Jurisdictional Delineation Report

Soft Bottom Channel Reaches 120 and 121
Santa Clarita, California

Prepared for

Los Angeles County Flood Control District
900 South Fremont Avenue, 2nd Floor Annex
Alhambra, California 91802-1460
Contact: Nandini T. Moran

Prepared by

Psomas
225 South Lake Avenue, Suite 1000
Pasadena, California 91101
Contact: David T. Hughes, Senior Project Manager
Regulatory Services
T: (626) 351-2000

January 2018

TABLE OF CONTENTS

TABLES

EXHIBITS

ATTACHMENTS

EXECUTIVE SUMMARY

The purpose of this report is to document existing jurisdictional resources within Soft Bottom Channel Reaches 120 and 121 located in the City of Santa Clarita. Reach 120 consists of a portion of the southern bank of the Santa Clara River, immediately east (upstream) of State Route 14. Reach 121 consists of a portion of San Francisquito Creek, approximately 0.7 mile upstream of its confluence with the Santa Clara River.

The Los Angeles County Flood Control District (LACFCD) proposes to perform annual maintenance activities consisting of vegetation removal and minor repair to the side levees and storm drain outlets for flood prevention purposes. The LACFCD performs similar maintenance in many other soft-bottom channels throughout Los Angeles County and typically includes vegetation removal, sediment removal, and minor structural repair. The results of this jurisdictional delineation will allow Reaches 120 and 121 to be permitted as part of the overall LACFCD soft-bottom channel maintenance program. Jurisdictional resources considered for this report include wetlands and non-wetland "waters of the U.S." regulated by the U.S. Army Corps of Engineers (USACE) and the Los Angeles Regional Water Quality Control Board (RWQCB), as well as the bed, bank, and channel of all rivers and streams (and associated riparian trees), as regulated by the California Department of Fish and Wildlife (CDFW).

The jurisdictional delineation work was performed by Psomas Regulatory Specialist David Hughes on September 22, 2017. Reach 120 is located on the U.S. Geological Service's (USGS') Mint Canyon 7.5-minute quadrangle map and Reach 121 is located on the USGS' Newhall 7.5-minute quadrangle map.

Wetland features were identified based on the USACE's three-parameter approach in which wetlands are defined by the presence of hydrophytic vegetation, hydric soils, and presence of wetland hydrology indicators. The limits of non-wetland "waters of the U.S." were identified by the presence of an ordinary high water mark. The limits of CDFW jurisdictional waters were identified as the top of bank or the outer drip line of riparian vegetation.

Based on the results of the jurisdictional delineation field work, the total acreage of jurisdictional resources within the boundaries for Soft Bottom Channel Reaches 120 and 121 are summarized below.

Reach 120:

- **USACE Jurisdiction:** 0.23 acre (all non-wetland "waters of the U.S.").
- **RWQCB Jurisdiction:** 0.23 acre (all non-wetland "waters of the State").
- **CDFW Jurisdiction:** 1.08 acres.

Reach 121:

- **USACE Jurisdiction:** 0.77 acre (0.08 acre of wetland "waters of the U.S." and 0.69 acre of non-wetland "waters of the U.S.").
- **RWQCB Jurisdiction:** 0.77 acre (0.08 acre of wetland "waters of the State" and 0.69 acre of non-wetland "waters of the State").
- **CDFW Jurisdiction:** 6.12 acres.

1.0 INTRODUCTION

This Jurisdictional Delineation Report (report) has been prepared for the Los Angeles County Flood Control District (LACFCD) to provide baseline data concerning the type and extent of resources under the jurisdiction of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW). within Soft Bottom Channel (SBC) Reaches 120 and 121 in the City of Santa Clarita in Los Angeles County. This report is based on a jurisdictional delineation survey performed on September 22, 2017.

1.1 PROJECT LOCATION

SBC Reaches 120 and 121 are located in the northern portion of Los Angeles County in the City of Santa Clarita (Exhibits 1 and 2). Reach 120 consists of a section of the Santa Clara River's southern bank extending approximately 0.2 mile upstream of State Route 14 (Exhibit 3a). Reach 121 consists of a portion of San Francisquito Creek, bisected by Newhall Ranch Road, and approximately 0.7 mile upstream of the confluence with the Santa Clara River (Exhibit 3b).

1.2 EXISTING CONDITIONS

Reach 120 consists of a portion of the southern bank of the Santa Clara River that is immediately adjacent to a concrete side levee. The downstream end of this reach contains a storm drain outlet that discharges water into the Santa Clara River. Upstream and downstream of the concrete levee, rip-rap has been placed at the slope bottom for bank protection. Vegetation along the bottom of slopes consists of a mixture of native and non-native species. This area was likely disturbed when the concrete side levee was constructed as the levee extends below grade; soil along the bottom of the levee was likely backfilled when construction was completed. Vegetation in this area consists largely of California buckwheat (*Eriogonum fasciculatum*), telegraph weed (*Heterotheca grandiflora*), narrowleaf goldenbush (*Ericameria linearifolia*), and annual grasses such as red brome (*Bromus madritensis* ssp. *rubens*). Downstream of the concrete side levee, a dense patch of mule fat (*Baccharis salicifolia*) is growing adjacent to the rip-rap bank protection. Rip-rap also occurs on the stream bottom at the storm drain outlet which is sparsely vegetated with watercress (*Nasturtium officinale*) and mule fat saplings. Undisturbed portions of the Santa Clara River that occur at edge of the Reach 120 boundary support sparse mule fat, Fremont cottonwood (*Populus fremontii*), and tree tobacco (*Nicotiana glauca*).

Reach 121 consists of a portion of San Francisquito Creek extending approximately 250 feet upstream and 700 feet downstream of Newhall Ranch Road. Both sides of Reach 121 are confined by concrete side levees. Water generally flows along the west bank of the creek, while the east bank consists of a raised sandy bench that is densely vegetated with red willows (*Salix laevigata*), Fremont cottonwood, and mule fat. At the downstream end of the reach, along the eastern bank, a storm drain outlet discharges water into San Francisquito Creek. An entrainment channel, approximately three feet wide, carries stormwater through the raised sandy bench area to the low flow portion of the channel.

Prior to urbanization, both the Santa Clara River and San Francisquito Creek were wide sandy alluvial streams that would contain flowing water during and immediately after storm events. Both reaches contain deep sandy soils, so water infiltrates the streambed rapidly. Flowing water would generally be expected for brief periods of time immediately after winter rain events, though inflows from urban runoff may result in surface and subsurface flows outside of the seasonal rainy period. Both reaches were dry at the time of the September 22, 2017 field visit.

D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_RL_20171009.mxd

Regional Location

Exhibit 1

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

3 1.5 0 3 Miles

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_RL.pdf

D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_LV_120_20171009.mxd

Local Vicinity – Reach 120

Exhibit 2a

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_LV_120.pdf

D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_LV_121_20171009.mxd

Local Vicinity – Reach 121

Exhibit 2b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

1,000 500 0 1,000 Feet

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_LV_121.pdf

\\irvine1\gis\Projects\COLADPW\J247MXD\Reaches_120_121\JDex_ProjectSite_120_20171009.mxd

Project Site – Reach 120

Exhibit 3a

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

125 0 125 Feet

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_ProjectSite_120.pdf

\\irvine1\gis\Projects\COLADPW\J247MXD\Reaches_120_121\JDIex_ProjectSite_121_20171009.mxd

Project Site – Reach 121

Exhibit 3b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N
W E
S

200 0 200
Feet

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_ProjectSite_121.pdf

1.3 PROJECT DESCRIPTION

The LACFCD proposes to perform annual maintenance activities within the project site consisting of vegetation removal and minor repair to the side levees and storm drain outlets. Sediment removal will not be conducted. Maintenance work is expected to consist of vegetation removal using hand tools and possibly small mechanical equipment (such as a skidsteer).

1.4 REGULATORY AUTHORITY

This section summarizes the federal and State agencies' regulatory jurisdiction over activities that have a potential to impact jurisdictional resources. A detailed explanation of each agency's regulatory authority is provided in Attachment A.

1.4.1 U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. Its authority applies to all "waters of the U.S." where the material (1) replaces any portion of a "waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". Activities that result in fill or dredge of "waters of the U.S." require a permit from the USACE.

1.4.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB), in conjunction with the nine RWQCBs, is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The SWRCB's and RWQCBs' jurisdictions extend to all "waters of the State" and to all "waters of the U.S.", including wetlands (isolated and non-isolated).

1.4.3 California Department of Fish and Wildlife

The CDFW regulates activities that may affect rivers, streams, and lakes pursuant to the *California Fish and Game Code* (§§1600–1616). According to Section 1602 of the *California Fish and Game Code,* the CDFW has jurisdictional authority over any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake.

2.0 METHODS

The analysis contained in this report uses the results of field surveys conducted by Psomas Regulatory Specialist David Hughes on September 22, 2017. The literature reviewed for the preparation of the delineation is outlined in Section 2.1 and the field methods to delineate wetland and non-wetland jurisdictional waters are summarized in Section 2.2.

2.1 LITERATURE REVIEW

Prior to conducting the delineation field investigations, Psomas reviewed USGS topographic maps; soil survey data from the Natural Resources Conservation Service (NRCS) Web Soil Survey (USDA NRCS 2017); the National Hydric Soils List (USDA NRCS 2012); the National Wetlands Inventory's (NWI) Wetland Mapper (USFWS 2017); and digital color aerial photography to identify areas on the project site that may fall under an agency's jurisdiction.

2.2 JURISDICTIONAL DELINEATION

A field delineation was conducted by Psomas Regulatory Specialist David Hughes on September 22, 2017. Jurisdictional features were mapped using a 1 inch equals 100 feet (1″ = 100′) scale aerial photograph, and were further delineated as a drainage polygon with corresponding width measurements. An assessment of the presence of wetland "waters of the U.S." was made based on vegetation and hydrology; if potential wetlands were observed, test pits were dug to analyze soil and to confirm the presence or absence of wetlands. Information on the OHWM was recorded on the Arid West Ephemeral and Intermittent Streams OHWM Datasheet (Attachment B). The field survey included the collection of vegetation, soils, and hydrologic data from seven sampling points in the survey areas for Reaches 120 and 121; this information was recorded on Wetland Determination Data Forms (Attachment C). Representative photographs of the survey area are included in Attachment D.

Non-wetland "waters of the U.S." were delineated based on the limits of the Ordinary High Water Mark (OHWM), which can be determined by a number of factors, including the presence of a clear, natural line impressed on the bank; shelving; changes in the character of the soil; destruction of terrestrial vegetation; and the presence of litter and debris. The OHWM limits (i.e., active floodplain) occurring in the survey area were further verified using methods contained in *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States*, *A Delineation Manual* (Lichvar and McColley 2008) and the *Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (Curtis and Lichvar 2010).

In September 2008, the USACE issued the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.* This regional supplement is designed for use with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987). Both the 1987 Wetlands Manual and the Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of "waters of the U.S." and wetland resources. A three-parameter approach was used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. In order to be considered a wetland, an area must exhibit at least minimal hydric characteristics within the three parameters. However, problem areas may periodically or permanently lack certain indicators due to seasonal or annual variability or the nature of the soils or plant species on site. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the Regional Supplement.

It should be noted that the RWQCB shares USACE jurisdiction unless isolated conditions are present. If isolated waters are present, the RWQCB takes jurisdiction using the USACE's

definition of the OHWM and/or the three-parameter wetlands method pursuant to the 1987 Wetlands Manual. The CDFW's jurisdiction is defined as the top of the bank to the top of the bank of the stream, channel, or basin or to the outer limit of riparian vegetation located within or immediately adjacent to the river, stream, creek, pond, lake, or other impoundment.

2.2.1 Vegetation

Hydrophytic vegetation (or hydrophytes) is defined as any macrophytic plant that "grows in water or on a substrate that is at least periodically deficient in oxygen as a result of excessive water content; plants typically found in wet habitats" (Environmental Laboratory 1987). Specifically, these plant species have specialized morphological, physiological, or other adaptations for surviving in permanently saturated to periodically saturated soils where oxygen levels are very low or the soils are anaerobic. Lichvar and Gillrich (2011) provide the following technical definitions of wetland plant indicator status categories:

- **Obligate Wetland (OBL):** These wetland-dependent plants (herbaceous or woody) require standing water or seasonally saturated soils (14 or more consecutive days) near the surface to ensure adequate growth, development, and reproduction and to maintain healthy populations. These plants consist of four types:
    - *submerged:* plants that conduct virtually all of their growth and reproductive activity under water.
    - *floating:* plants that grow with leaves and most often their vegetative and reproductive organs floating on the water surface.
    - *floating-leaved:* plants that are rooted in sediment but also have leaves that float on the water surface.
    - *emergent:* herbaceous and woody plants that grow with their bases submerged and rooted in inundated sediment or seasonally saturated soil and their upper portions, including most of the vegetative and reproductive organs, growing above the water level.
- **Facultative Wetlands (FACW):** These plants depend on and predominantly occur with hydric soils, standing water, or seasonally high water tables in wet habitats for ensuring optimal growth, development, and reproduction and for maintaining healthy populations. These plants often grow in geomorphic locations where water saturates soils or floods the soil surface at least seasonally.
- **Facultative (FAC):** These plants can occur in wetlands or non-wetlands. They can grow in hydric, mesic, or xeric habitats. The occurrence of these plants in different habitats represents responses to a variety of environmental variables other than just hydrology (e.g., shade tolerance, soil hydrogen potential [pH], and elevation) and they have a wide tolerance of soil moisture conditions.
- **Facultative Upland (FACU):** These plants are not wetland dependent. They can grow on hydric and seasonally saturated soils, but they develop optimal growth and healthy populations on predominantly drier or more mesic sites. Unlike FAC plants, these plants are non-wetland plants by habitat preference.
- **Obligate Upland (UPL):** These plants occupy mesic to xeric non-wetland habitats. They almost never occur in standing water or saturated soils. Typical growth forms include herbaceous, shrubs, woody vines, and trees.

The USACE—as part of an interagency effort with the U.S. Environmental Protection Agency (USEPA), the U.S. Fish and Wildlife Service (USFWS), and the USDA NRCS—has approved a National Wetland Plant List (NWPL), which provides the current indicator status for plant species. The NWPL is used to determine whether the hydrophytic vegetation parameter is met when conducting wetland determinations under the CWA and the Wetland Conservation Provisions of the Food Security Act. The NWPL is also intended to be used for wetland restoration, establishment, and enhancement projects. This report utilizes the indicator statuses for the Arid West Supplement portion of the NWPL.

The following are three procedures for determining whether the hydrophytic vegetation criterion is met: Indicator 1, "Dominance Test", using the "50/20 Rule"; Indicator 2, "Prevalence Index"; or Indicator 3, "Morphological Adaptation", as identified in the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008). The hydrophytic vegetation criterion is met if any indicator is satisfied. If none of the indicators are satisfied, then hydrophytic vegetation is absent unless (1) indicators of hydric soil and wetland hydrology are present and (2) the site meets the requirements for a problematic wetland situation.

- **Dominance Test:** Vegetative cover is estimated and is ranked according to its dominance. Dominant species are the most abundant species for each stratum of the community (i.e., tree, sapling/shrub, herb, or woody vine) that individually or collectively amount to 50 percent of the total coverage of vegetation plus any other species that, by itself, accounts for 20 percent of the total vegetation cover (also known as the "50/20 Rule"). These species are recorded on the "Wetland Determination Data Form – Arid West Region". The wetlands indicator status of each species is also recorded on the data forms based on the NWPL (Lichvar and Kartesz 2009). If greater than 50 percent of the dominant species across all strata are OBL, FACW, or FAC species, the criterion for wetland vegetation is considered to be met.
- **Prevalence Index:** The prevalence index considers all plant species in a community, not just the dominant ones. The prevalence index is the average of the wetland indicator status of all plant species in a sampling plot. Each indicator status category is given a numeric code (OBL = 1, FACW = 2, FAC = 3, FACU = 4, and UPL = 5) and is weighted by the species' abundance (percent cover). Hydrophytic vegetation is present if the prevalence index is 3.0 or less.
- **Morphological Adaptation:** Morphological adaptations, such as adventitious roots (i.e., roots that take advantage of the wet conditions) and shallow root systems, must be observed on more than 50 percent of the individuals of a FACU species for the hydrophytic vegetation wetland criterion to be met.

2.2.2 Soils

The National Technical Committee for Hydric Soils (NTCHS) defines a hydric soil as a soil that is formed under conditions of saturation, flooding, or ponding that occurs long enough during the growing season to develop anaerobic conditions (or conditions of limited oxygen) at or near the soil surface and that favor the establishment of hydrophytic vegetation (USDA NRCS 2016). It should be noted that hydric soils created under artificial conditions of flooding and inundation sufficient for the establishment of hydrophytic vegetation would also meet this hydric soils indicator.

The soil conditions are verified by digging test pits along each transect to a depth of at least 20 inches (except where a restrictive layer occurs in areas containing hard pan, cobble, or solid rock). It should be noted that, at some sites, it may be necessary to make exploratory soil test pits up to 40 inches deep to more accurately document and understand the variability in soil properties

and hydrologic relationships on the site. Soil test pit locations are usually dug in the drainage invert or at the edge of a waterbody/drainage course in vegetated areas. Soil extracted from each soil test pit is then examined for texture and color using the standard plates on the Munsell Soil Color Chart (1994) and recorded on the Data Form. The Munsell Soil Color Chart aids in designating soils by color labels based on gradations of three simple variables: hue, value, and chroma. Any indicators of hydric soils, such as the following, are also recorded on the Data Form: redoximorphic features (i.e., areas where iron is reduced under anaerobic conditions and oxidized following a return to aerobic conditions); buried organic matter; organic streaking; reduced soil conditions; gleyed (i.e., soils having a characteristic bluish-gray or greenish-gray color) or low-chroma soils; or sulfuric odor. If hydric soils are found, progressive pits are dug along the transect moving laterally away from the active channel area until hydric soil features are no longer present in the top 20 inches of the soil.

