Angeles River, at the confluence of Bell Canyon Channel and Arroyo Calabasas. Tributary stream order, if known: 1. General Tributary Characteristics (check all that apply): Tributary is: ☐ Natural Artificial (man-made). Explain: Manipulated (man-altered). Explain: culvert, shotcrete swales, water control weirs and impoundments present. Tributary properties with respect to top of bank (estimate): Average width: 4-5 feet Average depth: 1 feet Average side slopes: 1:1 Primary tributary substrate composition (check all that apply): **⊠** Silts Sands Cobbles Gravel Muck ■ Bedrock ☐ Vegetation. Type/% cover: Other, Explain: Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: some incision evident. Presence of run/riffle/pool complexes. Explain: n/a. Tributary geometry: Relatively straight Tributary gradient (approximate average slope): 1 % (c) Flow: Tributary provides for: I phemeral flow Estimate average number of flow events in review area/year: 1.5 Describe flow regime: ephemeral. Other information on duration and volume: Channel previously affected by discharges from SSFL test operations requiring cooling water (no longer conducted). Channel and downstream impoundments acted to collect cooling water discharges during rocket engine testing. Surface flow is: Discrete and confined. Characteristics: Subsurface flow: Unknown Explain findings: ☐ Dye (or other) test performed: Tributary has (check all that apply): ☑ Bed and banks
 ☑ OHWM⁶ (check all indicators that apply): clear, natural line impressed on the bank the presence of litter and debris destruction of terrestrial vegetation shelving the presence of wrack line vegetation matted down, bent, or absent sediment sorting leaf litter disturbed or washed away sediment deposition multiple observed or predicted flow events water staining abrupt change in plant community other (list): ☐ Discontinuous OHWM. Explain: If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply): High Tide Line indicated by: Mean High Water Mark indicated by: oil or scum line along shore objects
fine shell or debris deposits (foresho
physical markings/characteristics survey to available datum; fine shell or debris deposits (foreshore) physical markings; vegetation lines/changes in vegetation types. tidal gauges other (list):

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: water not present at time of delineation.

Identify specific pollutants, if known: heavy metals.

	(iv)		ogical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width):
			Wetland fringe. Characteristics:
		Ц	Habitat for:
			☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings:
2.	Cha	ract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW
	(i)	Phy	sical Characteristics:
	2/0	(a)	General Wetland Characteristics:
			Properties:
			Wetland size: 0.33 acres
			Wetland type. Explain: palustrine.
lne	long	w aar	Wetland quality. Explain: poor, formed as a result of impoundments intened to collect runoff from testing operations aducted).
(m	longe	i coi	Project wetlands cross or serve as state boundaries. Explain: n/a.
			110 per resultate e con or but to the boundaries 2 spinish in the
		(b)	General Flow Relationship with Non-TNW:
			Flow is: Epherical flow Explain:
			Surface flow is: Non present
			Characteristics:
			Subsurface flow: Antonia Explain findings:
			Dye (or other) test performed:
		(c)	Wetland Adjacency Determination with Non-TNW:
		1-7	☑ Directly abutting
			☐ Not directly abutting
			☐ Discrete wetland hydrologic connection. Explain:
			Ecological connection. Explain:
			Separated by berm/barrier. Explain:
		(d)	Proximity (Relationship) to TNW
		(0)	Project wetlands are 5-10 river miles from TNW.
			Project waters are serial (straight) miles from TNW.
			Flow is from: Wetland to navigable waters.
			Estimate approximate location of wetland as within the **Transfer
	(ii)	Che	emical Characteristics:
	()		racterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed
			characteristics; etc.). Explain: dry at time of delineation.
		Ider	tify specific pollutants, if known: heavy metals detected downstream.
	(11)	Rin	logical Characteristics. Wetland supports (check all that apply):
	(n	Riparian buffer. Characteristics (type, average width):
			Vegetation type/percent cover. Explain: .
			Habitat for:
			Federally Listed species. Explain findings:
			Fish/spawn areas. Explain findings:
			Other environmentally-sensitive species. Explain findings:
			Aquatic/wildlife diversity. Explain findings:
3.	Ch	aract	eristics of all wetlands adjacent to the tributary (if any)
	C.A.		wetland(s) being considered in the cumulative analysis:
			1. 70.200

