C  Jurisdictional Delineation
JURISDICTIONAL DELINEATION REPORT

TAYLOR YARD BIKEWAY/PEDESTRIAN BRIDGE
OVER LA RIVER PROJECT, LOS ANGELES
COUNTY, CALIFORNIA

PREPARED FOR:

City of Los Angeles Department of Public Works
Bureau of Engineering, Environmental Management Group
1149 S. Broadway, Suite 600
Los Angeles, CA 90015

PREPARED BY:

ICF International
1 Ada, Suite 100
Irvine, CA 92618
Contact: Greg Hoisington
949.333.6622

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<tr>
<td>Approved JD</td>
<td>Approved Jurisdiction Determination</td>
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<tr>
<td>Bikeway</td>
<td>Los Angeles River Greenway Trail</td>
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<td>CDFW</td>
<td>California Department of Fish and Wildlife</td>
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<tr>
<td>CFR</td>
<td>Code of Federal Regulations</td>
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<td>CWA</td>
<td>Clean Water Act</td>
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<td>EPA</td>
<td>U.S. Environmental Protection Agency</td>
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<tr>
<td>FAC</td>
<td>facultative</td>
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<td>FACU</td>
<td>facultative upland</td>
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<td>FACW</td>
<td>facultative wetland</td>
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<tr>
<td>GPS</td>
<td>global positioning systems</td>
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<td>HUC</td>
<td>Hydrologic Unit Code</td>
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<tr>
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<td>ICF International</td>
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<tr>
<td>LABOE</td>
<td>City of Los Angeles Department of Public Works Bureau of Engineering</td>
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<tr>
<td>LADWP</td>
<td>Los Angeles Department of Water and Power</td>
</tr>
<tr>
<td>NI</td>
<td>no indicator</td>
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<tr>
<td>NO</td>
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<td>OBL</td>
<td>obligate</td>
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<td>OHWM</td>
<td>Ordinary High Water Mark</td>
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<td>Porter-Cologne Act</td>
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<td>Preliminary JD</td>
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<td>Rapanos decision</td>
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<td>RGL</td>
<td>Regulatory Guidance Letter</td>
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<tr>
<td>RPW</td>
<td>relatively permanent water</td>
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<td>RWQCB</td>
<td>Regional Water Quality Control Board</td>
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<tr>
<td>SSURGO</td>
<td>Soil Survey Geographic</td>
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<tr>
<td>Study area</td>
<td>Project footprint plus 100-foot buffer</td>
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<td>SWANCC</td>
<td><em>Solid Waste Agency of North Cook County</em></td>
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<td>SWRCB</td>
<td>State Water Resources Control Board</td>
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<td>TNW</td>
<td>traditional navigable water</td>
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<td>U.S. Geological Survey</td>
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<td>WoS</td>
<td>waters of the State</td>
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<tr>
<td>WoUS</td>
<td>waters of the United States</td>
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ICF International (ICF) conducted a routine-level delineation of jurisdictional waters and wetlands for the Taylor Yard Bikeway/Pedestrian Bridge over LA River Project (Project) footprint plus an additional 100-foot buffer (study area). The purpose of this delineation was to identify the extent of jurisdictional waters within and adjacent to the Project as part of the federal and state regulatory permitting process under Sections 401 and 404 of the Clean Water Act (CWA) and Section 1602 of the California Fish and Game Code. Relevant jurisdictions include federal jurisdiction regulated by the U.S. Army Corps of Engineers (USACE) as waters of the United States (WoUS) or USACE wetlands, state jurisdiction regulated by State Water Resources Control Board (SWRCB) and Regional Water Quality Control Board (RWQCB) as waters of the state (WoS) and RWQCB wetlands, and state jurisdiction regulated by the California Department of Fish and Wildlife (CDFW) as aquatic features and associated riparian habitat.

One feature was determined to be potentially subject to the jurisdiction of USACE, RWQCB, and CDFW: the Los Angeles River. In total, 2.94 acres of potential USACE/RWQCB nonwetland waters and 1.87 acres of USACE/RWQCB wetlands were mapped within the study area. A total of 4.43 acres of potential CDFW jurisdiction was also mapped with the study area, 1.86 acres of which is composed of vegetated riparian habitat.