2.2.3 Hydrology

Wetland hydrology indicators provide evidence that a site has a continuing wetland hydrologic regime. Wetlands hydrology is represented by either (1) all of the hydrological elements or characteristics of areas permanently or periodically inundated or (2) areas containing soils that are saturated for a sufficient duration of time to create hydric soils suitable for the establishment of plant species that are typically adapted to anaerobic soil conditions. The presence of wetland hydrology is evaluated at each intersect by recording the extent of observed surface flows; the depth of inundation; the depth to saturated soils; and the depth to free water in soil test pits. In instances where stream flow is divided into multiple channels with intervening sandbars, the entire area between the channels is considered to be within the “Active Floodplain” and within the OHWM. Therefore, an area containing these features would meet the indicator requirements for wetland hydrology.

3.0 RESULTS

A description of the literature review results is provided in Section 3.1, and a detailed analysis of each regulatory agency's jurisdiction is provided in Section 3.2.

3.1 LITERATURE REVIEW

USGS Topographic Quadrangle. The USGS quadrangle maps show geological formations and their characteristics; they describe the physical settings of an area through topographic contour lines and other major surface features. These features include lakes, streams, rivers, buildings, roadways, landmarks, and other features that may fall under the jurisdiction of one or more regulatory agencies. In addition, the USGS maps provide topographic information that is useful in determining elevations, latitude and longitude, and Universal Transverse Mercator (UTM) Grid coordinates for a survey area.

Reach 120 is located on the USGS' Mint Canyon 7.5-minute quadrangle map and is approximately 1,460 feet above mean sea level (msl) (Exhibit 4a). Reach 121 is located on the USGS' Newhall 7.5-minute quadrangle map and is approximately 1,115 feet above msl (Exhibit 4b).

Color Aerial Photography. Psomas reviewed existing color aerial photography prior to conducting the field delineation to identify the extent of any drainages/waterbodies and riparian vegetation occurring in the survey area.

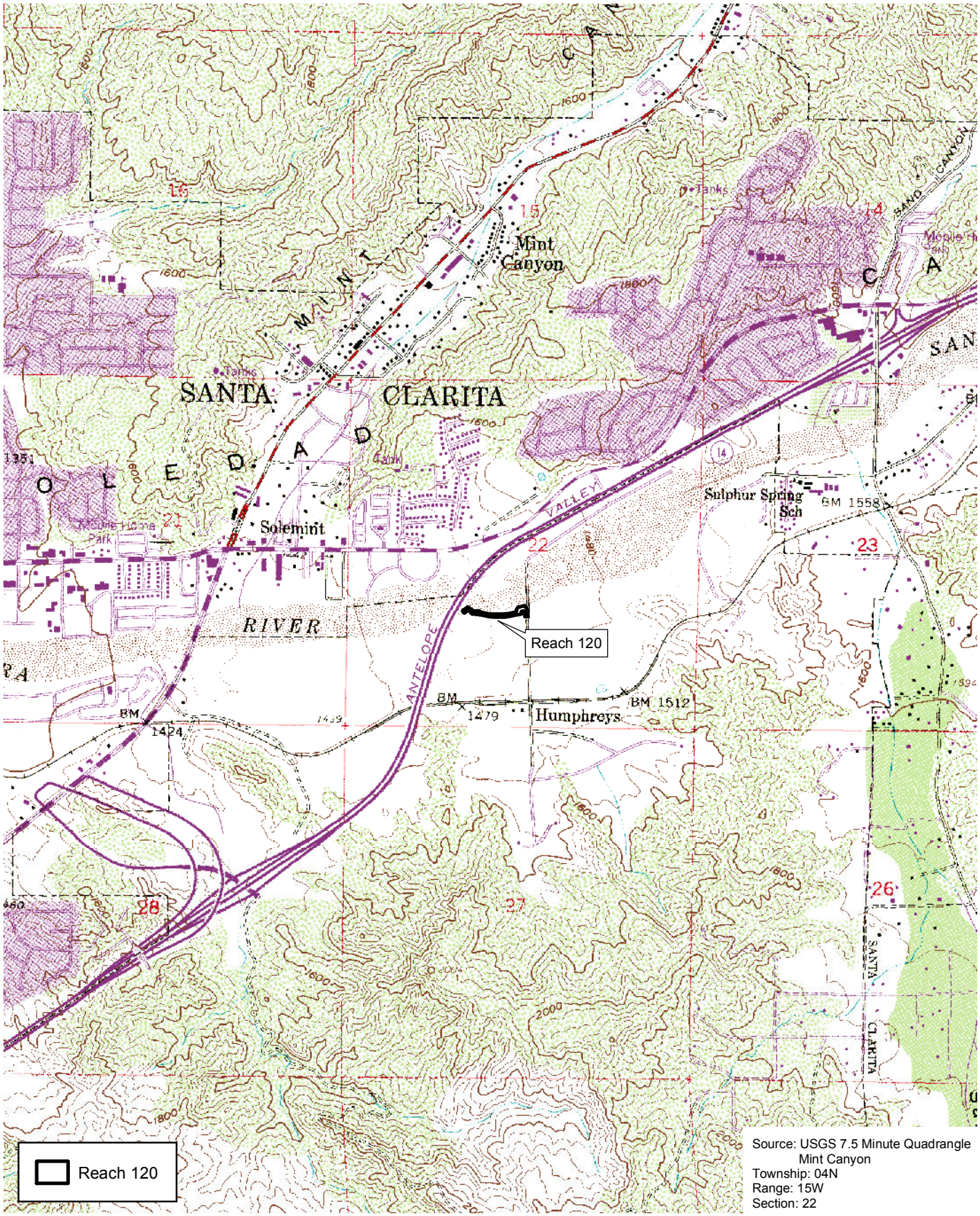
Both the Santa Clara River and San Francisquito Creek which are associated with Reaches 120 and 121 respectively are wide alluvial washes and are visible on aerial photographs. Drainage patterns and riparian vegetation are also visible. Surface water is not visible in Google Earth aerial images taken at multiples times, though surface is intermittently visible exiting storm drain outlets at both sites.

Vegetation Map. Vegetation was mapped by Psomas Biologist Katherine Gallagher as part of biological constraints analysis of the sites. The following vegetation types and other areas are mapped within and adjacent to the Reach 120 boundaries: annual brome grassland, cottonwood forest, ephemeral scoured streambed, mule fat shrubland, scale-broom-buckwheat alluvial shrubland, open water, disturbed, and developed (Exhibit 5a).

The following vegetation types and other areas are mapped within and adjacent to the Reach 121 boundaries: annual brome grassland, arroyo willow-giant reed shrubland, cottonwood-willow-mule fat woodland, ephemeral scoured streambed, open cottonwood-mule fat woodland, revegetated sagebrush-tamarisk shrubland, revegetated cottonwood-deer grass woodland, sandbar willow shrubland, scale-broom-buckwheat alluvial shrubland, open water, disturbed, and developed (Exhibit 5b).

U.S. Department of Agriculture, Natural Resources Conservation Service. The presence of hydric soils is one of the chief indicators of jurisdictional wetlands. Psomas reviewed the USDA's soil data for the survey area.

The following soil types occur within the Reach 120 boundary: Cortina sandy loam, 0 to 2 percent slopes, riverwash, and sandy alluvial land. Soil types that occur within the Reach 121 boundary include Castaic-Balcom silty clay loams, 30 to 50 percent slopes, eroded; Hanford sandy loam, 2 to 9 percent slopes; Metz loam, 0 to 2 percent slopes; riverwash; sandy alluvial land, and Sorrento loam, 0 to 2 percent slopes (Exhibit 6a).



\\irvine1\gis\Projects\COLADPW\J247MXD\Reaches_120_121\JDlex_USGS_120_20171009.mxd

U.S. Geological Survey 7.5-Minute Quadrangle - Reach 120

Exhibit 4a

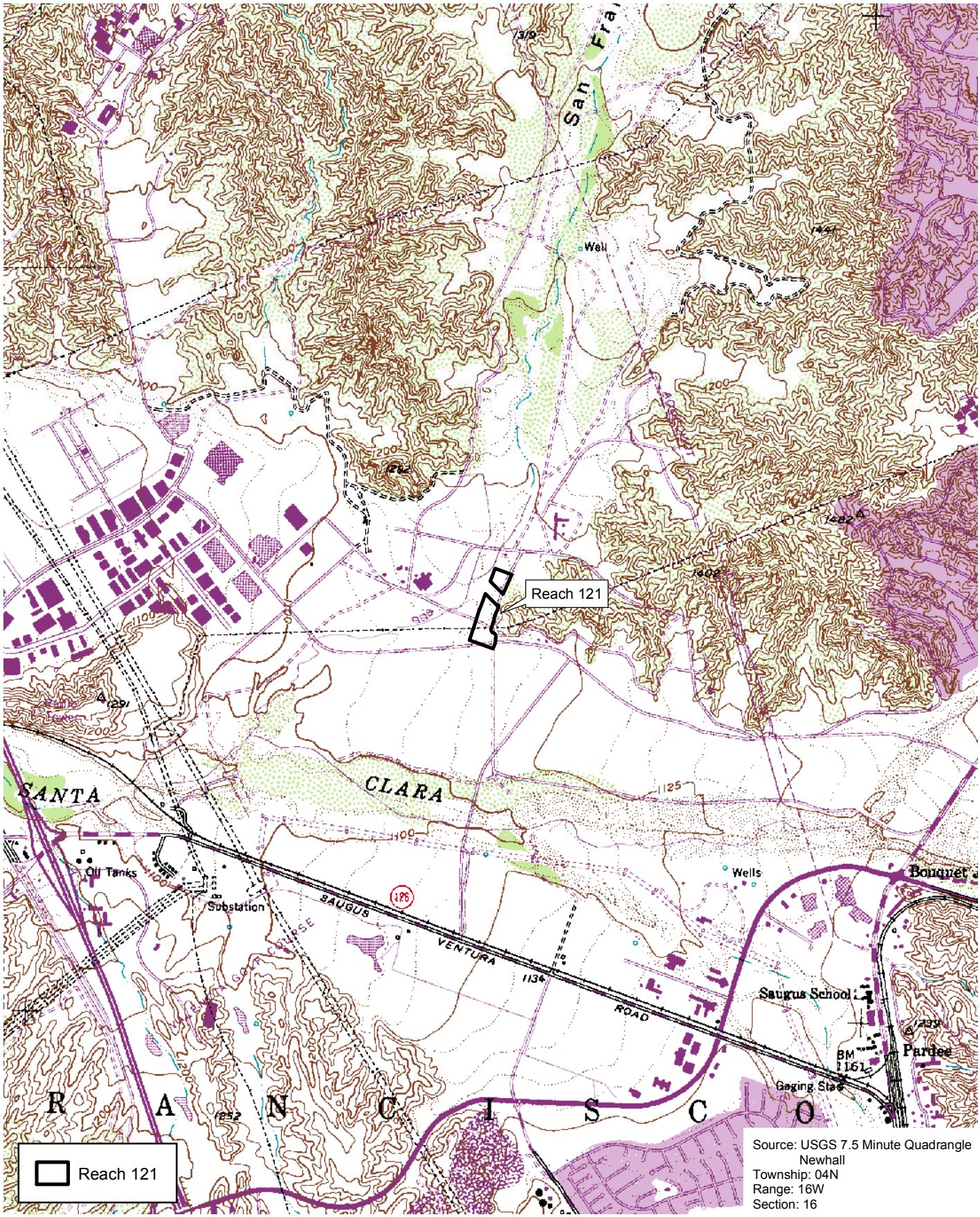
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

2,000 0 2,000 Feet

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_120_USGS.pdf



\\irvine1\gis\Projects\COLADPW\J247MXD\Reaches_120_121\JDlex_USGS_121_20171009.mxd

U.S. Geological Survey 7.5-Minute Quadrangle - Reach 121

Exhibit 4b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N
W E
S

2,000 0 2,000 Feet

PSOMAS

(Rev: 10-10-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_120_USGS.pdf

D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_JD_veg_120_20171011.mxd

Existing Vegetation – Reach 120

Exhibit 5a

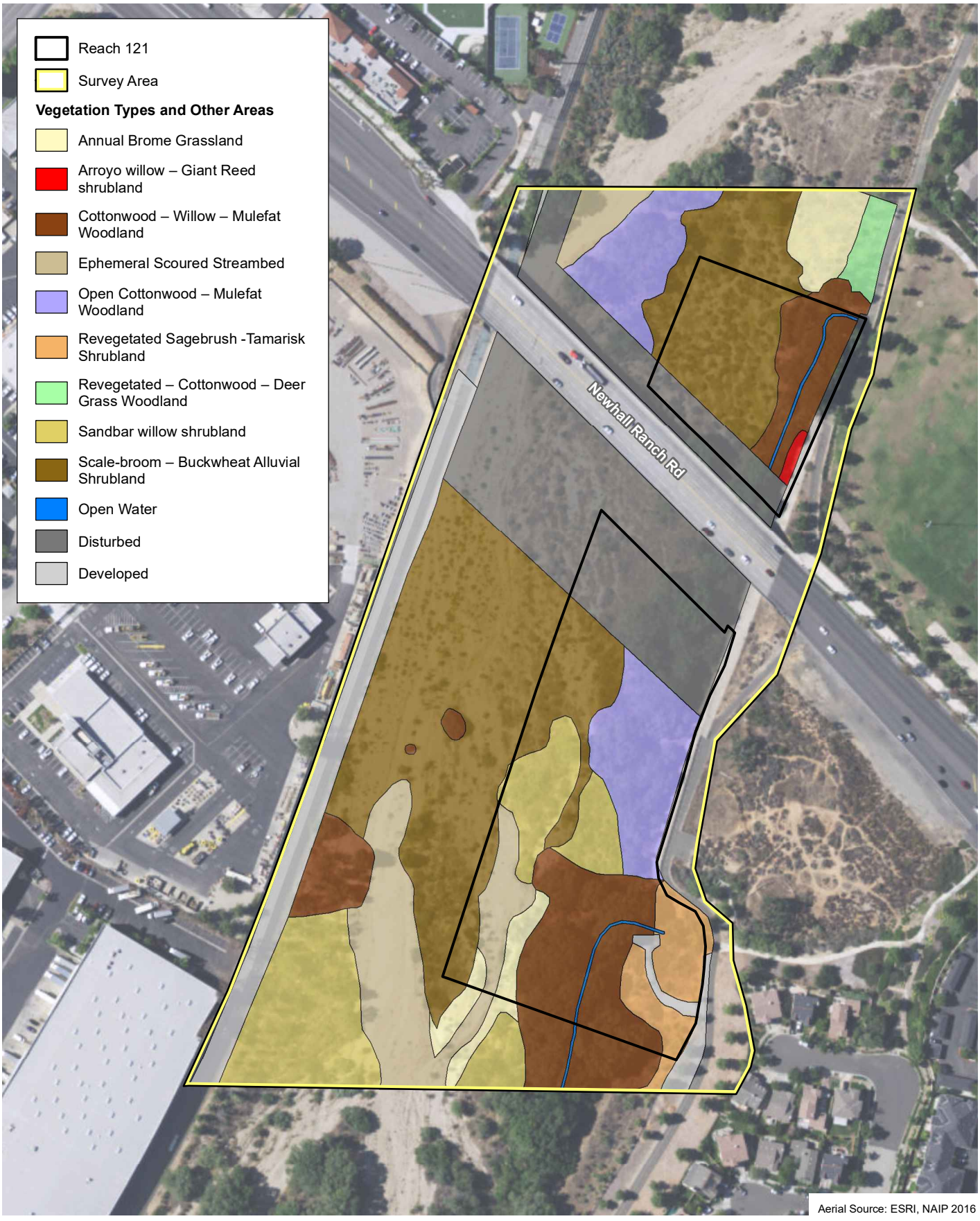
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

125 0 125 Feet

PSOMAS

(Rev: 10-13-2017 CJS) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_veg_120.pdf



D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_JD_veg_121_20171011.mxd

Existing Vegetation – Reach 121

Exhibit 5b

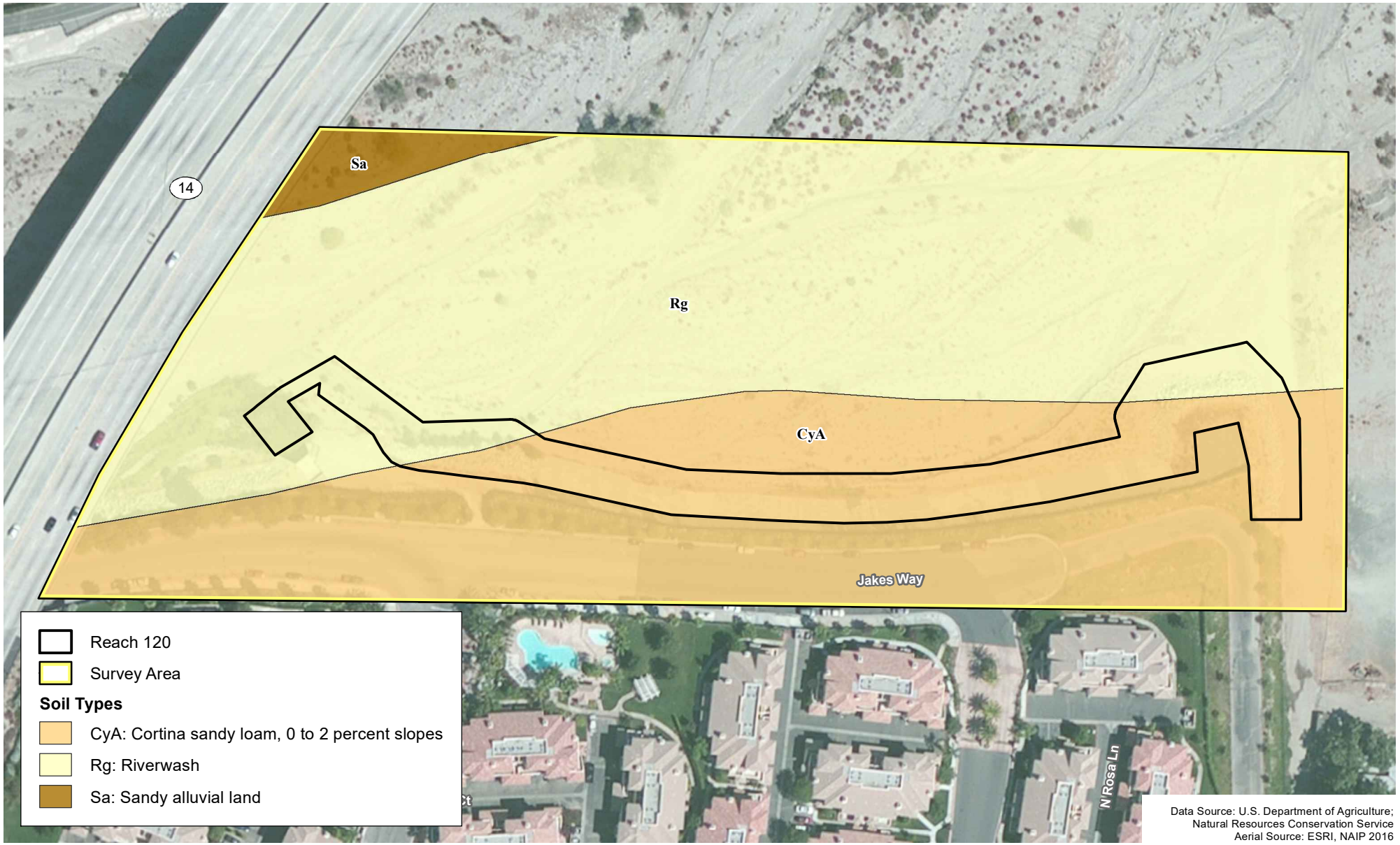
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

