URS, "Composite Wetland Delineation for the Newhall Ranch Resource Management and Development Plan Site and Entrada Planning Area" (2009)

COMPOSITE WETLAND DELINEATION

FOR THE

NEWHALL RANCH RESOURCE MANAGEMENT AND DEVELOPMENT PLAN SITE AND ENTRADA PLANNING AREA

Prepared for:

Newhall Land and Farming Company
23823 Valencia Blvd.
Valencia, CA 91355

Prepared by:

URS
130 Robin Hill Road, Suite 100
Santa Barbara, California 93117
(805) 964-6010 ◆ Fax: (805) 964-0259

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SECTION 1.0
INTRODUCTION

This composite wetland delineation has been prepared by URS Corporation (URS) on behalf of the Newhall Land and Farming Company (Newhall Land). The purpose of this document is to determine the location and extent of all lands within Newhall Land's Resource Management and Development Plan (RMDP) project site and the adjacent Entrada planning area (Figure 1) that would meet the federal definition of wetlands (see 33 CFR 328.3(b)) promulgated by the U.S. Army Corps of Engineers (Corps). The extent of wetlands presented in this document includes wetland boundaries delineated in previous studies, as well as boundaries delineated specifically for this report. The body of this report is organized in two parts: Part One describes the field study conducted specifically for this report, and Part Two integrates the results of that study with the results of previous investigations to create a comprehensive, composite wetland delineation for the entire project site.

1.1 BACKGROUND AND PURPOSE

In 2003, the Los Angeles County Board of Supervisors approved the Newhall Ranch Specific Plan (Specific Plan), which designated a portion of the currently undeveloped Newhall Ranch site near Valencia, California for residential and other urban uses. However, although approval from the County has been granted, build out of the Specific Plan development cannot proceed without compliance with federal and state statutes including the Clean Water Act and applicable sections of the California Fish and Game Code. Both of these statutes require project proponents to acquire authorizations prior to undertaking development activities that would affect waters and streambeds. To meet this need in a streamlined manner, Newhall Land has proposed the RMDP, a comprehensive, long-term permitting plan intended to obtain the required state and federal approvals to build out the site's infrastructure and urban land uses over the next 20 years as previously approved by Los Angeles County. Specifically, the RMDP would involve issuance of a long-term, Individual Section 404 Permit from the Corps and a Master Streambed Alteration Agreement from the California Department of Fish and Game (CDFG). For a more detailed description of the RMDP, please refer to Section 1.2 below, or to the RMDP technical document (Dudek 2006b).

As stated above, Newhall Land is currently in the process of obtaining the federal and state authorizations laid out in the RMDP. Because issuance of the requested permits could potentially result in significant effects on the environment, this process includes working with the Corps and CDFG to prepare a joint Environmental Impact Statement/Environmental Impact Report (EIS/EIR) as required by the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA). To assist preparation of the EIS/EIR, numerous jurisdictional delineations and studies have been conducted within the RMDP site

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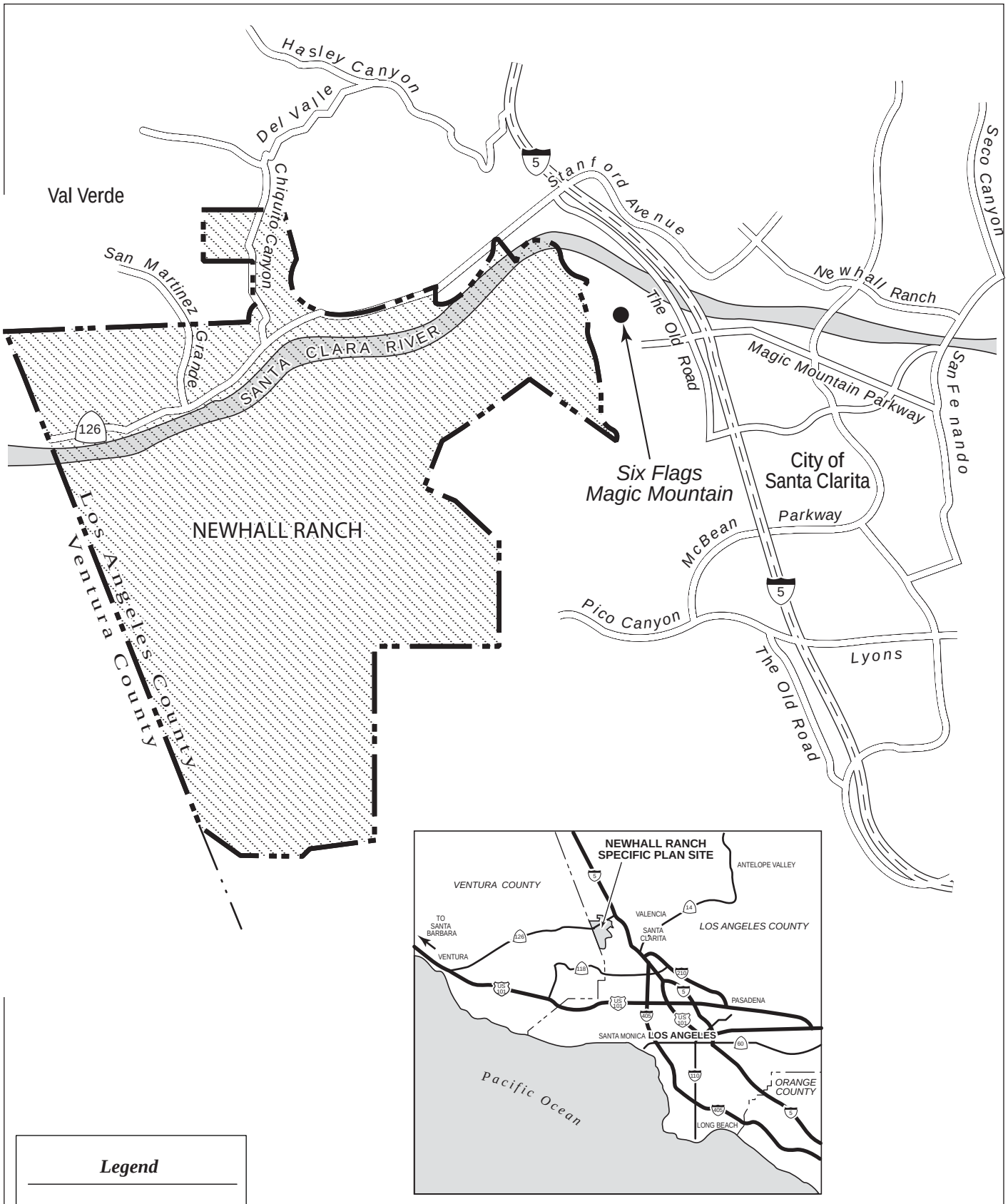

Legend

Newhall Ranch Boundary

Quadrangle Location

0 3500 7000

Feet

1 inch dquals 7,000 feet

Figure 1. Project Vicinity Map

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and Development Plan

over the last six years. However, not all of these studies addressed wetlands specifically, and some of the studies were limited to specific portions of the project area.

The most comprehensive jurisdictional delineation for the project was completed in 2004, when URS field mapped all jurisdictional rivers and streams within the RMDP project site. Concurrence with the mapped jurisdictional boundaries was received from the Corps and CDFG in 2004. However, while the 2004 delineation provided comprehensive coverage of the jurisdictional streams on-site, it did not address the presence of special aquatic sites, such as wetlands, within the project site. Because special aquatic sites are afforded additional legal protection beyond that extended to non-wetland waters of the U.S. under the Clean Water Act, it was determined that supplemental delineation work should be performed to identify the location and extent of federally protected wetlands on-site. The 2004 delineation was exhaustive in its treatment of CDFG jurisdictional streambeds on-site, and no additional delineation work is required with regard to those areas. Streambeds under the jurisdiction of CDFG are therefore not discussed further in this document. The wetland boundaries presented in this composite wetland delineation report are compiled from the following sources:

- The URS (2004) comprehensive delineation report, discussed above (Appendix D).
- A field delineation of wetlands within the Entrada portion of the project area conducted by Lukos and Associates in 2008 (Appendix E).
- Interpretation of high-resolution aerial photographs of the Santa Clara River within the RMDP site to obtain a planning-level delineation of wetlands, conducted jointly by URS and Dudek and Associates in 2006.
- A field delineation of on-site wetlands in certain portions of the project site where large-scale project facilities (i.e., bridges across the Santa Clara River mainstem) are proposed, conducted specifically for this composite wetland delineation report. For more information, please refer to Part Two of this document.

A report of the field delineations conducted specifically for this composite report in 2007 is presented in Part One, below. The results of that effort and the other surveys identified above are integrated into a single, project-wide plannning-level delineation in Part Two.

1.2 DESCRIPTION OF THE PROPOSED RMDP

The intent of the RMDP is to obtain comprehensive state and federal approvals to construct facilities needed to supply a portion of the infrastructure required to build out the Newhall Ranch Specific Plan site's urban land uses over the next 20 years as previously approved by Los Angeles County. The proposed RMDP project activities that may affect jurisdictional areas include construction and maintenance of bridges, bank stabilization, grade control structures, utility crossings, storm drains, building pads, debris and detention basins, and a

water reclamation plant outfall. Among the most prominent features proposed are three new roadway bridges across the Santa Clara River, and buried bank stabilization that would line a portion of the river and tributaries. A fully detailed description of the facilities proposed in the Newhall Ranch RMDP project can be found in the RMDP technical document (Dudek 2006b).

By seeking a long-term, comprehensive Section 404 permit and Master 1605 Agreement, Newhall Land can facilitate a well planned and streamlined environmental evaluation and decision process by the Corps and CDFG, and can provide an opportunity to design a long-term, regionally-based planning and mitigation program for impacts to the affected riparian habitats. The Section 404 permit and Master 1605 Agreement would allow project components to be implemented under a comprehensive set of specific conditions, thereby avoiding the traditional case-by-case permitting process, expediting the permitting process for qualified project components, and ensuring consistent mitigation.

The various components of the proposed RMDP would be constructed by Newhall Land or other private or public agencies. Third parties would be allowed to perform some of the activities (such as ongoing maintenance operations) authorized under the proposed Section 404 permit and Master 1605 Agreement issued to Newhall Land, but would be bound by the conditions in those permits.

SECTION 2.0
PART ONE: URS CORPORATION 2007 FIELD DELINEATION OF WETLANDS IN PROPOSED BRIDGE ALIGNMENT AREAS

This Part presents the methods and results of field investigations for wetlands conducted by URS staff in portions of the RMDP site where large-scale facilities, such as bridges across the Santa Clara River mainstem, are proposed that would potentially impact any wetlands present. Field investigations were conducted in August, 2007.

2.1 STUDY AREA

The study area assessed in the 2007 field delineation (Part One study area) consists of four discrete locations within the RMDP project site, including three proposed bridge locations and one area where proposed bank stabilization would impact existing riparian vegetation (Figure 2). From west to east, these locations include: the Potrero Canyon Road bridge alignment (actually two alternative alignments, but located in the same general area); the Onion Fields bank stablization area; the Long Canyon Road bridge alignment; and the southern abutment of the Commerce Center Drive bridge. All four of these locations that comprise the Part One study area are located immediately adjacent to the Santa Clara River mainstem within the RMDP site.

As shown on Figure 2, the Santa Clara River traverses the RMDP site from east to west and is the dominant hydrologic feature on the site. The current and historic river floodplain are evident from the the existing hydrology, sediment deposition, topographic gradients, and the residual disjunct riparian vegetation. Row-crop agricultural fields are situated on the historic floodplain and adjacent historic river terraces, especially on the north side of the river where the dominant topography is flat to slightly sloping. On the south side of the river, the presence of steeper canyons reduces the available agricultural land near the Santa Clara River. Oil production is the dominant land use in the southern hills, although some of the larger mesas are actively farmed.

Descriptions of the four locations that comprise the Part One study area are provided below. The study area boundary for each of the locations includes the disturbance footprint for the project component proposed at that location (bridge or bank stabilization) and a 100-foot buffer surrounding the footprint.

2.1.1 Potrero Canyon Road Bridge Alignment

The Potrero Canyon Road bridge alignment study location is located in the western portion of the RMDP site at the mouth of Potrero Canyon (Figure 2). This 7.97-acre study location contains the disturbance footprints (including buffers, as described above) of two alternative bridge alignments which will be evaluated in the joint EIS/EIR for the RMDP project. This

0 455 910 1,820

Feet

1 inch equals 1,525 feet

Legend

Newhall Ranch Boundary

Bridge Alignment Alternatives and Bank Stablization

Aerial Interpreted River

Basemap

Aerial flown by Robert J. Lung & Associates, 5/24/2006, 0.5ft resolution

Castaic Creek

Commerce Center Bridge

Santa Clara River

State Route 126

Long Canyon Bridge

Onion Field
Bank Stablization

Santa Clara River

Potrero Canyon Bridge

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Figure 2. Project Location Map

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location includes a portion of the Santa Clara River, its floodplain, and riparian, agricultural, and upland sage scrub vegetation. Current land uses within the Potrero Canyon Road bridge study location include agriculture, grazing, and open space.

The majority of the Potrero Canyon Road bridge study location is composed of a flat to slightly sloping floodplain comprised of a main channel and several secondary channels separated by long, narrow sandbars. The study location spans the active channel, and extends into the adjacent uplands on the northern and southern banks. The dynamic nature of the river prevents vegetation within the channel from reaching maturity and limits the type of vegetation to riparian scrub communities, which occur on stable sandbars and terraces within the active channel. Along the banks of the river, mature vegetation communities including cottonwood/willow riparian forest are present. The area beyond the northern bank includes riparian scrub and riparian forest vegetation that are currently separated from the main channel by agricultural fields. The southern bank at this location contains a slightly sloping terrace that begins near a dry secondary channel along the edge of the River and continues south toward a ranch road. This area is within the Santa Clara River floodplain and is dominated by mature riparian forest. Additionally, riparian scrub vegetation occurs in a drainage ditch adjacent to a ranch road in the southernmost portion of the Potrero Canyon Road bridge study location.

2.1.2 Onion Fields Bank Stablization Site

The Onion Fields bank stabilization study location is located in the western portion of the RMDP site approximately 0.5 miles east of the proposed bridge across the river at Potrero Canyon Road and 30 feet south of the Santa Clara River (Figure 2). This 3.13 acre study location covers an oval shaped area between the river and an east-west trending ranch road. The study location is partly elevated above the Santa Clara River floodplain due to an upward-sloping bank. The majority of the study location is composed of a flat to moderately sloping river terrace containing mature riparian forest. The current land use within the Onion Fields study location is open space, although a dirt road and an irrigated agricultural field occur immediately adjacent to this location.

2.1.3 Long Canyon Road Bridge Alignment

The Long Canyon Road bridge alignment study location is situated in the middle portion of the project site, approximately 1.25 miles east of the proposed bridge across the river at Potrero Canyon Road (Figure 2). This 2.1 acre study area contains the proposed alignment for the Long Canyon Road bridge across the Santa Clara River, including a 100-foot buffer surrounding the proposed disturbance footprint. Within this area, ground covers include the active channel, riparian corridor, and floodplain of the Santa Clara River, and adjacent fallow agricultural fields. Current land uses within the Long Canyon Road bridge alignment study location include agriculture, cattle grazing, and open space.

The majority of this study location is composed of a flat to slightly sloping floodplain containing a primary channel and several secondary channels separated by sandbars. The floodplain is dominated by riparian scrub habitat. There is a river terrace approximately 12 feet high along the southern part of the study area that is situated above the current floodplain. This terrace is also dominated by riparian scrub vegetation. The northernmost and southernmost portions of the study location (ends of the proposed bridge) currently contain row-crop agricultural fields.

2.1.4 Southern Abutment of Commerce Center Drive Bridge

The Commerce Center Drive bridge alignment study location is located very close to the eastern boundary of the RMDP site (Figure 2.) The approximately 2.94 acre study area includes the disturbance footprint for the southern abutment of the Commerce Center Drive bridge across the river, including a 100-foot buffer (The study location was limited to the southern abutment because Newhall Land already holds a valid Section 404 Permit and Streambed Alteration Agreement for the remainder of the bridge, and only the southern abutment would require authorization under the proposed RMDP.). Land covers within the study location include the Santa Clara River, its floodplain, and riparian and sage scrub vegetation. Current land uses within the Commerce Center Drive bridge study location include agriculture and open space.

The majority of the Commerce Center Drive bridge study location is composed of a flat to slightly sloping floodplain dominated by riparian scrub vegetation. The southernmost portion of the study location includes part of a hill dominated by upland sage scrub vegetation.

Pursuant to Section 404 of the Clean Water Act (CWA), the Corps regulates the discharge of dredged and/or fill material into waters of the U.S., including navigable waterways and wetlands adjacent to navigable waterways; relatively permanent, non-navigable tributaries to navigable waterways; and wetlands adjacent to non-navigable waters that are contiguous with navigable waterways. The CWA states that the Corps may only issue a Section 404 Permit for the Least Environmentally Damaging Practicable Alternative (LEDPA), and the U.S. Environmental Protection Agency (EPA) has established guidelines [404(b)(1) Guidelines] enabling the Corps to compare alternatives to a proposed discharge and determine the LEDPA. Certain high-value aquatic resource areas, termed Special Aquatic Sites, are given additional protection by the 404(b)(1) Guidelines and avoidance is required if practicable. Special Aquatic Sites are defined to include wetlands, mudflats, vegetated shallows, riffle/pool complexes, coral reefs, and sanctuaries and refuges. Of these features, only wetlands occur within the RMDP project area.

2.1.5 Wetland Defined

Wetlands are defined by 33 CFR 328.3(b) as “those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under

normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions" (Environmental Laboratory 1987). In 1987, the Corps published the *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987; Wetland Delineation Manual) to guide its field personnel in determining jurisdictional wetland boundaries. In 2006, the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2006; Arid West Regional Supplement) was published by the Corps for use in California (Region 0) as a complement to the Wetland Delineation Manual. Where differences occur within the two documents, the Arid West Regional Supplement takes precedence. The methodology set forth in the Wetland Delineation Manual and the Arid West Regional Supplement requires that to be considered a wetland, the vegetation, soils, and hydrology of an area must exhibit at least minimal hydric characteristics. While the Wetland Delineation Manual and Arid West Regional Supplement provide great detail concerning methodology and allow for varying special conditions, a wetland should normally meet each of the following three criteria: Hydrophytic Vegetation, Hydric Soils, and Wetland Hydrology. These wetland parameters are discussed in greater detail below.

2.1.5.1 Hydrophytic Vegetation

In order for a site to meet the CWA definition of a wetland, the site must exhibit a prevalence of hydrophytic vegetation. A site is usually considered to have a prevalence of hydrophytic vegetation when 50 percent or more of the dominant plant species of a specific community are classified as obligate, facultative-wetland, or facultative (excluding FAC-) according to the *National List of Plant Species That Occur in Wetlands* (Reed 1988). This list divides plants into five categories that reflect the range of estimated probabilities (expressed as a frequency of occurrence) of a species occurring in a wetland versus a non-wetland.

These categories are as follows:

- **Obligate Wetland (OBL)** – Occur almost always (estimated probability >99 percent) under natural conditions in wetlands.
- **Facultative Wetland (FACW)** – Usually occur in wetlands (estimated probability 67 percent to 99 percent), but occasionally found in non-wetlands.
- **Facultative (FAC)** – Equally likely to occur in wetlands or non-wetlands (estimated probability 34 percent to 66 percent).
- **Facultative Upland (FACU)** – Usually occur in non-wetlands (estimated probability 67 percent to 99 percent), but occasionally found in wetlands.
- **Obligate Upland (UPL)** – May occur in wetlands in another region, but occur almost always (estimated probability >99 percent) under natural conditions in non-wetlands in southern California.

A positive sign (+) or negative sign (-) can be used with the Facultative Wetland, Facultative, and Facultative Upland categories to more specifically define the likelihood of occurrence toward the higher or lower end of the category (positive sign indicates a higher probability that the species occurs in wetlands).

2.1.5.2 Hydric Soils

A hydric soil is defined by the National Technical Committee for Hydric Soils as a soil that formed under conditions of saturation, flooding, or ponding long enough during the growing season to develop anaerobic conditions in the upper part (NRCS 1994). A hydric soil may be drained or undrained, and a drained hydric soil may not continue to support hydrophytic vegetation yet still retain the appearance of a hydric soil.

The following indicators are used as a guide to determine whether a given soil meets the criteria for hydric soils. These indicators are listed in decreasing order of importance and reliability. In most situations, only one of these indicators is required to make a positive determination.

- Presence of organic soils (Histosols) or soils that have more than 50 percent (by volume) of the upper 32 inches of soil is composed of organic soil materials
- Presence of histic epipedons (i.e., layers of organic matter in the upper soil) that are saturated for 30 days or more during the growing season
- Presence of sulfidic material or odors indicating anaerobic conditions
- Presence of an aquic or peraquic regime in which oxygen in the upper soil has been displaced by surface water or groundwater saturation that causes anaerobic conditions
- Evidence of chemically reducing conditions in the soil based on chemical tests
- Presence of gleyed soil conditions or soils with bright mottles and/or low matrix chroma
- Soils that occur on the National Technical Committee for Hydric Soils list of hydric soils
- Presence of manganese and iron concretions
- Presence of high amounts of organic matter in the upper soil and/or organic matter streaking (sandy soils only)

2.1.5.3 Wetland Hydrology

The term “wetland hydrology” indicates that the hydrology of an area is periodically inundated or that it has soils saturated to the surface at some time during the growing season. Wetlands are characterized by various hydrologic regimes that range from permanently inundated to irregularly inundated or saturated. In other words, some wetlands are always wet while other wetlands may contain water during only part of the year. The minimum threshold for wetland

hydrology under most circumstances is inundation or saturation within 12 inches of the surface for more than five percent of the growing season (Environmental Laboratory 1987). The growing season is defined as the duration between the last freeze of the spring and the first freeze of the fall.

A list of field indicators of wetland hydrology is presented below in decreasing order of importance and reliability:

- Recorded data on inundation or soil saturation from wells or gauges
- Visual observation of inundation or soil saturation within 12 inches of the surface
- Water marks on stems and fixed objects
- Drift lines consisting of debris and waterborne material
- Sediment deposition
- Visual evidence of surface flows and ponding

Secondary indicators, of which two or more are required in order to meet the hydrology criterion, include the following:

- Oxidized root channels in the upper 12 inches of the soil
- Water-stained leaves
- Local soil survey data
- Other site-dependant features based on the professional judgment of the delineator

According to the Wetland Delineation Manual, wetland hydrology can be inferred indirectly if *all* of the dominant plants in an area are obligate (OBL) species.

2.1.6 SWANCC Decision

Although not related to the three parameters discussed above, the Corps' jurisdiction over wetlands is also limited by legal interpretations of the CWA statute and associated regulations. In 2001, the United States Supreme Court stated in *Solid Waste Agency of Northern Cook Cty. v. Army Corps of Engineers* (531 U.S. 159, 168 (2001)), that the Corps' CWA jurisdiction does not extend to ponds that "are not adjacent to open water," and determined that the Corps exceeded its statutory authority by asserting CWA jurisdiction over "an abandoned sand and gravel pit in northern Illinois, which provides habitat for migratory birds." In reaching its decision, the Court concluded that the "Migratory Bird Rule," which served as the basis for the Corps' asserted jurisdiction, was not supported by the CWA. The Migratory Bird Rule extended CWA jurisdiction to intrastate waters "which are or would be used as habitat by birds protected by Migratory Bird Treaties or which are or

would be used as habitat by other migratory birds which cross state lines..." (Id. at p. 164). This decision stands for the proposition that non-navigable isolated, intrastate waters lacking interstate commerce connections other than potential to be used by migratory waterfowl are not waters of the United States and thus are not jurisdictional under the CWA.