For each wetland, specify the following:

<u>Directly abuts? (Y/N)</u> <u>Size (in acres)</u> <u>Directly abuts? (Y/N)</u> <u>Size (in acres)</u>

Summarize overall biological, chemical and physical functions being performed: very small impoundment area with managed hydrology. Dominated by Typha sp. and unvegetated open water (dry at time of delineation). An additional impoundment along flow route likely supports palustrine fringe wetlands, however this was outside the assessment area.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook, Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and
 other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain
 findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The subject tributary is a small ephemeral drainage with a discontinuous ordinary high water mark averaging 4-5 feet in width. The tributary includes concrete-lined sections and flow control wiers. Historically, the channel functioned to collect and convey runoff from adjacent rocket engine test stands that require substantial amounts of cooling water during testing. Flows are eventurally conveyed to a holding pond off the NASA property (Boeing property) and thence to a secondary pond ("R2A Pond") and thence to Bell Canyon Channel. The downstream TNW (upper reach of the Los Angeles River) is approximately 8 miles downstream. The total drainage area of the tributary represents approximately 2% of the watershed draining to the downstream TNW. Soil testing within the channel and surrounding watershed have revealed elevated levels of heavy metals (lead, cadmium, copper and/or mercury). The tributary therefore has a significant nexus to the downstream TNW by virtue of its potential to deliver contaminants downstream.
- 3. Significant nexus findings for wettands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: Wetlands present are palustrine in nature as the result of impoundments of tributary. Flow and potential pollutants would be conveyed through wetland, therefore the wetlands in question have a significant nexus to the downstream TNW.
- D. DETERMINATIONS OF JURISDICTIONAL FINDINGS, THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):
 - TNWs and Adjacent Wetlands. Check all that apply and provide size estimates in review area:
 TNWs: linear feet width (ft), Or, acres.

	Wetlands adjacent to TNWs: acres.
2.	RPWs that flow directly or indirectly into TNWs. Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally;
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 3700 linear feet; 5 width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly
	abutting an RPW: Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C. Provide acreage estimates for jurisdictional wetlands in the review area: acres.
	100 to vago estimates for jurisdictional violations in the 100 to view area.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: 0.13 acres.
7.	As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).

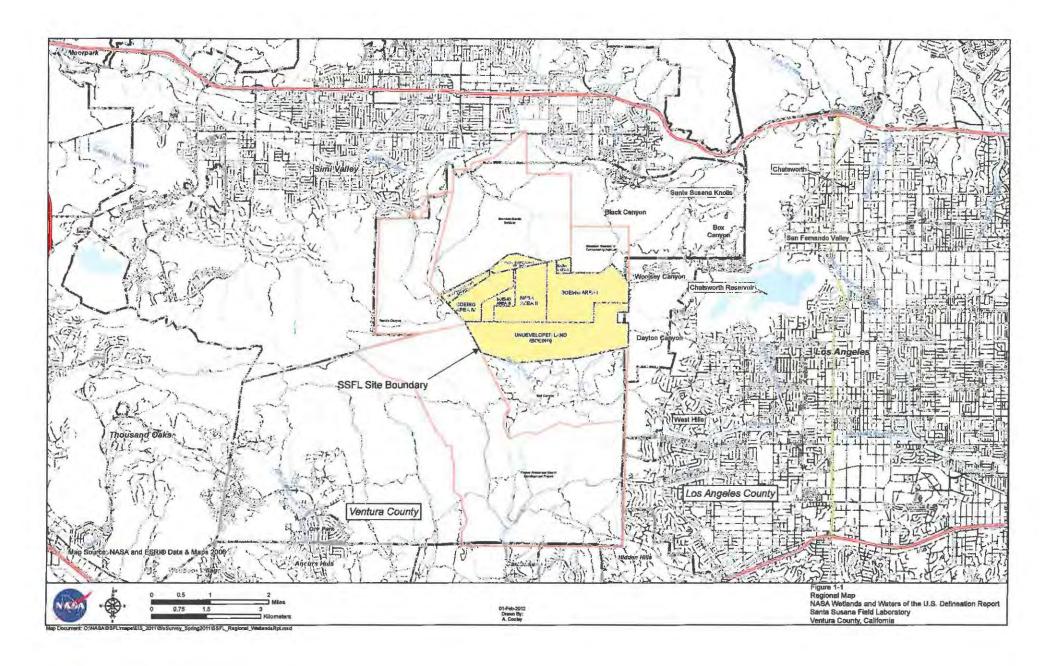
 $^{^8 \}rm See$ Footnote # 3. 9 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