200 0 200 Feet

PSOMAS

(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_121.pdf



D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_Soils_120_20171009.mxd

Soil Map – Reach 120

Exhibit 6a

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N
W E
S

125 0 125 Feet

PSOMAS

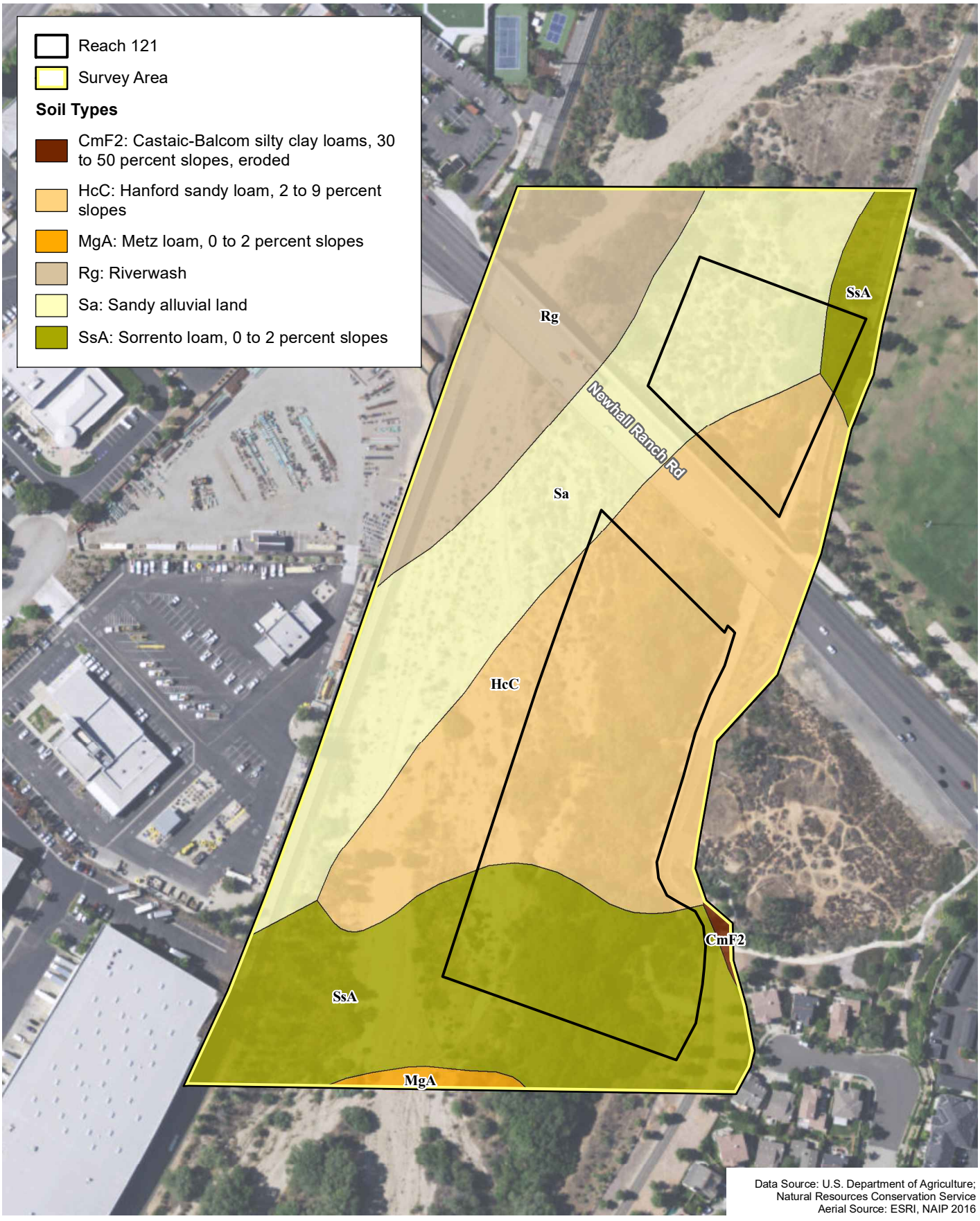
(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_Soil_120.pdf

The NRCS has delineated the boundaries of 'soil map units', which often contain components of multiple soil types that may be classified as hydric or non-hydric. The National Hydric Soils List identifies a soil map unit as "hydric" if it contains either a major or minor component that is at least in part hydric (USDA NRCS 2015). The survey area occurs in the Antelope Valley soil survey area. Of the above-listed soil types, the following are listed as hydric on the National List for the soil survey area in which they occur: Cortina sandy loam, 0 to 2 percent slopes, riverwash, sandy alluvial land, and Sorrento loam, 0 to 2 percent slopes (Exhibits 6a and 6b). A brief description of the soils mapped at Reaches 120 and 121 is provided in Attachment E of this report.

U.S. Fish and Wildlife Service, National Wetlands Inventory. The Wetland Mapper shows wetland resources available from the Wetlands Spatial Data Layer of the National Spatial Data Infrastructure (USFWS 2017). This resource provides the classification of known wetlands following the Classification of Wetlands and Deepwater Habitats of the United States (FGDC 2013). This classification system is arranged in a hierarchy of (1) Systems that share the influence of similar hydrologic, geomorphologic, chemical, or biological factors (i.e., Marine Estuarine, Riverine, Lacustrine, and Palustrine); (2) Subsystems (i.e., Subtidal and Intertidal; Tidal, Lower Perennial, Upper Perennial, and Intermittent; or Littoral and Limnetic); (3) Classes, which are based on substrate material and flooding regime or on vegetative life forms; (4) Subclasses; and (5) Dominance Types, which are named for the dominant plant or wildlife forms. In addition, there are modifying terms applied to Classes or Subclasses.

Wetlands that are identified in the NWI are shown in Exhibits 7a and 7b. It should be noted that the NWI maps wetland features at a broad scale and is not meant to replace an on-site analysis. Conditions shown in the NWI need to be ground-truthed because of conditions that change over time and because the NWI is not based on an on-the-ground analysis. The NWI maps Reach 120 as R4SBA and Reach 121 is mapped as R4SBC. Both of these Cowardin Codes are described in detail below:

- ***R: System RIVERINE.*** The Riverine System includes all wetlands and deepwater habitats contained in natural or artificial channels periodically or continuously containing flowing water or which forms a connecting link between the two bodies of standing water. Upland islands or Palustrine wetlands may occur in the channel, but they are not part of the Riverine System.
    - ***4: Subsystem INTERMITTENT***. This Subsystem includes channels that contain flowing water only part of the year, but may contain isolated pools when the flow stops.
        - ***SB: Class STREAMBED.*** This Class includes all wetlands contained within the Intermittent Subsystem of the Riverine System and all channels of the Estuarine System or of the Tidal Subsystem of the Riverine System that are completely dewatered at low tide.
            - ***A: Water Regime Modifier TEMPORARY FLOODED***: Surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for most of the season.
            - ***C: Water Regime Modifier SEASONALLY FLOODED.*** This modifier refers to areas where surface water is present for extended periods especially early in the growing season, but is absent by the end of the growing season in most years. The water table after flooding ceases is variable, extending from saturated to the surface to a water table well below the ground surface, in which water covers the land surface throughout the year in all years



Data Source: U.S. Department of Agriculture; Natural Resources Conservation Service
Aerial Source: ESRI, NAIP 2016

D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_Soils_121_20171009.mxd

Soil Map – Reach 121

Exhibit 6b

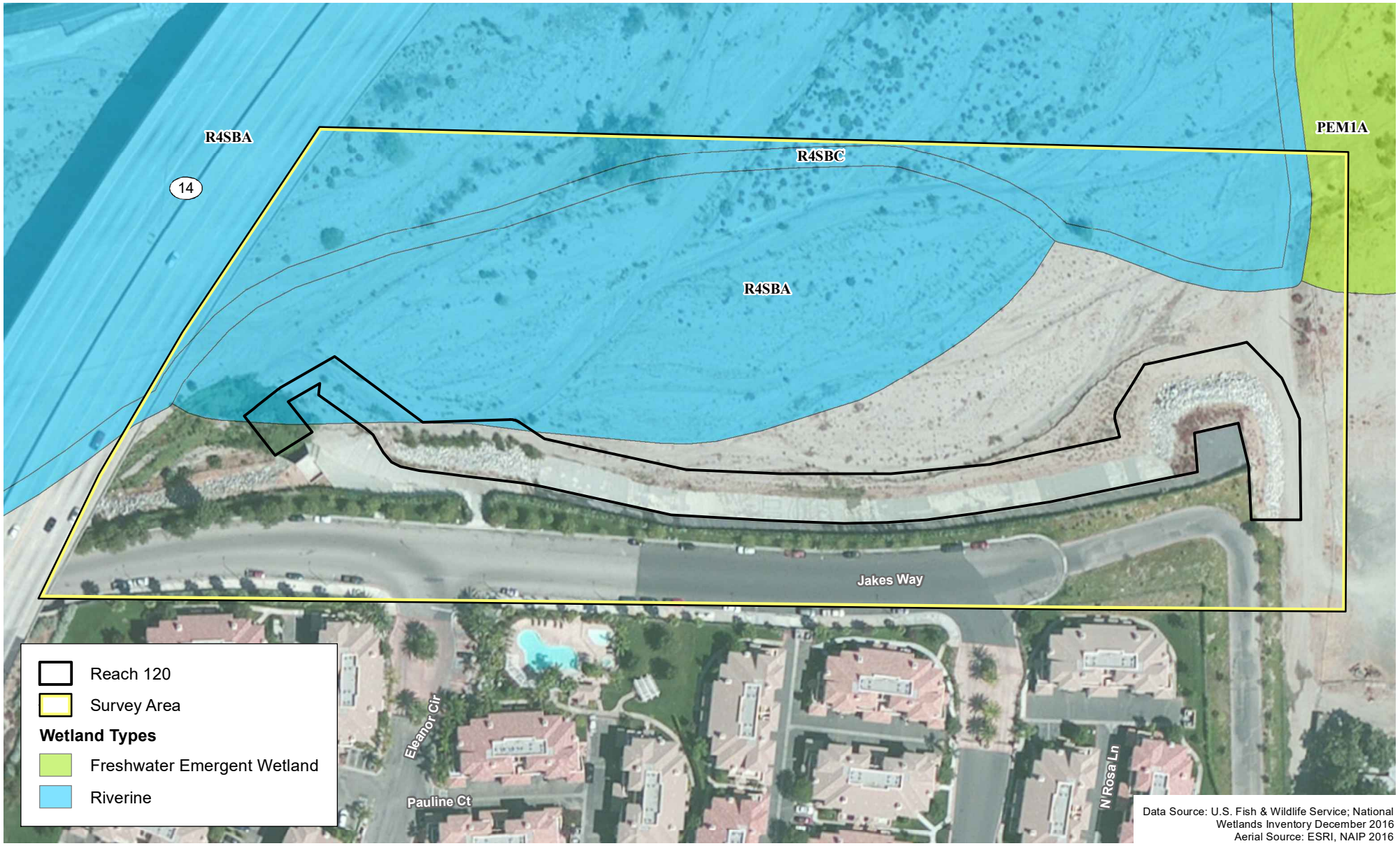
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

200 0 200 Feet

PSOMAS

(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_Soil_121.pdf



Data Source: U.S. Fish & Wildlife Service; National Wetlands Inventory December 2016
Aerial Source: ESRI, NAIP 2016

D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_NWI_120_20171009.mxd

National Wetland Inventory – Reach 120

Exhibit 7a

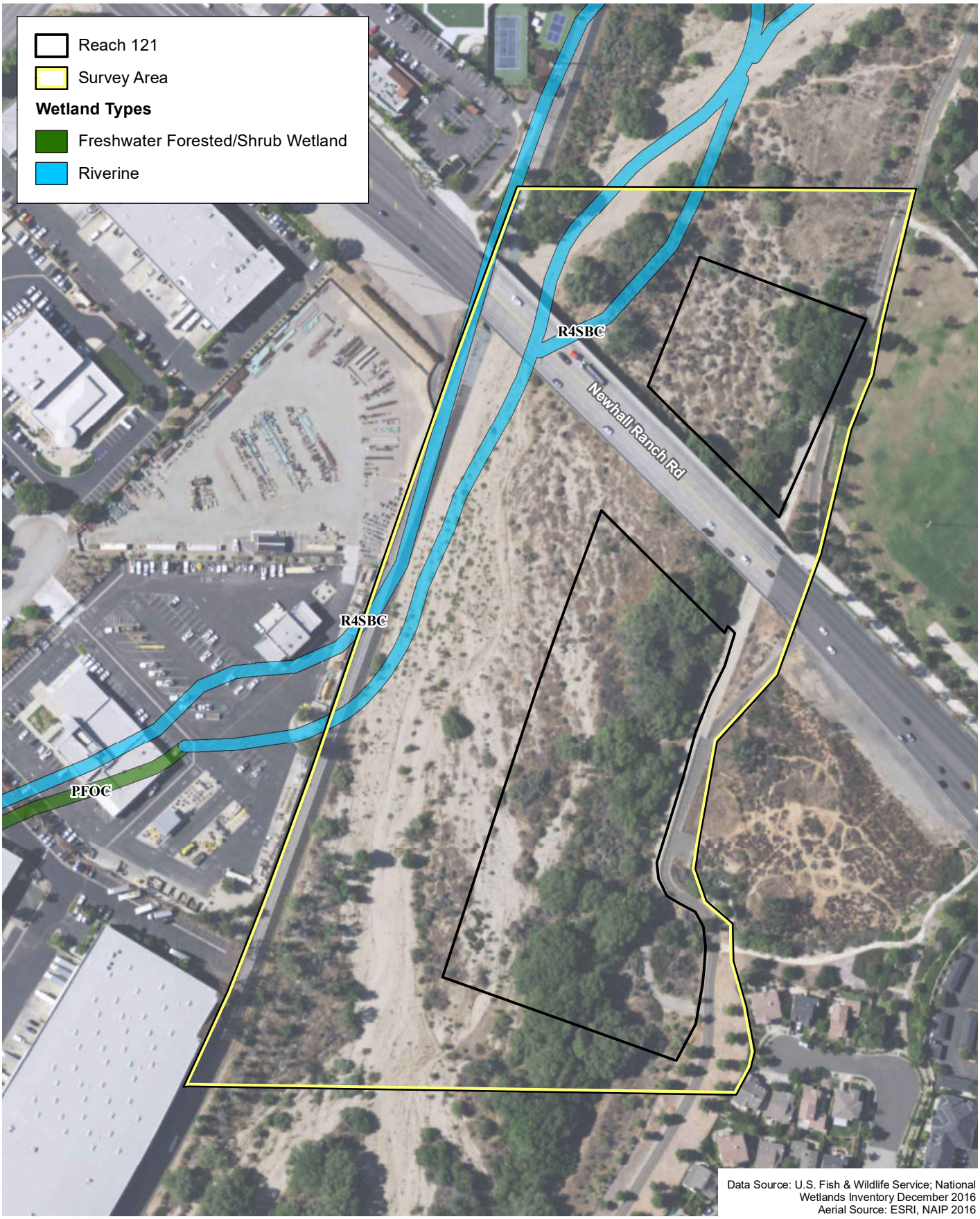
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

125 0 125 Feet

PSOMAS

(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_NWI_120.pdf



Data Source: U.S. Fish & Wildlife Service; National Wetlands Inventory December 2016
Aerial Source: ESRI, NAIP 2016

D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_NWI_121_20171009.mxd

National Wetland Inventory – Reach 121

Exhibit 7b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N
W E
S

200 0 200 Feet

PSOMAS

(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_NWI_121.pdf

Regional Water Quality Control Plans. There are nine RWQCBs in California. The survey area is located in RWQCB Region 4, the Los Angeles Region. The Los Angeles RWQCB has adopted a Water Quality Control Plan (or "Basin Plan") for the coastal watersheds of Los Angeles and Ventura Counties. The Basin Plan contains goals and policies, descriptions of conditions, and proposed solutions to surface and groundwater issues. The Basin Plan also establishes water quality standards for surface and groundwater resources and includes beneficial uses and levels of water quality that must be met and maintained to protect these uses. These water quality standards are implemented through various regulatory permits pursuant to the CWA, specifically Section 401 for Water Quality Certifications and Section 402 for Report of Waste Discharge (ROWD) permits.