2.1.7 Rapanos/Carabell Decision

In another example, in 2006 the United States Supreme Court decided Rapanos v. United States, 126 S.Ct. 2208 (2006) ("Rapanos"), consolidated cases regarding the extent of the Corps' jurisdiction over waters of the United States under the CWA. The court issued no majority opinion in Rapanos. Instead, the justices authored five separate opinions including the "plurality" opinion, authored by Justice Scalia (joined by three other justices), and a concurring opinion by Justice Kennedy. To guide implementation of the decision, the Corps issued a memorandum stating that "regulatory jurisdiction under the CWA exists over a water body if either the plurality's or Justice Kennedy's standard is satisfied" (Corps, CWA Jurisdiction Following the United States Supreme Court's Decision in Rapanos v. United States & Carabell v. United States, December 2, 2008, ["Rapanos Guidance Memorandum"]).

According to the plurality opinion in Rapanos, "'the waters of the United States' include only relatively permanent, standing or flowing bodies of water" and do not include "ordinarily dry channels through which water occasionally or intermittently flows" (Rapanos, 126 S. Ct. 2208, 2221). In addition, while all wetlands that meet the Corps' definition are considered adjacent wetlands, only those adjacent wetlands that have a continuous surface connection because they directly abut the tributary (e.g., they are not separated by uplands, a berm, dike, or similar feature) are considered jurisdictional under the plurality standard (Rapanos Guidance Memorandum, p. 7).

Under the Kennedy approach, "the Corps' jurisdiction over wetlands depends upon the existence of a significant nexus between the wetlands in question and navigable waters in the traditional sense" (Rapanos 126 S.Ct. 2208, 2248). "Wetlands possess the requisite nexus, and thus come within the statutory phrase 'navigable waters,' if the wetlands, 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.' When, in contrast, wetlands' effects on water quality are speculative or insubstantial, they fall outside the zone fairly encompassed by the statutory term "navigable waters" (Ibid.). Justice Kennedy identified "pollutant trapping, flood control, and runoff storage" as some of the critical functions wetlands can perform relative to other waters (Id. at p. 2248). He concluded that, given wetlands' ecological role, "mere adjacency" to a non-navigable tributary was insufficient to establish CWA jurisdiction, and that "a more specific inquiry, based on the significant nexus standard, is therefore necessary" (Id. at pp. 2249-2252).

Interpreting these decisions, and according to the Rapanos Guidance Memorandum, the Corps and EPA will assert jurisdiction over the following waters:

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

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

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

Where a significant nexus analysis is required, the Corps and EPA will apply the significant nexus standard as follows:

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

The Corps and EPA generally will not assert jurisdiction over the following features:

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

A wetland delineation of potentially jurisdictional features was conducted in the study area in accordance with the procedures of the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), Department of the Army (DOA) *Clarification and Interpretation of the 1987 USACE Wetland Delineation Manual* (DOA 1992), and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid*

West Region (USACE 2006; Arid West Region Supplement). In addition, the United States Geologic Society (USGS) Val Verde, CA (1995) and Newhall, CA (1995) 7.5 minute topographical quadrangle maps, Soil Survey Geographic Database for the San Francis Area, CA (NRCS 2007), and a high quality aerial photograph of the RMDP project site and the surrounding area (Psomas 2003) were utilized in the delineation. Field surveys were conducted by URS staff on September 25, 26, and 28 and included senior biologists John Davis IV, Johanna Kisner, and Erik Larsen and staff biologists Julie Love, Laura Rizzo, and Wayne Vogler. As described above the study area included four discrete locations, each of which contained the disturbance footprint for a proposed project facility (bridge or bank stabilization) and a 100-foot buffer.

The delineation of wetlands within the study area was complicated because the majority of the study locations were located within the active and/or historic floodplain of the Santa Clara River. Sandy soils and current agricultural uses within the floodplain added to the complexity. To address the challenges presented by sandy soils, the wetland delineation included an evaluation of "problem areas" where appropriate. Areas containing high concentrations of sandy soil were analyzed conservatively for evidence of hydric conditions as specified in the Arid West Region Manual. Agricultural operations have greatly changed the vegetation, soil, and hydrology within the RMDP site. In many areas, agricultural fields are located within the historic river floodplain and often physically isolate on-site hydrophytic vegetation from the river's potential hydrologic influence. Although row-crop agricultural fields within the Santa Clara River floodplain have affected the extent to which flood flows can access floodplain areas beyond the active channel, the RMDP site has been an agricultural operation for many decades, and the existing condition represents "normal circumstances" on the site.

Data collected during the assessment of wetlands were recorded on Wetland Determination Data Forms – Arid West Region Supplement (Corps 2006). Sample point locations were selected for both potential wetland and upland areas to determine the wetland/upland boundary and characterize the vegetation, soils, and hydrology of the area. Soil pits were excavated in areas supporting hydrophytic vegetation to determine the extent of saturation and to examine the soil for positive indicators of hydric soils and wetland hydrology. Soil pits were also excavated in upland areas adjacent to wetlands to aid in delineating the extent of jurisdictional wetlands. At each sample point, plant species composition and indicators of hydric soil and wetland hydrology were recorded. Data forms completed for wetland analysis are included in Appendix A.

Thirty-six sampling points were analyzed to determine boundary between wetland and upland portions of the four study locations. Sample points PC-1 through PC-20 (20 sample points) characterize the Potrero Canyon Road bridge alignment study location; BS-1 (one sample point) characterizes the Onion Fields bank stabilization study location; LC-1 through LC-8 (eight sample points) characterize the Long Canyon Road bridge alignment study

location; and, CC-1 through CC-7 (seven sample points) characterize the study location at the southern abutment of the Commerce Center Drive bridge. To the maximum extent possible, paired upland and wetland sample points were taken. Sample point locations were captured in the field using a Trimble GeoExplorer Series 2003 GPS unit capable of sub-meter accuracy and were plotted on aerial photographs overlaid with the approximate bridge and bank stabilization footprints and study location boundaries. A sample point was considered to be within a wetland (an "in" point) if the area met all three wetland parameters: dominance by wetland plant species; positive wetland hydrology indicators; and hydric soil conditions. If one or more of these parameters was not met, the point was considered not to be within a wetland (an "out" point) and a line was drawn between the two sample points on the site specific aerial photograph.

2.2 METHODS

2.2.1 Vegetation

Prior to field investigations, URS staff obtained a vegetation map of the entire RMDP project area in GIS format prepared for Newhall Land by Dudek and Associates (2006). The classification system used for the vegetation map is a combination of the established Holland (1986) and Sawyer and Keeler-Wolf (1995) classification systems. This map was used in conjunction with high-resolution aerial photos of the site to predict areas likely to contain wetlands, and to ensure that areas containing riparian vegetation communities were thoroughly sampled during field investigations. At each sampling point, the dominant plant species within each stratum (tree, shrub, herb, woody vine) were determined using the 50/20 rule and were identified to the species level. The wetland status of dominant plant species present at each sampling point was determined using the *National List of Species That Occur in Wetlands: California (Region 0)* (Reed 1988). As defined in Section 2: Regulatory Setting, this list assigns each plant species an indicator status of OBL, FACW, FAC, FACU, or UPL. When more than 50 percent of the dominant plants consisted of species rated OBL, FACW, or FAC (excluding FAC-), the vegetation at the sampling location was classified as "hydrophytic vegetation" in accordance with the Wetland Delineation Manual and Arid West Regional Supplement.

2.2.2 Soils

At each sample point, a delineation shovel was used to dig a pit at least 12 inches in depth, and an intact soil sample allowing inspection of the soil profile was extracted where possible. The characteristics of on-site soils were compared to the literature results obtained from the *NRCS Soil Survey Geographic Database, San Francis Area, CA* (NRCS 2007) for the study area. The soil profiles were examined for indicators of hydric soils and to determine if the on-site soils were consistent with the USDA soils map of the area. Soil characteristics assessed were soil color, texture, and the presence of mottles, organic matter, and other

indicators of hydric soils as listed on the Corps' Wetland Determination Data Forms for the Arid West region. A Munsell® Soil Color Chart (Munsell Color 2000) was used in the field to identify the color of soil and to assist in soil type verification and the color of mottles, where present.

2.2.3 Hydrology

Each sample point was examined for positive field indicators of wetland hydrology. The soil pit was examined for standing water or saturation, and the surrounding area was investigated for hydrologic indicators as specified on the Wetland Delineation Data Forms, including water marks, sediment deposits, drift lines, and other primary and secondary indicators of wetland hydrology.

2.2.4 Classification of Wetlands

After Corps-jurisdictional wetlands were delineated in the field, URS staff classified the delineated areas into wetland classes using *Classification of Wetlands and Deepwater Habitats of the United States* (Cowardin *et al.* 1979). This classification system, used by the U.S. Fish and Wildlife Service (USFWS), classifies wetlands[1] into systems and subsystems based on the type of aquatic feature with which the wetland is associated (the five systems are marine, estuarine, lacustrine, riverine, and palustrine) and then further assigns classes subclasses, and dominance types to wetlands within each system and subsystem. As the study area does not include any marine, estuarine, or lacustrine (lake) environments, Corps-jurisdictional wetlands on-site are limited to the riverine and palustrine (vegetated fringe) systems. The palustrine system includes wetlands that are dominated by trees, shrubs, or persistent emergent vegetation, and includes classes such as aquatic bed, scrub-shrub wetland and forested wetland. Because the classification system is open-ended beyond the class level, site-specific subclasses were defined based on vegetation communities present within the study area. Wetlands delineated were classified into two classes and three subclasses, which are described below.

Class: Scrub-shrub Wetland. Scrub-shrub Wetlands include areas dominated by woody vegetation less than 6 meters (20 feet) tall, including both shrubs and young trees. Dominant species include true shrubs, young trees, and trees or shrubs that are small or stunted because of environmental conditions. Scrub-shrub Wetlands may represent a successional stage leading to the Forested Wetland class, or they may be relatively stable communities. Scrub-Scrub Wetlands are one of the most widespread classes in the United States (Cowardin *et al.* 1979).

[1] It should be noted that, because the USFWS uses a different definition of wetlands than does the Corps, not all wetlands classified by the Cowardin *et al.* method meet the three-parameter regulatory definition of wetlands promulgated by the Corps and used by URS in this delineation of wetlands within the study area.

Subclass: Riparian Scrub. Within the study area, narrow-leaved deciduous scrub-shrub wetland plant communities dominated by mule fat (*Baccharis salicifolia*), narrowleaf willow (*Salix exigua*), red willow (*Salix laevigata*), arroyo willow (*Salix lasiolepis*), tamarisk (*Tamarix* spp.), giant reed (*Arundo donax*), white sweetclover (*Melilotus alba*), Fremont cottonwood (*Populus fremontii*), salt grass (*Distichlis spicata*), and cattail (*Typha* spp.) were classified as Riparian Scrub Wetland. Although the majority of these species are native to the area, white sweet clover, giant reed, and tamarisk are non-native. Giant reed and tamarisk are also considered to be invasive species by the California Invasive Plant Council (Cal-IPC 2007). The riparian scrub canopy within this community was partially open and dominated by shrubs and tree saplings with an herbaceous understory.

Subclass: Ruderal. Ruderal vegetation generally occurs in areas of past or chronic disturbance, and is characterized by the presence of species adapted to such conditions. Many of the plant species occurring in ruderal communities are non-native, and the habitat quality associated with this vegetation type is generally low. Although most ruderal plant communities occur in upland areas, portions of the study area contain ruderal vegetation dominated by hydrophytic species. The dominant vegetation included mule fat and Bermuda grass (*Cynodon dactylon*). Bermuda grass is an invasive species (Cal-IPC 2007). Many other non-native grasses were present, but in minor amounts. This vegetation may occur when contiguous areas of riparian vegetation are disrupted and fragmented by human alterations, facilitating invasion by non-native plants.

Class: Forested Wetland. The class Forested Wetland is characterized by woody vegetation that is six meters tall or taller. Forested Wetlands are most common in the eastern United States and in those sections of the West where moisture is relatively abundant, particularly along rivers and in the mountains. Forested Wetlands occur only in the palustrine and estuarine systems and normally possess an overstory of trees, an understory of young trees or shrubs, and a herbaceous layer (Cowardin *et al*. 1979).

Subclass: Riparian Forest. This subclass includes broad-leaved deciduous riparian forest vegetation, such as that observed on banks along the Santa Clara River within the study area. The dominant hydrophytic species within this wetland subclass on-site included Fremont cottonwood, mule fat, and an unidentified grass. The riparian forest vegetation contained a closed canopy that was dominated by mature trees and a thick ground cover consisting mostly of leaf litter and woody debris. Sporadic mulefat and California rose (*Rosa californica*) shrubs and grasses were also present in the open areas that received sufficient sunlight.

2.3 WETLAND DELINEATION RESULTS

A total of 9.06 acres of Corps jurisdictional wetlands were delineated in the four discrete study locations that comprise the Part One study area. Table 1 provides a summary of wetlands observed within each study location by wetland subclass.

TABLE 1
SUMMARY OF JURISDICTIONAL WETLANDS ACREAGE
PER STUDY LOCATION AND VEGETATION TYPE

	USACE Jurisdictional Wetlands by Vegetation Type			
Study Areas	Riparian Scrub	Riparian Forest	Ruderal	Total
Potrero Canyon Road Bridge Alignment	3.82 acres	0.56 acre	0.51 acre	4.89 acres
Onion Field Bank Stabilization	--	--	--	0.00 acre
Long Canyon Road Bridge Alignment	1.33 acres	--	--	1.33 acres
Southern Abutment of Commerce Center Bridge	2.84 acres	--	--	2.84 acres
Total Wetland Acres				9.06 acres

An overview of conditions related to hydrology, vegetation, and soils within the study area is presented below, followed by a determination of the extent of jurisdictional wetlands at each study location. The study area overview is based on a combination of literature reviews and field verifications of vegetation, soils, and hydrology that occur within the boundaries of the study area. The determination of wetlands provides an assessment and reasoning for the delineation of jurisdictional areas. The determination is further supported by vegetation, soils, and wetland delineation maps.

2.3.1 Study Area Overview: Vegetation

The vegetation map of the RMDP site (Dudek 2006) shows eight vegetation/land cover occurring within the four locations that comprise the study area, including arrow weed scrub, mulefat scrub, cottonwood/willow riparian forest, herbaceous wetlands, riverwash, California sagebrush scrub, and agricultural and disturbed lands. These vegetation types can be generally divided into two main categories: riparian communities, which generally occur within and adjacent to areas of ponded or flowing water, and upland communities, which do not. Descriptions of these vegetation types, including mapped locations within the study area and dominant species present, are provided below. A list of all plant species observed in the four locations that comprise the Part One study area and their wetland indicator status is presented in Appendix B.

2.3.1.1 Riparian Communities

Based on the vegetation map of the RMDP site (Dudek 2006) five different riparian plant communities occur within the study area. Several of the sample points were located within these vegetation communities, and some of the areas sampled exhibited a predominance of hydrophytic vegetation. However, because not all of the areas within riparian communities were dominated by hydrophytic species, and because hydrophytic vegetation is only one of the three required wetland parameters, not all areas mapped as riparian vegetation are Corps-jurisdictional wetlands. The five riparian plant communities occurring within the study area are described below.

Arrow Weed Scrub. This vegetation type occurs in moderate to dense thickets along stream banks, and is dominated by arrow weed (*Pluchea sericea*). Arrow weed scrub is fairly common is southern California, occurring along sandy streambeds, ditches, and washes. In addition to arrow weed, species commonly found within this community include salt grass, narrow-leaved willow (*Salix exigua*), tamarisk (*Tamarix* spp.), rushes (*Juncus* spp.), and slender cattail (*Typha domingensis*) (Holland 1986). Within the study area, arrow weed scrub occurs in a depression between an agricultural road and a cottonwood/willow riparian forest community at the Potrero Canyon Road bridge alignment study location.

Mulefat Scrub. This relatively dense, shrubby riparian plant community occurs on river terraces, atop the banks of stream channels and in floodplain areas that are open or disturbed. It is dominated by mulefat (*Baccharis salicifolia*) although arroyo willow (*Salix lasiolepis*) individuals, upland shrubs, and facultative herbs are often present in limited numbers (Holland 1986). In areas of human disturbance, non-native annual grasses are frequently present as well. Frequent flooding and/or scouring often maintain this community in an early successional state, limiting the height of the shrubs. Within the study area, mulefat scrub occurs at the Potrero Canyon Road bridge alignment in a relict floodplain area; and at the Long Canyon Road bridge alignment adjacent to the active river channel.

Cottonwood/Willow Riparian Forest. This mature riparian community is a tall, open, broad-leafed winter-deciduous riparian forest dominated by Fremont cottonwood trees (*Populus fremontii)* and various species of willow (Holland 1986). It occurs commonly on stream banks and in floodplain areas where flooding occurs periodically but not so frequently as to preclude the development of mature trees. The understory within this community can be varied, containing riparian and upland shrub and herb species including Great Basin sagebrush (*Artemisia tridentata*), quail bush (*Atriplex lentiformis*), coyote brush (*Baccharis pilularis*), scale-broom (*Lepidospartum squamatum*), California mugwort (*Artemisia douglasiana*), wild cucumber (*Marah marcocarpus*), and many others. Within the study area, cottonwood/willow riparian forest occurs at all four study locations in portions of the Santa Clara River floodplain, and is the most abundant plant community at the Commerce Center Drive and Onion Fields study locations.

Herbaceous Wetland. This vegetation does not conform to a CDFG-defined vegetation community classification, and appears to be an early seral form of riparian vegetation that occurs in perennial stream channels where recent flooding has resulted in substantial scour or sediment deposition. Herbaceous wetlands commonly include thick stands of native seedlings and saplings, including Fremont cottonwood, willows, and mulefat; native herbaceous species, such as broad-leaved cattail (*Typha latifolia*), Hooker's evening primrose (*Oenothera elata*), and bulrushes (*Scirpus* ssp.); and non-native species, including water cress (*Rorippa nasturtium-aquaticum*), curly dock (*Rumex crispus*), and tamarisk (*Tamarix* spp.). Within the study area, herbaceous wetlands occur within the active channel of the Santa Clara River at the Potrero Canyon Road, Long Canyon Road, and Commerce Center Drive bridge locations, but are not present at the Onion Fields study location.

River Wash. This land cover does not conform to a CDFG-defined vegetation community classification, and is characterized by unvegetated or sparsely vegetated substrate within stream channels. Such areas may contain seedlings, sparse grasses, and forbs, which often begin colonize the channel after storm events, but mature vegetation is absent due to scouring by seasonal storm flows. River wash is a naturally dynamic habitat which may vary in location and extent depending on local hydrology and long-term and seasonal precipitation patterns. Within the study area, river wash is present within the active channel of the Santa Clara River at the Potrero Canyon Road, Long Canyon Road, and Commerce Center Drive bridge locations, but is absent at the Onion Fields study location.

2.3.1.2 Upland Communities

According to the vegetation map of the RMDP site (Dudek 2006), upland land covers within the study area consisted of California sagebrush scrub and agricultural/disturbed lands. These vegetation types are not typically associated with wetlands, and hydrophytic species are usually not present within these habitats.

California Sagebrush Scrub. This scrub community described by Sawyer and Keeler-Wolf (1995) is dominated California sagebrush (*Artemisia californica*). Other native shrub species present commonly include sages (*Salvia* spp.), California buckwheat (*Eriogonum fasciculatum*), and Mexican elderberry (*Sambucus mexicana*), and components occurring between and beneath these shrubs can include California wishbone-bush (*Mirabilis laevis* var. *crassifolia*), yellow pincushion (*Chaenactis glabriuscula*), lacy phacelia (*Phacelia tanacetifolia*), long-stem golden yarrow (*Eriophyllum confertiflorum*), common forget-me-not (*Cryptantha intermedia*), common owl's clover, deerweed (*Lotus scoparius*), and wild cucumber (*Marah macrocarpus*). Non-native species that commonly occur within California sagebrush scrub communities include red-stemmed filaree (*Erodium cicutarium*), short-podded mustard (*Hirschfeldia incana*), horehound (*Marrubium vulgare*), and tree tobacco (*Nicotiana glauca*). Within the study area, California sagebrush scrub occurs in the extreme southern portions of the Potrero Canyon and Commerce Center Drive study locations,

farthest from the river channel. None of the dominant species observed in this community were hydrophytic, and sampling points within sagebrush scrub were not found to exhibit a prevalence of hydrophytic vegetation.

Agricultural and Disturbed Lands. These land covers do not occur naturally, but are instead the result of farming, ranching, oil and gas production, and other human activities. Agricultural and disturbed lands within the study area are are typically either unvegetated, as is the case with fallow farm fields and operations areas, which are intentionally kept clear of vegetation; or are vegetated with row crops. However it is possible for non-agricultural species (both native and non-native) to colonize agricultural lands, especially when fields are fallow or not in service. Lands disturbed by non-agricultural activities, such as oil production, are often graded, compacted, and kept free of vegetation while operations are active. When oil activities cease, these areas often become invaded by ruderal vegetation such as bromes (*Bromus* spp.), wild oats (*Avena barbata*), and Russian thistle (*Salsola tragus*). Within the study area, areas mapped as agricultural and disturbed lands occur in association with farm fields and associated roads within the Potrero Canyon Road and Long Canyon Road bridge alignments, and at the Onion Fields bank stabilization location. This land cover was dominated by goose grass (*Eleusine indica*), bluegrass species (*Poa* spp.), and crowfoot grass (*Dactyloctenium aegyptium*) at the Potrero Canyon location, and by many unidentified annual grass species and tilled earth at the Long Canyon location.

2.3.2 Study Area Overview: Soils

According to the Soil Survey of San Francis Area, California (USDA 2007), a total of four soil mapping units were identified as occurring in the study area. Of the four, only Sorrento loam is considered to be a true soil type, or a land composition capable of supporting plant life. The other three (Riverwash, Sandy Alluvial Lands, and Terrace Escarpments) are considered land types rather than soils. Land types are defined as areas of frequent disturbance and/or areas harsh to plant life (ice fields, beach sands, riverbeds, etc.). All soils and land types mapped within the study area are described below.

2.3.2.1 Sandy Alluvial Lands

Sandy Alluvial Lands contain alluvial sand, gravel, and cobbles deposited in irregular layers, but do not flood during normal flow periods. Vegetation supported by this land type is sparse, and often consists of scattered sagebrush, small trees, and annual grasses and forbs. This land type is included on the National Hydric Soils List due to frequent flooding and ponding, and occurrence in areas with a high water table. The Sandy Alluvial Lands land type was the dominant “soil type” in the study area according to the County Soil Survey, and occurs throughout the Santa Clara River floodplain in the project region. Because this land type contains a high concentration of fine to coarse sand, hydric soil indicators are often challenging to observe while conducting field investigations in Sandy Alluvial Lands. Soils

in these areas were therefore treated as "Problem Areas," as specified in the Wetland Delineation Manual.