Jurisdictional Delineation Figures are attached as Appendix A. An Ordinary High Water Mark data sheet is attached as Appendix B. Wetland Determination Data Forms are included as Appendix C. Site Photographs are attached as Appendix D.
ICF International (ICF) conducted a routine-level delineation of potential jurisdictional waters and wetlands within the Taylor Yard Bikeway/Pedestrian Bridge over LA River Project (Project) footprint plus an additional 100-foot buffer (study area) (Appendix A, Figures 1 & 2). The delineation was conducted as part of the federal and state regulatory permitting process for the City of Los Angeles Department of Public Works Bureau of Engineering (LABOE). The purpose of this delineation was to identify the extent of potential federal and state jurisdiction within the study area to support the resource-agency permitting process under Sections 401 and 404 of the Clean Water Act (CWA), Section 13260 of the Porter-Cologne Water Quality Control Act (Porter-Cologne Act), and Section 1602 of the California Fish and Game Code.

Section 404 of the CWA covers waters of the United States (WoUS) as well as federal wetlands and is regulated by the U.S. Army Corps of Engineers (USACE). Under Section 401 of the CWA, the Regional Water Quality Control Board (RWQCB) regulates at the state level all activities that are regulated at the federal level by USACE. The RWQCB/State Water Resources Control Board (SWRCB) may also regulate activities affecting non-federal waters and wetlands (e.g., isolated features) under the Porter-Cologne Act. Section 1600 et seq. of the California Fish and Game Code is regulated by the California Department of Fish and Wildlife (CDFW) and covers aquatic features, which may include lakes or streambeds with a defined bed and bank plus any adjacent riparian vegetation. If a proposed project may affect waters or wetlands, then the project site must be evaluated to determine the presence of jurisdictional waters. Permits for the proposed activity must be sought from each applicable resource agency. Details regarding each of these resource agencies, their regulatory authority, jurisdiction, permits, and regulatory process are provided in Chapter 2, Regulatory Background.

The information and results presented herein document the delineation, best professional judgment, and conclusions of ICF. It is correct and complete to the best of our knowledge; however, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

1.1 Project Description

The proposed project would construct a multi-modal bridge over the Los Angeles River between Elysian Valley on the west and Taylor Yard on the east. The proposed bridge would be designed for bicycle and pedestrian use, and would also support emergency vehicles. On the south, the proposed bridge would connect with the existing bikeway along the river. Two American with Disabilities Act (ADA) compliant ramps would also be constructed in this area. On the north, a 275-foot long bikeway ramp would be constructed. This proposed ramp would lead to a proposed two-way bike path with buffer along Kerr Road that would connect to San Fernando Road, as shown in Figure 4. Nine (9) Magnolia trees located along Kerr Road would be removed under the proposed project. Proposed crosswalks would be added at the San Fernando Road/Future Street and Cypress Street/Future Street intersections.
The proposed steel-framed bridge would be approximately 400-feet long and would be supported on abutments and a concrete pier in the central portion of the channel. The abutment to the North would be located along the LA River maintenance road and the abutment on the South side would be located along the existing bikeway; and both abutments would be adjacent to the top of the channel slopes. The abutment on the north side would include the construction of a retaining wall that will range in height from about 5 to 18 feet. The bridge structure itself would be approximately 30 feet high by 24'-3” wide. The width of the actual pedestrian and bikeway path would be approximately 18 feet. The pedestrian and bikeway path would descend to the south at an inclination of approximately 3.1 percent.

The proposed design would minimize the disruption of the waterway as well as minimize structural supports in the river. The bridge design would include a foundational support pier in the riverbed, which is soft-bottomed in this area. Except for the pier, the bridge would be located above the River’s cross-sectional flow area. There would be an at-grade crossing of an existing railroad on the east side. The proposed project would cross land within the jurisdictions of the City of Los Angeles (City), Los Angeles County Flood Control District, and the United States Army Corps of Engineers (USACE).