The Basin Plan indicates that both reaches are located in the Santa Clara River Watershed Boundary Dataset (WBD). The Hydrologic Unit Code (HUC) for Reach 120 is 180701020107; the HUC for Reach 121 is 180701020402 (Los Angeles RWQCB 1994). The Basin Plan provides Water Quality Objectives for both reaches as summarized in Table 1.

TABLE 1
WATER QUALITY OBJECTIVES FOR REACHES 120 AND 121

	Water Quality Objectives (mg/L)					
	Total Dissolved Solids	**Sulfate**	**Chloride**	**Boron**	**Nitrogen**	**Sodium Adsorption Ratio**
Reach 120	800	150	100	1.0	5	5
Reach 121	*	*	150	*	*	*
mg/L: milligrams per liter; * site-specific objectives have not been determined. Source: RWQCB 1994.						

Santa Clara River Reach 7 is included on the 2006 and 2010 list of Impaired Water Bodies in the State of California, pursuant to Section 303(d) of the federal Clean Water Act (SWRCB 2010). Santa Clara River Reach 7 is listed as Category 5 water body (requiring the development of a Total Maximum Daily Load) with coliform bacteria being the pollutant that was assessed.

The Basin Plan identifies a number of beneficial uses for SBC Reaches 120 and 121, including Municipal Water Supply (MUN); Industrial Service Supply (IND); Industrial Process Supply (PROC); Agricultural Supply (AGR); Ground Water Recharge (GWR); Fresh Water Replenishment (FRSH); Warm Freshwater Habitat (WARM); Wildlife Habitat (WILD); Rare, Threatened, or Endangered Species (RARE); Spawning, Reproduction, and/or Early Development (SPWN); Wetland Habitat (WET); Limited Water Contact Recreation (REC1); and Non-Contact Water Recreation (REC2) (Los Angeles RWQCB 1994). Beneficial Uses associated with Reaches 120 and 121 are listed below in Table 2 and described in Attachment E of this report.

TABLE 2
SUMMARY OF BENEFICIAL USES

	Beneficial Uses												
	MUN	**IND**	**PROC**	**AGR**	**GWR**	**FRSH**	**WARM**	**WILD**	**RARE**	**SPWN**	**WET**	**REC1**	**REC2**
Reach 120	P	E	E	E	E	E	E	E	E	–	E	E	E
Reach 121	I	I	I	I	I	I	I	E	E	I	E	I	I

WBD: Watershed Boundary Dataset; MUN: Municipal Water Supply; IND: Industrial Service Supply; PROC: Industrial Process Supply; AGR: Agricultural Supply; GWR: Ground Water Recharge; FRSH: Fresh Water Replenishment; WARM: Warm Freshwater Habitat; WILD: Wildlife Habitat; RARE: Rare, Threatened, or Endangered Species; SPWN: Spawning, Reproduction, and/or Early Development; WET: Wetland Habitat; REC1: Limited Water Contact Recreation; REC2: Non-Contact Water Recreation;

E: Existing Beneficial Use; I: Intermittent Beneficial Use; P: Potential Beneficial Use

Source: Los Angeles RWQCB 1994.

Proposed maintenance activities will affect vegetation growing along the southern and eastern banks of Reaches 120 and 121 respectively. Because these maintenance activities will affect a small portion of the two channels generally on the upper banks away from flowing water, proposed maintenance activities are expected to have an extremely minor effect on the above-listed beneficial uses.

3.2 JURISDICTIONAL DELINEATION

3.2.1 U.S. Army Corps of Engineers Determination

Non-wetland "Waters of the U.S." Determination

The NWI lists both the Santa Clara River and San Francisquito Creek as intermittent streams that contain flowing water for only part of the year. Further, the Santa Clara River (in the vicinity of Reach 120) is described by the NWI as temporarily flooded in which flowing water is present for only brief periods during the growing season. San Francisquito Creek (in the vicinity of Reach 121) is described by the NWI as seasonally flooded so that surface water is periodically present early in the growing season, but is absent for the remainder of the year. Both waterways emanate from natural open space with additional water flowing into the system from urban runoff from adjacent residential neighborhoods and commercial areas. From Reach 120, the Santa Clara River travels approximately 54 linear miles until it flows directly into the Pacific Ocean, a Traditional Navigable Water, just south of Ventura. From Reach 121, San Francisquito Creek travels approximately 0.5 mile, where it connects with the Santa Clara River. From that point, water would flow approximately 46 miles to the Pacific Ocean.

Non-wetland "waters of the U.S." are drainage features that conduct water at some point during the year, evidenced by the presence of an OHWM, but do not satisfy all three criteria to be considered a wetland. The limits of non-wetland "waters of the U.S." are defined by the presence of the OHWM that was determined by a break in the bank slope caused by scouring flows during high flows.

Based on field observations and data collected, the Santa Clara River (in the vicinity of Reach 120) and San Francisquito Creek (in the vicinity of Reach 121) would be considered "Not Relatively Permanent Waters", due to the lack of continuous seasonal flows. However, due to their "Significant Nexus" with the Pacific Ocean, a Traditional Navigable Waterway, both streams would be considered "waters of the U.S." and under the jurisdiction of the USACE. In the Reach 120 survey area, a total of 6.21 acres of non-wetland "waters of the U.S." occur, while

5.12 acres of non-wetland "waters of the U.S." occur in the Reach 121 survey area (Table 3; Exhibits 8a–8b).

TABLE 3
SUMMARY OF JURISDICTIONAL WATERS

Location	Jurisdictional Feature			
	USACE/RWQCB			CDFW Jurisdictional Limits
	Non-wetland "waters of the U.S."	Wetlands	Total "waters of the U.S."	
Reach 120				
Within Survey Area	6.21	0.00	6.21	7.80
Within Reach Boundary	0.23	0.00	0.23	1.08
Reach 121				
Within Survey Area	5.12	0.08	5.20	18.00
Within Reach Boundary	0.69	0.08	0.77	6.12

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.

Wetland "Waters of the U.S." Determination

As previously described in Section 2.0 of this report, an area must exhibit all three wetland parameters, as described in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008) and the Corps of Engineers Wetlands Delineation Manual (Environmental Laboratory 1987) to be considered a jurisdictional wetland. Three sampling points were assessed at Reach 120 and four sampling points were assessed at Reach 121 to determine the presence of wetlands. Of the seven sampling locations, two of them (located in Reach 121) exhibited all three of the necessary parameters to be considered a wetland (i.e., hydrophytic vegetation, hydric soils, wetland hydrology, see Table 4). Wetland Determination Data Forms that document field observations are provided in Attachment C.

TABLE 4
SUMMARY OF SAMPLING POINT DATA

Sampling Point	Vegetated	Dominance Test Result*	Prevalence Index Result	Hydric Soil Indicators	Wetland Hydrology Indicators	Wetland?
120-1	Yes	100%	3.0	None	B1, B2, B10	No
120-2	Yes	100%	3.0	None	B1, B2, B10	No
120-3	Yes	100%	2.5	None	A1	No
121-1	Yes	100%	2.4	A1	A1	Yes
121-2	Yes	66.7%	2.7	A4	A1	Yes
121-3	Yes	100%	2.6	None	None	No
121-4	Yes	100%	2.2	None	A1	No

* Percent of dominant species that are OBL, FACW, or FAC.
Note: sampling point names refer to the reach number and the sampling point; sampling point 120-1 is the first sampling point at Reach 120.

Hydric Soil Indicators		**Wetland Hydrology Indicators**	
A1	Histosol	A1	Surface Water
A4	Hydrogen Sulfide	B2	Sediment Deposits
		B3	Drift Deposits
		B10	Drainage Patterns

D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_JD_120_20171009.mxd

Jurisdictional Resources – Reach 120

Exhibit 8a

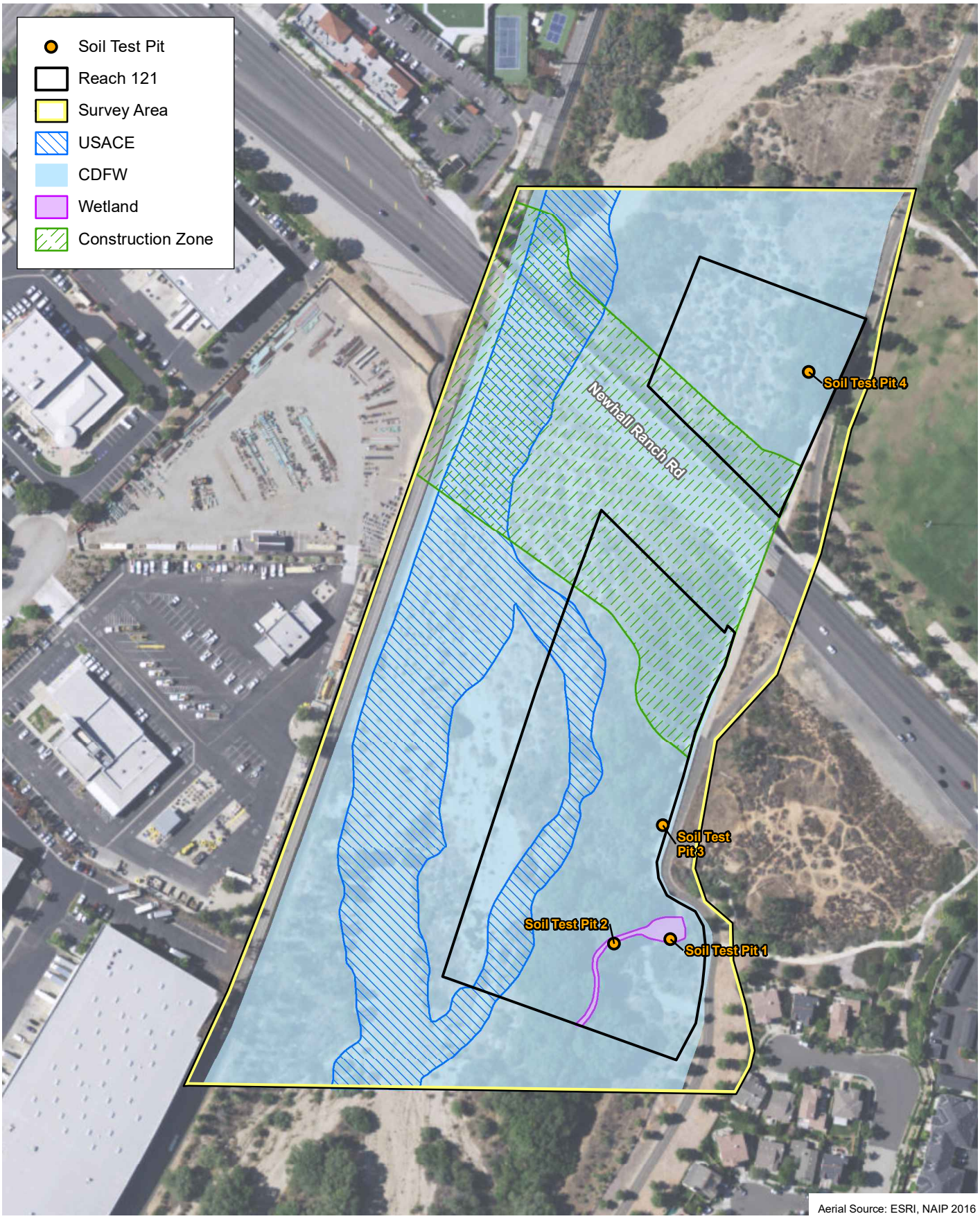
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

125 0 125 Feet

PSOMAS

(Rev: 10-11-2017 CJS) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_120.pdf



D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_JD_121_20171011.mxd

Jurisdictional Resources – Reach 121

Exhibit 8b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

200 0 200 Feet

PSOMAS

(Rev: 10-11-2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_121.pdf

Vegetation

Vegetation was assessed in representative areas at or below the OHWM. Areas with less than five percent vegetation were considered unvegetated and so did not meet the hydrophytic vegetation criteria. The sampling points were generally dominated by FACW and FAC species, with relatively sparse cover of FACU and UPL species. The hydrophytic vegetation criteria were achieved at all seven sampling points. All locations met the Dominance Test Result requirement (greater than 50 percent presence of OBL, FACW, or FAC species) and the Prevalence Index criterion (score less than or equal to 3.0).

Soils

Soil test pits were dug in representative areas containing at least five percent vegetation. Soils encountered at both reaches were generally sandy. The soil at Sampling Point 121-1 contained soil that was comprised of several inches of poorly decomposed leaves and twigs and met the definition of a histosol. At Sampling Point 121-2, the soil had a hydrogen sulfide scent, indicating the presence of anaerobic conditions. Therefore, it was determined that the hydric soil criterion was met at those two locations at the downstream end of Reach 121. No hydric soil indicators were present at the other sampling points.

Hydrology

Six of the seven sampling points exhibit one or more indicators of wetland hydrology (e.g., surface water, sediment deposits, drift deposits, and/or drainage patterns). Therefore, the wetland hydrology criterion was met at these locations. Sampling Point 121-3 was located in the proposed maintenance area for Reach 121, but occurs on the upper bench adjacent to the eastern levee for San Francisquito Creek. This area did not exhibit indicators of wetland hydrology and does not meet the hydrology criterion.

Results

Two of the seven sampling points exhibited all three criteria for wetland “waters of the U.S.”. Therefore, of the 5.20 acres of “waters of the U.S.” in the Reach 121 survey area, approximately 0.08 acre is considered wetlands. No wetlands were determined to occur in the Reach 120 survey area (Table 3).

3.2.2 California Regional Water Quality Control Board Jurisdiction

No isolated waters are present in either survey area; therefore, RWQCB jurisdiction is the same as that of the USACE. Approximately 6.21 acres of “waters of the State” under the regulatory authority of the RWQCB occur in the Reach 120 survey area while 5.20 acres of “waters of the State” occur in the Reach 121 survey area (Table 3; Exhibits 8a–8b).

3.2.3 California Department of Fish and Wildlife Jurisdiction

The limits of CDFW jurisdiction in the survey area were mapped according to the outer drip line of riparian vegetation. Approximately 7.80 acres of CDFW jurisdictional waters occur in the Reach 120 survey area while 18.00 acres of CDFW waters occur in the Reach 121 survey area (Table 3; Exhibit 8a–8b).

4.0 IMPACT ANALYSIS

Proposed maintenance activities consist of vegetation maintenance and as-needed repair of flood control structures. No permanent discharges into "waters of the U.S." are proposed; therefore, all impacts to non-wetland waters under the jurisdiction of the USACE and RWQCB should be considered temporary (Table 5, Exhibits 9a–9b).

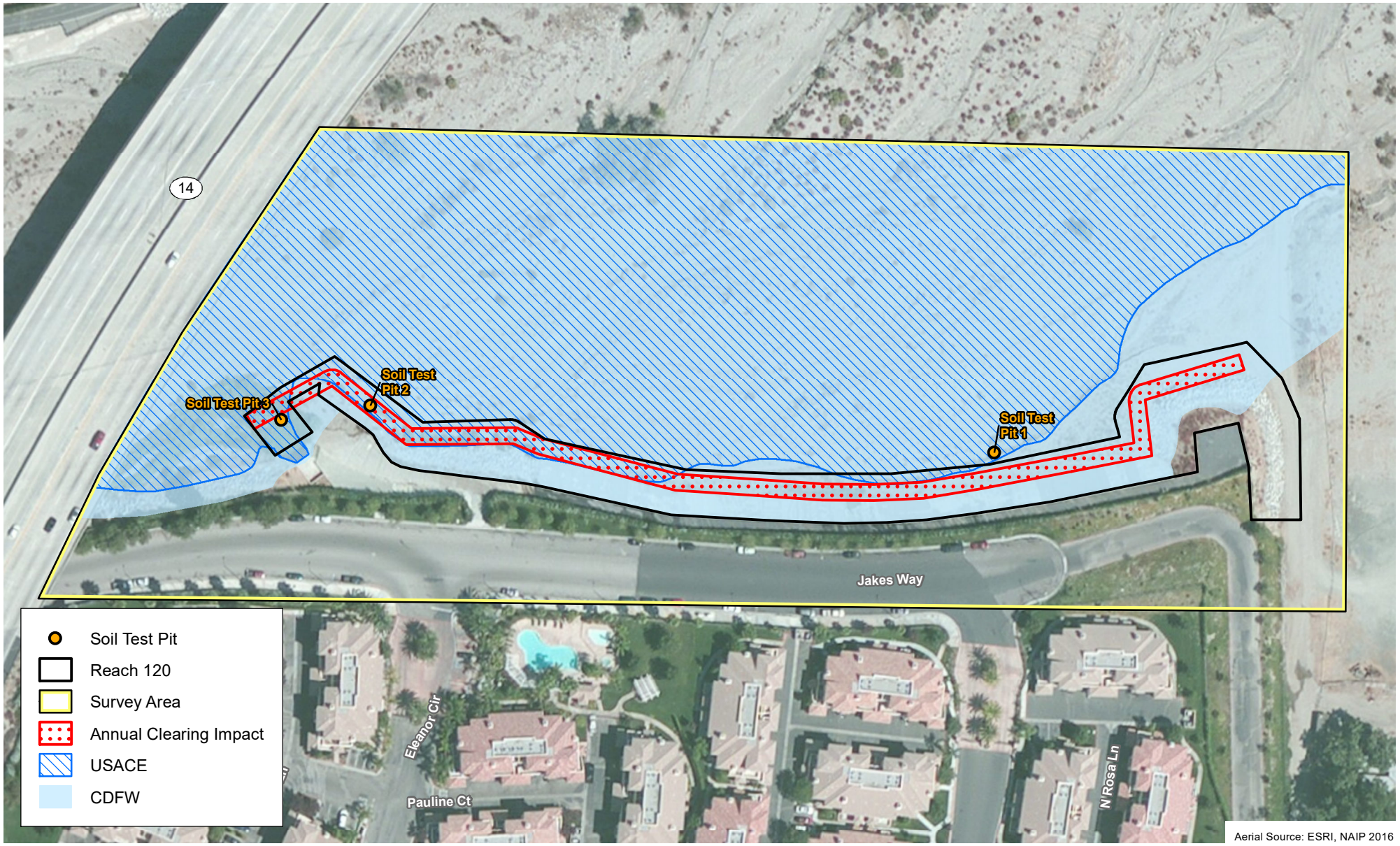
A new entrainment channel is proposed at the downstream end of Reach 121 to allow water to efficiently drain from the storm drain outlet structure to the main channel of San Francisquito Creek. Though no fill would be placed in the wetland areas, improved drainage of these areas would likely not allow for hydric soil conditions to persist. Due to this permanent change in drainage patterns, impacts to wetlands are shown as a permanent impact in Table 5, although the limited coverage of hydrophytic vegetation in the wetland areas would mean that the loss of wetland function would be modest.