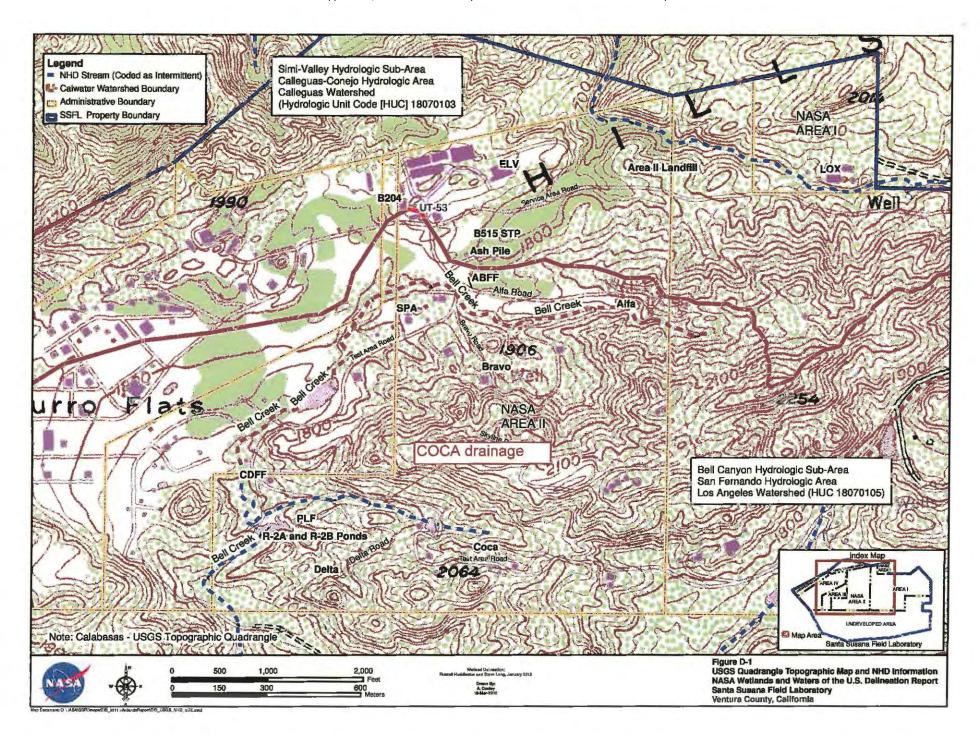
Е.	DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY): 10 which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: 0.155 acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters; acres. List type of aquatic resource: Wetlands: acres.
	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data. USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey, Citation:
	USDA Natural Resources Conservation Service Soil Survey, Chauon: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s):

¹⁰ Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

I	FEMA/FIRM maps: .
	100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
	Photographs: Aerial (Name & Date):
	or Other (Name & Date):
	Previous determination(s). File no. and date of response letter: .
	Applicable/supporting case law:
	Applicable/supporting scientific literature:
問	Other information (please specify):

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject tributary is a small first order drainage channel with an average OHWM width of 4-5 feet. The drainage area is roughly 495 acres. Soil sampling within the drainage area has identified elevated levels of heavy metals and dioxin. Based on these results, the subject tributary appears to have a significant nexus to the downstream TNW (upper Los Angeles River, approximately 8 river miles downstream) based on the potential to deliver contaminants downstream.