2.3.2.2 Riverwash

The Riverwash land type consists of sand, gravel, and cobblestones in active stream channels. Rocks and sand are constantly being removed and redeposited in the channel during periods of active flow. Riverwash typically supports very little vegetation due to the instability of the substrate; however, willows, sagebrush, and other plants may be found growing on this land type (SCS 1972). This land type is included on the National Hydric Soils List due to occurrence in areas of frequent flooding and high water table. According to the County Soil Survey, the Riverwash land type was the dominant "soil type" in the vicinity of the Long Canyon Road bridge alignment, occurring throughout the full extent of the Santa Clara River floodplain within that study location (approximately 75 percent of study location). The high concentration of sand present in Riverwash poses as problematic when assessing evidence of hydric characteristics. Hydric soil indicators are often challenging to observe while conducting field investigations in this land type.

2.3.2.3 Terrace Escarpments

Terrace Escarpments consist of steep slopes that result from continual erosion or faulting, and separates terraces from lower lying land. The resulting steep faces are influenced heavily by weather conditions and typically do not support diverse vegetation communities. The County Soil Survey showed this land type to be present in a small percentage in the southern portion of the Long Canyon Road bridge alignment area. Sparse vegetation was observed on the north-facing slopes. Terrace Escarpments are included on the National Hydric Soils List due to occurrence in areas of frequent flooding.

2.3.2.4 Sorrento Loam

Sorrento Loam consists of very deep, well-drained soils that formed in alluvium mostly from sedimentary rocks formations. This soil is similar to the Riverwash and Sandy Alluvial land types in that the original alluvium was deposited in layers; however, Sorrento Loam is less subject to flooding and subsequent reworking. Thus, Sorrento Loam had more time to develop the characteristics of a true soil. This soil is classified as a fluvent, which is a very young soil subject to periodic flooding and occurs on alluvial fans and in stabilized floodplains. Vegetation typically consists of irrigated agriculture or annual grasses and forbs within uncultivated areas. This soil is included on the National Hydric Soils List due to occurrence in areas of frequent flooding.

2.3.3 Study Area Overview: Hydrology

The Santa Clara River is the dominant hydrologic feature in the study area, and the active river channel flows through three of the four study locations (The Onion Fields bank stabilization site is located directly adjacent to the river, but outside of the channel). Within the study area, the river supports a complex mosaic of riparian plant communities along the channel margins, on alluvial terraces, and within the greater floodplain. Surface flows are perennial within this reach, supported in part by effluent discharges from two publicly owned treatment works upstream. For agricultural purposes, Newhall Land maintains a number of dry-season culvert road crossings over the Santa Clara River that are removed prior to high winter flows each year. A portion of one of these crossings is located within the Potrero Canyon Road bridge alignment study location, and another occurs approximately 300 feet downstream of the Long Canyon Road bridge alignment location.

The headwaters of the Santa Clara River are located in the San Gabriel Mountains in Los Angeles County, and the seasonal hydrology of the river is primarily dictated by patterns of precipitation in these mountains. Upstream of the study area, the watershed consists of approximately 680 square miles of mostly natural land with some areas developed for urban and agricultural uses. The total watershed area is approximately 1,600 square miles. The Santa Clara River is one of two rivers in the region that is not channelized and remains in a relatively natural state. Within the project vicinity, the river is a braided system with a primary active channel and several secondary channels, and its banks are constantly in flux due to erosion and sedimentation. According to a recent study by Balance Hydrologics (2005), the morphology of the channel is in a state of dynamic equilibrium, where the influence of large storm events dominates the form of the channel. Smaller-scale events can shape the channel in the short term, but the morphologic effect of these events is eliminated when larger storms "reset" the channel through large-scale erosional and depositional processes.

2.3.4 Determination of Wetlands within the Study Area

Through investigations for on-site indicators of wetland hydrology, hydrophytic vegetation and hydric soils, wetlands were identified and mapped within three of the four discrete locations that comprise the study area. The results and determining factors of the wetland delineation are discussed in this section and presented on location-specific figures.

2.3.4.1 Potrero Canyon Road Bridge Alignment

The Potrero Canyon Road bridge alignment study location is a long, narrow swath that spans the active channel of the Santa Clara River, and includes the wetted channel, riparian corridor, and upland agricultural areas on either bank. Within this study location, a total of 20 data points were investigated for evidence of wetland indicators (Appendix A: Wetland Delineation Forms PC-1 through PC-20). Data points were located in various floodplain

positions, including areas adjacent to the active channel, on alluvial terraces, and within the floodplain beyond the channel banks.

According to the vegetation map for the RMDP site (Dudek 2006), vegetation types within the Potrero Canyon Road study location include arrow weed scrub, cottonwood riparian forest, herbaceous wetlands, mulefat scrub, riverwash, big sagebrush scrub, and agriculture. For a description of these communities, please refer to Section 4.2, above. Of the 20 sampling points within the Potrero Canyon Road study location, three were located within areas mapped as arrow weed scrub, four were within cottonwood/willow riparian forest, two were within herbaceous wetlands, one was in mule fat scrub, seven were in riverwash, and the remaining three were within areas mapped as agricultural and disturbed lands (Figure 3).

All but one of these data points (data point PC-1, located in an agricultural field) showed a dominance of hydrophytic vegetation. Dominant hydrophytic plant species observed within this study location included red willow, narrow-leafed willow, Fremont cottonwood, mulefat, cattail, and white sweetclover. Although most of the hydrophytic vegetation within the study location was associated with the current channel of the Santa Clara River, hydrophytic vegetation was also observed in a strip of agricultural land in the northern portion of the study location. In this area, the historic floodplain of Santa Clara River was evident as riparian scrub and forest bordered the narrow swath of agriculture. The area to the south of this hydrophytic vegetation is occupied by a fallow agriculture field. Vegetation in the field consists of Bermuda grass (*Cynodon dactylon*), Mexican sprangletop (*Leptochloa uninervia*), white sweetclover, and mulefat. The locations of sampling points and presence/absence of hydrophytic vegetation are depicted graphically on Figure 3.

According to the Soil Survey of San Francis Area, California (USDA 2007), the Potrero Canyon Road bridge alignment study location contains three distinct mapped soil types: Riverwash, Sandy Alluvial Lands, and Terrace Escarpments. For a description of these soils, please refer to Section 4.3, above. Soils observed during field investigations within this study location consisted of coarse sand typical of the Sandy Alluvial Land and Riverwash soil mapping units (Figure 4). In areas that experienced recent river deposition, various sized gravels and small cobbles comprised a loose matrix with the coarse sand. The dynamic nature of the on-site river channel and the sandy soil composition posed difficulties in determining the presence of hydric indicators. However, hydric features observed included small reddish mottles often throughout the soil profile (Appendix A: Data Sample Points PC-2 through PC-4, PC-10, PC-11, and PC-17 through PC-20; and Appendix C: Photo 5) and organic material in the top portion of the profile (Sample Point PC-6 and Photo 4). In addition, Sandy Alluvial Land and Riverwash land types are listed by the USDA as hydric soils under flooded conditions, which was the condition of soils observed at several locations during the field survey. Of the 20 data points assessed in this study location, 18 exhibited hydric soil characteristics, while such characteristics were lacking in the remaining two (data points PC-1 and PC-12, located in areas mapped as Sandy Alluvial Lands and Terrace

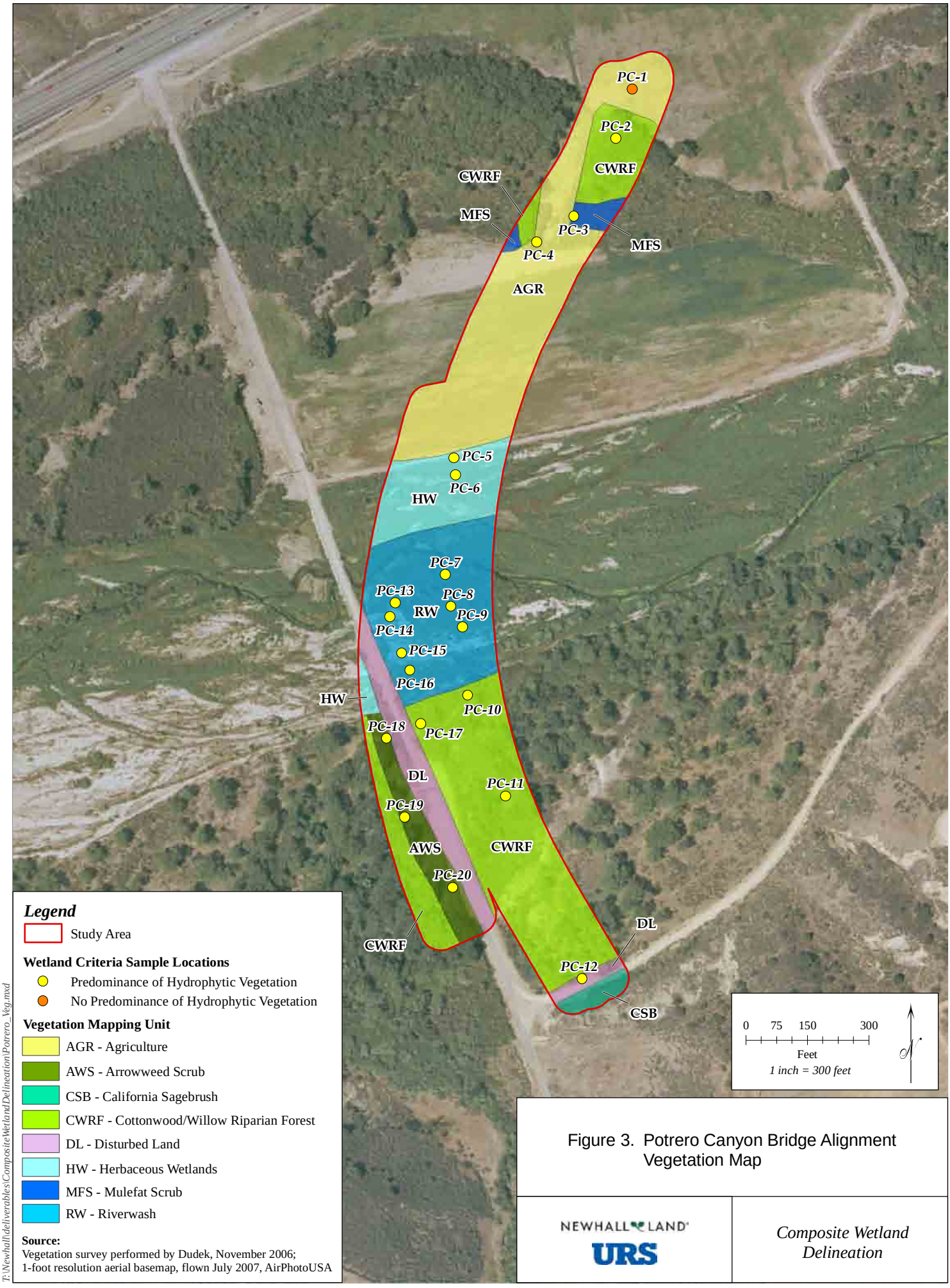

Figure 3. Potrero Canyon Bridge Alignment Vegetation Map

NEWHALL LAND

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Composite Wetland Delineation

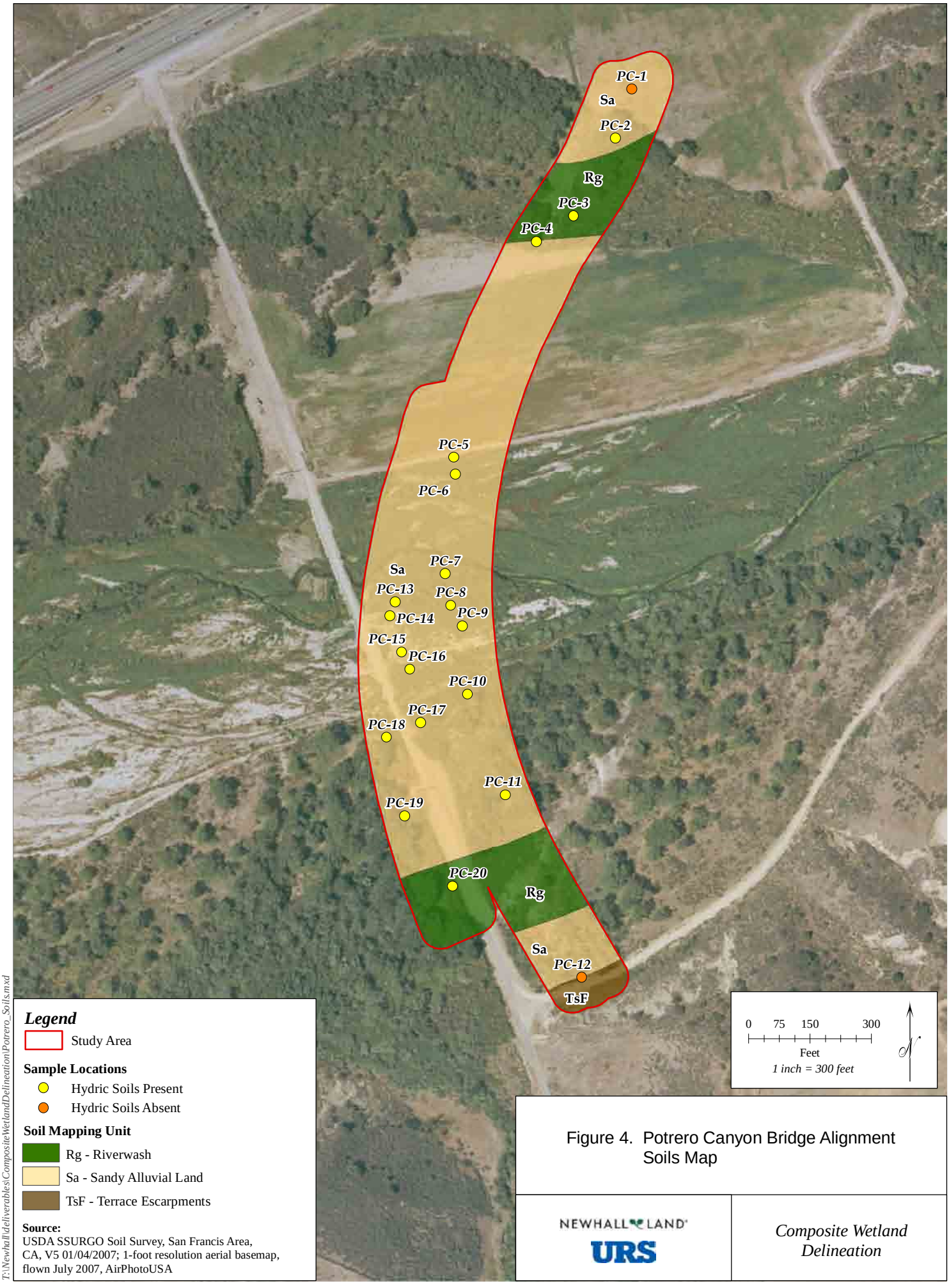

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Figure 4. Potrero Canyon Bridge Alignment Soils Map

NEWHALL LAND

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Composite Wetland Delineation

Escarpments, respectively). The mapped soil types, along with locations of sampling points and presence/absence of hydric soil indicators, are depicted graphically on Figure 4.

Hydrology within the Potrero Canyon Road bridge alignment is dominated by the Santa Clara River mainstem, which flows through this study location. The river supports year-round surface flows at this location, and flows are supplemented by treated wastewater discharges from two treatment works upstream. The study location contains three basic hydrologic zones: the low-flow river channel, which is inundated year-round by surface flows; terraces and secondary channels, which are inundated periodically during periods of high flow but may be saturated at other times depending on the season, flow conditions, and location; and adjacent uplands, which are not regularly or periodically inundated by river flows. Although the boundaries between these zones are not always easily defined and change over time, the 20 sampling points assessed at the Potrero Canyon Road study location were situated to include all hydrologic zones. Wetland hydrology was evident at all data points located within the active river channel and terraces, but was generally absent at points farther removed from the river. However, three data points (PC-2, PC-3, and PC-4) located in a portion of the historic floodplain exhibited wetland hydrology, as did a point (PC-20) located between an artificial berm and a ranch road. Hydrology at these points is dictated by local relief, rather than Santa Clara River flows.

A total of 4.89 acres of wetlands were delineated within the Potrero Canyon Road study location (Figure 5 and Table 1). All of the jurisdictional wetlands identified as this location were within the Palustrine system as described by Cowardin (1979). Based on the vegetation communities present, the wetlands within this study location were classified as Riparian Scrub Wetlands (3.82 acres), Riparian Forest Wetlands (0.56 acres), and Ruderal Wetlands (0.51 acres). The determination of wetlands was difficult given the sandy soil types. In light of problematic sandy soils, the presence of redox mottles and organic matter at several sampling locations provided evidence of hydric soils. Due to the wide distribution of riparian vegetation and problematic sandy soils, the presence of saturated soils, high water table, oxidized roots, and other hydrologic indicators were also used in mapping the wetlands within this study location. Wetlands were mostly located within the active channel of the Santa Clara River, but also occurred in the northern portion of the study area associated with the disjunct historic floodplain and in a small area in the southwest of the study area associated with a small drainage (Figure 5).

2.3.4.2 Onion Fields Bank Stabilization Site

The Onion Fields study location is on the southern bank of the Santa Clara River, on a slope between the river channel and an adjacent agricultural field. Only one data point was assessed in this study location, situated at the bottom of the bank slope (Appendix A: Wetland Delineation Forms BS-1).

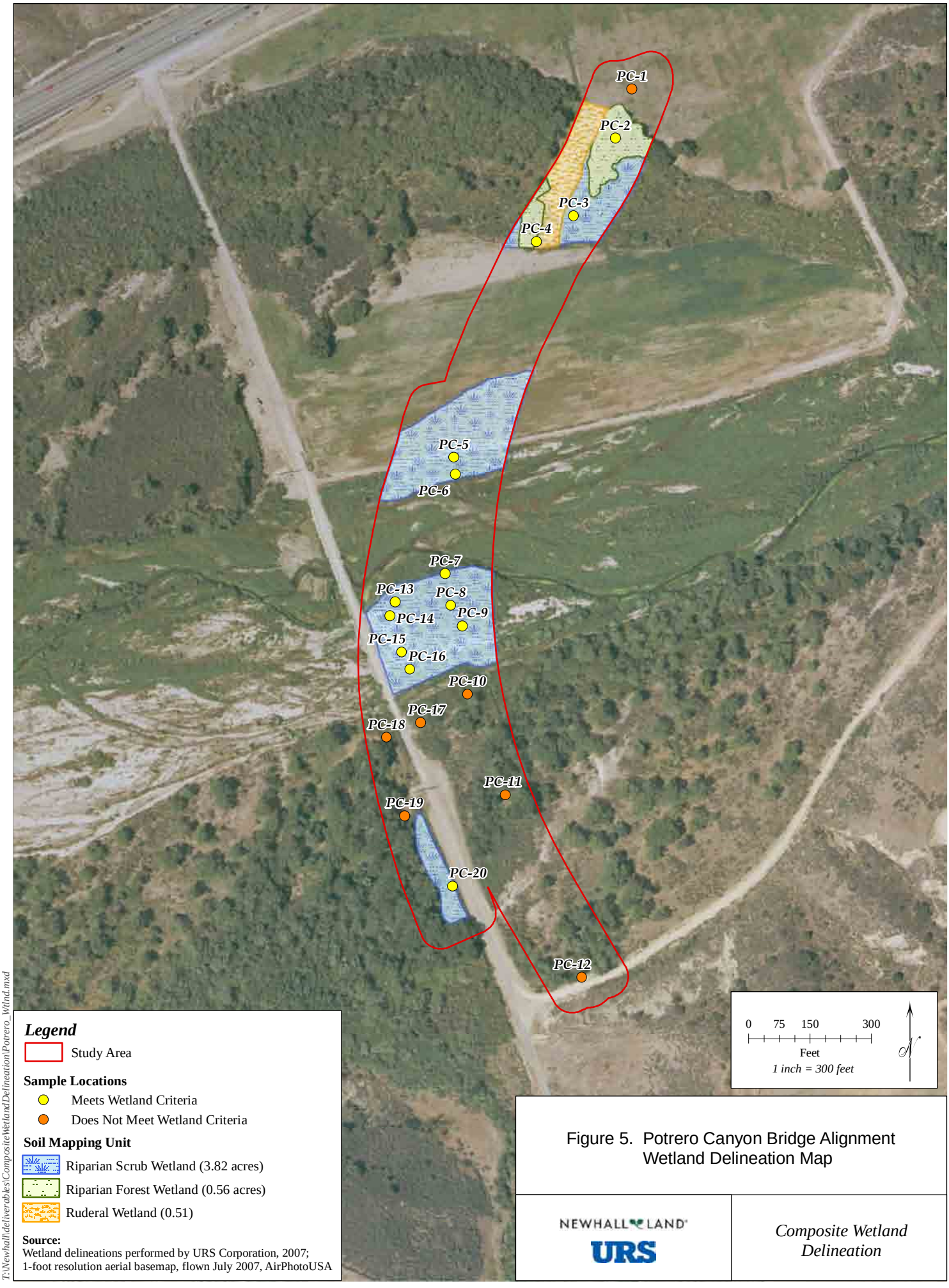

Figure 5. Potrero Canyon Bridge Alignment Wetland Delineation Map

NEWHALL LAND

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Composite Wetland Delineation

According to the vegetation map for the RMDP site (Dudek 2006), the Onion Fields study location is comprised almost exclusively of cottonwood/willow riparian forest, with small patches of disturbed land present along the agricultural road at the southern boundary. For a description of these communities, please refer to Section 4.2, above. The data point assessed at this location was within the cottonwood/willow riparian forest, and exhibited a dominance of hydrophytic vegetation (Figure 6). Dominant hydrophytic plant species within this study location included Freemont cottonwood and red willow trees, confirming the mapped vegetation type. Understory plants included California rose (*Rosa californica*), stinging nettle (*Urtica dioica*) and mugwort (*Artemisia douglasiana*). The riparian canopy was dense with an open to closed shrub layer. In open areas, thick leaf litter covered the majority of the ground.

According to the Soil Survey of San Francis Area, California (USDA 2007), the entire Onion Fields study location is mapped as Sandy Alluvial Lands (Figure 7). For a description of this land cover, please refer to Section 4.3, above. Soils assessed at the sampling point consisted of sandy loam typical of the Sandy Alluvial Lands soil mapping unit. Typical conditions were present during the delineation, and the soils were not determined to be problematic due to the presence of well-established vegetation. No redox features or other hydric soil indicators were observed at the sampling point.

Although the Onion Fields study location is within the Santa Clara River floodplain, it is located on a slope between the river channel and an adjacent agricultural field. The data point assessed at this study location was located at the bottom end of this slope, closest to the river channel (Figure 8). Due to the age and structure of the riparian forest, it is apparent that this location is seldom affected by high flows in the river, and that regular inundation or saturation does not occur. The sampling point was thoroughly examined for evidence of wetland hydrology, but no primary or secondary indicators were present.

No jurisdictional wetlands were found to occur within the Onion Fields Bank Stabilization study location (Table 1). Although hydrophytic vegetation was present, the area lacked hydric soils and wetland hydrology.

2.3.4.3 Long Canyon Road Bridge Alignment

The Long Canyon Road bridge alignment study location is a long, narrow swath that spans the active channel of the Santa Clara River, and includes the wetted channel, riparian corridor, transitional vegetation, and upland agricultural areas on either bank. Within this study location, a total of eight data points were investigated for evidence of wetland indicators (Appendix A: Wetland Delineation Forms LC-1 through LC-8). Data points were located in various floodplain positions, including areas adjacent to the active channel, on alluvial terraces, and within the floodplain beyond the channel banks. Within this study location, the active river channel is in the northern portion of the floodplain.