Removal of native vegetation in Reaches 120 and 121 would occur on a regular basis and is therefore considered a permanent impact to CDFW jurisdictional areas. Removal of non-native habitat is considered herein as a temporary impact.

TABLE 5
JURISDICTIONAL RESOURCES IMPACT SUMMARY

Impact Type	Jurisdictional Feature		
	USACE/RWQCB		CDFW Jurisdictional Limits
	Non-wetland "waters of the U.S."	Wetlands	
Reach 120			
Permanent	0.00	0.00	0.11
Temporary	0.13	0.00	0.24
No Impact	0.10	0.00	0.73
Subtotal Reach 120	0.23	0.00	1.08
Reach 121			
Permanent	0.00	0.08	0.44
Temporary	0.00	0.00	0.00
No Impact	0.69	0.00	5.68
Subtotal Reach 121	0.69	0.08	6.12
Total Permanent Impacts	**0.00**	**0.08**	**0.55**
Total Temporary Impacts	**0.13**	**0.00**	**0.24**

USACE: U.S. Army Corps of Engineers; RWQCB: Regional Water Quality Control Board; CDFW: California Department of Fish and Wildlife.
Note: temporary impacts shown above are related to vegetation removal activities.



D:\Projects\COLADPW\J247\MXD\Reaches_120_121\JD\ex_JD_impact_120_20171011.mxd

Impacts to Jurisdictional Resources – Reach 120

Exhibit 9a

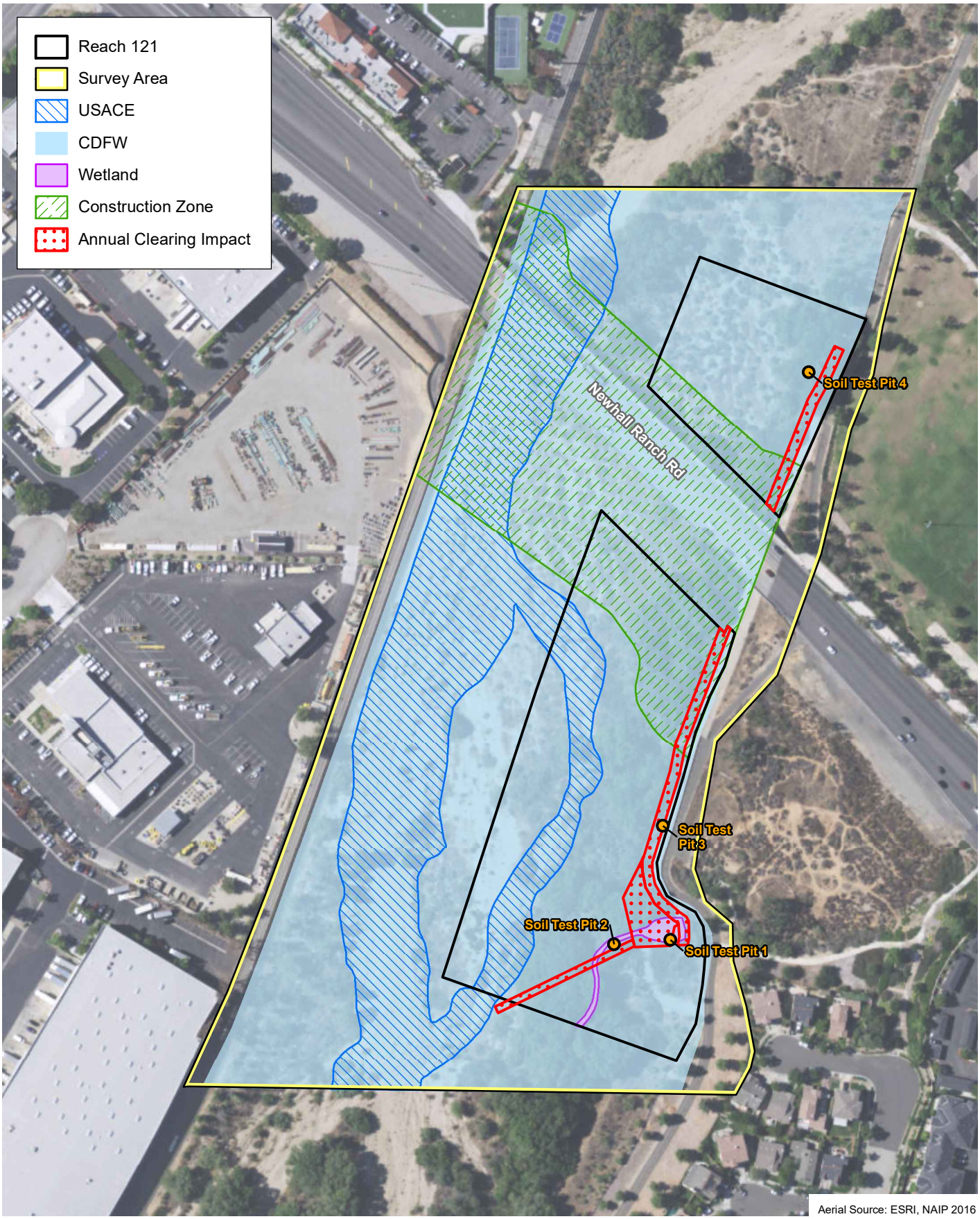
Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N W E S

125 0 125 Feet

PSOMAS

(Rev: 10-12-2017 CJS) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_120.pdf



Impacts to Jurisdictional Resources – Reach 121

Exhibit 9b

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

N
W E
S

200 0 200 Feet

PSOMAS

(Rev: 10-11-2017 CJS) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_JD_impacts_121.pdf

D:\Projects\CO\LADPW\J247\MXD\Reaches_120_121\JD\ex_JD_impact_121_20171011.mxd

5.0 REGULATORY APPROVAL PROCESS

5.1 REGULATORY PERMIT REQUIREMENTS

This section summarizes the various permits, agreements, and certifications that are expected to be required prior to initiation of proposed project activities that involve impacts to jurisdictional waters.

- USACE Section 404 Permit
- RWQCB Section 401 Water Quality Certification
- CDFW Section 1602 Notification of Lake or Streambed Alteration

It should be noted that all regulatory permit applications can be processed concurrently. The USACE permit would be issued subject to the receipt of the RWQCB's Section 401 Water Quality Certification.

5.1.1 U.S. Army Corps of Engineers

Prior to construction in "waters of the U.S.", a Section 404 permit from the USACE is required. Regulatory authorization in the form of a Nationwide Permit (NWP) or regional permit is provided for certain categories of activities. If the NWP conditions cannot be met, an Individual Permit (IP) will be required.

The proposed project would likely fall under NWP 31 (Maintenance of Existing Flood Control Facilities), which authorizes the removal of vegetation from levees associated with a flood-control project; however, a pre-construction notification would be required. The USACE may also authorize the project under NWP 3 (Maintenance), which includes (1) the repair, rehabilitation, and replacement of previously authorized, currently serviceable structures and (2) discharges associated with removal of accumulated sediments and debris in the vicinity of existing structures. A preconstruction notification is required for the latter activity, but not the former. Descriptions of NWP 3 and 31 are included as Attachment F.

Issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Los Angeles RWQCB. The RWQCB requires certification of the proposed project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the proposed project's CEQA document to satisfy its own CEQA-compliance requirements.

5.1.2 Regional Water Quality Control Board

As noted above, issuance of the USACE Section 404 permit would be contingent upon the approval of a Section 401 Water Quality Certification from the Los Angeles RWQCB. The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that the application would also require the payment of an application fee, which would be based on project impacts.

5.1.3 California Department of Fish and Wildlife

Prior to construction, Notification of a Lake or Streambed Alteration (LSA) must be submitted to the CDFW that describes any proposed streambed alteration contemplated by the proposed project. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The CDFW will not deem the application to be complete until the application fees have been paid and the agency is provided with a certified CEQA document and a signed copy of the receipt of County Clerk filing fees for the Notice of Determination (NOD).

5.2 RECOMMENDATIONS

Based on the conclusions of this Jurisdictional Delineation Report, the following recommendations are identified:

1. A pre-application meeting should be scheduled with USACE, CDFW, and RWQCB staff to discuss site conditions; the proposed project; biological and jurisdictional resources and impacts to these resources resulting from the proposed project; proposed minimization measures and the mitigation program to offset these impacts; and the regulatory permit process, including the decision to prepare and submit an Approved Jurisdictional Determination or a Preliminary Jurisdictional Determination. The USACE is expected to approve a Preliminary Jurisdictional Determination as the appropriate jurisdictional determination given the extent of proposed project impacts and the length of project construction.
2. The following should be prepared and processed: a USACE Section 404 Permit; an RWQCB Section 401 Water Quality Certification; a CDFW Section 1602 Notification of LSA; and the appropriate jurisdictional determination form approved by the USACE.

6.0 REFERENCES

Curtis, K. E., and R. L. Lichvar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (ERDC/CRREL TN-10-1). Hanover, NH: USACE Research and Development Center, Cold Regions and Research Engineering Laboratory.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual* (Technical Report Y-87-1). Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

Federal Geographic Data Committee (FGDC). 2013. Classification of Wetlands and Deepwater Habitats of the United States (FGDC-STD-004-2013, 2nd Ed.). Washington, D.C.: FGDC and U.S. Fish and Wildlife Service.

Lichvar, R.W. and J.J. Gillrich. 2011 (September). *Final Protocol for Assigning Wetland Indicator Status Ratings during National Wetland Plant List Update*. Hanover, NH: USACE Research and Development Center, Cold Regions Research and Engineering Laboratory.

Lichvar, R. and J. Kartesz. 2009. North American Digital Flora: National Wetland Plant List (version 2.4.0). Hanover, NH: U.S. Army Corps of Engineers, Engineer Research and Development Center, Cold Regions Research and Engineering Laboratory, and Chapel Hill, NC : BONAP.

Lichvar, R. W. and S. M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (ERDC/CRREL TR-08-12). Hanover, NH: USACE Research and Development Center, Cold Regions and Research

Los Angeles Regional Water Quality Control Board (Los Angeles RWQCB). 1994 (June). *Basin Plan for the Coastal Watersheds of Los Angeles and Ventura Counties*. Los Angeles, CA: Los Angeles RWQCB. http://www.swrcb.ca.gov/rwqcb4/water_issues/programs/basin_plan/basin_plan_ documentation.shtml.

Munsell Color. 1994. Munsell Soil Color Charts. New Windsor, NY: Kollmorgen Instruments Corp.

U.S. Army Corps of Engineers (USACE) 2008 (September). *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0). (J.S. Wakeley, R.W. Lichvar, and C.V. Noble, Eds.). Vicksburg, MS: U.S. Army Engineer Research and Development Center. http://www.dtic.mil/cgi-bin/GetTRDoc?AD=ADA489704&Location=U2&doc=GetTRDoc.pdf.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA NRCS). 2017 (November 15). Hydric Soils – Introduction. Washington, D.C.: USDA NRCS. https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/soils/?cid=nrcs142p2_053961.

U.S. Fish and Wildlife Service (USFWS). 2017 (accessed November 14). Wetland Mapper. Washington D.C.: USFWS, National Wetlands Inventory. http://www.fws.gov/wetlands/Data/Mapper.html.

ATTACHMENT A

SUMMARY OF REGULATORY AUTHORITY

REGULATORY AUTHORITY

This attachment summarizes the regulatory authority of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and the California Department of Fish and Wildlife (CDFW) over activities that have potential to impact jurisdictional resources.

U.S. Army Corps of Engineers

The USACE Regulatory Branch regulates activities that discharge dredged or fill materials into "waters of the U.S." under Section 404 of the Federal Clean Water Act (CWA) and Section 10 of the Rivers and Harbors Act. This permitting authority applies to all "waters of the U.S." where the material (1) replaces any portion of "waters of the U.S." with dry land or (2) changes the bottom elevation of any portion of any "waters of the U.S.". These fill materials would include sand, rock, clay, construction debris, wood chips, and materials used to create any structure or infrastructure in these waters.

Waters of the United States

"Waters of the U.S." can be divided into three categories: territorial seas, tidal waters, or non-tidal waters. The term "waters of the U.S." is defined by the *Code of Federal Regulations*[1] (CFR) and includes:

1. All waters that have, are, or may be used in interstate or foreign commerce (including sightseeing or hunting), including all waters subject to the ebb and flow of the tide (i.e., Traditional Navigable Waters [TNWs]).
2. All interstate waters including interstate wetlands.
3. All other waters such as intrastate lakes, rivers, or streams (including intermittent streams), mudflats, sand flats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds where the use, degradation, or destruction of which could affect interstate or foreign commerce.
4. All impoundments of waters otherwise defined as "waters of the U.S." under the definition.
5. All tributaries of waters identified above.
6. The territorial seas.
7. All wetlands adjacent to waters (other than waters that are themselves wetlands) identified above.

The U.S. Supreme Court has issued three decisions that provide context and guidance in determining the appropriate scope of "waters of the U.S.". In *United States v. Riverside Bayview Homes*, the Court upheld the inclusion of adjacent wetlands in the regulatory definition of "waters of the U.S.". In *Solid Waste Agency of Northern Cook County v. U.S. Army Corps of Engineers* (SWANCC), the Court held that the use of "isolated" non-navigable intrastate ponds by migratory birds was not, by itself, sufficient basis for the exercise of federal regulatory authority under the CWA. In *Rapanos v. United States* (Rapanos)[2], a majority of the U.S. Supreme Court overturned two Sixth Circuit Court of Appeals decisions, finding that certain wetlands constituted "waters of the U.S." under the CWA. In his plurality opinion, Justice Scalia argued that "waters of the U.S."

[1] Specifically, Title 33, Navigation and Navigable Waters; Part 328, Definition of waters of the United States; §328.3, Definitions.

[2] Consolidated cases: *Rapanos v. United States* and *Carabell v. United States* refer to the U.S. Supreme Court's decision concerning USACE jurisdiction over "waters of the U.S." under the CWA.

should not include channels through which water flows intermittently or ephemerally or channels that periodically provide drainage for rainfall. He also stated that a wetland may not be considered "adjacent to" remote "waters of the U.S." based on a mere hydrologic connection. Justice Kennedy authored a separate concurring opinion concluding that wetlands are "waters of the U.S." if they, either alone or in combination with similarly situated lands in the region, significantly affect the chemical, physical, and biological integrity of other covered waters more readily understood as "navigable". Lacking a majority opinion, regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's "significant nexus" standard is satisfied.

In summary, the USACE and the U.S. Environmental Protection Agency (USEPA) will assert jurisdiction over the following waters: (1) TNWs; (2) wetlands adjacent to a TNW; (3) relatively permanent, non-navigable tributaries of a TNW that typically flow year-round or have continuous flow at least seasonally (e.g., typically three months); and (4) wetlands that directly abut such tributaries.

The USACE and the USEPA will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a TNW: (1) non-navigable tributaries that are not relatively permanent; (2) wetlands adjacent to non-navigable tributaries that are not relatively permanent; and (3) wetlands adjacent to, but that do not directly abut, a relatively permanent, non-navigable tributary.

The USACE and the USEPA will apply the significant nexus standard defined as follows:

1. A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of downstream TNWs.
2. A significant nexus includes consideration of hydrologic and ecological factors.

The USACE and the USEPA generally will not assert jurisdiction over the following features: (1) swales or erosional features (e.g., gullies or small washes characterized by low volume, infrequent, or short duration flow) and (2) ditches (including roadside ditches) excavated wholly within and draining only uplands and that do not carry a relatively permanent flow of water.

Ordinary High Water Mark

The landward limit of tidal "waters of the U.S." is the high-tide line. In non-tidal waters where adjacent wetlands are absent, the lateral limits of USACE jurisdiction extend to the ordinary high water mark (OHWM).[3] The OHWM is defined as "that line on the shore established by the 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".[4] When wetlands are present, the lateral limits of USACE jurisdiction extend beyond the OHWM to the limits of the adjacent wetlands.[5]

Wetlands

A wetland is a subset of jurisdictional waters and is defined by the USACE and the USEPA as "those areas that are inundated or saturated by surface or groundwater at a frequency and

[3] U.S. Army Corps of Engineers (USACE). 2005 (December 7). Regulatory Guidance Letter. Ordinary High Water Mark Identification. Washington, D.C.: USACE.

[4] *Code of Federal Regulations* (CFR), Title 33, §328.3(e)

[5] USACE 2005

duration sufficient to support, and under normal circumstances, do support a prevalence of vegetation typically adapted for life in saturated soil conditions".[6] Wetlands generally include swamps, marshes, bogs, and areas containing similar features.