The proposed bridge would be designed to carry two-16 inch LADWP waterlines carrying reclaimed water which will connect from Elysian Valley to Cypress Park. The scope of LADWP waterline installation, for this project, will start from 5 feet south of the masonry wall on the bikeway side, travel underground perpendicular to the bikeway, travel up through the bridge landing, straddle under the bridge deck, then travel back underground through the bridge landing, travel through Kerr Road and connect to an existing waterline in San Fernando Road. The recycled water lines would be a visible bridge element, hanging under the bridge deck. These recycled waterlines represent the investment in recycled water infrastructure that the city is making.

### 1.2 Project Location

The Project would be located across the Los Angeles River in the Silverlake-Echo Park-Elysian Park Community Plan Area in the City of Los Angeles (Appendix A, Figure 1). The northern abutment of the Project would be located adjacent to Kerr Road and its southern abutment would be located adjacent to the Los Angeles River Greenway Trail (bikeway) approximately between Altman Street and Dorris Place in the City of Los Angeles. The southern abutment would be located adjacent to 2331 Dorris Place. The site is mapped in Township 1 South, Range 13 West, Section 11 of the U.S. Geological Survey (USGS) 7.5-minute Los Angeles topographic map (USGS 1964) (Appendix A, Figure 2). The jurisdictional delineation study area was defined as the Project footprint plus a 100-foot buffer.
Chapter 2

Regulatory Background

The following sections summarize the regulations imposed on each type of jurisdictional feature potentially present within the Project area.

2.1 U.S. Army Corps of Engineers Regulated Activities

Pursuant to Section 404 of the CWA, USACE regulates the discharge (temporary or permanent) of dredged or fill material into WoUS, including wetlands. A discharge of fill material includes, but is not limited to, grading, placing riprap for erosion control, pouring concrete, laying sod, and stockpiling excavated material into WoUS. Activities that generally do not involve a regulated discharge (if performed specifically in a manner to avoid discharges) include driving pilings, performing certain drainage channel maintenance activities, constructing temporary mining and farm/forest roads, and excavating without stockpiling.

2.1.1 Waters of the United States

WoUS, as defined in Code of Federal Regulations (CFR) title 33, section 328.3, includes the following.

(1) All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;

(2) All interstate waters including interstate wetlands;

(3) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
   (i) Which are or could be used by interstate or foreign travelers for recreational or other purposes; or
   (ii) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
   (iii) Which are used or could be used for industrial purpose by industries in interstate commerce;

(4) All impoundments of waters otherwise defined as WoUS under the definition;

(5) Tributaries of waters identified in paragraphs (1) through (4) of this section;

(6) The territorial seas;

(7) Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (1) through (6) of this section.

(8) WoUS do not include prior converted cropland. Notwithstanding the determination of an area’s status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with EPA.
Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not WoUS.

The limit of USACE jurisdiction, excluding wetlands and tidal waters, is delineated using the Ordinary High Water Mark (OHWM), defined in CFR 328.3(e) as

...that line on the shore established by the fluctuations of water and indicated by physical characteristics such as [a] clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas.

2.1.2 Wetlands

Normally, three criteria must be satisfied to classify an area as a jurisdictional wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soils saturation, at least seasonally (wetland hydrology) (Environmental Laboratory 1987).

2.1.3 Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers

In 1986, in an attempt to clarify the reach of its jurisdiction, USACE stated that Section 404(a) extends to intrastate waters that

...(a) are or would be used as habitat by birds protected by migratory bird treaties, or (b) are or would be used as habitat by other migratory birds which cross state lines, or (c) are or would be used as habitat for endangered species, or (d) used to irrigate crops sold in interstate commerce.

(51 Federal Register 41217)

As a result of the 2001 Solid Waste Agency of Northern Cook County (SWANCC) case, the U.S. Supreme Court held that USACE may not rely on the Migratory Bird Rule to establish a significant nexus to interstate or foreign commerce. Although no formal guidance was issued by USACE interpreting the extent to which the SWANCC decision would limit jurisdictional determinations, in practice USACE considers intrastate waters as WoUS where there is an appropriate connection to a navigable water or other clear interstate commerce connection. Therefore, WoUS, including jurisdictional wetlands, must show connectivity with (be tributary to) a navigable WoUS to be subject to USACE under Section 404 of the CWA.