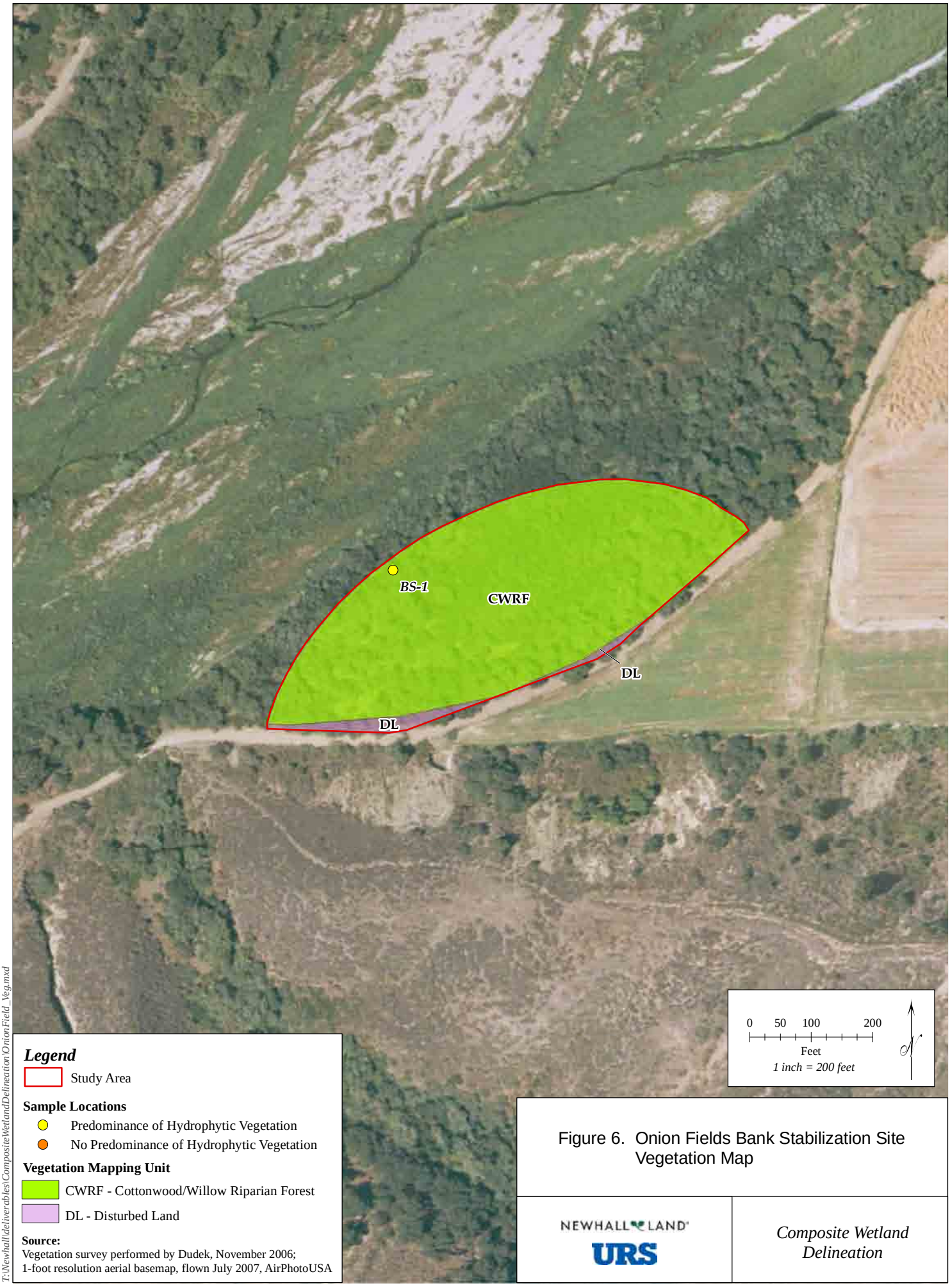

Figure 6. Onion Fields Bank Stabilization Site Vegetation Map

NEWHALL LAND

URS

Composite Wetland Delineation

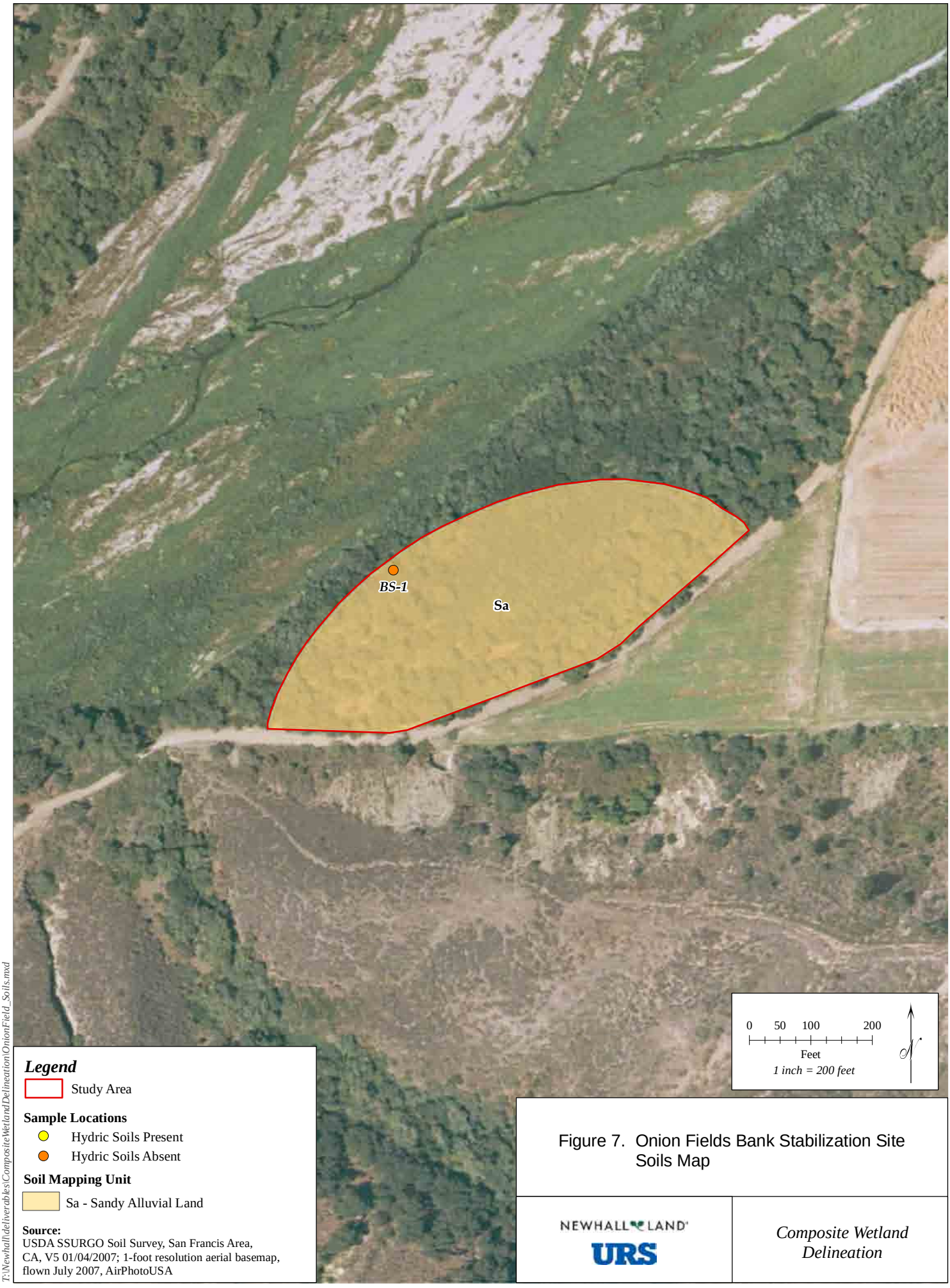

Figure 7. Onion Fields Bank Stabilization Site Soils Map

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Composite Wetland Delineation

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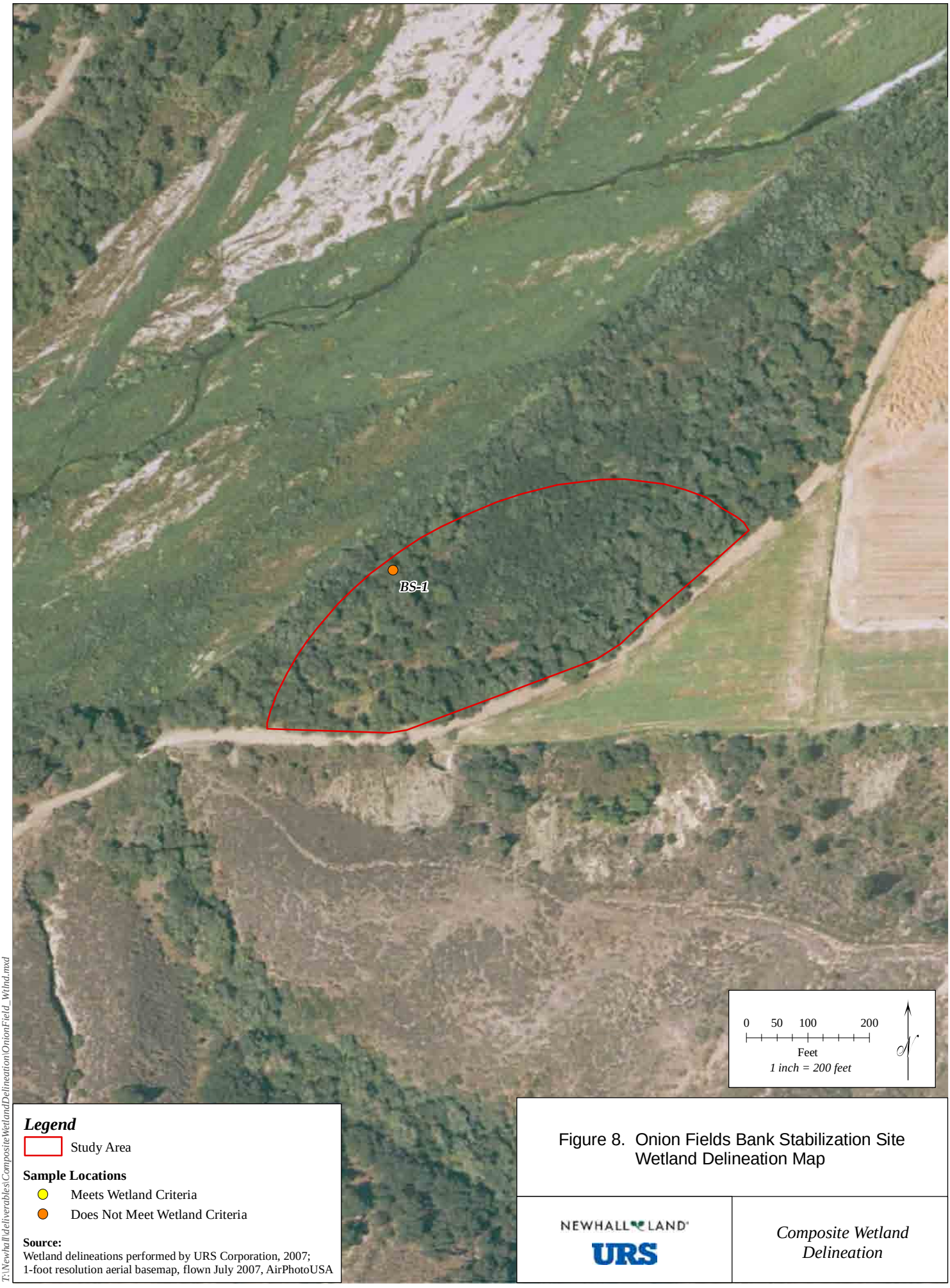

Figure 8. Onion Fields Bank Stabilization Site Wetland Delineation Map

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The vegetation map for the RMDP site (Dudek 2006) shows several vegetation types within the Long Canyon Road study location, including cottonwood/willow riparian forest, herbaceous wetlands, mulefat scrub, riverwash, disturbed land, and agriculture. For a description of these communities, please refer to Section 4.2, above. Of the eight sampling points assessed within the Long Canyon Road bridge alignment study location, one was located within an area mapped as cottonwood/willow riparian forest, one was within mule fat scrub, three were in riverwash, and the remaining three were in areas mapped as agricultural or disturbed land (Figure 9). All but two of these data points (Points LC-1 and LC-8, located in agricultural fields) showed a dominance of hydrophytic vegetation. Dominant hydrophytic plant species within this study location included mulefat, tamarisk, arundo, South American horseweed (*Conyza bonariensis*), red willow, narrow-leaf willow, and willow weed (*Polygonum lapathifolium*). All of the hydrophytic vegetation within this study location was associated with the active channel and riparian corridor of the Santa Clara River. In the southern portion of the Long Canyon Road study location, a terrace at the edge of the riparian corridor contained several hydrophytic vegetation species including mulefat and narrow-leaf willow. Lands within the study location beyond the riparian corridor, at the extreme northern and southern ends of the study location, contained agricultural fields and did not exhibit a dominance of hydrophytic vegetation; these areas were dominated by annual grasses. The locations of sampling points and presence/absence of hydrophytic vegetation are depicted graphically on Figure 9.

According to the Soil Survey of San Francis Area, California (USDA 2007), the Long Canyon Road bridge alignment study location is underlain primarily by Riverwash, but also includes Sandy Alluvial Lands and Sorrento Loam at the northern and southern ends, respectively. For a description of these soils, please refer to Section 4.3, above. Soils observed during field investigations within this study location consisted of coarse sand typical of the Sandy Alluvial Land and Riverwash land types; and loamy sand, sandy loam, and clay loam typical of the Sorrento Loam soil type (Figure 10). Riverwash was found throughout the majority of the study area (Appendix A: LC-2 through LC-5). In areas that experienced recent river deposition, various sized gravels and small cobbles comprised a loose matrix with the coarse sand. The only hydric soil indicator observed within this study location was depleted matrix (data point LC-3); no sandy redox or other hydric soil indicators were evident during examination of soil profiles. However, the dynamic nature of the on-site river channel and the sandy soil composition posed difficulties in determining the presence of hydric soil indicators. Because the Sandy Alluvial Land and Riverwash land types are listed by the USDA as hydric soils under flooded and/or saturated conditions, these soil types were counted as hydric even in the absence of other indicators when flooding and/or saturation were observed (data point LC-5). The mapped soil types, along with locations of sampling points and presence/absence of hydric soil indicators, are depicted graphically on Figure 10.

Hydrology within the Long Canyon Road bridge alignment is dominated by the Santa Clara River mainstem, which flows through this study location. The river supports year-round

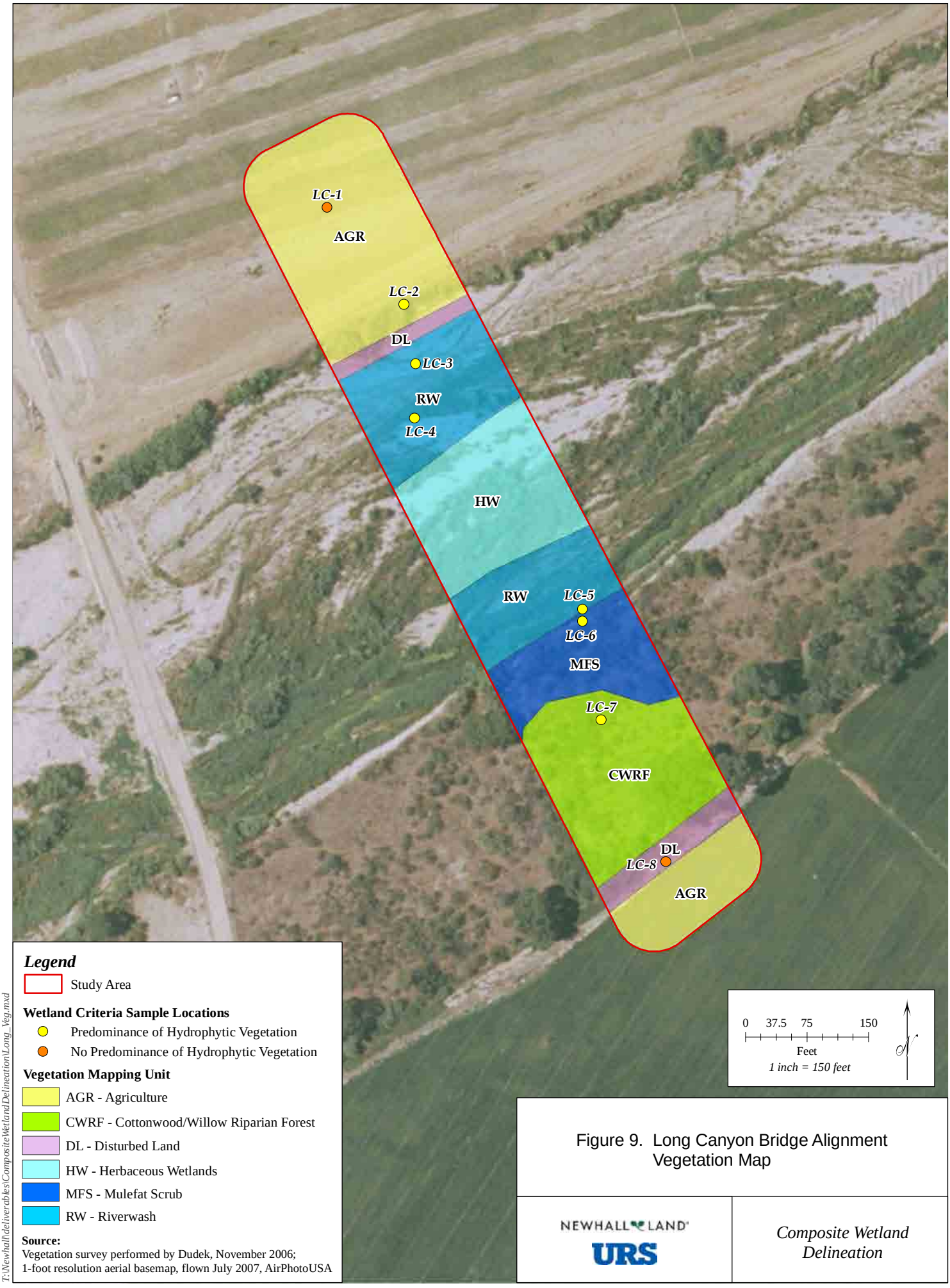

Figure 9. Long Canyon Bridge Alignment Vegetation Map

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Composite Wetland Delineation

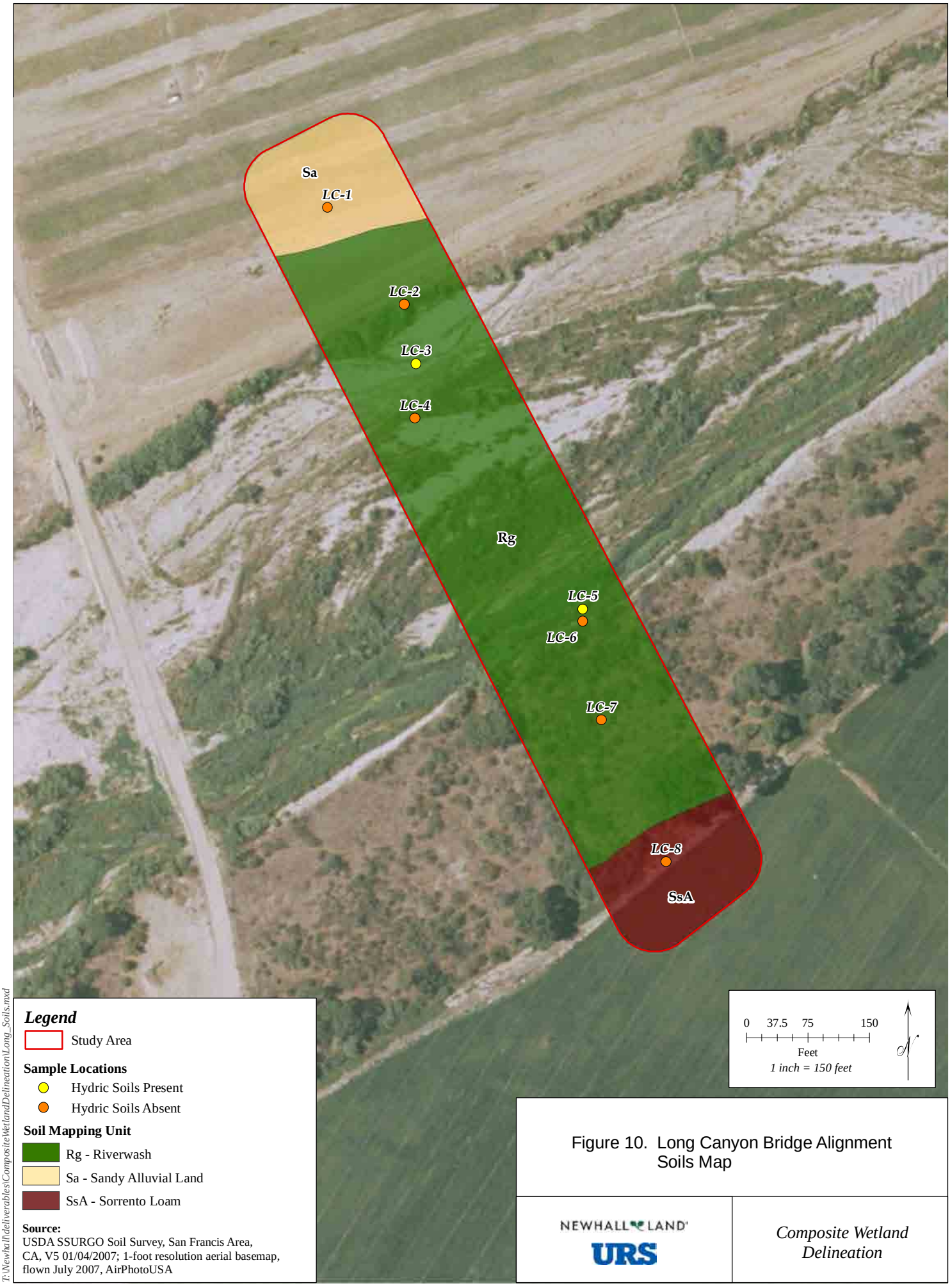

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Figure 10. Long Canyon Bridge Alignment Soils Map

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Composite Wetland Delineation

surface flows at this location, which are supplemented by treated wastewater discharges from two treatment works upstream. The study location contains three basic hydrologic zones: the low-flow river channel, which is inundated year-round by surface flows; terraces and secondary channels, which are inundated periodically during periods of high flow but may be saturated at other times depending on the season, flow conditions, and location; and adjacent uplands, which are not regularly or periodically inundated by river flows. Although the boundaries between these zones are not always easily defined and change over time, the eight sampling points assessed at the Long Canyon Road study location were situated to include all hydrologic zones. Wetland hydrology was evident at all data points located within the active river channel and terraces, but was absent at points farther removed from the river. A total of 1.34 acres of wetlands were delineated within the Long Canyon Road study location (Figure 11 and Table 1). The determination of wetlands was difficult given the problematic, sandy soil types within the study location. Due to the presence of problematic soils, the mapped soil types and position in the riverbed was used as evidence of hydric soils in some areas. Wetlands were present on both banks of the Santa Clara River, within and adjacent to the active channel. All of the jurisdictional wetlands identified as this location were within the Palustrine system as described by Cowardin (1979). Based on the vegetation communities present, the wetlands within this study location were classified as Riparian Scrub Wetlands. The most appropriate National Wetland Inventory (NWI) classification for this community is PSS6.