The definition and methods for identifying wetland resources can be found in the USACE's *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*,[7] a supplement to the 1987 *Corps of Engineers Wetlands Delineation Manual*.[8] Both the 1987 Wetlands Manual and the 2008 Arid West Supplement to the manual provide technical methods and guidelines for determining the presence of wetland "waters of the U.S.". Pursuant to these manuals, a three-parameter approach is used to identify wetlands and requires evidence of wetland hydrology, hydrophytic vegetation, and hydric soils. In order to be considered a wetland, an area must exhibit one or more indicators of all three of these parameters. However, problem areas may periodically or permanently lack certain indicators for reasons such as seasonal or annual variability of rainfall, vegetation, and other factors. Atypical wetlands lack certain indicators due to recent human activities or natural events. Guidance for determining the presence of wetlands in these situations is presented in the regional supplement.

Section 404 Permit

Except as specified in Section 323.4 of the CFR, impacts to "waters of the U.S." require a Section 404 Permit. Permit authorization may be in the form of (1) a "general permit" authorizing a category of activities in a specific geographical region or nationwide or (2) an "individual permit" (IP) following a review of an individual application form (to be obtained from the district office having jurisdiction over the waters in which the activity is proposed to be located).

Regulatory authorization in the form of a Nationwide Permit (NWP) is provided for certain categories of activities such as repair, rehabilitation, or replacement of a structure or fill which was previously authorized; utility line placement; or bank stabilization. The current set of NWPs became effective on March 19, 2017 and will expire in on March 18, 2022. NWPs authorize only those activities with minimal adverse effects on the aquatic environment and are valid only if the conditions applicable to the permits are met or waivers to these conditions are provided in writing from the USACE. Please note that waivers may require consultation with affected federal and State agencies, which can be a lengthy process with no mandated processing time frames. Certain activities do not require submission of an application form, but may require a separate notification. If the NWP conditions cannot be met, an IP will be required. "Waters of the U.S." temporarily filled, flooded, excavated, or drained but restored to pre-construction contours and elevations after construction are not included in the measurement of loss of "waters of the U.S.". The appropriate permit authorization will be based on the amount of impacts to "waters of the U.S.", as determined by the USACE. There is no filing fee for the Section 404 Permit.

Approximately three or four months are typically required to process a routine permit application; large or complex activities may take longer to process. When a permit application is received, it will be assigned an identification number and reviewed for completeness by the District Engineer. If an application is incomplete, additional information will be requested within 15 days of receipt of the application. If an application is complete, the District Engineer will issue a public notice within 15 days unless specifically exempted by provisions of the CFR. Public comments will be accepted no more than 30 days but not less than 15 days from the date of public notice; these will become part of the administrative record of the application. Generally, the District Engineer

6 33 CFR §328.3(b)

7 USACE. 2008a. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. (J.S. Wakeley, R.W. Lichvar, and C.V. Noble, Eds.). Vicksburg, MS: U.S. Army Engineer Research and Development Center.

8 Environmental Laboratory. 1987. Cor*ps of Engineers Wetlands Delineation Manual (Technical Report Y-87-1)*. Vicksburg, MS: U.S. Army Engineer Waterways Experiment Station.

will decide on the application no later than 60 days after receipt of the completed application. Additional permit situations may increase the permit processing time (e.g., projects involving a Section 401 Water Quality Certification, a coastal zone management consistency analysis, historic properties, a federal agency, and/or Endangered species). The Project Applicant will be given time, not to exceed 30 days, to respond to requests of the District Engineer.

On January 31, 2007, the USACE published a memorandum clarifying the Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) implementing regulations.[9] The Interim Guidance applies to all Department of the Army requests for authorization/verification, including Individual Permits (IPs, i.e., standard permits and letters of permission) and all Regional General Permits (RGPs) and Nationwide Permits (NWPs). The State or Tribal Historic Preservation Officer (SHPO/THPO) has 30 days to respond to a determination that a proposed activity, which otherwise qualifies for an NWP or an RGP, has no effect or no adverse effect on a historic property. If the SHPO/THPO does not respond within 30 days of notification, the Los Angeles District may proceed with verification. If the SHPO/THPO disagrees with the District's determination, the District may work with the SHPO/THPO to resolve the disagreement or request an opinion from the ACHP. The USACE will submit the Draft Jurisdictional Delineation Report to the SHPO/THPO for review prior to initiating the actual regulatory process.

Please note that, if the USACE determines that the drainages/waterbodies are jurisdictional and would be impacted by project implementation, the Applicant will be required to obtain a CWA Section 401 Water Quality Certification from the RWQCB before the USACE will issue the Section 404 Permit. If the USACE determines that the impacted drainage/waterbody is not jurisdictional, the Applicant will be required to obtain RWQCB authorization under the provisions of a Report of Waste Discharge (ROWD).

Jurisdictional Determinations

Pursuant to USACE Regulatory Guidance Letter (RGL) 08-02 (dated June 26, 2008), the USACE can issue two types of jurisdictional determinations to implement Section 404 of the CWA: Approved Jurisdictional Determinations and Preliminary Jurisdictional Determinations.[10] An Approved Jurisdictional Determination is an official USACE determination that jurisdictional "waters of the U.S.", "Navigable Waters of the U.S.", or both are either present or absent on a site. An Approved Jurisdictional Determination also identifies the precise limits of jurisdictional waters on a project site.

The USACE will provide an Approved Jurisdictional Determination when (1) an Applicant requests an official jurisdictional determination; (2) an Applicant contests jurisdiction over a particular water body or wetland; or (3) when the USACE determines that jurisdiction does not exist over a particular water body or wetland. The Approved Jurisdictional Determination then becomes the USACE's official determination that can then be relied upon over a five-year period to request regulatory authorization as part of the permit application.

In addition, an Applicant may decline to request an Approved Jurisdictional Determination and instead obtain a USACE IP or General Permit Authorization based on a Preliminary Jurisdictional Determination or, in certain circumstances (e.g., authorizations by non-reporting nationwide general permits), with no Jurisdictional Determination.

[9] USACE. 2007 (January 31). Memorandum: Interim Guidance for Amendments to the National Historic Preservation Act and the Advisory Council on Historic Preservation (ACHP) Implementing Regulations. Washington, D.C.: USACE.

[10] USACE. 2008b (June 26). Regulatory Guidance Letter. Jurisdictional Determinations. Washington, D.C.: USACE.

Preliminary Jurisdictional Determinations are non-binding, advisory in nature, and may not be appealed. They indicate that there may be "waters of the U.S." on a project site. An Applicant may elect to use a Preliminary Jurisdictional Determination to voluntarily waive or set aside questions regarding CWA jurisdiction over a site, usually in the interest of expediting the permitting process. The USACE will determine what form of Jurisdictional Determination is appropriate for a particular project site.

The USACE Regulatory Branch Offices will coordinate with the USEPA Regional Office and USACE Headquarters (HQ), as outlined in its January 28, 2008, memorandum entitled "Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the *Rapanos* and *SWANCC* Supreme Court Decisions".[11] The guidance provided in this memorandum is quoted as follows:

1. Effective immediately, unless and until paragraph 5(b) of the June 5, 2007, Rapanos guidance coordination memorandum is modified by a joint memorandum from Army and EPA, we will follow these procedures:
    a. For jurisdictional determinations involving significant nexus determinations, USACE districts will send copies of draft jurisdictional delineations via e-mail to appropriate EPA regional offices. The EPA regional office will have 15 calendar days to decide whether to take the draft jurisdictional delineation as a special case under the January 19, 1989, "Memorandum of Agreement Between the Department of the Army and the USEPA Concerning the Determination of the Section 404 Program and the Application of the Exceptions under Section 404(f) of the Clean Water Act." If the EPA regional office does not respond to the district within 15 days, the district will finalize the jurisdictional determination.
    b. For jurisdictional determinations involving isolated waters determinations, the agencies will continue to follow the procedure in paragraph 5(b) of June 5, 2007, coordination memorandum, until a new coordination memorandum is signed by USACE and EPA. (In accordance with paragraph 6 of the June 5, 2007, coordination memorandum, this is a 21-day timeline that can only be changed through a joint memorandum between agencies).
2. Approved JDs are not required for non-reporting NWPs, unless the project proponent specifically requests an approved JD. For proposed activities that may qualify for authorization under a State Programmatic General Permit (SPGP) or RGP, an approved JD is not required unless requested by the project proponent.
3. The USACE will continue to work with EPA to resolve the JDs involving significant nexus and isolated waters determinations that are currently in the elevation process.
4. USACE districts will continue posting completed Approved JD Forms on their web pages.

[11] USACE. 2008c (January 28). *Memorandum for Commander, Major Subordinate Commands and District Commands. Process for Coordinating Jurisdictional Determinations Conducted Pursuant to Section 404 of the Clean Water Act in Light of the Rapanos and SWANCC Supreme Court Decisions.* Washington, D.C.: USACE.

Regional Water Quality Control Board

The RWQCB is the primary agency responsible for protecting water quality in California through the regulation of discharges to surface waters under the CWA and the California Porter-Cologne Water Quality Control Act (Porter-Cologne Act). The RWQCB's jurisdiction extends to all "waters of the State" and to all "waters of the U.S.", including wetlands (isolated and non-isolated).

Section 401 of the CWA provides the RWQCB with the authority to regulate, through a Water Quality Certification, any proposed, federally permitted activity that may affect water quality. Among such activities are discharges of dredged or fill material permitted by the USACE pursuant to Section 404 of the CWA. Section 401 requires the RWQCB to provide certification that there is reasonable assurance that an activity which may result in discharge to navigable waters will not violate water quality standards. Water Quality Certification must be based on a finding that the proposed discharge will comply with water quality standards, which contain numeric and narrative objectives that can be found in each of the nine RWQCBs' Basin Plans.

The Porter-Cologne Act provides the State with very broad authority to regulate "waters of the State" (which are defined as any surface water or groundwater, including saline waters). The Porter-Cologne Act has become an important tool in the post-SWANCC (Solid Waste Agency of Northern Cook Counties vs. Unites States Army Corps of Engineers) and Rapanos era with respect to the State's authority over isolated waters. Generally, any person proposing to discharge waste into a water body that could affect its water quality must file an ROWD when there is no federal nexus, such as under Section 404(b)(1) of the CWA. Although "waste" is partially defined as any waste substance associated with human habitation, the RWQCB interprets this to include fill discharge into water bodies.

Section 401 Water Quality Certification

Issuance of the USACE Section 404 Permit would be contingent upon the approval of a Section 401 Water Quality Certification from the RWQCB. Also, the RWQCB requires certification of the project's California Environmental Quality Act (CEQA) documentation before it will approve the Section 401 Water Quality Certification or ROWD. The RWQCB, as a responsible agency, will use the project's CEQA document to satisfy its own CEQA-compliance requirements.

Upon acceptance of a complete permit application, the RWQCB has between 60 days and 1 year to make a decision regarding the permit request. This is compliant with USACE regulations, which indicate that the RWQCB has 60 days from the date of receipt of a completed application that requests water quality certification to make a decision.[12] The RWQCB has the option of issuing a "Denial Without Prejudice", which does not mean that the request is denied, but that it requires more information in order to make a decision. This effectively stops the processing clock until this information is provided.

The RWQCB is required under the *California Code of Regulations* (CCR) to have a "minimum 21 day public comment period" before any action can be taken on the Section 401 application.[13] This period closes when the RWQCB acts on the application. Since projects often change or are revised during the Section 401 permit process, the comment period can remain open. The public comment period starts as soon as an application has been received. Generally, the RWQCB Section 401, USACE Section 404, and CDFW Section 1602 permit applications are submitted at the same time. However, the RWQCB Section 401 Water Quality Certification may take longer to process than the other two applications.

[12] 33 CFR §325.2(b)(1)(ii)
[13] 23 CCR §3858(a)

The RWQCB requires the Applicant to address urban storm water runoff during and after construction in the form of Best Management Practices (BMPs). These BMPs are intended to address the treatment of pollutants carried by storm water runoff and are required in all complete applications. The notification/application for a CWA Section 401 Water Quality Certification must also address compliance with the Basin Plan. Please note that filing an application would also require the payment of an application fee which would be based on project impacts. The fee schedule calculator is available at http://www.waterboards.ca.gov/santaana/water_issues/programs/401_certification/index.shtml.

California Department of Fish and Wildlife

The CDFW has jurisdictional authority over wetland resources associated with rivers, streams, and lakes pursuant to the *California Fish and Game Code*.[14] Activities of State and local agencies as well as public utilities that are project proponents are regulated by the CDFW under Section 1602 of the *California Fish and Game Code.* This section regulates any work that will (1) substantially divert or obstruct the natural flow of any river, stream, or lake; (2) substantially change or use any material from the bed, channel, or bank of any river, stream, or lake; or (3) deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake. Section 1602 of the *California Fish and Game Code* applies to all perennial, intermittent, and ephemeral rivers, streams, and lakes in the State.

The CDFW jurisdictional limits are not as clearly defined by regulation as those of the USACE. While they closely resemble the limits described by USACE regulations, they include riparian habitat supported by a river, stream, or lake regardless of the presence or absence of hydric and saturated soils conditions. In general, the CDFW takes jurisdiction from the top of a stream bank or to the outer limits of the adjacent riparian vegetation (outer drip line), whichever is greater. Notification is generally required for any project that will take place within or in the vicinity of a river, stream, lake or within or in the vicinity of tributaries to a river, stream, or lake. This includes rivers or streams that flow at least periodically or permanently through a bed or channel with banks that support fish and other aquatic plant and/or wildlife species. It also includes watercourses that have a surface or subsurface flow that support or have supported riparian vegetation.

Section 1602 Lake or Streambed Alteration Agreement

The CDFW enters into a Lake or Streambed Alteration (LSA) Agreement with a project proponent in order to ensure protection of wildlife and habitat values and acreages.

Prior to construction, a Notification of an LSA must be submitted to the CDFW that describes any proposed lake or streambed alteration that would occur with implementation of a project. The Notification of an LSA must address the initial construction and long-term operation and maintenance of any structures (such as a culvert or a desilting basin) included in the project design that are located within any river, stream, or lake and that may require periodic maintenance. In addition to the formal application materials and the fee, a copy of the appropriate environmental document (e.g., a Mitigated Negative Declaration) should be included in the submittal, consistent with CEQA requirements. The complete notification package must be submitted to the CDFW regional office that services the county where the activity will take place. This notification will serve as the basis for the CDFW's issuance of a Section 1602 LSA Agreement. Note that notification is not required before beginning emergency work, but the CDFW must be notified in writing within 14 days after beginning the work.

[14] See §§1600–1616.

After receiving Notification of an LSA Agreement, the CDFW will determine whether an LSA Agreement will be required for the proposed activity. An LSA Agreement will be required if the activity could substantially adversely affect an existing fish and wildlife resource. If an LSA Agreement is required, the CDFW may want to conduct an on-site inspection.

If the CDFW does not respond in writing concerning the completeness of the Notification within 30 days of its submittal, the Notification automatically becomes complete. If the CDFW does not submit a draft LSA Agreement to the Applicant within 60 days of the determination of a completed Notification package, the CDFW will issue a letter that either (1) identifies the final date to transmit a draft LSA Agreement or (2) indicates that an LSA Agreement was not required. The CDFW will also indicate that it was unable to meet this mandated compliance date and that, by law, the Applicant is authorized to complete the project without an LSA Agreement as long as the Applicant constructs the project as proposed and complies with all avoidance, minimization, and mitigation measures described in the submitted Notification package. Please note that, if the project requires revisions to the design or project construction, the CDFW may require submittal of a new Notification/application with an additional 90-day permit process.

If determined to be necessary, the CDFW will prepare a draft LSA Agreement, which will include standard measures to protect fish and wildlife resources during project construction and during ongoing operation and maintenance of any project element that occurs within a CDFW jurisdictional area. The draft Agreement must be transmitted to the Applicant within 60 calendar days of the CDFW's determination that the notification is complete. It should be noted that the 60-day timeframe might not apply to long-range agreements.

Following receipt of a draft LSA Agreement from the CDFW, the Applicant has 30 calendar days to notify the CDFW concerning the acceptability of the proposed terms, conditions, and measures. If the Applicant agrees with these terms, conditions and measures, the Agreement must be signed and returned to the CDFW. The Agreement becomes final once the CDFW executes it and an LSA Agreement is issued. Please note that all application fees must be paid and the final certified CEQA documentation must be provided prior to the CDFW's execution of the Agreement.

ATTACHMENT B

ORDINARY HIGH WATER MARK DATASHEET

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Reach 120 JD
Project Number:
Stream: Santa Clara River
Investigator(s): David Hughes

Date: 9/22/17 **Time:**
Town: **State:**
Photo begin file#: **Photo end file#:**

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☒ / N ☐ Is the site significantly disturbed?

Location Details:
SBC Reach 120

Projection: **Datum:**
Coordinates:

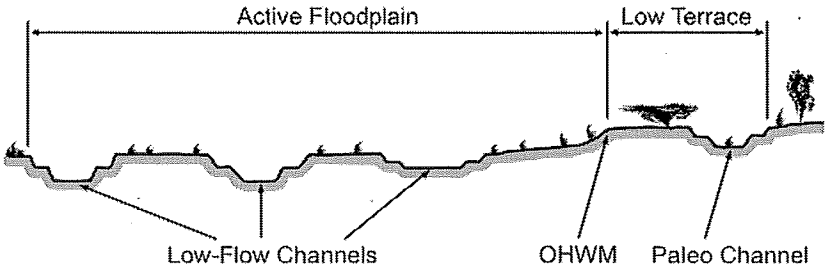
Potential anthropogenic influences on the channel system:
Concrete side levee along southern bank of Santa Clara River.