APPROVED JURISDICTIONAL DETERMINATION FORM U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 09/12/2012

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: CESPL-RG-N, Ventura Field Office; SSFL NASA Property Delineation; File no. SPL-2012-520-AJS: ELV Drainage

C. PROJECT LOCATION AND BACKGROUND INFORMATION: State: CA County/parish/borough: Ventura City: unincorporated (SSFL) Center coordinates of site (lat/long in degree decimal format); Lat. 32.23245° 7, Long. 118.6982° W Universal Transverse Mercator: Name of nearest waterbody: ELV Drainage Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Lower Calleguas Creek Name of watershed or Hydrologic Unit Code (HUC): Calleguas Creek (18070103) Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request. Check if other sites (e.g., offsite mitigation sites, disposal sites, etc...) are associated with this action and are recorded on a different JD form. D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY); Office (Desk) Determination. Date: 09/12/2012 Field Determination. Date(s): Jan 2012 SECTION II: SUMMARY OF FINDINGS A. RHA SECTION 10 DETERMINATION OF JURISDICTION. There "navigable waters of the U.S." within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [Required] Waters subject to the ebb and flow of the tide. Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce. Explain: B. CWA SECTION 404 DETERMINATION OF JURISDICTION. There "waters of the U.S." within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [Required] 1. Waters of the U.S. a. Indicate presence of waters of U.S. in review area (check all that apply): 1 TNWs, including territorial seas Wetlands adjacent to TNWs Relatively permanent waters² (RPWs) that flow directly or indirectly into TNWs Non-RPWs that flow directly or indirectly into TNWs Wetlands directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs Impoundments of jurisdictional waters Isolated (interstate or intrastate) waters, including isolated wetlands b. Identify (estimate) size of waters of the U.S. in the review area: Non-wetland waters: 1250 linear feet: 5 width (ft) and/or 0.171 acres. Wetlands: 0 acres. c. Limits (boundaries) of jurisdiction based on: [analysts of the collection based on the collection b Elevation of established OHWM (if known): 2. Non-regulated waters/wetlands (check if applicable):3 Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional. Explain:

Supporting documentation is presented in Section III.F.

¹ Boxes checked below shall be supported by completing the appropriate sections in Section III below.

For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. TNW

Identify TNW:

Summarize rationale supporting determination:

2. Wetland adjacent to TNW

Summarize rationale supporting conclusion that wetland is "adjacent":

B, CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under Rapanos have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody⁴ is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. Characteristics of non-TNWs that flow directly or indirectly into TNW

(i) General Area Conditions:

Watershed size: 291 square miles

Drainage area: 67

Average annual rainfall: 19 inches Average annual snowfall: 0 inches

(ii) Physical Characteristics:

(a) Relationship with TNW:

☐ Tributary flows directly into TNW.

Tributary flows through fributaries before entering TNW.

Project waters are 15 to river miles from TNW.

Project waters are 2-5 river miles from RPW.

Project waters are 23-23 aerial (straight) miles from TNW.

Project waters are 3-5 aerial (straight) miles from RPW.

Project waters cross or serve as state boundaries. Explain: n/a.

Identify flow route to TNW⁵: ELV Drainage flows approximately 2.5 miles to Meier Creek, thence to Arroyo Simi, Arroyo Las Posas and Calleguas Creek. The downstream TNW is the uppoor limit of tidal influence on Calleguas Creek.

⁴ Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid

⁵ Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.

	Tributary stream order, if known: 1.	
(b)	General Tributary Characteristics (check all that apply) Tributary is: Natural Artificial (man-made). Explain Manipulated (man-altered). Ex	
lined with asp	halt.	P PPP TO SECURE IN COLUMN
	Tributary properties with respect to top of bank (estime Average width: 5 feet Average depth: 1 feet Average side slopes: ≥:1	ate):
	Primary tributary substrate composition (check all that Silts Sands Cobbles Gravel Bedrock Vegetation. Type/% Other. Explain:	Concrete Muck
	Tributary condition/stability [e.g., highly eroding, slou Presence of run/riffle/pool complexes. Explain: n/a. Tributary geometry: Tributary gradient (approximate average slope): 1 %	thing banks]. Explain: some incision evident.
(c)	Flow: Tributary provides for: Section 1000 Estimate average number of flow events in review area Describe flow regime: intermittent. Other information on duration and volume: Surface flow is: Cartain 1. Characteristics: Subsurface flow: Lea nown. Explain findings: Dye (or other) test performed: Tributary has (check all that apply): Bed and banks OHWM ⁶ (check all indicators that apply): clear, natural line impressed on the bank changes in the character of soil shelving vegetation matted down, bent, or absent leaf litter disturbed or washed away sediment deposition water staining other (list): Discontinuous OHWM. Explain:	the presence of litter and debris destruction of terrestrial vegetation the presence of wrack line sediment sorting scour multiple observed or predicted flow events abrupt change in plant community
		e lateral extent of CWA jurisdiction (check all that apply): Mean High Water Mark indicated by: survey to available datum; physical markings; vegetation lines/changes in vegetation types.
Cha	Explain: water not present at time of delineation.	oily film; water quality; general watershed characteristics, etc.).

subwatershed of this drainage feature. No monitoring results of this specific drainage channel are available, however the drainage area

⁶A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

Tibid.

includes facilities historically operated as part of the Santa Susanna Field Lab and it likely similar contaminants would be genereated within this drainage area.