2.1.4 Rapanos v. United States and Carabell v. United States Army Corps of Engineers

In 2006, the U.S. Supreme Court issued an opinion regarding the extent of USACE jurisdiction over certain waters under Section 404 of the CWA. The Rapanos v. United States and Carabell v. United States Army Corps of Engineers (Rapanos decision) consolidated decisions addressed the question of jurisdiction over attenuated tributaries to WoUS, as well as wetlands adjacent to those tributaries.

On June 5, 2007, the USACE and EPA issued guidance related to the Rapanos decision. The guidance identifies those waters over which the agencies (USACE/EPA 2008) will assert jurisdiction
categorically and on a case-by-case basis. To summarize, USACE will continue to assert jurisdiction over the following features.

- Traditional navigable waters (TNWs) and their adjacent wetlands
- Non-navigable tributaries of TNWs that are relatively permanent waters (RPWs) (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally [i.e., typically 3 months]) and wetlands that directly abut such tributaries (i.e., not separated by uplands, berm, dike, or similar feature)

For non-RPWs, the agencies will determine whether a “significant nexus” exists with a TNW using the data found in an Approved Jurisdictional Determination (Approved JD) Form. The purpose of the significant nexus evaluation is to determine whether the existing functions of a tributary affect the chemical, physical, and/or biological integrity of a downstream TNW. Tributary characteristics that are considered when evaluating whether a significant nexus exists include volume, duration, and frequency of flow; proximity to a TNW; and hydrologic and ecologic functions performed by the tributary and all of its adjacent wetlands. Based on that information, the agencies may assert jurisdiction over the following features.

- Non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally
- Wetlands adjacent to such tributaries
- Wetlands adjacent to but not directly abutting a relatively permanent nonnavigable tributary

The agencies will typically not assert jurisdiction over the following features.

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

### 2.1.4.1 Approved Jurisdictional Determinations

An Approved JD is an official USACE jurisdictional determination, is valid for 5 years, can be used and relied upon in a CWA citizen's lawsuit if its legitimacy is challenged (except under extraordinary circumstances), and can be immediately appealed (33 CFR 331). Approved JDs are documented in accordance with Regulatory Guidance Letter (RGL) No. 07-01 and require the use of the Approved JD Form. Approved JDs are evaluated by USACE and EPA.

Under the *Rapanos* guidance, an Approved JD is required for determinations for all “isolated” waters or wetlands, and is subject to review by USACE and EPA.

### 2.1.4.2 Preliminary Jurisdictional Determinations

USACE issued RGL No. 08-02 on June 26, 2008, allowing the USACE to issue Preliminary Jurisdictional Determinations (Preliminary JD) for a project. A Preliminary JD is a non-binding written indication that there may be WoUS, including wetlands, on a project site and identifies the approximate location of these features. Preliminary JDs are used when a landowner, permit applicant, or other affected party elects to voluntarily waive or set aside questions regarding CWA jurisdiction over a particular site, usually in the interest of allowing the landowner to move ahead...
expeditiously to obtain Section 404 authorization where the party determines that it is in his or her best interest to do so. A Preliminary JD is not an official determination regarding the jurisdictional status of potentially jurisdictional features and has no bearing on Approved JDS. A Preliminary JD cannot be used to confirm the absence of jurisdictional waters or wetlands, is advisory in nature, and cannot be appealed. It is considered “preliminary” because a recipient can later request an Approved JD if one is necessary or appropriate.

A Preliminary JD is documented using the Preliminary JD Form. For purposes of impact calculations, compensatory mitigation requirements, and other resource protection measures, a permit decision made on the basis of a Preliminary JD treats all waters and wetlands that would be affected in any way, except by the permitted activity, as if they are jurisdictional. Although a Preliminary JD may be chosen by the applicant, the district engineer reserves the right to use an Approved JD where warranted.