Brief site description:
Southern bank of Santa Clara River, disturbed habitat occurs along toe of slope

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

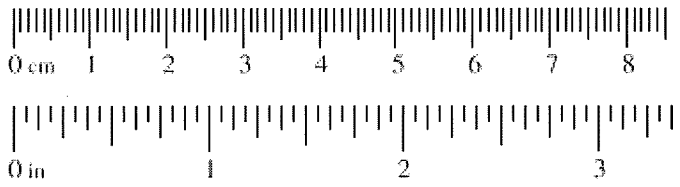


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

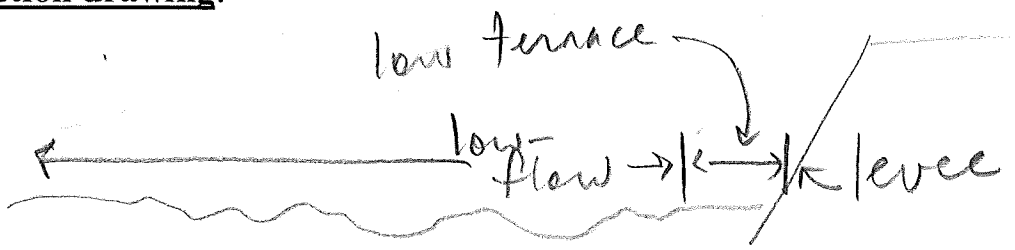
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64		
0.157	4	Pebble	
		Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

OHWM is evident based on scour/shelving.

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 25 % Tree: 5 % Shrub: 10 % Herb: 10 %

Community successional stage:

- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Santa Clara River is a wide alluvial channel with braided low flow

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: Sand

Total veg cover: 30 % Tree: 0 % Shrub: 10 % Herb: 20 %

Community successional stage:

- ☐ NA
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

- ☐ NA
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Early (herbaceous & seedlings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Reach 121 JD
Project Number:
Stream: San Francisquito Creek
Investigator(s): David Hughes

Date: 9/22/17
Town:
Photo begin file#:

Time:
State:
Photo end file#:

Y ☒ / N ☐ Do normal circumstances exist on the site?

Y ☐ / N ☒ Is the site significantly disturbed?

Location Details:

Projection: **Datum:**
Coordinates:

Potential anthropogenic influences on the channel system:

Channelized alluvial creek

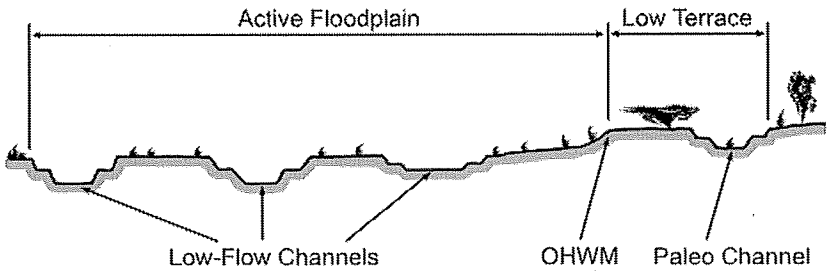
Brief site description:

Reach 121 is along east bank. Creek is alluvial wash with upper banks consisting of mulefat + cottonwood

Checklist of resources (if available):

- ☒ Aerial photography
  Dates:
- ☐ Topographic maps
- ☐ Geologic maps
- ☐ Vegetation maps
- ☒ Soils maps
- ☐ Rainfall/precipitation maps
- ☐ Existing delineation(s) for site
- ☐ Global positioning system (GPS)
- ☐ Other studies
- ☐ Stream gage data
  Gage number:
  Period of record:
- ☐ History of recent effective discharges
- ☐ Results of flood frequency analysis
- ☐ Most recent shift-adjusted rating
- ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

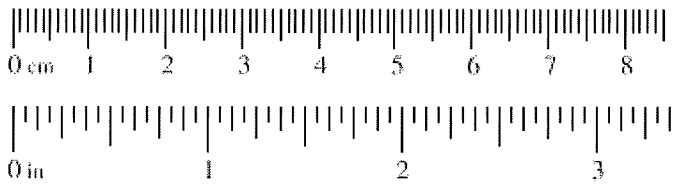


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   - ☒ Mapping on aerial photograph
   - ☐ Digitized on computer
   - ☐ GPS
   - ☐ Other:

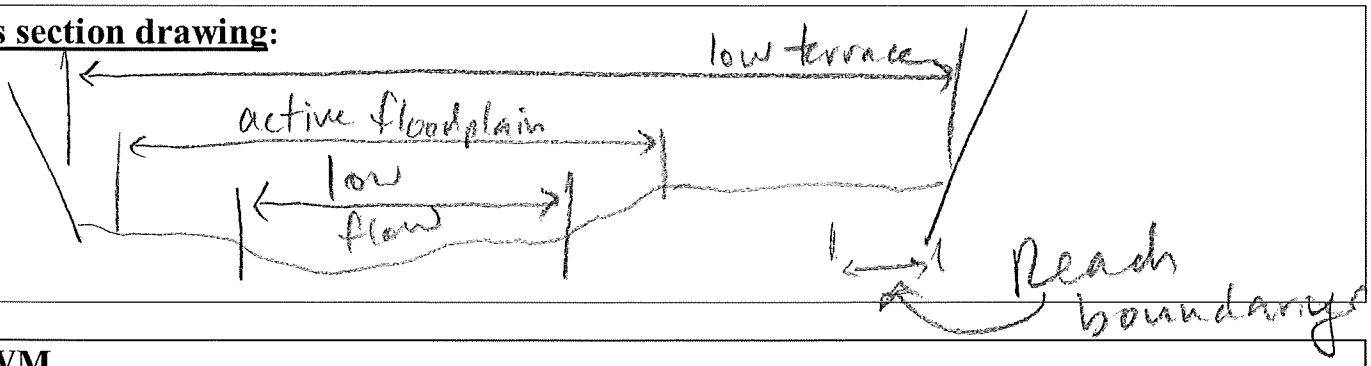
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	Gravel
2.56	64	Cobble	Gravel
0.157	4	Pebble	Gravel
0.079	2.00	Granule	Gravel
0.039	1.00	Very coarse sand	Sand
0.020	0.50	Coarse sand	Sand
1/2 0.0098	0.25	Medium sand	Sand
1/4 0.005	0.125	Fine sand	Sand
1/8 0.0025	0.0625	Very fine sand	Sand
1/16 0.0012	0.031	Coarse silt	Silt
1/32 0.00061	0.0156	Medium silt	Silt
1/64 0.00031	0.0078	Fine silt	Silt
1/128 0.00015	0.0039	Very fine silt	Silt
		Clay	Mud



Project ID: **Cross section ID:** **Date:** **Time:**

Cross section drawing:



OHWM

GPS point: _____

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

OHWM determined based on break in slope.

Floodplain unit: ☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: sand

Total veg cover: _____ % Tree: 0 % Shrub: 0 % Herb: 5 %

Community successional stage:

- ☐ NA
- ☒ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☒ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Sandy alluvial wash

Project ID: **Cross section ID:** **Date:** **Time:**

Floodplain unit: ☐ Low-Flow Channel ☒ Active Floodplain ☐ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Sand
Total veg cover: 25 % Tree: 5 % Shrub: 10 % Herb: 10 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☒ Mid (herbaceous, shrubs, saplings)
- ☐ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:

Floodplain unit: ☐ Low-Flow Channel ☐ Active Floodplain ☒ Low Terrace

GPS point: _____

Characteristics of the floodplain unit:
Average sediment texture: Sandy loam
Total veg cover: 80 % Tree: 30 % Shrub: 50 % Herb: 20 %
Community successional stage:
- ☐ NA
- ☐ Early (herbaceous & seedlings)
- ☐ Mid (herbaceous, shrubs, saplings)
- ☒ Late (herbaceous, shrubs, mature trees)

Indicators:
- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☒ Benches
- ☐ Soil development
- ☒ Surface relief
- ☐ Other: _____
- ☐ Other: _____
- ☐ Other: _____

Comments:
Upper bench above sandy stream bottom dominated by mature cottonwood, willow, mule fat

ATTACHMENT C

WETLAND DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 120 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 120-1

Investigator(s): David Hughes Section, Township, Range: Section 22, Township 04N, Range 15W

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

Subregion (LRR): CA Lat: 34° 24.841' Long: -118° 26.501' Datum: NAD 83

Soil Map Unit Name: Cortina sandy loam, 0 to 2 percent slopes NWI classification: R4SBA

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Populus fremontii	40	Y	FAC
2. Baccharis salicifolia	25	Y	FAC
3.			
4.			
5.			
	65	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	65	x 3 =	195
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	65 (A)		195 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sampling location is at upstream end of site, streambed near southern bank. Alluvial area with shrubby mule fat and cottonwood.

SOIL

Sampling Point: 120-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 4/2	100					sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock

Depth (inches): 4"

Hydric Soil Present? Yes ____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

Surface Water Present? Yes ____ No ✓ Depth (inches): ____

Water Table Present? Yes ____ No ✓ Depth (inches): ____

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

Wetland Hydrology Present? Yes ✓ No ____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 120 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 120-2

Investigator(s): David Hughes Section, Township, Range: Section 22, Township 04N, Range 15W

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

Subregion (LRR): CA Lat: 34° 24.837' Long: -118° 26.611' Datum: NAD 83

Soil Map Unit Name: Riverwash NWI classification: R4SBA

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	10	Y	FAC
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: 5')			
1. Baccharis salicifolia	40	Y	FAC
2.			
3.			
4.			
5.			
	40 = Total Cover		
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0 = Total Cover		
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0 = Total Cover		

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 0	x 2 = 0
FAC species 50	x 3 = 150
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 50 (A)	150 (B)

Prevalence Index = B/A = 3.0

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sampling location is next to rip-rap where a line of dense mule fat occurs.

SOIL

Sampling Point: 120-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-11	10YR 3/2	100					sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock

Depth (inches): 11"

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 120 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 120-3

Investigator(s): David Hughes Section, Township, Range: Section 22, Township 04N, Range 15W

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

Subregion (LRR): CA Lat: 34° 24.839' Long: -118° 26.645' Datum: NAD 83

Soil Map Unit Name: Riverwash NWI classification: R4SBA

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

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

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Baccharis salicifolia	20	Y	FAC
2. Tamarisk ramosissima	5	N	FAC
3. Populus fremontii	5	N	FAC
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Nasturtium officinale	10	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	0	x 2 =	0
FAC species	30	x 3 =	90
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	40 (A)		100 (B)

Prevalence Index = B/A = 2.5

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Sampling location is at storm drain outlet, water trickling out of drain, encouraging growth of mule fat and cottonwood seedlings/saplings with patches of watercress.

SOIL

Sampling Point: 120-3

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

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

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock

Depth (inches): 3"

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

flowing water from storm drain, main stem of river is dry

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 121 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 121-1

Investigator(s): David Hughes Section, Township, Range: Section 16, Township 04N, Range 16W

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

Subregion (LRR): CA Lat: 34° 25.947' Long: -118° 33.673' Datum: NAD 83

Soil Map Unit Name: Sorrento loam, 0 to 2 percent slopes NWI classification: R4SBC

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

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

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

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

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

Remarks:

Site is outlet of storm drain; minimal vegetation present, though aerial photos show more vegetation, likely willows

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	10	Y	FAC
2. Salix laevigata	10	Y	FACW
3.			
4.			
	20	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Typha sp	2	Y	OBL
2.			
3.			
4.			
5.			
	2	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	10	x 2 =	20
FAC species	10	x 3 =	30
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	22 (A)		52 (B)

Prevalence Index = B/A = 2.4

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 121-1

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100					organic	

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

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

- ✓ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

urban runoff

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 121 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 121-2

Investigator(s): David Hughes Section, Township, Range: Section 16, Township 04N, Range 16W

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

Subregion (LRR): CA Lat: 34° 25.951' Long: -118° 33.687' Datum: NAD 83

Soil Map Unit Name: Sorrento loam, 0 to 2 percent slopes NWI classification: R4SBC

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

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

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

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

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

Remarks:

Site is outlet of storm drain; minimal vegetation present, though aerial photos show more vegetation, likely willows

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	30	Y	FAC
2. Salix laevigata	50	Y	FACW
3.			
4.			
	80	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
	0	= Total Cover	
Herb Stratum (Plot size: 5')			
1. Stipa miliaceum	10	Y	UPL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 90% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 67% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 50	x 2 =	100
FAC species 30	x 3 =	90
FACU species 0	x 4 =	0
UPL species 10	x 5 =	50
Column Totals: 90 (A)		240 (B)

Prevalence Index = B/A = 2.7

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 121-2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-20	10YR 2/1	100					silty orga	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ✓ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? **Yes** ✓ **No** _____

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? **Yes** ✓ **No** _____

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

Remarks:

urban runoff

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 121 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 121-3

Investigator(s): David Hughes Section, Township, Range: Section 16, Township 04N, Range 16W

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

Subregion (LRR): CA Lat: 34° 25.978' Long: -118° 33.681' Datum: NAD 83

Soil Map Unit Name: Hanford sandy loam, 2 to 9 percent slopes NWI classification: R4SBC

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

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

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

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

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

Remarks:

base of side levee

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus fremontii	60	Y	FAC
2. Salix laevigata	40	Y	FACW
3.			
4.			
	100	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Baccharis salicifolia	30	Y	FAC
2. Artemisia californica	10	N	UPL
3.			
4.			
5.			
	40	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	40	x 2 =	80
FAC species	90	x 3 =	270
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	140 (A)		360 (B)

Prevalence Index = B/A = 2.6

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 121-3

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 3/1	100					sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock

Depth (inches): 6"

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

adjacent to side levee, no indication of water flow, area is upper portion of bench above OHWM

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Soft Bottom Channel Reach 121 City/County: Santa Clarita/Los Angeles Sampling Date: 09/22/2014

Applicant/Owner: Los Angeles County Department of Public Works State: CA Sampling Point: 121-4

Investigator(s): David Hughes Section, Township, Range: Section 16, Township 04N, Range 16W

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

Subregion (LRR): CA Lat: 34° 26.085' Long: -118° 33.641' Datum: NAD 83

Soil Map Unit Name: Hanford sandy loam, 2 to 9 percent slopes NWI classification: R4SBC

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

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

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

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

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

Remarks:

base of side levee

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: 30')	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix lasiolepis	60	Y	FACW
2. Populus fremontii	10	N	FAC
3.			
4.			
	70	= Total Cover	
Sapling/Shrub Stratum (Plot size: 5')			
1. Arundo donax	40	Y	FACW
2. Baccharis salicifolia	10	Y	FAC
3.			
4.			
5.			
	50	= Total Cover	
Herb Stratum (Plot size: 5')			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	0	= Total Cover	
Woody Vine Stratum (Plot size: 30')			
1.			
2.			
	0	= Total Cover	

% Bare Ground in Herb Stratum 100% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 100% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	100	x 2 =	200
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	120 (A)		260 (B)

Prevalence Index = B/A = 2.2

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: 121-4

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR 4/1	100					silty sand	

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

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

- ___ Histosol (A1)
- ___ Histic Epipedon (A2)
- ___ Black Histic (A3)
- ___ Hydrogen Sulfide (A4)
- ___ Stratified Layers (A5) (**LRR C**)
- ___ 1 cm Muck (A9) (**LRR D**)
- ___ Depleted Below Dark Surface (A11)
- ___ Thick Dark Surface (A12)
- ___ Sandy Mucky Mineral (S1)
- ___ Sandy Gleyed Matrix (S4)
- ___ Sandy Redox (S5)
- ___ Stripped Matrix (S6)
- ___ Loamy Mucky Mineral (F1)
- ___ Loamy Gleyed Matrix (F2)
- ___ Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: rock

Depth (inches): 14"

Hydric Soil Present? Yes _____ No ✓

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (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)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

adjacent to side levee, site is outside of WOUS, surface water present due to storm water runoff from outlet nearby; 1-2" rain previous day

ATTACHMENT D

SITE PHOTOGRAPHS

Photo Location 1. September 22, 2017. View of outlet structure and young mule fat growth.

Photo Location 2. September 22, 2017. Mature mule fat and Fremont cottonwood saplings growing along rip rap at downstream end of site.

D:\Projects\COLADPW\J247\Graphics\Reach_120_121\JD\ex_SP1_Reach120_20171009.ai

Site Photographs – Reach 120

Exhibit D-1

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP1_Reach120.pdf

Photo Location 3. September 22, 2017. View of vegetation conditions along concrete levee.

Photo Location 4. September 22, 2017. Overview of site conditions from upstream end of site facing downstream.

D:\Projects\COLADPW\J247\Graphics\Reach_120_121\JD\ex_SP2_Reach120_20171009.ai

Site Photographs – Reach 120

Exhibit D-2

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP2_Reach120.pdf

Photo Location 5, facing downstream. September 22, 2017. Overview of existing vegetation conditions in downstream half of site.

Photo Location 5, facing upstream. September 22, 2017. Overview of existing vegetation conditions in upstream half of site.

D:\Projects\COLADPWJ247\Graphics\Reach_120_121\JD\ex_SP3_Reach120_20171009.ai

Site Photographs – Reach 120

Exhibit D-3

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP3_Reach120.pdf

Photo Location 1. September 22, 2017. View of riparian habitat conditions near outlet structure at downstream end of site.

Photo Location 2. September 22, 2017. View of outlet structure and wetland conditions at downstream end of site.

D:\Projects\COLADPWJ2447\Graphics\Reach_120_121\JD\ex_SP4_Reach121_20171009.ai

Site Photographs – Reach 121

Exhibit D-4

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP4_Reach121.pdf

Photo Location 3. September 22, 2017. Overview of wetland conditions at outlet structure.

Photo Location 4, facing downstream. September 22, 2017. View of vegetation conditions along levee on southern bank.

D:\Projects\COLADPWJ247\Graphics\Reach_120_121\JD\ex_SP5_Reach121_20171009.ai

Site Photographs – Reach 121

Exhibit D-5

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP5_Reach121.pdf

Photo Location 4, facing upstream. September 22, 2017. View of vegetation conditions along levee on southern bank.

Photo Location 5, facing upstream. September 22, 2017. View of vegetation conditions along levee on southern bank.