	(iv)	Biol	ogical Characteristics. Channel supports (check all that apply): Riparian corridor. Characteristics (type, average width); Wetland fringe. Characteristics:			
			Habitat for:			
			☐ Federally Listed species. Explain findings: ☐ Fish/spawn areas. Explain findings:			
			Other environmentally-sensitive species. Explain findings:			
			Aquatic/wildlife diversity. Explain findings:			
2.	Cha	iract	eristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW			
	(i)		sical Characteristics: General Wetland Characteristics:			
		(a)	Properties:			
			Wetland size: acres			
			Wetland type. Explain:			
			Wetland quality. Explain:			
			Project wetlands cross or serve as state boundaries. Explain:			
		(b)	General Flow Relationship with Non-TNW:			
		(0)	Flow is: Francisco Explain:			
			Surface flow is: Figh 1 and			
			Characteristics			
			Subsurface flow: Now Last Explain findings:			
			☐ Dye (or other) test performed:			
		(c)	Wetland Adjacency Determination with Non-TNW:			
			Directly abutting			
			□ Not directly abutting			
			Discrete wetland hydrologic connection. Explain:			
			Ecological connection. Explain:			
			Separated by berm/barrier. Explain:			
		(d)	Proximity (Relationship) to TNW			
			Project wetlands are Children river miles from TNW.			
			Project waters are Visit loss aerial (straight) miles from TNW.			
			Flow is from: The location of wetland as within the Poster in floodplain.			
	(ii)		emical Characteristics:			
		Cha	aracterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed			
		Ide	characteristics; etc.). Explain: https://example.com/restricts/files/fil			
	/***		1 1 1 7 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1			
	(111) R10	logical Characteristics. Wetland supports (check all that apply):			
		H	Riparian buffer. Characteristics (type, average width): Vegetation type/percent cover. Explain:			
		H	Habitat for:			
			Federally Listed species. Explain findings:			
			Fish/spawn areas. Explain findings:			
			Other environmentally-sensitive species. Explain findings:			
			Aquatic/wildlife diversity. Explain findings:			
3.	Ch	araci	teristics of all wetlands adjacent to the tributary (if any)			
7		All	wetland(s) being considered in the cumulative analysis:			
			proximately () acres in total are being considered in the cumulative analysis.			

For each wetland, specify the following:

Directly abuts? (Y/N)

Size (in acres)

Directly abuts? (Y/N)

Size (in acres)

Summarize overall biological, chemical and physical functions being performed:

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the Rapanos Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and
 other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

- Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D:The subject tributary is a small ephemeral drainage with an ordinary high water mark averaging 5 feet in width. Estimated discharge volumes at Outfall 009 (which includes the subject tributary plus the contribution from the Northern Drainage) is approximately 12 cfs for a 1-year, 24-hour flood event, 49 cfs for the 10-year event and 100 cfs for the 100-year event. The downstream TNW (upper limit of tidal influence on Calleguas Creek) is approximately 28 miles downstream. The total drainage area of the tributary represents approximately 0.03% of the watershed draining to the downstream TNW. Soil testing within the channel and surrounding watershed have revealed elevated levels of heavy metals (lead, cadmium, copper and/or mercury) as well as dioxin at one location. The tributary therefore has a significant nexus to the downstream TNW by virtue of its potential to deliver contaminants downstream.
- 2. Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- 3. Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW. Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D:
- D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1.	TNWs and	Adjacent Wetlands.	Check all that ap	ply and provide size estimates in review area:
	TNWs:	linear feet	width (ft), Or,	acres.

Wetlands adjacent to TNWs: acres.