### 2.1.4.3 2011 Draft Clean Water Act Guidance

On April 27, 2011, USACE and EPA issued draft guidance for determining jurisdiction under the CWA. The guidance supersedes the previous guidance from 2003 regarding SWANCC (68 Federal Register 1991–1995) and 2007 Rapanos guidance. This document reiterated the guidance issued under the Rapanos decision, asserting that the following waters are protected by the CWA.

- TNWs
- Interstate waters
- Wetlands adjacent to either TNWs or interstate waters
- Nonnavigable tributaries to TNWs that are relatively permanent (meaning they contain water at least seasonally)
- Wetlands that directly abut RPWs

The guidance further clarifies the criteria for defining TNWs, primarily consistent with previous guidance. In addition, a significant nexus evaluation is required for the “other waters” category of the regulations (see item 3 in Section 2.1.1 above). The guidance divides these waters into two categories—those that are physically proximate to other jurisdictional waters and those that are not, and discusses how each category should be evaluated.

Finally, the guidance reiterated that certain aquatic areas are generally not considered WoUS.

- Wet areas that are not tributaries or open waters and do not meet the agencies’ regulatory definition of “wetlands”
- Waters excluded from coverage under the CWA by existing regulations
- Waters that lack a “significant nexus” where one is required for a water to be protected by the CWA
- Artificially irrigated areas that would revert to upland should irrigation cease
- Artificial lakes or ponds created by excavating and/or diking dry land and used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing
- Artificial reflecting pools or swimming pools created by excavating and/or diking dry land
- Small ornamental waters created by excavating and/or diking dry land for primarily aesthetic reasons
- Water-filled depressions created incidental to construction activity
- Groundwater drained through subsurface drainage systems
- Erosional features (gullies and rills), and swales and ditches that are not tributaries or wetlands

2.2 Activities Regulated by the State

2.2.1 Section 401 of the Clean Water Act

A federal permit or license cannot be issued that may result in a discharge to WoUS unless certification under Section 401 of the CWA is granted or waived by EPA, the state, or the tribe where the discharge would originate (EPA 2010). Within the proposed study area, the ability to grant, grant with conditions, deny, or waive certification falls to two separate parties: RWQCB and EPA.

Pursuant to Section 401 of the CWA:

...any applicant for a federal permit for activities that involve a discharge to WoUS shall provide the federal permitting agency a certification from the state in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal CWA.

Therefore, before USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 water quality certification or waiver, as applicable. Under Section 401 of the CWA, all activities that are regulated at the federal level by USACE are also regulated at the state level. Therefore, state jurisdiction usually includes all waters or tributaries to waters that are determined to be WoUS and, similar to WoUS, are typically delineated at the OHWM.

However, if waters are determined not to be WoUS, they may still be subject to state jurisdiction based on the Porter-Cologne Act.

2.2.2 Porter-Cologne Water Quality Control Act

The state also regulates activities that would involve "discharging waste, or proposing to discharge waste, within any region that could affect WoS" (California Water Code 13260(a)), pursuant to provisions of the state Porter-Cologne Act. WoS are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (California Water Code 13050(e)). Such waters may include waters not subject to regulation under Section 404 (i.e., isolated features). These waters may include isolated vernal pools, isolated wetlands, or other aquatic habitats not normally subject to federal regulation under Section 404 of the CWA.

2.2.3 Regulating Agencies

2.2.3.1 State Water Resources Control Board/Regional Water Quality Control Board Regulated Activities

In California, the SWRCB and the nine RWQCBs regulate activities within state and federal waters under Section 401 of the CWA and the state Porter-Cologne Act. The SWRCB is responsible for
setting statewide policy, coordinating and supporting RWQCB efforts, and reviewing petitions that contest RWQCB actions. Each semi-autonomous RWQCB sets water quality standards, issues Section 401 certifications and waste discharge requirements, and takes enforcement action for projects occurring within its boundary. However, when a project crosses multiple RWQCB jurisdictional boundaries, the SWRCB becomes the regulating agency for both of these acts and issues project permits.