2.3.4.4 Southern Abutment of Commerce Center Drive Bridge

The study location at the southern abutment of the Commerce Center Drive bridge is a narrow swath that extends southward from the active channel of the Santa Clara River into the uplands on the southern bank. Within this study location, a total of seven data points were investigated for evidence of wetland indicators (Appendix A: Wetland Delineation Forms CC-1 through CC-7). Data points were located in various floodplain positions, including areas adjacent to the active channel, on alluvial terraces, and beyond the southern bank. At the time of the investigation, the active river channel was within the northernmost portion of the study location.

The vegetation map for the RMDP site (Dudek 2006) shows four vegetation types within the Commerce Center Drive study location, including riverwash, herbaceous wetlands, cottonwood/willow riparian forest, and California sagebrush scrub. For a description of these communities, please refer to Section 4.2, above. Of the eight sampling points assessed within this study location, one was located within an area mapped as riverwash, one was in herbaceous wetlands, three were within cottonwood/willow riparian forest, and the remaining two were mapped as California sagebrush scrub (Figure 12). All of the sampling points assessed exhibited a dominance of hydrophytic vegetation. Dominant hydrophytic plant species within the Commerce Center Drive study location included red willow, sandbar willow, Fremont cottonwood, mulefat, cattails (*Typha* spp.), and giant reed. All of the

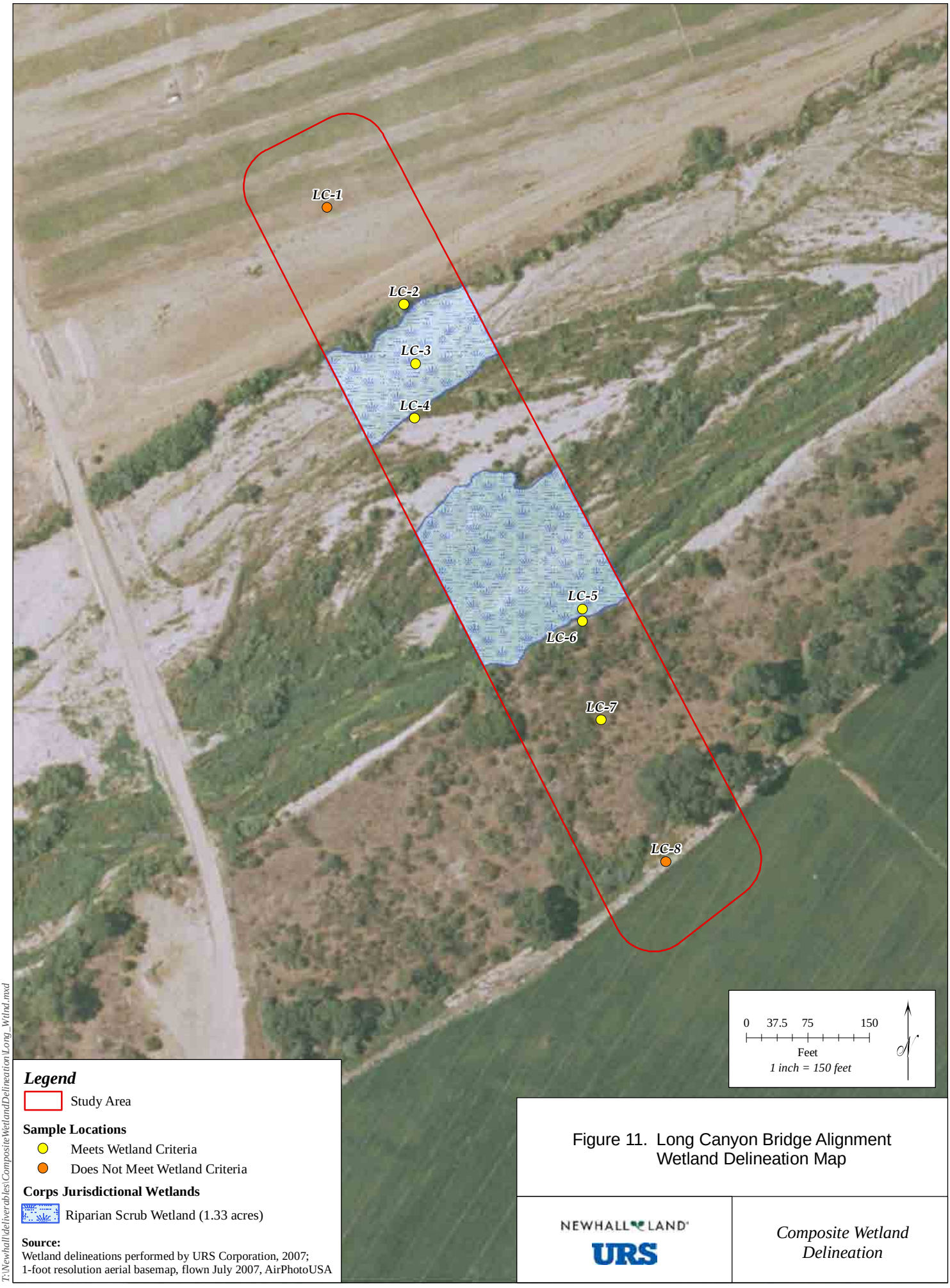

Figure 11. Long Canyon Bridge Alignment Wetland Delineation Map

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Composite Wetland Delineation

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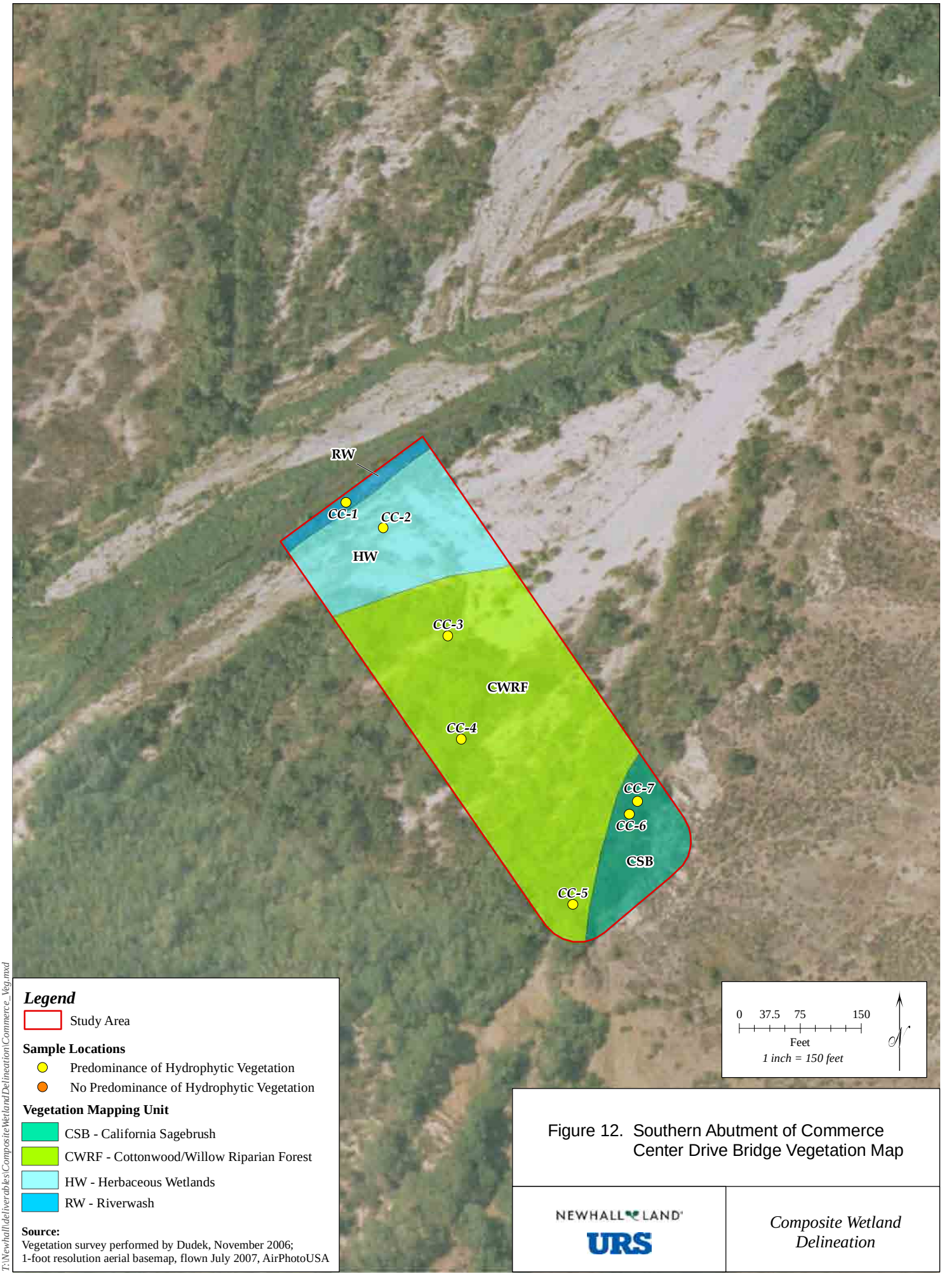

Figure 12. Southern Abutment of Commerce Center Drive Bridge Vegetation Map

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Composite Wetland Delineation

hydrophytic vegetation within this study location was associated with the active channel and riparian corridor of the Santa Clara River. The locations of sampling points and presence/absence of hydrophytic vegetation are depicted graphically on Figure 12.

According to the Soil Survey of San Francis Area, California (USDA 2007), the Commerce Center Drive study location is underlain primarily by Sandy Alluvial Lands, but also includes Terrace Escarpments in the southeastern corner. For a description of these soils, please refer to Section 4.3, above. Soils observed during field investigations within this study location consisted of coarse sand, consistent with the Sandy Alluvial Land and Terrace Escarpments mapping units (Figure 13). In areas that experienced recent river deposition, various sized gravels and small cobbles comprised a loose matrix with the coarse sand. Hydric soil indicators observed within this study location included small reddish mottles, often throughout the soil profile (Appendix A: Data Sample Points CC 1-6 and Appendix B: Photo 4), and organic material in the top portion of the profile. However, the dynamic nature of the on-site river channel and the sandy soil composition posed difficulties in determining the presence of hydric soil indicators. In addition, the Terrace Escarpment land type is especially problematic due to its steep faces and continuing erosional processes. Because Sandy Alluvial Land is listed by the USDA as a hydric soil under flooded and/or saturated conditions, this soil type was counted as hydric even in the absence of other indicators when flooding and/or saturation were observed (data points CC-1, CC-2, and CC-5). The mapped soil types, along with locations of sampling points and presence/absence of hydric soil indicators, are depicted graphically on Figure 13.

Hydrology within the Commerce Center Drive study location is dominated by the Santa Clara River, which flows through the southern end of this study location. The river supports year-round surface flows at this location, which are supplemented by treated wastewater discharges from two treatment works upstream. The study location is sloped, with higher elevation area occurring on the southern river bank and lower elevations at the river channel, in the northern portion of the study location. The sloping topography results in a gradation of hydrologic zones, ranging from the low-flow river channel, which is inundated year-round by surface flows, to upland areas on the southern bank, which are not regularly affected by the river hydrology. The seven sampling points assessed at the Commerce Center Drive study location were situated at various locations throughout the study location, and included all hydrologic zones present. Wetland hydrology was evident at all data points located within the active river channel and terraces, but was absent at points farther removed from the river. Indicators of wetland hydrology included water marks, sediment deposits, and drainage patterns.

A total of 2.84 acres of wetlands were delineated within the Commerce Center Drive study location (Figure 14 and Table 1). The determination of wetlands was difficult given the presence of sandy and eroding soil types, and the mapped soil types and observed inundation/saturation were used as evidence of hydric soils in some areas. Wetlands were

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Figure 13. Southern Abutment of Commerce Center Drive Bridge Soils Map

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Figure 14. Southern Abutment of Commerce Center Drive Bridge Wetland Delineation Map

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present throughout the study location, with the exception of the southeastern corner which lacked hydric soils and wetland hydrology. All of the jurisdictional wetlands identified as this location were within the Palustrine system as described by Cowardin (1979). Based on the vegetation communities present, the wetlands within this study location were classified as Riparian Scrub Wetlands.

As shown in Table 1, URS Corporation has delineated approximately 9.06 acres of jurisdictional wetlands within four discrete locations on the RMDP site that comprise the Part One study area. The study locations within the bridge alignments at Potrero Canyon Road, Long Canyon Road, and Commerce Center Drive contained 4.89 acres, 2.10 acres, and 2.94 acres of jurisdictional wetlands, respectively. No wetlands were identified at the Onion Fields bank stabilization study location. Because the study area included a 100-foot buffer surrounding the proposed bridge alignments and bank stabilization, construction of these facilities would likely not impact the entire wetland acreage delineated within each study location. The locations of jurisdictional wetlands within the Part One study area are displayed on Figures 5, 11, and 14, and acreages are summarized in Table 1. The use of three field indicators for the three defined parameters: hydrophytic vegetation, hydric soils, and wetland hydrology, as well as the application of the routine and problematic methodologies were used to determine the location and extent of wetlands subject to Corps jurisdiction.

SECTION 3.0
PART TWO: COMPOSITE DELINEATION OF WETLANDS WITHIN THE RMDP SITE AND THE ADJACENT ENTRADA PLANNING AREA

As stated previously, the field delineation of wetlands undertaken by URS in 2007 and presented in Part One of this document only addressed areas of the RMDP site that are within and adjacent to the disturbance footprints of major project components, such as roadway bridges across the Santa Clara River. Part Two of this study presents a composite wetland delineation, which combines the findings of Part One with the results of previous studies to yield a comprehensive, planning-level delineation of Corps-jurisdictional wetlands within the entire RMDP site.

3.1 STUDY AREA

The study area for this composite wetland delineation includes the entire RMDP site, as well as the adjacent Entrada planning area (Figure 15). The total acreage within the study area is approximately 14,042 acres: 13,651 within the RMDP site and 391 within Entrada. The study area is largely undeveloped, although Newhall Land has historically leased portions of the site for agricultural, grazing, oil and gas production, and filmmaking purposes. Geographically, the study area is bounded by the crest of the Santa Susana Mountains to the south, urban development in the City of Santa Clarita to the east, by the Chiquita Canyon Landfill and the community of Val Verde to the north, and by agricultural lands and open space in Ventura County to the west.

Hydrology within the study area is dominated by the Santa Clara River, which flows through the study area in an east-west direction, and a by a large number of tributary drainages which flow from the mountains on either side of the Santa Clarita Valley to join the river. The river mainstem exhibits perennial flow within the boundaries of the study area, supported in part by treated effluent discharges from two wastewater treatment works located a short distance upstream. This river reach supports substantial habitat for aquatic and riparian plants and wildlife. The majority of the on-site tributaries to the river are ephemeral, first- and second-order streams that exhibit surface flows only immediately following storm events and do not support aquatic life or riparian vegetation. However, the RMDP site does contain seven larger tributaries, some of which exhibit intermittent and perennial flow regimes in some reaches. These larger tributaries convey flows from natural lands outside the study area through the RMDP site and into the Santa Clara River.

The study area contains varied topography due to the presence of low-lying riverbed areas and higher-elevation mountains within the site. At higher elevations within the study area, steep slopes and rugged mountains and foothills dominate the landscape. Vegetation in these

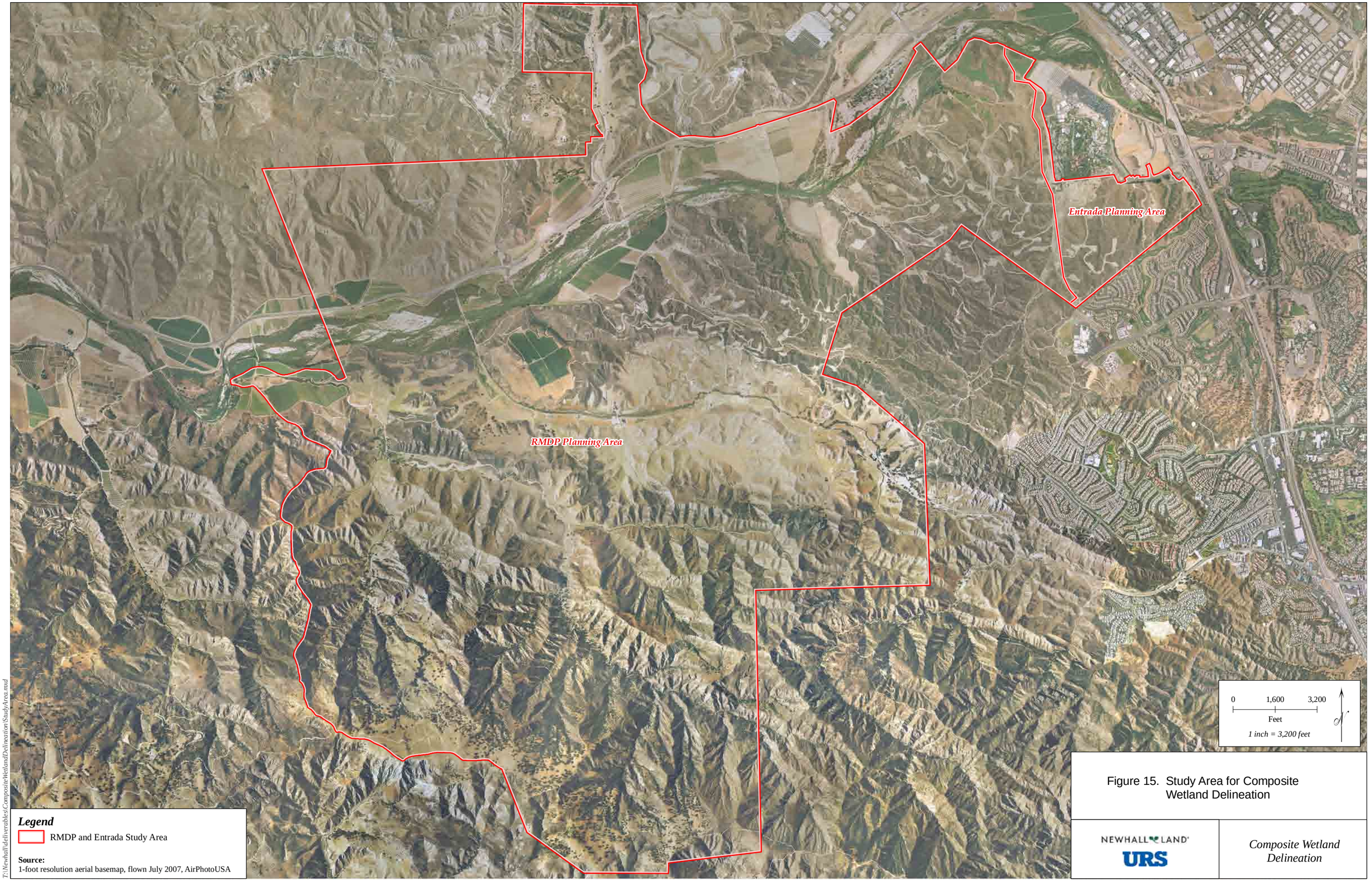

Figure 15. Study Area for Composite Wetland Delineation

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Composite Wetland Delineation

areas consists primarily of shrub-dominated upland habitats, such as California sagebrush scrub and chaparral, although oak woodlands and occasional riparian areas are also present.

Although the site's higher elevations are subject to cattle grazing, human activities within these areas are otherwise minimal. The lower-elevation portions of the study area within the larger tributary valleys and river floodplain, by contrast, have been more heavily impacted by human activities including commercial farming and oil production. These areas have much gentler slopes than the site's mountainous regions, and support habitats including cottonwood/willow riparian forest and riparian scrub habitats along drainages, annual grassland and various scrub communities in the uplands, and ruderal vegetation and bare ground in disturbed areas.

3.2 METHODS AND SOURCE MATERIALS

This composite wetland delineation presents a single map of jurisidictional wetlands within the study area that has been compiled from several technical documents produced between 2004 and 2009. Because all of the source materials utilized in this study included map data in Geographic Information Systems (GIS) format, GIS software was used to compile and combine the source data.

Each data source contained one or more shape files that spatially defined the location and extent of areas mapped as wetlands by that particular investigation. The wetland areas were mapped in the source material as enclosed shapes, or polygons, and were distinguished from other, non-wetland polygons by attribute information in the data set. The areas evaluated in the four data sources were mutually exhaustive, meaning that there was no portion of the study area that was not covered in one or more of the source materials. However, the areas evaluated were not mutually exclusive, so certain portions of the study area were covered by more than one data source.

In portions of the study area where only one data source provided wetland delineation information, such as the Entrada planning area and portions of the RMDP site that were not within the Santa Clara River corridor, the wetland polygons from that data source were copied into the composite wetland delineation. In portions of the study area where more than one data source provided wetland information, the union of all wetland polygons from those sources was copied into the composite wetland delineation. This is a more conservative approach than choosing to adopt one set of wetland boundaries over another, as it assigns wetland status to a polygon if any one of the data sources evaluated identified the polygon as a wetland.

It should be noted that the composite wetland delineation is a "planning-level" delineation, as it relies on mutliple data sources, dating from different years and using different investigation methods. While data sources based on field investigations are available for some portions of the study area, other areas were delineated through analysis of aerial photographs. The four

sources from which spatial wetland data was compiled for the composite wetland delineation are described below.

3.2.1 URS Corporation (2004) Delineation Report for the RMDP Site

In the winter of 2003, URS staff conducted a delineation of all waters exhibiting an ordinary high water mark and all CDFG-jurisdictional streambeds present within the RMDP site; a technical report was completed in early 2004. The Santa Clara River, Salt Creek, and portions of the Potrero Canyon drainage were found to be the only perennial streams on-site; many jurisdictional intermittent and ephemeral streams also were present. The 2004 delineation was conducted by walking the jurisdictional boundaries using sub-meter accurate GPS units capable of mapping polygons in the field; these data were then transferred into a GIS database. Although the 2004 delineation did not evaluate wetland areas specifically, four of the CDFG-jurisdictional streambed areas identified in this report were determined to meet wetland criteria due to the obvious and continuous presence of hydrophytic vegetation, saturated soils, and wetland hydrology. Two of these areas are cismontane alkali marshes within the Potrero Canyon drainage: one is located adjacent to the low-flow stream channel near the canyon mouth and the other is within the low-flow channel approximately one mile upstream. A third wetland area was identified at a confluence of two branches in the Salt Creek drainage, where perennial flows spread out across a flat floodplain area. The fourth jurisdictional wetland within the RMDP site is a spring complex within the river corridor near the mouth of Middle Canyon, where perennial flows down a slope from a spring support extensive, dense riparian vegetation and continuous soil saturation. Because this delineation report did not specifically investigate wetlands, the report does not provide acreage estimates for these sites. However, acreages have been calculated based on the GIS data, and are presented in Section 3.4 Results, below. The URS Corporation 2004 jurisdictional delineation of the RMDP site is included as Appendix D of this composite wetland delineation.