2. RPWs that flow directly or indirectly into TNWs.

	 Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
3.	Non-RPWs ⁸ that flow directly or indirectly into TNWs. Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional waters within the review area (check all that apply): Tributary waters: 1,200 linear feet; 5 width (ft). Other non-wetland waters: acres. Identify type(s) of waters:
4.	Wetlands directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands. Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW:
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
5.	Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs. Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.
	Provide acreage estimates for jurisdictional wetlands in the review area: acres.
6.	Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs. Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.
	Provide estimates for jurisdictional wetlands in the review area: acres.
7.	Impoundments of jurisdictional waters. ⁹ As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional. Demonstrate that impoundment was created from "waters of the U.S.," or Demonstrate that water meets the criteria for one of the categories presented above (1-6), or Demonstrate that water is isolated with a nexus to commerce (see E below).
DE	OLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, EGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY ICH WATERS (CHECK ALL THAT APPLY): 10

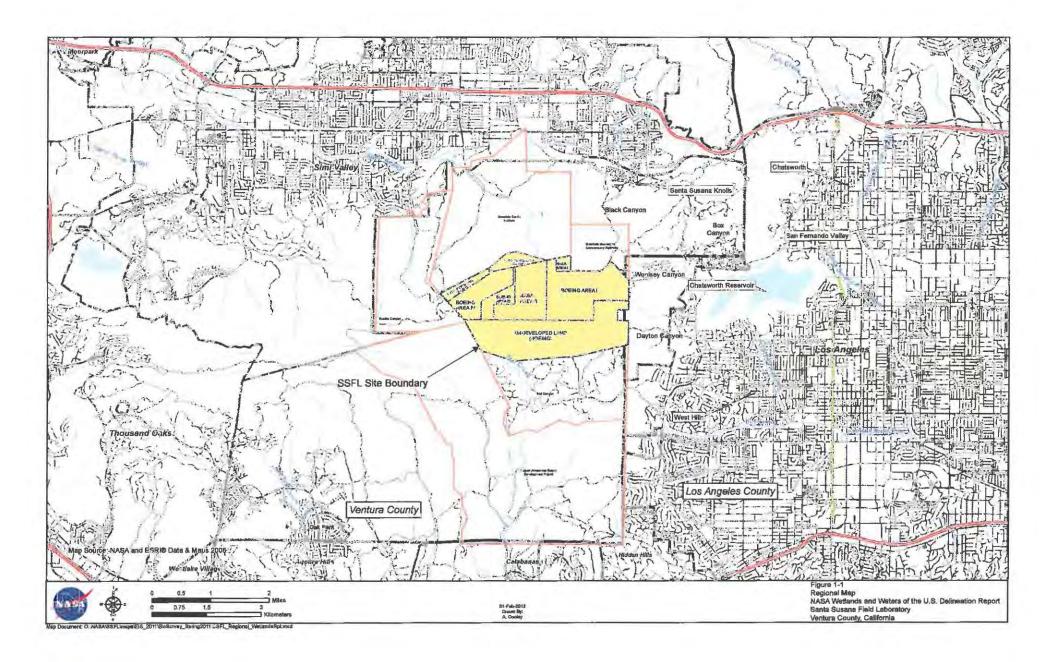
E.