2.3 California Department of Fish and Wildlife Regulated Activities

Pursuant to Sections 1600–1616 of the California Fish and Game Code, CDFW regulates any activity that will substantially divert or obstruct the natural flow—or substantially change or use any material from the bed, channel, or bank—of any river, stream, or lake. CDFW also regulates any activity that will deposit or dispose of debris, wastewater, or other material containing crumbled, flaked, or ground pavement that may pass into any river, stream, or lake. The applicant must notify CDFW prior to such activities and obtain a Lake or Streambed Alteration Agreement.

2.3.1 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction includes ephemeral, intermittent, and perennial watercourses (including dry washes) and lakes characterized by the presence of (1) definable bed and banks, and (2) existing fish or wildlife resources. Furthermore, CDFW jurisdiction is often extended to habitats adjacent to watercourses, such as oak woodlands in canyon bottoms or willow woodlands that support hydrologic functions within the riparian system. CDFW jurisdiction typically does not include features without a discernible bed and bank, such as swales, vernal pools, or wet meadows.

2.3.2 Section 1602 of the California Fish and Game Code

The California Fish and Game Code mandates that:

...it is unlawful for any person to substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake designated by the department, or use any material from the streambeds, without first notifying the department of such activity.

Historical court cases have further extended CDFW jurisdiction to include watercourses that seemingly disappear but re-emerge elsewhere. Under the CDFW definition, a watercourse need not exhibit evidence of an OHWM to be claimed as jurisdictional.

Water features such as vernal pools and other seasonal swales where the defined bed and bank are absent and the feature is not contiguous or closely adjacent to other jurisdictional features are generally not asserted to fall within state jurisdiction under Section 1602. CDFW generally does not assert jurisdiction over human-made water bodies unless they are located where such natural features were previously located or (importantly) where they are contiguous with existing or prior natural jurisdictional areas.
3.1 Project Research

Prior to the field visit, a 200-foot-scale (1 inch = 200 feet) aerial photograph of the study area was obtained and compared with the Los Angeles, California, USGS 7.5-minute topographic quadrangle and Google Earth imagery (Google Earth 2016, dated February 2, 2016) to identify drainage features within and adjacent to the study area as indicated by vegetation types, topographic changes, or visible drainage patterns.

In addition, the following sources were reviewed during the preparation of this report.

- National Hydrography Dataset (USGS 2016) (Appendix A, Figure 3).
- Hydrologic Unit Code (HUC) 8 and 10 Watershed Maps (Calwater 2014) (Appendix A, Figure 4).
- U.S. Department of Agriculture, Natural Resources Conservation Service Soil Survey Geographic (SSURGO) database (USDA/NRCS 2011) (Appendix A, Figure 5).
- National Wetlands Inventory Map (USFWS 2016) (Appendix A, Figure 6).

3.2 Field Investigation

ICF biologists Greg Hoisington and Dennis Miller conducted the jurisdictional waters and wetland delineation on April 15, 2016. The survey was conducted on foot, and jurisdictional limits were recorded using high-resolution aerial photographs and a sub-meter accuracy Trimble global positioning systems (GPS) unit where access was possible. Areas within the bottom of the channel with flowing water in excess of 1 foot deep were delineated with the GPS unit as feasible and inaccessible areas were extrapolated using aerial imagery in the field. Existing conditions were documented with field notes and site photographs.

Common plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows the Jepson Manual: Vascular Plants of California (Baldwin et al. 2012). When no common name for plant species was listed in the Jepson Manual, common names were taken from the Arid West 2014 Regional Wetland Plant List (USACE 2014).

3.2.1 U.S. Army Corps of Engineers Jurisdiction

Potential WoUS and wetlands were delineated using methods established in the Wetland Delineation Manual (Environmental Laboratory 1987), the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (USACE 2008a), A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008b), and Draft Guidance on Identifying Waters Protected by the Clean Water Act (USACE/EPA 2011). Nonwetland waters were delineated based on the presence of OHWM indicators and an OHWM data sheet was recorded where appropriate (i.e., named blue-line features depicted on USGS topographic maps), which is attached as Appendix B.
Several parameters were considered to determine whether the sample point is within a wetland. Three criteria normally must be fulfilled in order to classify an area as a jurisdictional USACE wetland: (1) a predominance of hydrophytic vegetation, (2) the presence of hydric soils, and (3) the presence of wetland hydrology. Details of the application of these techniques are described below.