3.2.2 Lukos and Associates (2008) Delineation Report for the Entrada Planning Area

A study conducted by Lukos and Associates in 2008 delineated the limits of waters of the United States, Corps jurisdictional wetlands, and CDFG jurisdictional streams within the Entrada planning area. Methods utilized included field surveys in accordance with the Corps' Wetland Delineation Manual (Environmental Laboratory 1987), mapping of jurisdictional areas on maps and aerial photographs in the field, and digitizing this information to create a GIS layer. This study identified four jurisdictional drainage systems within the Entrada planning area, one of which was the Magic Mountain Canyon drainage previously delineated by URS during the 2004 delineation of the RMDP site (The drainage generally follows the boundary between the RMDP study area and the Entrada planning area, and portions of the drainage are within each area. However, for simplicity of analysis, the Magic Mountain Canyon drainage is considered to be within the RMDP study area). The study identified

jurisdictional wetlands within two of the drainages within the Entrada planning area, and reported the total acreage of these areas to be 0.15 acres. The 2008 Lukos and Associates delineation report for the Entrada planning area is included as Appendix E to this composite wetland delineation.

3.2.3 URS Corporation/Dudek and Associates (2006) Planning-level Delineation of Wetlands in the Santa Clara River through Interpretation of Aerial Photography

In 2006, biologists from URS Corporation and Dudek and Associates jointly undertook a planning-level delineation of Corps-jurisdictional wetlands within the reach of the Santa Clara River corridor in the RMDP site. The extent of wetlands within this reach was determined through an analysis of high-resolution (6 inch pixels) aerial photographs flown by Robert J. Lung and Associates on May 24, 2006. Although hydrologic and soils maps were reviewed during this effort, it was determined that the available maps lacked the resolution necessary to be useful in delineating wetland boundaries at the desired scale (For example, the Soil Survey of San Francis Area, California [USDA 2007] maps nearly the entire riverbed within this reach as Sandy Alluvial Land, a problematic soil type). Because the extent of hydric soils within the study reach was not discernible from either the aerial photographs or the soils map, soils were not used as a criterion in the delineation. Instead, to be conservative, all areas where wetland hydrology and hydrophytic vegetation were evident were mapped as wetlands, regardless of soil conditions.

Evidence of wetland hydrology was determined though evaluation of the aerial photographs for evidence of scour, and through inspection of the field-delineated ordinary high water mark boundaries presented in the URS 2004 jurisdiction delineation of the RMDP site. All areas within or adjacent to the mapped river channel that showed signs of recent scour on the aerial photos were considered to exhibit wetland hydrology.

Dominance of hydrophytic vegetation was determined through evaluation of the RMDP site vegetation map prepared by Dudek and Associates in 2006 in conjunction with the aerial photographs. Where riparian vegetation communities were identified on the vegetation map, the air photo was examined, and all areas within or adjacent to mapped riparian vegetation that appeared vegetated were considered to exhibit a predominance of hydrophytic vegetation, except when the vegetation map indicated that a different, non-hydrophytic vegetation type was present.

No technical report or other written document was produced from this study; the tangible result of the planning-level delineation of wetlands within the river corridor was a GIS shape file documenting the location and extent of wetlands delineated. Acreages have been calculated based on this GIS data, and are presented in Section 3.4 Results, below.

3.2.4 URS Corporation (2007) Field Delineation of Wetlands in Proposed Bridge Alignment Areas

In 2007, URS Corporation conducted a wetland delineation of potentially jurisdictional features in portions of the RMDP site where major infrastructure improvements, such as roadway bridges across the Santa Clara River, are proposed. This field investigation was performed in accordance with the procedures set forth in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987), Department of the Army (DOA) *Clarification and Interpretation of the 1987 USACE Wetland Delineation Manual* (DOA 1992), and the *Interim Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2006; Arid West Region Supplement). Data collected during the assessment of wetlands were recorded on Wetland Determination Data Forms – Arid West Region Supplement (Corps 2006). A total of 36 sample point locations were selected in both potential wetland and upland areas to determine the wetland/upland boundary and characterize the vegetation, soils, and hydrology of the area. Soil pits were excavated in areas supporting hydrophytic vegetation to determine the extent of saturation and to examine the soil for positive indicators of hydric soils and wetland hydrology. Soil pits were also excavated in upland areas adjacent to wetlands to aid in delineating the extent of jurisdictional wetlands. At each sample point, plant species composition and indicators of hydric soil and wetland hydrology were recorded. Sample point locations were recorded in the field using a Trimble GeoExplorer Series 2003 GPS unit capable of sub-meter accuracy and were plotted on aerial photographs overlaid with the approximate bridge and bank stabilization footprints and study location boundaries. A sample point was considered to be within a wetland (an "in" point) if the area met all three wetland parameters: dominance by hydrophytic plant species; positive wetland hydrology indicators; and hydric soil conditions. If one or more of these parameters was not met, the point was considered not to be within a wetland (an "out" point) and a line was drawn between the two sample points on the site specific aerial photograph.

The URS 2007 field investigation identified a total of 9.06 acres of Corps-jurisdictional wetlands within the four discrete parts of the RMDP site evaluated. The technical report from this investigation comprises Part One of this composite wetland delineation, and is presented above.

3.3 RESULTS

Based on the four data sources identified above, the study area contains wetlands within the Santa Clara River mainstem and the Potrero Canyon and Salt Creek tributaries within the RMDP site and within two unnamed drainages in the Entrada planning area. Of the acreage delineated within the river corridor, 2.51 acres are attributable to a spring complex near the mouth of Middle Canyon, rather than to the hydrologic influence of the river itself. Table 2 presents the acreages of wetlands delineated, as presented in the source technical reports and

TABLE 2
CORPS JURISDICTIONAL WETLANDS WITHIN THE RMDP SITE AND ENTRADA PLANNING AREA (ACRES)

Drainage	Wetland Acreage from URS 2004 Streambed Delineation (from GIS)	Wetland Acreage from Lukos 2008 Entrada Delineation (Reported)	Wetland Acreage from URS/Dudek 2006 Planning-Level Delineation of River Corridor (from GIS)	Wetland Acreage from URS 2007 Delineation of Bridge Alignment Areas (Reported)	Total Wetland Acreage within the RMDP Site and Entrada Planning Area
Santa Clara River	Not Analyzed	Not Analyzed	228	9.06	237.06
Salt Creek	5.67	Not Analyzed	Not Analyzed	Not Analyzed	5.67
Potrero Canyon	6.52	Not Analyzed	Not Analyzed	Not Analyzed	6.52
Spring Complex	2.14	Not Analyzed	Not Analyzed	Not Analyzed	2.14
Subtotal RMDP Site	14.33	Not Analyzed	228	9.06	251.39
Entrada Unnamed Drainages	Not Analyzed	0.15	Not Analyzed	Not Analyzed	0.15
Subtotal Entrada Planning Area	Not Analyzed	0.15	Not Analyzed	Not Analyzed	0.15
Grand Total	14.33	0.15	228	9.06	251.54

calculated from the source GIS layers. These wetlands are depicted graphically on Figure 16. The four assessments delineated a total of 251.39 acres of jurisdictional wetlands within the RMDP site and an additional 0.15 acres of wetlands within the Entrada planning area, for a grand total of 251.54 acres of jurisdictional wetlands within the study area.

3.4 CONCLUSION AND RECOMMENDATIONS

The composite wetland delineation identified a total of 251.54 acres of jurisdictional wetlands within the study area, most of which occur within the Santa Clara River mainstem. It is important to note that the vast majority of the wetland area delineated in the source studies (228 acres) was identified through the planning-level delineation of the river corridor. While it is almost certainly true that the planning-level delineation methods employed by the biologists at URS Corporation and Dudek and Associates in 2006 determine wetland boundaries with lesser accuracy than the intensive field methods set forth in the Wetland Delineation Manual (Environmental Laboratory 1987), it is important to remember that the Santa Clara River mainstem is a highly dynamic system, and that the proposed RMDP is a long-term project. Even if the extent of wetlands within the river corridor were delineated with the utmost precision today, natural forces such as lateral channel migration, growth and scouring of vegetation, and sediment dynamics would render the delineation progressively less accurate with each passing storm season. The planning-level delineation provides a reasonable estimate (really a conservative estimate, due to the methods employed) of the wetland acreage that occurred within the river corridor in 2006, and the field based source documents provide somewhat more accurate estimates of the location and extent of wetlands in the years when those assessments were conducted. Over the 30-year life of the proposed RMDP project it is not likely that any single delineation of wetlands within the river corridor, regardless of the method employed, would remain accurate.

Despite this reduction in accuracy over time, considerable knowledge can be gained from the results of this composite wetland delineation. Outside the river mainstem, in wetland areas such as Potrero Canyon, Salt Creek, and the unnamed drainages in the Entrada planning area, changes occur much more slowly due to the relative infrequency of extreme flow events in these small watersheds. Wetlands in these areas were delineated using highly accurate field methods, and the delineations should provide useful, accurate information for substantially longer than delineations conducted within the river corridor. In addition, the compilation of many source delineations into a single layer allows an assessment of the proposed RMDP's impacts on wetlands that would not otherwise be possible. Combining the various spatial data sets serves to eliminate the data gaps that would exist if only one of the assessments were used (since no single assessment delineated wetlands within the entire study area) while also eliminating the overlap in the individual GIS layers that prevents an analyst from mathematically combining data from each layer to get a combined wetland impact total.

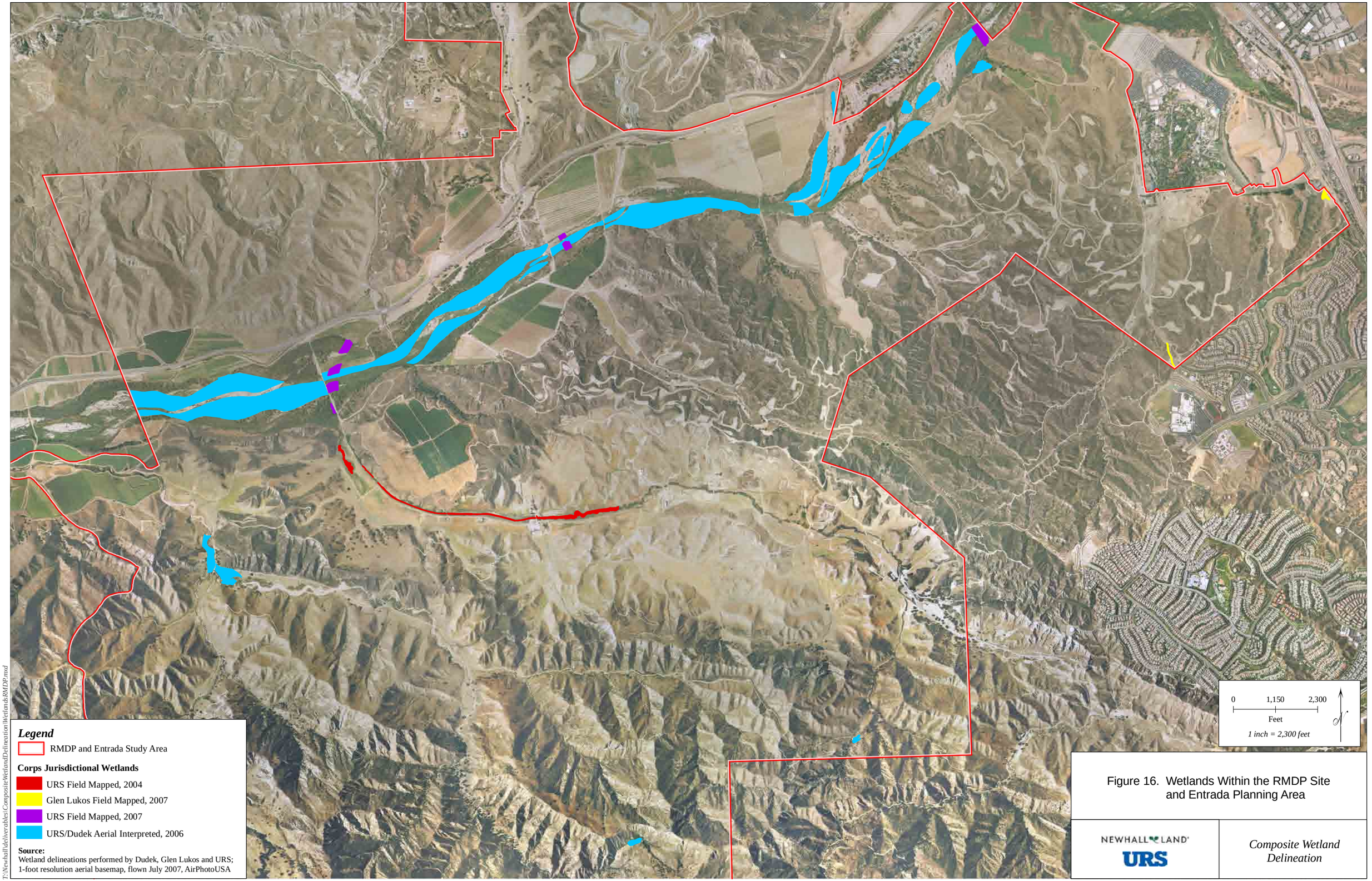

Figure 16. Wetlands Within the RMDP Site and Entrada Planning Area

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Composite Wetland Delineation

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Based on the information above, URS recommends that this composite wetland delineation be supplemented by smaller-scale, field-based delineations prior to construction of individual RMDP project components. The RMDP technical document (Dudek 2006b) identifies the types and locations of facilities proposed, but is intended to provide sufficient flexibility for future RMDP components to meet changing demands while avoiding impacts to the aquatic environment to the maximum extent practicable. To this end, the delineations should ideally be conducted close enough to the time of construction to minimize the effects of natural river dynamics, but far enough in advance to allow consideration of design changes that could avoid or minimize impacts to special aquatic sites.

SECTION 4.0
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APPENDIX A
WETLAND DETERMINATION DATA FORMS

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-1

Investigator(s): J. Kisner, J. Love, W. Vogler, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358923.7936400 Long: 1971818.2330300 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-1 characterizes an agricultural field with mixed grasses approximately 850 feet North of the Santa Clara River.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
Total Cover:			
Herb Stratum			
1. ***Eleusine indica***	25	Y	FACU
2. ***Poa*** sp.	25	Y	
3. ***Dactyloctenium aegyptium***	25	Y	NI
4. ***Ambrosia acanthicarpa***	3	N	NI
5. ***Brassica nigra***	3	N	NI
6. ***Trifolium*** sp.	1	N	
7. ***Leptochloa uninervia***	1	N	FACW
8. ***Polygonum arenastrum***	1	N	FAC
9. ***Rumex*** sp.	1	N	
10. ***Sonchus*** sp.	1	N	
11. ***Xanthium strumarium***	1	N	FAC+
Total Cover:	87		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 13 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 33% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

Reed 1988 was used to determine the wetland indicator status of plants unless otherwise noted.

SOIL

Sampling Point: PC-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR4/3						sandy coarse	
6-16	10YR4/3						coarse sand w/ gravel (riverwash)	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-2

Investigator(s): E. Larsen, J. Kisner, W. Vogler, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358883.5776700 Long: 1971698.1401700 Datum: NAD83

Soil Map Unit Name: Sany Alluvial Land NWI classification: PFO6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP PC-2 characterizes riparian forest North of Santa Clara River. Currently, fragmented from riparian habitat near river due to agricultural use in the area.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	95	Y	FACW
2.			
3.			
4.			
Total Cover:	95		
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	5	Y	FACW[a]
2. ***Salix exigua***	2	N	OBL
3. ***Tamarix*** sp.	2	N	FAC[b]
4.			
5.			
Total Cover:	9		
Herb Stratum			
1. grass	25	Y	
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	25		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 75 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	2	x 1 =	2
FACW species	100	x 2 =	200
FAC species	2	x 3 =	6
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	104 (A)		208 (B)

Prevalence Index = B/A = 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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-2 most closely corresponds to Cowardin's (1979) riparian forest.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all Tamarix species that were not identified to species. Tamarix species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-2	10YR4/3						silty loam	
2-3	10YR4/3						sand	
3-16	10YR4/2	80	5YR4/6	20	C	M,RC,PL	silty clay	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Shovel refusal was experienced due to difficulty getting through the thick layer of grass.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-3

Investigator(s): J. Kisner, J. Love, W. Vogler, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358781.7248300 Long: 1971508.0936000 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-3 characterizes riparian habitat north of the Santa Clara River. Currently, fragmented from riparian habitat near river due to agricultural use in the area.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	70	Y	FACW[a]
2. ***Salix exigua***	15	N	OBL
3. ***Salix lasiolepis***	5	N	FACW
4. ***Tamarix*** sp.	2	N	FAC[b]
5.			
Total Cover:	92		
Herb Stratum			
1. ***Distichlis spicata***	85	Y	FACW
2. ***Ambrosia psilostachya*** var. ***californica***	5	N	NI
3. ***Cynodon dactylon***	1	N	FAC
4. ***Melilotus alba***	1	N	FACU+
5.			
6.			
7.			
8.			
Total Cover:	92		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	15	x 1 =	15
FACW species	160	x 2 =	320
FAC species	8	x 3 =	24
FACU species	1	x 4 =	4
UPL species	0	x 5 =	0
Column Totals:	184 (A)		363 (B)

Prevalence Index = B/A = 1.97

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-3 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-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
0-2	10YR4/3		none				silt loam	
2-16	10YR4/2	95	5YR4/6	5	C	RC,M	silty clay	small amount of root channels w/ mottles

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small mottling was found scattered through the soil profile. Oxidation was also observed from 2-16 inches around the roots.

Due to the "neutral" characteristics of sandy soils, riverwash is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Soil damp throughout soil pit.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-4

Investigator(s): J. Kisner, J. Love, W. Vogler, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358690.6215500 Long: 1971446.0286400 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land/Riverwash NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-4 characterizes riparian habitat North of the Santa Clara River. Currently, fragmented from riparian habitat near river due to agricultural use in the area.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
Total Cover:			
Sapling/Shrub Stratum			
1. Baccharis salicifolia	10	Y	FACW[a]
Total Cover: 10			
Herb Stratum			
1. ***Cynodon dactylon***	40	Y	FAC
2. ***Leptochloa uninervia***	5	N	FACW
3. ***Melilotus alba***	5	N	FACU+
4. ***Echinochloa crus-galli***	2	N	FACW
5. ***Polypogon monspeliensis***	2	N	FACW+
6. ***Chenopodium album***	1	N	FAC
7. ***Cyperus erythrorhizos***	1	N	OBL
8. ***Eleusine indica***	1	N	FACU
9. ***Malvella leprosa***	1	N	FAC*
10. ***Phalaris aquatica***	1	N	FAC+
11. ***Poa*** sp.	1	N	
12. ***Sonchus asper***	1	N	FAC
13. ***Typha domingensis***	1	N	OBL
14. ***Xanthium strumarium***	1	N	FAC+
Total Cover: 63			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	2	x 1 =	2
FACW species	19	x 2 =	38
FAC species	45	x 3 =	135
FACU species	6	x 4 =	24
UPL species	0	x 5 =	0
Column Totals:	72 (A)		199 (B)

Prevalence Index = B/A = 2.76

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-4 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

* = A tentative assignment to that indicator status by Reed, 1988

SOIL

Sampling Point: PC-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
0-16	10YR4/3	98	5YR4/6	2	C	RC,M	silty clay mixed w/ silty loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-5

Investigator(s): J. Kisner, W. Vogler Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358488.6477700 Long: 1970918.1258500 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-5 characterizes the floodplain North of the Santa Clara River. Sandy soils present.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	12	Y	FACW[a]
2. ***Populus fremontii***	3	N	FACW
3. ***Tamarix*** sp.	3	N	FAC[b]
4. ***Salix exigua***	2	N	OBL
5. ***Salix laevigata***	2	N	FACW+[a]
Total Cover:	22		
Herb Stratum			
1. ***Melilotus alba***	50	Y	FACU+
2. ***Bassia hyssopifolia***	10	N	FAC
3. ***Ambrosia acanthicarpa***	2	N	NI
4. ***Aster subulatus*** var. ***ligulatus***	2	N	FACW
5. ***Brassica nigra***	2	N	NI
6. ***Leptochloa uninervia***	1	N	FACW
7. unknown grass	1	N	
8.			
Total Cover:	68		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	2	x 1 =	2
FACW species	20	x 2 =	40
FAC species	13	x 3 =	39
FACU species	50	x 4 =	200
UPL species	4	x 5 =	20
Column Totals:	89 (A)		301 (B)

Prevalence Index = B/A = 3.38

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Although the dominance test equals 50% and the Prevalence Test was greater than 3.0, the invasive nature and annual/biannual life cycle of ***Melilotus alba*** has skewed the results. Most plants are hydrophytic.

The vegetation of SP PC-5 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-5

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
0-18	10YR6/2		n/a				coarse sand w/ cobbles	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Soil pit 3 feet from the bank to the road.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☐ No ☒ Depth (inches): 0

Water Table Present? Yes ☒ No ☐ Depth (inches): 15

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 8-15

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

A high water table and saturated soils provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-6

Investigator(s): E. Larsen, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358492.1903900 Long: 1970877.0632800 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP PC-6 characterizes the floodplain North of Santa Clara River and its water's edge. Sandy soils present.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Populus fremontii***	10	Y	FACW
2. ***Salix laevigata***	10	Y	FACW+[a]
3. ***Salix exigua***	10	Y	OBL
4. ***Tamarix sp.***	10	Y	FAC[b]
Total Cover:	40		
Herb Stratum			
1. ***Agrostis viridis***	20	Y	OBL
2. ***Typha domingensis***	20	Y	OBL
3. ***Eleocharis macrostachya***	10	Y	OBL
4. ***Juncus torreyi***	10	Y	FACW+
5. ***Tamarix sp.***	10	Y	FAC
6. ***Arundo donax***	5	N	FACW
7. ***Cyperus erythrorhizos***	5	N	OBL
8. ***Cyperus involucratus***	5	N	OBL
9. ***Epilobium ciliatum***	5	N	FACW
10. ***Juncus xiphodes***	5	N	OBL
11. ***Melilotus alba***	5	N	FACU+
Total Cover:	100		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 8 (A)

Total Number of Dominant Species Across All Strata 8 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	75	x 1 =	75
FACW species	40	x 2 =	80
FAC species	20	x 3 =	60
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	140 (A)		375 (B)

Prevalence Index = B/A = 2.68

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-6 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16			n/a				coarse sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions. Note: Water at 2 inches.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☒ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 2-16

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:

High water table provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-7

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358467.0973400 Long: 1970634.2451100 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-7 Characterizes the southern bank of the Santa Clara River.

The 2006-2007 rainy season received an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix exigua***	90	Y	OBL
2. ***Populus fremontii***	5	N	FACW
3.			
4.			
5.			
Total Cover:	95		
Herb Stratum			
1. ***Typha*** Sp.	15	Y	OBL[c]
3. ***Salix laevigata***	10	Y	FACW+[a]
2. ***Melilotus alba***	5	N	FACU+
4.			
5.			
6.			
7.			
Total Cover:	30		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 1 % Cover of Biotic Crust

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	105	x 1 =	105
FACW species	15	x 2 =	30
FAC species	0	x 3 =	0
FACU species	5	x 4 =	20
UPL species	0	x 5 =	0
Column Totals:	125 (A)		155 (B)

Prevalence Index = B/A = 1.24

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-7 most closely corresponds to Cowardin's (1979) riparian scrub.