D:\Projects\COLADPWJ2447\Graphics\Reach_120_121\JD\ex_SP6_Reach121_20171009.ai

Site Photographs – Reach 121

Exhibit D-6

Jurisdictional Delineation Report for Soft Bottom Channel Reaches 120 and 121

PSOMAS

(10/09/2017 MMD) R:\Projects\DPW\3DPW031100\Graphics\JD\Reach_120_121\ex_SP6_Reach121.pdf

ATTACHMENT E

LITERATURE REVIEW DETAILS

This attachment provides detailed results of the literature review.

SOIL SERIES

Cortina Sandy Loam, 0 to 2 percent slopes

Setting

- Landform: Alluvial fans
- Landform position (two-dimensional): Backslope
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium derived from sedimentary rock

Typical profile

- H1 - 0 to 12 inches: sandy loam
- H2 - 12 to 28 inches: very gravelly sandy loam
- H3 - 28 to 60 inches: very cobbly sandy loam

Properties and qualities

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Excessively drained
- Runoff class: Very low
- Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: Occasional
- Frequency of ponding: None
- Available water storage in profile: Low (about 3.7 inches)

Interpretive groups

- Land capability classification (irrigated): 4s
- Land capability classification (nonirrigated): 4e
- Hydrologic Soil Group: A
- Ecological site: SANDY 9-20" (R019XD065CA)
- Hydric soil rating: No

Riverwash

Setting

- Landform: Drainageways
- Landform position (two-dimensional): Footslope
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium

Typical profile

- H1 - 0 to 6 inches: sand
- H2 - 6 to 60 inches: stratified coarse sand to sandy loam

Properties and qualities

- Slope: 0 to 2 percent
- Natural drainage class: Excessively drained
- Runoff class: Negligible
- Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
- Depth to water table: About 0 inches
- Frequency of flooding: Frequent
- Available water storage in profile: Very low (about 2.9 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 8
- Hydrologic Soil Group: A
- Hydric soil rating: Yes

Hanford sandy loam, 2 to 9 percent slopes

Setting

Setting

- Landform: Alluvial fans
- Landform position (two-dimensional): Backslope
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium derived from granite

Typical profile

- H1 - 0 to 8 inches: sandy loam
- H2 - 8 to 70 inches: fine sandy loam, sandy loam
- H2 - 8 to 70 inches:

Properties and qualities

- Slope: 2 to 9 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Low
- Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None

- Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water storage in profile: Very high (about 14.5 inches)

Sandy alluvial land

Setting

- Landform: Flood plains
- Landform position (two-dimensional): Footslope
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Alluvium

Typical profile

- H1 - 0 to 10 inches: sand
- H2 - 10 to 30 inches: stratified sand to loam
- H3 - 30 to 60 inches: stratified gravelly sand to gravelly loam

Properties and qualities

- Slope: 0 to 2 percent
- Natural drainage class: Excessively drained
- Runoff class: Very low
- Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
- Depth to water table: About 10 inches
- Frequency of flooding: Frequent
- Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water storage in profile: Moderate (about 6.1 inches)

Interpretive groups

- Land capability classification (irrigated): None specified
- Land capability classification (nonirrigated): 7w
- Hydrologic Soil Group: B
- Ecological site: SANDY 9-20" (R020XE025CA)
- Hydric soil rating: Yes

Sorrento loam, 0 to 2 percent slopes

Map Unit Setting

- National map unit symbol: hchg
- Elevation: 80 to 1,800 feet
- Mean annual precipitation: 12 to 20 inches
- Mean annual air temperature: 64 degrees F
- Frost-free period: 200 to 300 days
- Farmland classification: Prime farmland if irrigated

Map Unit Composition

- Sorrento and similar soils: 85 percent
- Minor components: 15 percent

- Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Sorrento

Setting

- Landform: Alluvial fans
- Landform position (two-dimensional): Backslope
- Landform position (three-dimensional): Tread
- Down-slope shape: Linear
- Across-slope shape: Linear
- Parent material: Mixed alluvium

Typical profile

- H1 - 0 to 7 inches: loam
- H2 - 7 to 72 inches: loam

Properties and qualities

- Slope: 0 to 2 percent
- Depth to restrictive feature: More than 80 inches
- Natural drainage class: Well drained
- Runoff class: Low
- Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
- Depth to water table: More than 80 inches
- Frequency of flooding: None
- Frequency of ponding: None
- Calcium carbonate, maximum in profile: 10 percent
- Salinity, maximum in profile: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
- Available water storage in profile: High (about 9.6 inches)

BASIN PLAN BENEFICIAL USES

The *Water Quality Control Plan: Los Angeles Region* (Basin Plan) identifies a number of beneficial uses, some or all of which may apply to a specific hydrologic subarea (HSA), including: Municipal and Domestic Water Supply (MUN) waters; Agricultural Supply (AGR) waters; Industrial Process Supply (PROC) waters; Industrial Service Supply waters (IND); Groundwater Recharge (GWR) waters; Freshwater Replenishment (FRSH); Navigation (NAV) waters; Hydropower Generation (POW) waters; Water Contact Recreation (REC1) waters; Non-Contact Water Recreation (REC2) waters; Commercial and Sport Fishing (COMM) waters; Aquaculture (AQUA) waters; Warm Fresh Water Habitat (WARM) waters; Cold Fresh Water Habitat (COLD) waters; Inland Saline Water Habitat (SAL) waters; Estuarine Habitat (EST) waters; Wetland Habitat (WET) waters; Marine Habitat (MAR) waters; Wildlife Habitat (WILD) waters; Preservation of Biological Habitats of Special Significance (BIOL) waters; Rare, Threatened or Endangered Species (RARE) waters; Migration of Aquatic Organisms (MIGR) waters; Spawning, Reproduction and Development (SPWN) waters; and Shellfish Harvesting (SHELL) waters. Beneficial uses associated with SBC Reaches 120 and 121 are described in detail below; beneficial uses not described below do not apply to these reaches.

- **Municipal and Domestic Supply (MUN)**: Uses of water for community, military, or individual water supply systems including, but not limited to, drinking water supply.
- **Agricultural Supply (AGR)**: Uses of water for farming, horticulture, or ranching including, but not limited to, irrigation, stock watering, or support of vegetation for range grazing.
- **Industrial Process Supply (PROC)**: Uses of water for industrial activities that depend primarily on water quality.
- **Industrial Service Supply (IND)**: Uses of water for industrial activities that do not depend primarily on water quality including, but not limited to, mining, cooling water supply, hydraulic conveyance, gravel washing, fire protection, or oil well re-pressurization.
- **Ground Water Recharge (GWR)**: Uses of water for natural or artificial recharge of ground water for purposes of future extraction, maintenance of water quality, or halting of saltwater intrusion into freshwater aquifers.
- **Freshwater Replenishment (FRSH)**: Uses of water for natural or artificial maintenance of surface water quantity or quality (e.g., salinity).
- **Warm Freshwater Habitat (WARM)**: Uses of water that support warm water ecosystems including, but not limited to, preservation or enhancement of aquatic habitats, vegetation, fish, or wildlife, including invertebrates.
- **Wildlife Habitat (WILD)**: Uses of water that support terrestrial ecosystems including, but not limited to, preservation and enhancement of terrestrial habitats, vegetation, wildlife (e.g., mammals, birds, reptiles, amphibians, invertebrates), or wildlife water and food sources.
- **Rare, Threatened, or Endangered Species (RARE)**: Uses of water that support habitats necessary, at least in part, for the survival and successful maintenance of plant or animal species established under state or federal law as rare, threatened, or endangered.
- **Spawning, Reproduction, and/or Early Development (SPWN)**: Uses of water that support high quality aquatic habitats suitable for reproduction and early development of fish.
- **Wetland Habitat (WET)**: Uses of water that support wetland ecosystems, including, but not limited to, preservation or enhancement of wetland habitats, vegetation, fish, shellfish, or wildlife, and other unique wetland functions which enhance water quality, such as providing flood and erosion control, stream bank stabilization, and filtration and purification of naturally occurring contaminants.

- **Water Contact Recreation (REC-1)**: Uses of water for recreational activities involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, swimming, wading, water-skiing, skin and scuba diving, surfing, white water activities, fishing, or use of natural hot springs.
- **Non-contact Water Recreation (REC-2)**: Uses of water for recreational activities involving proximity to water, but not normally involving body contact with water, where ingestion of water is reasonably possible. These uses include, but are not limited to, picnicking, sunbathing, hiking, beachcombing, camping, boating, tidepool and marine life study, hunting, sightseeing, or aesthetic enjoyment in conjunction with the above activities.

ATTACHMENT F

NATIONWIDE PERMIT SUMMARY

The following is a summary of Nationwide Permits 3 (Maintenance) and 31 (Maintenance of Existing Flood Control Facilities).

NATIONWIDE PERMIT 3: MAINTENANCE

a. the repair, rehabilitation, or replacement of any previously authorized, currently serviceable structure, or fill, or of any currently serviceable structure or fill authorized by 33 CFR 330.3, provided that the structure or fill is not to be put to uses differing from those uses specified or contemplated for it in the original permit or the most recently authorized modification. Minor deviations in the structure's configuration or filled area, including those due to changes in materials, construction techniques, requirements of other regulatory agencies, or current construction codes or safety standards that are necessary to make the repair, rehabilitation, or replacement are authorized. Any stream channel modification is limited to the minimum necessary for the repair, rehabilitation, or replacement of the structure or fill; such modifications, including the removal of material from the stream channel, must be immediately adjacent to the project or within the boundaries of the structure or fill. This NWP also authorizes the repair, rehabilitation, or replacement of those structures or fills destroyed or damaged by storms, floods, fire or other discrete events, provided the repair, rehabilitation, or replacement is commenced, or is under contract to commence, within two years of the date of their destruction or damage. In cases of catastrophic events, such as hurricanes or tornadoes, this two-year limit may be waived by the district engineer, provided the permittee can demonstrate funding, contract, or other similar delays.

b. This NWP also authorizes the removal of accumulated sediments and debris in the vicinity of existing structures (e.g., bridges, culverted road crossings, water intake structures, etc.) and/or the placement of new or additional riprap to protect the structure. The removal of sediment is limited to the minimum necessary to restore the waterway in the vicinity of the structure to the approximate dimensions that existed when the structure was built, but cannot extend farther than 200 feet in any direction from the structure. This 200 foot limit does not apply to maintenance dredging to remove accumulated sediments blocking or restricting outfall and intake structures or to maintenance dredging to remove accumulated sediments from canals associated with outfall and intake structures. All dredged or excavated materials must be deposited and retained in an area that has no waters of the United States unless otherwise specifically approved by the district engineer under separate authorization. The placement of new or additional riprap must be the minimum necessary to protect the structure or to ensure the safety of the structure. Any bank stabilization measures not directly associated with the structure will require a separate authorization from the district engineer.

c. This NWP also authorizes temporary structures, fills, and work necessary to conduct the maintenance activity. Appropriate measures must be taken to maintain normal downstream flows and minimize flooding to the maximum extent practicable, when temporary structures, work, and discharges, including cofferdams, are necessary for construction activities, access fills, or dewatering of construction sites. Temporary fills must consist of materials, and be placed in a manner, that will not be eroded by expected high flows. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The areas affected by temporary fills must be revegetated, as appropriate.

d. This NWP does not authorize maintenance dredging for the primary purpose of navigation. This NWP does not authorize beach restoration. This NWP does not authorize new stream channelization or stream relocation projects.

Notification: For activities authorized by paragraph (b) of this NWP, the permittee must submit a pre-construction notification to the district engineer prior to commencing the activity (see general condition 31). The pre-construction notification must include information regarding the original design capacities and configurations of the outfalls, intakes, small impoundments, and canals. (Sections 10 and 404)

Note: This NWP authorizes the repair, rehabilitation, or replacement of any previously authorized structure or fill that does not qualify for the Clean Water Act Section 404(f) exemption for maintenance.

NATIONWIDE PERMIT 31: MAINTENANCE OF EXISTING FLOOD CONTROL FACILITIES

a. Discharges of dredged or fill material resulting from activities associated with the maintenance of existing flood control facilities, including debris basins, retention/detention basins, levees, and channels that:

   (i) were previously authorized by the Corps by individual permit, general permit, or 33 CFR 330.3, or did not require a permit at the time they were constructed, or

   (ii) were constructed by the Corps and transferred to a non-Federal sponsor for operation and maintenance. Activities authorized by this NWP are limited to those resulting from maintenance activities that are conducted within the "maintenance baseline," as described in the definition below.

   Discharges of dredged or fill materials associated with maintenance activities in flood control facilities in any watercourse that have previously been determined to be within the maintenance baseline are authorized under this NWP. To the extent that a Corps permit is required, this NWP authorizes the removal of vegetation from levees associated with the flood control project. This NWP does not authorize the removal of sediment and associated vegetation from natural water courses except when these activities have been included in the maintenance baseline. All dredged material must be placed in an area that has no waters of the United States or a separately authorized disposal site in waters of the United States, and proper siltation controls must be used.

Maintenance Baseline: The maintenance baseline is a description of the physical characteristics (e.g., depth, width, length, location, configuration, or design flood capacity, etc.) of a flood control project within which maintenance activities are normally authorized by NWP 31, subject to any case-specific conditions required by the district engineer. The district engineer will approve the maintenance baseline based on the approved or constructed capacity of the flood control facility, whichever is smaller, including any areas where there are no constructed channels but which are part of the facility. The prospective permittee will provide documentation of the physical characteristics of the flood control facility (which will normally consist of as-built or approved drawings) and documentation of the approved and constructed design capacities of the flood control facility. If no evidence of the constructed capacity exists, the approved capacity will be used. The documentation will also include best management practices to ensure that the impacts to the aquatic environment are minimal, especially in maintenance areas where there are no constructed channels. (The Corps may request maintenance records in areas where there has not been recent maintenance.) Revocation or modification of the final determination of the maintenance baseline can only be done in accordance with 33 CFR 330.5. Except in emergencies as described below, this NWP cannot be used until the district engineer approves the maintenance baseline and determines the need for mitigation and any regional or activity-specific conditions. Once determined, the maintenance baseline will remain valid for any subsequent reissuance of this NWP. This NWP does not authorize maintenance of a flood control facility that has been abandoned. A flood control facility will be considered abandoned if it has operated at a

significantly reduced capacity without needed maintenance being accomplished in a timely manner.

Mitigation: The district engineer will determine any required mitigation one-time only for impacts associated with maintenance work at the same time that the maintenance baseline is approved. Such one-time mitigation will be required when necessary to ensure that adverse environmental impacts are no more than minimal, both individually and cumulatively. Such mitigation will only be required once for any specific reach of a flood control project. However, if one-time mitigation is required for impacts associated with maintenance activities, the district engineer will not delay needed maintenance, provided the district engineer and the permittee establish a schedule for identification, approval, development, construction and completion of any such required mitigation. Once the one-time mitigation described above has been completed, or a determination made that mitigation is not required, no further mitigation will be required for maintenance activities within the maintenance baseline. In determining appropriate mitigation, the district engineer will give special consideration to natural water courses that have been included in the maintenance baseline and require compensatory mitigation and/or best management practices as appropriate.

Emergency Situations: In emergency situations, this NWP may be used to authorize maintenance activities in flood control facilities for which no maintenance baseline has been approved. Emergency situations are those which would result in an unacceptable hazard to life, a significant loss of property, or an immediate, unforeseen, and significant economic hardship if action is not taken before a maintenance baseline can be approved. In such situations, the determination of mitigation requirements, if any, may be deferred until the emergency has been resolved. Once the emergency has ended, a maintenance baseline must be established expeditiously, and mitigation, including mitigation for maintenance conducted during the emergency, must be required as appropriate.

Notification: The permittee must submit a pre-construction notification to the district engineer before any maintenance work is conducted (see general condition 31). The pre-construction notification may be for activity-specific maintenance or for maintenance of the entire flood control facility by submitting a five-year (or less) maintenance plan. The pre-construction notification must include a description of the maintenance baseline and the dredged material disposal site. (Sections 10 and 404)

GENERAL CONDITION 31: PRE-CONSTRUCTION NOTIFICATION

a. Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, if the PCN is determined to be incomplete, notify the prospective permittee within that 30 day period to request the additional information necessary to make the PCN complete. The request must specify the information needed to make the PCN complete. As a general rule, district engineers will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

    1. He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or

2. 45 calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 18 that listed species or critical habitat might be affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 20 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that there is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) has been completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee may not begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

b. Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

1. Name, address and telephone numbers of the prospective permittee;

2. Location of the proposed project;

3. A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause, including the anticipated amount of loss of water of the United States expected to result from the NWP activity, in acres, linear feet, or other appropriate unit of measure; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided results in a quicker decision. Sketches should contain sufficient detail to provide an illustrative description of the proposed activity (e.g., a conceptual plan), but do not need to be detailed engineering plans);

4. The PCN must include a delineation of wetlands, other special aquatic sites, and other waters, such as lakes and ponds, and perennial, intermittent, and ephemeral streams, on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters on the project site, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, as appropriate;

5. If the proposed activity will result in the loss of greater than 1/10-acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation requirement will be satisfied, or explaining why the adverse effects are

minimal and why compensatory mitigation should not be required. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.

6. If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and

7. For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

c. Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

d. Agency Coordination:

1. The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

2. For all NWP activities that require pre-construction notification and result in the loss of greater than 1/2-acre of waters of the United States, for NWP 21, 29, 39, 40, 42, 43, 44, 50, 51, and 52 activities that require pre-construction notification and will result in the loss of greater than 300 linear feet of intermittent and ephemeral stream bed, and for all NWP 48 activities that require pre-construction notification, the district engineer will immediately provide (e.g., via e-mail, facsimile transmission, overnight mail, or other expeditious manner) a copy of the complete PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments.

   The comments must explain why the agency believes the adverse effects will be more than minimal. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame concerning the proposed activity's compliance with the terms and conditions of the NWPs, including the need for mitigation to ensure the net adverse environmental effects to the aquatic environment of the proposed activity are minimal. The district engineer will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed

immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.

3. In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.

4. Applicants are encouraged to provide the Corps with either electronic files or multiple copies of pre-construction notifications to expedite agency coordination.