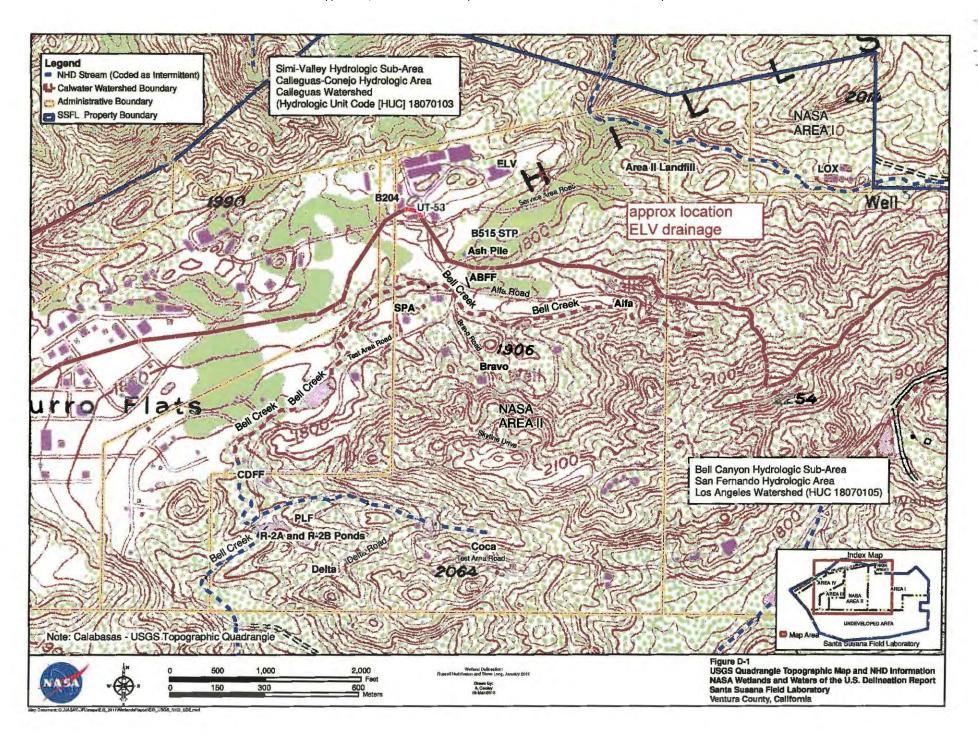
 ⁸See Footnote # 3.
 To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.
 10 Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA Memorandum Regarding CWA Act Jurisdiction Following Rapanos.

	which are or could be used by interstate or foreign travelers for recreational or other purposes. from which fish or shellfish are or could be taken and sold in interstate or foreign commerce. which are or could be used for industrial purposes by industries in interstate commerce. Interstate isolated waters. Explain: Other factors. Explain:
	Identify water body and summarize rationale supporting determination:
	Provide estimates for jurisdictional waters in the review area (check all that apply): Tributary waters: linear feet width (ft). Other non-wetland waters: acres. Identify type(s) of waters: . Wetlands: acres.
F.	NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY): If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements. Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce. Prior to the Jan 2001 Supreme Court decision in "SWANCC," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR). Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: Other: (explain, if not covered above):
	Provide acreage estimates for non-jurisdictional waters in the review area, where the <u>sole</u> potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet width (ft). Lakes/ponds: 0.155 acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
	Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply): Non-wetland waters (i.e., rivers, streams): linear feet, width (ft). Lakes/ponds: acres. Other non-wetland waters: acres. List type of aquatic resource: Wetlands: acres.
SEC	CTION IV: DATA SOURCES.
A. !	SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below): Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: Data sheets prepared/submitted by or on behalf of the applicant/consultant. Office concurs with data sheets/delineation report. Office does not concur with data sheets/delineation report. Data sheets prepared by the Corps: Corps navigable waters' study: U.S. Geological Survey Hydrologic Atlas: USGS NHD data.
	USGS 8 and 12 digit HUC maps. U.S. Geological Survey map(s). Cite scale & quad name: USDA Natural Resources Conservation Service Soil Survey. Citation: National wetlands inventory map(s). Cite name: State/Local wetland inventory map(s): FEMA/FIRM maps: 100-year Floodplain Elevation is; (National Geodectic Vertical Datum of 1929) Photographs: ☐ Aerial (Name & Date):
	or Other (Name & Date): Previous determination(s). File no. and date of response letter: file no SPL-2009-412-AJS (4/27/2010).

	Applicable/supporting case law: Applicable/supporting scientific literature:			
100		uic.		
100	Other information (please specify):			

B. ADDITIONAL COMMENTS TO SUPPORT JD: The subject tributary is a small first order drainage channel with an average OHWM width of 4 feet. The drainage area is roughly 67 acres. Flows from the tributary pass through the Outfall 009 water quality sampling station installed by the applicant. Data from the sampling station (2004-2007) showed exceedences of permit limits of copper on one occasion, lead on 2 occasions and a dioxin congener on three occasions. Soil sampling within the drainage area has identified elevated levels of heavy metals and dioxin. Based on these results, the subject tributary appears to have a significant nexus to the downstream TNW (upper limit of tidal influence on Calleguas Creek) based on the potential to deliver contaminants downstream.





End of Appendix G