[c] Wetland indicator status was assumed OBL for all Typha species that were not identified to species. Typha species found in California have indicators of at least OBL

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-5	10YR 4/2		N/A				Silty clay loam	
5-16	N/A						Coarse sand riverwash	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Organic material visible from the surface down through the top 5 inches of the rhizosphere/soil profile. With the exception of organic material, there was no additional hydric soil indicators. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 4

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:

High water table provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-8

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358481.1919400 Long: 1970556.5810700 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-8 characterizes the northern portion of southern abutment within the Santa Clara floodplain. A 2003 aerial review determined a side channel of the river was present at this location. No vegetation existed at that time. Vegetation is immature and tree species are young saplings.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix exigua***	40	Y	OBL
2. ***Populus fremontii***	5	N	FACW
3.			
4.			
5.			
Total Cover:	45		
Herb Stratum			
3. ***Typha*** Sp.	25	Y	OBL[c]
2. ***Baccharis salicifolia***	15	Y	FACW[a]
3. ***Arundo donax***	5	N	FACW
4. ***Salix laevigata***	5	N	FACW+[a]
5. ***Tamarix*** sp.	2	N	FAC[b]
6. ***Artemisia douglasiana***	1	N	FACW
7. ***Urtica dioica***	1	N	FACW
8. ***Xanthium strumarium***	1	N	FAC+
Total Cover:	55		
Woody Vine Stratum			
1.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

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	65	x 1 =	65
FACW species	32	x 2 =	64
FAC species	3	x 3 =	9
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	100 (A)		138 (B)

Prevalence Index = B/A = 1.38

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-8 most closely corresponds to Cowardin's (1979) riparian scrub.

A lot of Freemont cottonwood leaf litter.

[c] Wetland indicator status was assumed OBL for all Typha species that were not identified to species. Typha species found in California have indicators of at least OBL

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	10YR 2.5/1		N/A				coarse sandy loam	
4-5	2.5 YR 5-4/2							Organic layer
5-7/8	10YR 4/2							Depositional layer
10-16	N/A							oxidized roots

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Some mottling visible in depositional layer.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): >16

Water Table Present? Yes ☒ No ☐ Depth (inches): 16

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:

Surface water and a high water table provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-9

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358508.9742200 Long: 6358508.9742200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-9 characterizes the southern embankment of the Santa Clara River within relict alluvial channel.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Populus fremontii***	1	Y	FACW
2. ***Tamarix*** Sp.	1	Y	FAC[b]
3.			
4.			
5.			
Total Cover: 2			
Herb Stratum			
1. ***Melilotus alba***	60	Y	FACU+
2. ***Baccharis salicifolia***	30	Y	FACW[a]
3.			
4.			
5.			
6.			
Total Cover: 90			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 8 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	0	x 1 =	0
FACW species	31	x 2 =	62
FAC species	1	x 3 =	3
FACU species	60	x 4 =	240
UPL species	0	x 5 =	0
Column Totals:	92 (A)		305 (B)

Prevalence Index = B/A = 3.31

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-9 most closely corresponds to Cowardin's (1979) riparian scrub.

Tree species are young saplings.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-9

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	N/A		N/A				Medium gravel w/ coarse sand (riverwash)	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

No signs of oxidation or organic material.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 16

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:

High water table provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-10

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358522.2620200 Long: 1970339.6556000 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-10 characterizes change in soil type and a slight elevation change. SP PC-10 is South of the channel with mature trees.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	80	Y	FACW
2.			
3.			
4.			
Total Cover:	80		
Sapling/Shrub Stratum			
1. ***Salix exigua***	80	Y	OBL
2.			
3.			
4.			
5.			
Total Cover:	80		
Herb Stratum			
3. ***Leymus triticoides***	35	Y	FAC+
2. ***Baccharis salicifolia***	10	Y	FACW[a]
3.			
4.			
5.			
6.			
Total Cover:	45		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-10 most closely corresponds to Cowardin's (1979) riparian scrub.

A lot of Freemont cottonwood leaf litter.

[a] Kartesz, J\.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-10

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3		N/A				sandy	
8-16	10YR 4/2						silty clay	Oxidation around roots

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small mottling was found scattered through the soil profile. Oxidation was also observed from 8-16 inches around the roots.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed within one meter of sampling point.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-11

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358614.5033300 Long: 1970093.7130200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **Yes**, or Hydrology **no** 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:

SP PC-11 characterizes mature riparian forest approximately 100 feet away from the southern bank of the Santa Clara River.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	70	Y	FACW
2.			
Total Cover:	70		
Sapling/Shrub Stratum			
1. ***Salix laevigata***	15	Y	FACW+[a]
2. ***Salix*** sp.	10	Y	FACW[d]
3. ***Sambucus mexicana***	10	Y	FAC
Total Cover:	35		
Herb Stratum			
1. ***Salix*** sp.	10	Y	FACW[d]
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	10		
Woody Vine Stratum			
1.			
2.			
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: 5 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-11 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[d] Wetland indicator status was assumed FACW for all ***Salix*** species not identified to species at this SP. All unidentified ***Salix*** sp. were either ***S. lasiolepis*** (FACW) or ***S. laevigata*** (FACW+), which in some cases were difficult to distinguish during the field survey. FACW is the lower wetland indicator between these two species and therefore was chosen.

SOIL

Sampling Point: PC-11

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-8	10YR 4/3		N/A				sandy	
8-16	10YR 4/2		N/A				silty clay	Oxidation around roots

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small mottling was found scattered through the soil profile. Oxidation was also observed from 8-16 inches around the roots.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-12

Investigator(s): J. Davis, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358800.8811600 Long: 1969648.3912600 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **No**, or Hydrology **No** 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:

SP PC-12 characterizes the edge of a ranch road. Recent vegetation removal was evident in the area. Riparian forest surrounds and overhangs this SP.

The 2006-2007 rainy season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Salix laevigata***	30	Y	FACW+[a]
2.			
3.			
Total Cover:	30		
Sapling/Shrub Stratum			
1. ***Arundo donax***	10	Y	FACW
2.			
3.			
4.			
Total Cover:	10		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
Total Cover:			

% Bare Ground in Herb Stratum 80 % Cover of Biotic Crust 20

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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-12 most closely corresponds to Cowardin's (1979) riparian scrub.

Ruderal with elements of riparian forest.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-12

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
No Soil Pit								

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks:

No soil pit was excavated due to lack of vegetation and observable hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-13

Investigator(s): J. Love, L. Rizzo, J. Davis, J. Kisner Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358344.9185400 Long: 1970565.1804200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-13 characterizes the southern edge of a vegetated channel south of the Santa Clara River.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix exigua***	20	Y	OBL
2. ***Salix laevigata***	20	Y	FACW+[a]
3. ***Baccharis salicifolia***	10	N	FACW[a]
4. ***Populus fremontii***	10	N	FACW
5. ***Tamarix*** sp.	5	N	FAC[b]
Total Cover:	65		
Herb Stratum			
1. ***Melilotus alba***	20	Y	FACU+
2. ***Typha*** sp.	15	Y	OBL[c]
3. ***Arundo donax***	5	Y	FACW
4. ***Epilobium ciliatum***	5	Y	FACW
5. ***Euthamia occidentalis***	5	Y	OBL
6. ***Aster subulatus*** var. ***ligulatus***	2	N	FAC
7. ***Cyperus eragrostis***	2	N	FACW
8. ***Polygonum lapathifolium***	2	N	OBL
9. ***Xanthium strumarium***	2	N	FAC+
Total Cover:	58		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata 7 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 86% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	42	x 1 =	42
FACW species	52	x 2 =	104
FAC species	9	x 3 =	24
FACU species	20	x 4 =	80
UPL species	0	x 5 =	0
Column Totals:	123 (A)		250 (B)

Prevalence Index = B/A = 2.03

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-13 most closely corresponds to Cowardin's (1979) riparian scrub. Height of vegetation ranged from 10'-15'.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

[c] Wetland indicator status was assumed OBL for all ***Typha*** species that were not identified to species. ***Typha*** species found in California have indicators of at least OBL

SOIL

Sampling Point: PC-13

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
16	n/a		n/a				coarse sandy	No gravel

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small organic layer indicates young hydric soils layer (1/8") thick.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 2-3

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0-2

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Surface water present adjacent to soil pit.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-14

Investigator(s): J. Love, L. Rizzo, J. Davis, J. Kisner Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358332.4042200 Long: 1970531.6653300 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-14 characterizes a man-created depression within the Santa Clara River floodplain. Vegetation appears to be 2-3 years old.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
Total Cover:			
Herb Stratum			
1. ***Melilotus alba***	60	Y	FACU+
2. ***Typha*** sp.	15	N	OBL[c]
3. ***Epilobium ciliatum***	5	N	FACW
4. ***Leptochloa uninervia***	5	N	FACW
5. ***Cyperus erythrorhizos***	3	N	OBL
6. ***Polygonum lapathifolium***	3	N	OBL
7. ***Baccharis salicifolia***	1	N	FACW[a]
8. ***Cyperus involucratus***	1	N	OBL
9. ***Xanthium strumarium***	1	N	FAC+
Total Cover:	94		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 6 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by
OBL species 22	x 1 = 22
FACW species 11	x 2 = 22
FAC species 1	x 3 = 3
FACU species 60	x 4 = 240
UPL species 0	x 5 = 0
Column Totals: 94 (A)	287 (B)

Prevalence Index = B/A = 3.05

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Although the dominance test equals 0% and the Prevalence Test was greater than 3.0, the invasive nature and annual/biannual life cycle of ***Melilotus alba*** has skewed the results. Most plants are hydrophytic.

The vegetation of SP PC-14 most closely corresponds to Cowardin's (1979) riparian scrub.

[c] Wetland indicator status was assumed OBL for all ***Typha*** species that were not identified to species. ***Typha*** species found in California have indicators of at least OBL.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-14

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-10	n/a						coarse gravel	soil consists of riverwash within Santa Clara River flood plain

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Soil consisted of primarily 80% small gravel, 5% small gravel, balance 15% sand.

Due to the "neutral" characteristic of sandy soils they are problematic in observing hydric characteristics. Although no sandy redox was at this location, sandy alluvial land is often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes ☒ No ☐ Depth (inches): 0

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

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0-1

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Recent rains may have contributed to surface water and moist conditions. Water table is high because the SP is within the Santa Clara River floodplain.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-15

Investigator(s): J. Kisner, L. Rizzo Section, Township, Range: San Francis Land Grant

Landform (hillslope, terrace, etc.): Channel Bank Local relief (concave, convex, none): none Slope (%): 1

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358361.4192300 Long: 1970442.1226700 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-15 characterizes the center portion of a side channel, located to the South of the Santa Clara River. Recently received rainfall. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	30	Y	FACW[a]
2. ***Populus fremontii***	10	N	FACW
3. ***Salix exigua***	5	N	OBL
4. ***Salix laevigata***	5	N	FACW+[a]
5. ***Tamarix*** sp.	5	N	FAC[b]
Total Cover:	55		
Herb Stratum			
1. ***Melilotus alba***	20	Y	FACU+
2. ***Ambrosia acanthicarpa***	4	N	NI
3. ***Conyza canadensis***	3	N	FAC
4. ***Brassica*** sp.	2	N	NI
5. ***Artemisia douglasiana***	1	N	FACW
6. ***Aster subulatus*** var. ***ligulatus***	1	N	FACW
7. ***Heterotheca grandiflora***	1	N	NI
8. ***Oenothera elata***	1	N	FACW
Total Cover:	33		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 67 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	5	x 1 =	5
FACW species	48	x 2 =	96
FAC species	8	x 3 =	24
FACU species	20	x 4 =	80
UPL species	7	x 5 =	35
Column Totals:	88 (A)		365 (B)

Prevalence Index = B/A = 4.15

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks: Although the dominance test equals 50% and the Prevalence Test was greater than 3.0, the invasive nature and annual/biannual life cycle of ***Melilotus alba*** has skewed the results. Most plants are hydrophytic.

Willow height between 10'-15'. The vegetation of SP PC-15 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-15

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	n/a		n/a				coarse sandy w/ cobbles	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Thin layer of silty crust on top which is dark in color.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 18

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

A high water table and saturated soils provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-16

Investigator(s): J. Kisner, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358381.0721700 Long: 1970400.9710500 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-16 characterizes previous channel of the Santa Clara River according to aerial field maps (Psomas, 2003)..

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Populus fremontii***	30	Y	FACW
2. ***Baccharis salicifolia***	25	Y	FACW[a]
3. ***Salix exigua***	25	Y	OBL
4. ***Salix laevigata***	8	N	FACW+[a]
5. ***Tamarix*** sp.	5	N	FAC[b]
Total Cover:	93		
Herb Stratum			
1. ***Melilotus alba***	3	Y	FACU+
2. ***Arundo donax***	2	Y	FACW
3. ***Brassica*** sp.	2	Y	NI
4.			
5.			
6.			
7.			
8.			
Total Cover:	7		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 7 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	25	x 1 =	25
FACW species	65	x 2 =	130
FAC species	5	x 3 =	15
FACU species	3	x 4 =	12
UPL species	2	x 5 =	10
Column Totals:	100 (A)		192 (B)

Prevalence Index = B/A = 1.92

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-16 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: PC-16

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-13	n/a		n/a				coarse sandy w/ cobbles	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Very thin silty surface layer crust; dark in color.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 13

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 0-13

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Slight bank on south side, approximately 6 inches in height.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/25/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-17

Investigator(s): J. Kisner, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358407.4331100 Long: 1970270.4295400 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-17 characterizes a flat upland area south of the Santa Clara River channel.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Salix lasiolepis***	20	Y	FACW
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix exigua***	45	Y	OBL
2. ***Baccharis salicifolia***	5	N	FACW[a]
3.			
4.			
5.			
Total Cover: 50			
Herb Stratum			
1. ***Ambrosia psilostachya*** var. ***californica***	25	Y	FAC
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: 25			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-17 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-17

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR4/2	85	5YR4/6	15	RM	M	Loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ **No** ☐

Remarks:

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Recent rains may have caused soil to be moist down through the bottom of pit, but no hydrology indicators were present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-18

Investigator(s): J. Kisner, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358324.0847400 Long: 1970234.5389700 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-18 characterizes the boundary between vegetation types; riparian scrub and riparian forest. This SP focuses on the scrub habitat to the East. The Western area includes riparian forest with few small shrubs.

The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix lasiolepis***	30	Y	FACW
2. ***Salix exigua***	20	Y	OBL
3. ***Baccharis*** sp.	5	N	
4. ***Baccharis salicifolia***	2	N	FACW[a]
5. ***Populus fremontii***	2	N	FACW
6. ***Salix laevigata***	2	N	FACW+[a]
7. ***Baccharis pilularis***	1	N	NI
Total Cover:	62		
Herb Stratum			
1. ***Ambrosia psilostachya*** var. ***californica***	15	Y	FAC
2. ***Leymus triticoides***	5	N	FAC+
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-18 most closely corresponds to Cowardin's (1979) riparian scrub and Cowardin's (1979) riparian forest.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: PC-18

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	n/a		5YR4/6	55	RM	M	fine sand	moist for first 6”

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small chucks of clay deposits present in soil sample.

Due to the “neutral” characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-19

Investigator(s): J. Love, J. Kisner, W. Vogler, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358368.3670400 Long: 1970042.3134900 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

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

Are Vegetation **No**, Soil **Yes**, or Hydrology **No** 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:

SP PC-19 characterizes flat floodplain area to the south of the Santa Clara River.

The 2006-2007 rainy season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Pluchea sericea***	75	Y	FACW
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 25 % Cover of Biotic Crust

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-19 most closely corresponds to Cowardin's (1979) riparian scrub.

SOIL

Sampling Point: PC-19

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
0-18	10 YR 3/2	99	5YR 4/6	<1	C	M		

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Evidence that this SP is within floodplain due to large sediment deposits.

Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Potrero Canyon City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: PC-20

Investigator(s): J. Love, J. Kisner, W. Vogler, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6358485.2757400 Long: 1969870.9522100 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: PSS6

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

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

Are Vegetation **NO**, Soil **Yes**, or Hydrology **No** 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:

SP PC-20 is located in a small side drainage adjacent to a small berm along a ranch road. This SP is at the southernmost part of the entire PC site. The 2006-2007 rainy season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Pluchea sericea***	95	Y	FACW
2.			
3.			
4.			
5.			
Total Cover:	95		
Herb Stratum			
1. ***Arundo donax***	5	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	5		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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	x 1 =
FACW species	x 2 =
FAC species	x 3 =
FACU species	x 4 =
UPL species	x 5 =
Column Totals: (A)	(B)

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP PC-20 most closely corresponds to Cowardin's (1979) riparian scrub.

SOIL

Sampling Point: PC-20

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
0-18	10YR3/2	98	5YR4/6	2	C	M	silty clay mixed with fine sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Due to the "neutral" characteristics of sandy soils, riverwash is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Anthropogenic created berms visible. Possibly created from soil being pushed up along the sides of the nearby road during soil removal activities after high flood events.

APPENDIX A USACE WETLAND DETERMINATION DATA FORMS

Onion Field Bank Stabilization

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Onion Field Bank Stabilization City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: BS-1

Investigator(s): J. Davis, J. Love, W, Vogler, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6361064.5315100 Long: 1971370.3761600 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PFO6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **Yes**, or Hydrology **no** 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:

SP BS-1 characterizes the northern portion of the bank stabilization site. This SP is located approximately 60 feet to the south of the Santa Clara River and is representative of the riparian forest on the south bank.

The 2006-2007 rainy season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Salix laevigata***	60	Y	FACW+[a]
2. ***Populus fremontii***	30	Y	FACW
3. ***Tamarix*** Sp.	10	N	FAC[b]
Total Cover:	100		
Sapling/Shrub Stratum			
1. ***Rosa californica***	40	Y	FAC+
2. ***Urtica dioica***	25	Y	FACW
3. ***Arundo donax***	10	N	FACW
Total Cover:	75		
Herb Stratum			
1. ***Artemisia douglasiana***	5	Y	FACW
2. ***Conium maculatum***	1	N	FACW
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	6		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 94 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

Vegetation is representative of a riparian forest habitat (Cowardin 1979) with red willow and Freemont cottonwood comprising the dominant canopy layer. Vegetation is open to dense with a high leaf/branch litter content.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: BS-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
0-16	10YR 3/2	100	None OBS				Sandy loam	Soil texture & color consistent throughout

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

APPENDIX A USACE WETLAND DETERMINATION DATA FORMS

Long Canyon Bridge

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-1

Investigator(s): W. Vogler, J. Love Section, Township, Range: San Francis Land Grant

Landform (hillslope, terrace, etc.): Upland/Agriculture Local relief (concave, convex, none): none Slope (%): 5

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364608.8561600 Long: 1974793.5144700 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-1 characterizes the upland/agricultural area north of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. annual grasses	70	Y	
2. ***Conyza canadensis***	8	N	FAC
3. ***Zea mays***	7	N	NI
4. ***Spergularia*** sp.	5	N	
5. ***Ambrosia acanthicarpa***	2	N	NI
6. ***Polygonum arenastrum***	1	N	FAC
7.			
8.			
Total Cover:	93		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 0% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SP LC-1 does not have any natural vegetation communities; the site is characterized by ruderal vegetation and graded conditions.

SOIL

Sampling Point: LC-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR4/3						loamy sand	
12-16	10YR5/3						sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Hydric soil indicators are absent due to sandy soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-2

Investigator(s): J. Davis, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364702.4617800 Long: 1974675.5218600 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-2 characterizes the floodplain of the northern side of the Santa Clara River. The "main channel" was recently located adjacent to this point according to aerial field maps (Psomas, 2003). Vegetation is young in age. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Nicotiana glauca***	20	Y	FAC
2.			
3.			
Total Cover: 20			
Sapling/Shrub Stratum			
1. ***Arundo donax***	50	Y	FACW
2. ***Populus fremontii***	20	Y	FACW
3. ***Baccharis salicifolia***	10	N	FACW[a]
4. ***Tamarix*** sp.	10	N	FAC[b]
5. ***Salix exigua***	5	N	OBL
6. ***Typha latifolia*** (?)	5	N	OBL
Total Cover: 100			
Herb Stratum			
1. ***Brassica*** sp.	5	Y	NI
2. ***Heliotropium curassavicum***	5	Y	OBL
3. ***Melilotus alba***	5	Y	FACU+
4.			
5.			
6.			
7.			
8.			
Total Cover: 15			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 65 % Cover of Biotic Crust

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)

Total Number of Dominant Species Across All Strata 6 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 66% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP LC-2 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: LC-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
0-12	n/a	100	n/a				coarse sand	with small gravel in matrix; oxidation on roots
12-16	10YR3/3	80	n/a				coarse sand/sandy loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Soil primarily consisted of riverwash or recently deposited sediment (coarse sand/small gravel). Soil became apparent in low stratum where sandy loam was present. No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☒ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 12-16

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:

Primary indicators, secondary indicators, and water table presence provided evidence of hydrology. Inundation visible on aerial from 2003 (Psomas, 2003). Site is within OHWM, therefore site is considered Waters of the U.S.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-3

Investigator(s): W. Vogler, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364716.8658200 Long: 1974603.2893700 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-3 characterized the floodplain on the northern side of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Tamarix*** sp.	35	Y	FAC[b]
2. ***Baccharis salicifolia***	10	Y	FACW[a]
3. ***Melilotus alba***	2	N	FACU+
4. ***Salix exigua***	2	N	OBL
5. ***Salix laevigata***	1	N	FACW+[a]
Total Cover:	50		
Herb Stratum			
1. ***Arundo donax***	2	Y	FACW
2. ***Conyza bonariensis***	1	Y	NI
3. ***Populus fremontii***	<1	N	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	3		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 50 % 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 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	0	x 1 =	0
FACW species	12	x 2 =	24
FAC species	35	x 3 =	105
FACU species	0	x 4 =	0
UPL species	1	x 5 =	5
Column Totals:	48 (A)		134 (B)

Prevalence Index = B/A = 2.79

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP LC-3 most closely corresponds to Cowardin's (1979) riparian scrub.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: LC-3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR5/2						coarse sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Riverwash depositional fill in one of the primary channels. Due to the "neutral" characteristics of sandy soils, riverwash is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 4

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): surface

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Primary indicators, secondary indicators, and water table and saturation presence provided evidence of hydrology. Inundation visible on aerial from 2003 (Psomas, 2003).

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/18/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-4

Investigator(s): J. Davis, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364715.6990700 Long: 1974536.6755100 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-4 characterized a stable sandbar in the Santa Clara River. The SP was located on the southern bank of a main channel of the river. Elevation is approximately 18" above the channel. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	70	Y	FACW[a]
2. ***Tamarix*** sp.	10	N	FAC[b]
3. unknown plant	10	N	
4. ***Populus fremontii***	5	N	FACW
5.			
Total Cover:	95		
Herb Stratum			
1. ***Melilotus alba***	5	Y	FACU+
2.			
3.			
4.			
5.			
6.			
7.			
Total Cover:	5		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP LC-4 most closely corresponds to Cowardin's (1979) riparian scrub. Vegetation was observed primarily on the bank's edge above channel. To the north was an existing sparsely vegetated wash. Dense vegetation is approximately 12 ft wide at this location.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.
[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: LC-4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	n/a		n/a				coarse sand	small to large gravel, no saturation

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

Substrate mainly consists of river sediment deposit with small cobbles, no saturation present. No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Sandbar area of the greater Santa Clara River. Sediment deposits are evident on the sandbar; however no other indicators of hydrology were observed. Waters of the U.S. – OHWM.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-5

Investigator(s): J. Davis, L. Rizzo Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364920.5617900 Long: 1974303.83132 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-5 characterizes the main summer channel of the Santa Clara River that was present during the 2007 site visit. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Salix exigua***	35	Y	OBL
2. ***Salix laevigata***	30	Y	FACW+[a]
3. ***Arundo donax***	15	N	FACW
4. ***Typha latifolia***	10	N	OBL
5. ***Populus fremontii***	5	N	FACW
Total Cover:	95		
Herb Stratum			
1. ***Polygonum lapathifolium***	55	Y	OBL
2. unknown grass	15	N	
3. ***Urtica dioica***	5	N	FACW
4. ***Xanthium strumarium***	5	N	FAC+
5.			
6.			
7.			
8.			
Total Cover:	80		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

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	100	x 1 =	100
FACW species	55	x 2 =	110
FAC species	5	x 3 =	15
FACU species	0	x 4 =	
UPL species	0	x 5 =	
Column Totals:	160 (A)		225 (B)

Prevalence Index = B/A = 1.41

Hydrophytic Vegetation Indicators:

☒ Dominance Test is >50%

☒ Prevalence Index is ≤3.0[1]

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

☐ Problematic Hydrophytic Vegetation[1] (Explain)

[1]Indicators of hydric soil and wetland hydrology must be present.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP LC-5 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: LC-5

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
No soil pit								

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Site was inaccessible. Soil was assumed hydric due to its vegetation and position in the main channel. Due to the "neutral" characteristics of sandy soils, riverwash is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Primary indicators, secondary indicators, and saturation presence provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-6

Investigator(s): J. Davis, L. Rizzo Section, Township, Range: San Francis Land Grant

Landform (hillslope, terrace, etc.): Upland terrace/Bank slope Local relief (concave, convex, none): none Slope (%): 5

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364920.4195000 Long: 1974289.0605600 Datum: NAD83

Soil Map Unit Name: Riverwash NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-6 characterizes the southern bank edge of the Santa Clara River. The river is approximately 12 ft below the edge of the terrace. This SP is within riparian scrub habitat directly south of the OHWM. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	75	Y	FACW[a]
2.			
3.			
4.			
5.			
Total Cover: 75			
Herb Stratum			
1. unknown grass (dry)	85	Y	
2. ***Brassica*** spp.	10	N	NI
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover: 95			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

Riparian vegetation primarily consists of mule fat with grass understory. The vegetation of SP LC-6 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: LC-6

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16	n/a		n/a				coarse sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

The soil consists of old riverwash and alluvial material. Hydric soil indicators are likely absent due to sandy soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-7

Investigator(s): W. Vogler, J. Love Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364943.0013000 Long: 1974168.5593200 Datum: NAD 1983

Soil Map Unit Name: Riverwash NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP LC-7 characterizes the upland terrace south of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	60	Y	FACW[a]
2. ***Salix exigua***	10	N	OBL
3.			
4.			
5.			
Total Cover: 70			
Herb Stratum			
1. ***Bromus diandrus*** (dead)	80	Y	NI
2. ***Bromus diandrus*** (live)	1	N	NI
3. ***Leymus triticoides*** (?)	1	N	FAC+
4.			
5.			
6.			
7.			
8.			
Total Cover: 82			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 50% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A =

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP LC-7 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: LC-7

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-16	10YR4/3	100					clay loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Long Canyon Bridge City/County: Los Angeles County Sampling Date: 9/28/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: LC-8

Investigator(s): J. Davis, J. Love, W. Vogler, L. Rizzo Section, Township, Range: San Francis Land Grant

Landform (hillslope, terrace, etc.): Upland terrace/Agriculture Local relief (concave, convex, none): none Slope (%): 5

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364920.4195000 Long: 1974289.0605600 Datum: NAD83

Soil Map Unit Name: Sorrento loam NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **no**, or Hydrology **no** 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:

SP LC-8 characterizes upland habitat consisting of a recently tilled agricultural field. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

Total Number of Dominant Species Across All Strata _____ (B)

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

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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.

Hydrophytic Vegetation Present? Yes ☐ No ☒

Remarks:

SP LC-8 does not have any natural vegetation communities; the site is characterized by ruderal vegetation and graded conditions.

SOIL

Sampling Point: LC-8

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
No Soil Pit								

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ **No** ☒

Remarks:

No soil pit was excavated due to lack of vegetation and observable hydrology.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

APPENDIX A USACE WETLAND DETERMINATION DATA FORMS

Commerce Center Bridge

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-1

Investigator(s): J. Kisner, W. Vogler, J. Love, E. Larsen Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6375973.9068700 Long: 1980360.7805500 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-1 characterizes the floodplain on the southern side of the Santa Clara River. This SP is immediately adjacent to the water's edge and incorporates a portion of a sandbar, a portion of a side channel, and a portion of the adjacent floodplain. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Sapling/Shrub Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Baccharis salicifolia***	20	Y	FACW[a]
2. ***Salix exigua***	20	Y	OBL
3. ***Salix laevigata***	10	N	FACW+[a]
4. ***Tamarix*** sp.	8	N	FAC[b]
5. ***Populus fremontii***	5	N	FACW
Total Cover:	63		
Herb Stratum			
1. ***Melilotus alba***	40	Y	FACU+
2. ***Polygonum lapathifolium***	10	Y	OBL
3. ***Veronica anagallis-aquatica***	10	Y	OBL
4. ***Leptochloa uninervia***	5	N	FACW
5. ***Typha angustifolia***	5	N	OBL
6. ***Aster subulatus*** var. ***ligulatus***	3	N	FACW
7. ***Cyperus erythrorhizos***	2	N	OBL
8. ***Agrostis viridis***	1	N	OBL
9. ***Ambrosia acanthicarpa***	1	N	NI
10. ***Apium graveolens***	1	N	FACW
11. ***Epilobium ciliatum***	1	N	FACW
12. ***Heterotheca grandiflora***	1	N	NI
13. ***Ludwigia peploides***	1	N	OBL
14. ***Rumex*** sp.	1	N	
15. ***Urtica dioica***	1	N	FACW
16. ***Xanthium strumarium***	1	N	FAC+
Total Cover:	84		

% Bare Ground in Herb Stratum 0 % 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 5 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	40	x 1 =	40
FACW species	20	x 2 =	40
FAC species	0	x 3 =	0
FACU species	40	x 4 =	160
UPL species	0	x 5 =	0
Column Totals:	100 (A)		240 (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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

Reed 1988 was used to determine the wetland indicator status of plants unless otherwise noted.

The vegetation of SP CC-1 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

[b] Wetland indicator status was assumed FAC for all ***Tamarix*** species that were not identified to species. ***Tamarix*** species found in California have indicators of at least FAC.

SOIL

Sampling Point: CC-1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-16							coarse sand riverwash	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Small organic layer on top. With the exception of organic material, there were no additional hydric soil indicators. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

Water Table Present? Yes ☒ No ☐ Depth (inches): 9

Saturation Present? (includes capillary fringe) Yes ☒ No ☐ Depth (inches): 6

Wetland Hydrology Present? Yes ☒ No ☐

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

Remarks:

Water table and saturation provided evidence of hydrology. No primary or secondary indicators were present.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-2

Investigator(s): E. Larsen, W. Vogler Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6376020.0814000 Long: 1980329.5854800 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-2 characterizes the floodplain on the southern side of the Santa Clara River. This SP is approximately 15m from the low flow channel of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	30	Y	FACW[a]
2. ***Salix exigua***	30	Y	OBL
3. ***Populus fremontii***	20	Y	FACW
4. ***Tamarix aphylla***	20	Y	FAC
5.			
Total Cover:	100		
Herb Stratum			
1. ***Arundo donax***	5	Y	FACW
2. ***Cyperus involucratus***	5	Y	OBL
3. ***Ambrosia acanthicarpa***	1	N	NI
4. ***Washingtonia robusta***	1	N	NI
5.			
6.			
7.			
8.			
Total Cover:	12		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 50 % Cover of Biotic Crust 0

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 6 (A)

Total Number of Dominant Species Across All Strata 6 (B)

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	35	x 1 =	35
FACW species	55	x 2 =	110
FAC species	20	x 3 =	60
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		205 (B)

Prevalence Index = B/A = 1.86

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP CC-2 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: CC-2

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6							sand	moist; dark layers 1 cm intervals
6-16							sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ **No** ☐

Remarks:

Sand has black, organic layering (1cm). Soil is characterized as riverwash. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Secondary indicators provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-3

Investigator(s): J. Love, J. Kisner Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6376099.4530800 Long: 1980196.6727200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS1

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-3 characterizes the floodplain on the southern side of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	20	Y	FACW
2. ***Salix lasiolepis***	15	Y	FACW
3. ***Salix laevigata***	5	N	FACW+[a]
Total Cover:	40		
Sapling/Shrub Stratum			
1. ***Populus fremontii***	20	Y	FACW
2. ***Salix lasiolepis***	10	Y	FACW
3. ***Baccharis salicifolia***	5	N	FACW[a]
4. ***Salix exigua***	5	N	OBL
5. ***Artemisia tridentata***	1	N	NI
6. ***Salvia mellifera***	1	N	NI
Total Cover:	42		
Herb Stratum			
1. ***Arundo donax***	50	Y	FACW
2. ***Ambrosia acanthicarpa***	1	N	NI
3. ***Distichlis spicata***	1	N	FACW
4.			
5.			
6.			
7.			
8.			
Total Cover:	52		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 5 (A)

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	5	x 1 =	5
FACW species	126	x 2 =	252
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	3	x 5 =	15
Column Totals:	134 (A)		272 (B)

Prevalence Index = B/A = 2.03

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

SP is located in small depression/drainage. The vegetation of SP CC-3 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: CC-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	10YR3/2	80	5YR4/6	20	C	M	silt loam	
6-16							fine sand	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydric soils are present due to presence of redox concentrations or iron mottles. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Secondary indicators provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-4

Investigator(s): E. Larsen, W. Vogler Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6376115.9530100 Long: 1980069.5899200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-4 characterizes the floodplain on the southern side of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	10	Y	FACW
2.			
3.			
4.			
Total Cover:	10		
Sapling/Shrub Stratum			
1. ***Arundo donax***	60	Y	FACW
2. ***Salix exigua***	40	Y	OBL
3.			
4.			
5.			
Total Cover:	100		
Herb Stratum			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:			
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust 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	40	x 1 =	40
FACW species	70	x 2 =	140
FAC species	0	x 3 =	0
FACU species	0	x 4 =	0
UPL species	0	x 5 =	0
Column Totals:	110 (A)		180 (B)

Prevalence Index = B/A = 1.64

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP CC-4 most closely corresponds to Cowardin's (1979) riparian scrub. The ground was 100 percent covered, consisting of mostly leaf litter with some woody debris.

SOIL

Sampling Point: CC-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	10YR4/3	95+	5YR5/4	<5	C	M	silt/loam	organic flakes 25%
6-20	10YR5/4		n/a	n/a	n/a	n/a	sand/loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydric soils are present due to the presence of redox concentrations or iron mottles. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Secondary indicators provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-5

Investigator(s): J. Love, J. Kisner Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6376253.1696300 Long: 1979866.4310200 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-5 characterizes the floodplain on the southern side of the Santa Clara River. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	70	Y	FACW
2.			
3.			
4.			
Total Cover:	70		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. ***Arundo donax***	90	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	90		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

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

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 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 160	x 2 = 320
FAC species 0	x 3 = 0
FACU species 0	x 4 = 0
UPL species 0	x 5 = 0
Column Totals: 160 (A)	320 (B)

Prevalence Index = B/A = 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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP CC-4 most closely corresponds to Cowardin's (1979) riparian scrub.

SOIL

Sampling Point: CC-5

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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-16	10YR3/2	98					silt loam	
0-4			5YR4/6	2	C	M		

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydric soils are present due the presence of redox concentrations or iron mottles. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Secondary indicators provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-6

Investigator(s): E. Larsen, W. Vogler Section, Township, Range: San Francis Land Grant

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

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6376322.4256200 Long: 1979977.4281500 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: PSS6

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-6 characterizes the floodplain on the southern side of the Santa Clara River. Similar to sampling point CC-7 in vegetation and CC-5 in soils. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	20	Y	FACW
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	20	Y	FACW[a]
2. ***Artemisia californica***	10	Y	NI
3. ***Nicotiana glauca***	5	N	FAC
4. ***Eriodictyon crassifolium***	5	N	NI
5.			
Total Cover:	40		
Herb Stratum			
1. ***Arundo donax***	20	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by	
OBL species	0	x 1 =	0
FACW species	60	x 2 =	120
FAC species	5	x 3 =	15
FACU species	0	x 4 =	0
UPL species	15	x 5 =	75
Column Totals:	80 (A)		210 (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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP CC-6 most closely corresponds to Cowardin's (1979) riparian scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: CC-6

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	10YR3/2	98					silt loam	
6-20			5YR4/6	2	C	M		

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☒ No ☐

Remarks:

Hydric soils are present due to the presence of redox concentrations or iron mottles. Due to the "neutral" characteristics of sandy soils, sandy alluvial land is problematic and often considered to be hydric under flooded conditions.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

Secondary indicators provided evidence of hydrology.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Newhall Ranch/Commerce Center Bridge City/County: Los Angeles County Sampling Date: 9/26/07

Applicant/Owner: Newhall Land and Farming Company State: CA Sampling Point: CC-7

Investigator(s): E. Larsen, W. Vogler Section, Township, Range: San Francis Land Grant

Landform (hillslope, terrace, etc.): Hillslope Local relief (concave, convex, none): convex Slope (%): 45

Subregion (LRR): Mediterranean California (LRR-C) Lat: 6364920.4195000 Long: 1974289.06056 Datum: NAD83

Soil Map Unit Name: Sandy Alluvial Land NWI classification: N/A

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

Are Vegetation **no**, Soil **no**, or Hydrology **no** significantly disturbed? Are "Normal Circumstances" present? Yes ☒ No ☐

Are Vegetation **no**, Soil **yes**, or Hydrology **no** 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:

SP CC-7 characterizes the beginning of the upland area on the southern side of the Santa Clara River. Similar in vegetation to SP CC-6. The 2006-2007 rain season had an abnormally low amount of precipitation.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. ***Populus fremontii***	20	Y	FACW
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1. ***Baccharis salicifolia***	20	Y	FACW[a]
2. ***Artemisia californica***	10	Y	NI
3. ***Nicotiana glauca***	5	N	FAC
4. ***Eriodictyon crassifolium***	5	N	NI
5.			
Total Cover:	40		
Herb Stratum			
1. ***Arundo donax***	20	Y	FACW
2.			
3.			
4.			
5.			
6.			
7.			
8.			
Total Cover:	20		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 75% (A/B)

Prevalence Index worksheet:

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

Prevalence Index = B/A = _____

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.

Hydrophytic Vegetation Present? Yes ☒ No ☐

Remarks:

The vegetation of SP CC-7 most closely corresponds to Cowardin's (1979) riparian scrub; however this SP was at the bottom edge of a hill dominated by coastal sage scrub.

[a] Kartesz, J.T. 1996. National List of Vascular Plant Species that Occur in Wetlands: 1996 National Summary. U.S. Fish and Wildlife Survey.

SOIL

Sampling Point: CC-7

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-6	10YR5/4	97	5YR5/6	3			silt loam	
6-20							silt loam	

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ☐ No ☒

Remarks:

No hydric soil indicators were present.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

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)
- ☐ Thin Muck Surface (C7)
- ☐ Crayfish Burrows (C8)
- ☐ Saturation Visible on Aerial Imagery (C9)
- ☐ Shallow Aquitard (D3)
- ☐ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (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:

No evidence of hydrology was observed.

APPENDIX B
LIST OF ON-SITE PLANT SPECIES AND THEIR WETLAND INDICATOR STATUS

LIST OF PLANT SPECIES THAT WERE OBSERVED WITHIN THE STUDY AREAS AND THEIR WETLAND INDICATOR STATUS

Scientific Name	Common Name	Wetland Indicator Status[3]
Agrostis viridis[#]	Water Bent Grass	OBL
Ambrosia acanthicarpa	Annual Burweed	NI
Ambrosia psilostachya var. *californica*	Western Ragweed	FAC
Apium graveolens[#]	Wild Celery	FACW*
Artemisia californica	California Sagebrush	NI
Artemisia douglasiana	Mugwort	FACW
Artemisia tridentata	Big Sagebrush	NI
Arundo donax[#,1]	Giant Reed	FACW
Aster subulatus var. *ligulatus*	Slender Aster	FACW
Baccharis pilularis	Coyote Brush	NI
Baccharis salicifolia	Mulefat	FACW[4]
Bassia hyssopifolia[#,1]	Five-hook Bassia	FAC
Brassica nigra[#,1]	Black Mustard	NI
Brassica spp.[#,1]	Mustard	NI
Bromus diandrus[#,1]	Ripgut Brome	NI
Chenopodium album[#]	White Goosefoot	FAC
Conium maculatum[#,1]	Poison Hemlock	FACW
Conyza bonariensis[#]	South American Horseweed	NI
Conyza canadensis	Horseweed	FAC
Cynodon dactylon[#,1]	Bermuda Grass	FAC
Cyperus eragrostis	Flatsedge	FACW
Cyperus erythrorhizos	Redroot Flatsedge	OBL
Cyperus involucratus[#]	Umbrella Plant	OBL
Dactyloctenium aegyptium[#]	Crowfoot Grass	NI
Distichlis spicata	Saltgrass	FACW
Echinochloa crus-galli[#]	Barnyard Grass	FACW
Eleocharis macrostachya	Common Spikerush	OBL
Eleusine indica[#]	Goose Grass	FACU
Epilobium ciliatum	Willow Herb	FACW
Eriodictyon crassifolium	Yerba Santa	NI
Euthamia occidentalis	Western Goldenrod	OBL
Heliotropium curassavicum	Alkali Heliotrope	OBL
Heterotheca grandiflora	Telegraph Weed	NI
Juncus torreyi	Torrey's Rush	FACW+

LIST OF PLANT SPECIES THAT WERE OBSERVED WITHIN THE STUDY AREAS AND THEIR WETLAND INDICATOR STATUS (CONTINUED)

Scientific Name	Common Name	Wetland Indicator Status[3]
Juncus xiphioides	Iris-leaved Rush	OBL
Leptochloa uninervia	Mexican Sprangletop	FACW
Leymus triticoides	Alkali Ryegrass	FAC+
Ludwigia peploides	Floating Water Primrose	OBL
Malvella leprosa	Alkali Mallow	FAC*
Melilotus alba[#]	White Sweetclover	FACU+
Nicotiana glauca[#,1]	Tree Tobacco	FAC
Oenothera elata	Hooker's Evening Primrose	FACW
Phalaris aquatica[#,1]	Harding Grass	FAC+
Pluchea sericea	Arrowweed	FACW
Poa annua[#]	Annual Bluegrass	FACW-
Poa spp.	Bluegrass	
Polygonum arenastrum[#]	Common Knotweed	FAC
Polygonum lapathifolium	Willow Weed	OBL
Polypogon monspeliensis[#,1]	Rabbitsfoot Grass	FACW+
Populus fremontii	Fremont Cottonwood	FACW
Rosa californica	California Rose	FAC+
Rumex spp.[#]	Dock	
Salix exigua	Narrowleaf Willow	OBL
Salix laevigata	Red Willow	FACW+[4]
Salix lasiolepis	Arroyo Willow	FACW
Salvia mellifera	Black Sage	NI
Sambucus mexicana	Blue Elderberry	FAC
Sonchus asper[#,1]	Prickly Sow-thistle	FAC
Sonchus spp.[#]	Sow-thistle	
Spergularia spp.	Sandspurry	
Tamarix aphylla[#,1]	Athel Tamarisk	FACW-
Tamarix spp.[#,1]	Tamarisk	FAC[5]
Trifolium spp.[#]	Clover	
Typha angustifolia	Narrowleaf Cattail	OBL
Typha domingensis	Southern Cattail	OBL
Typha latifolia	Cattail	OBL
Typha spp.	Cattail	OBL[6]

LIST OF PLANT SPECIES THAT WERE OBSERVED WITHIN THE STUDY AREAS AND THEIR WETLAND INDICATOR STATUS (CONTINUED)

Scientific Name	Common Name	Wetland Indicator Status[3]
Urtica dioica	Stinging Nettle	FACW
Veronica anagallis-aquatica[#]	Water Speedwell	OBL
Washingtonia robusta[2,1]	Fan Palm	NI
Xanthium strumarium	Cocklebur	FAC+
Zea mays[2]	Corn	NI

Notes:

[#] Non-native (Hickman 1993)

[1] Invasive (California Invasive Plant Council 2007)

[2] Non-native (Calflora 2007)

[3] As described in Reed, 1988 unless otherwise noted

[4] Kartesz 1996

[5] Wetland indicator status was assumed FAC for all *Tamarix* species that were not identified to species. *Tamarix* species found in California have indicators of at least FAC.

[6] Wetland indicator status was assumed OBL for all *Typha* species that were not identified to species. *Typha* species found in California have indicators of at least OBL.

Wetland Indicator Status Key

OBL = Obligate wetland species, occur almost always in wetlands (>99% probability).

FACW = Facultative Wetland species, usually occur in wetlands (67 to 99% probability), but occasionally found in non-wetlands.

FAC = Facultative species, equally likely to occur in wetlands or non-wetlands (34 to 66% probability).

FACU = Facultative Upland, usually occur in non-wetlands (67% to 99%), but occasionally found in wetlands.

UPL = Obligate Upland species, occur almost always in non-wetlands (>99% probability).

NI = Non Indicator, not present on list.

+ = Modifier that indicates a frequency toward the higher end of the category (more frequently found in wetlands).

- = Modifier that indicates a frequency toward the lower end of the category (less frequently found in wetlands).

* = A tentative assignment to that indicator status by Reed, 1988.

APPENDIX C
PHOTO DOCUMENTATION

Photo 1. Viewing west along the Santa Clara River, featuring the main channel and riparian scrub vegetation. Wetlands occur adjacent to the river and riparian scrub vegetation is visible in the background. This photo was taken on September 26, 2007 (CC-1).

Photo 2. A mix of hydrophytic vegetation is displayed consisting of narrowleaf willow, red willow, western goldenrod, and cattail. This vegetation arrangement is representative of the on-site riparian scrub wetlands. This photo was taken on September 25, 2007 (PC-13).

Photo 3. A view of a representative on-site mature riparian forest. This photo was taken on September 26, 2007 (PC-2).

Photo 4. A view of redox features that occurred in sandy soils in a riverwash land form adjacent to the Santa Clara River. This photo was taken on September 26, 2007 (CC-3).

Photo 5. A view of a depleted matrix that occurred in a sandy alluvial land form within a mature riparian forest wetland. This photo was taken on September 26, 2007 (PC-2).

Photo 6. A view of a high water table present within sandy soils. This photo was taken on September 26, 2007 (PC-6).

Photo 7. A view of a soil pit in a typical upland habitat. Hydric soils and hydrology indicators were absent. This photo was taken on September 28, 2007 (LC-7).

Photo 8. A view of wetland hydrology indicators including soil cracking, crust, and sediment deposits. This photo was taken on September 25, 2007 (PC-15).

APPENDIX D
URS CORPORATION (2004) JURISDICTION DELINEATION FOR THE RMDP SITE

Under separate cover.

APPENDIX E
LUKOS AND ASSOCIATES (2008) JURISDICTION DELINEATION FOR THE ENTRADA PLANNING AREA

Under separate cover.