- **Hydrophytic Vegetation:** The hydrophytic vegetation criterion is satisfied at a location if greater than 50% of all the dominant species present within the vegetation unit have a wetland indicator status of obligate (OBL), facultative wetland (FACW), or facultative (FAC) (Environmental Laboratory 1987). An OBL indicator status refers to plants that have a 99% probability of occurring in wetlands under natural conditions. A FACW indicator status refers to plants that usually occur in wetlands (67–99% probability) but are occasionally found elsewhere. A FAC indicator status refers to plants that are equally likely to occur in wetlands or elsewhere (estimated probability 34–66% for each). A facultative upland (FACU) status refers to plants that usually do not occur in wetlands (1-33% probability). An obligate upland (UPL) status refers to plants that occur in wetlands within other regions, but occur almost always (>99% probability) under natural conditions in non-wetlands within the Arid West region. A no indicator (NI) status designates that insufficient information was available to determine an indicator status. An no occurrence (NO) status indicates that the species does not occur in the region; when a plant with an NO status is found within a region, it usually indicates that the plant is ornamental. The wetland indicator status used for this report follows the *Arid West 2014 Regional Wetland Plant List* (USACE 2014).

- **Hydric Soils:** The definition of a hydric soil is 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 (USDA/NRCS 1994). This determination is made based on various field indicators detailed in the *Arid West Supplement* (USACE 2008a) and the *Field Indicators of Hydric Soils in the United States (Version 7.0)* (USDA/NRCS 2010). Additional soil data was developed from the *National Hydric Soils List* (USDA/NRCS 2014).

- **Wetland Hydrology:** Wetland hydrology is determined using indicators of inundation or saturation (flooding, ponding, or tidally influenced) detailed in the *Wetland Delineation Manual* (Environmental Laboratory 1987) and the *Arid West Supplement* (USACE 2008a).

Soil pits were dug to examine soil color and texture at areas that exhibited the potential to meet the aforementioned wetland criteria. USACE Wetland determination forms are attached as Appendix C.

### 3.2.2 State Jurisdiction

Evaluation of state jurisdiction followed guidance from Section 401 of the CWA and typically follows the same jurisdictional areas as USACE.

### 3.2.3 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction typically includes water features with a defined bed and bank and associated riparian vegetation. Evaluation of potentially jurisdictional areas followed the guidance of standard practices by CDFW personnel. CDFW jurisdiction was delineated by measuring outer width and length boundaries of potentially jurisdictional areas consisting of the top of bank or the extent of associated riparian or wetland vegetation.
Chapter 4
Environmental Setting

The following section describes the topography, land use, hydrology, vegetation characteristics, and soils associated with the study area.

4.1 Topography

The study area is relatively flat with the exception of the elevation drop from the immediate surrounding areas down into the river. Beyond the study area to the west, the topographic complexity increases substantially within Elysian Park (Appendix A, Figure 2).

4.2 Land Use

A variety of land uses occur within the vicinity of the study area including commercial, residential, transportation, undeveloped lands, recreation, and agriculture. Within and adjacent to the northern portion of the study area, the dominant land uses are commercial, residential, and transportation.

4.3 Hydrologic Units

The Project is within the Upper Los Angeles River HUC 10 watershed, which is a sub-watershed of the larger Los Angeles HUC 8 watershed (Appendix A, Figures 4a & 4b). The Los Angeles Watershed covers a land area of over 834 square miles from the eastern portions of the Santa Monica Mountains and Simi Hills, and Santa Susana Mountains to the San Gabriel Mountains in the west. There are eight major tributaries to the Los Angeles River as it flows from its headwaters to the Pacific Ocean. From the study area, the Los Angeles River travels approximately 25 miles before discharging into the Pacific Ocean at Long Beach Harbor.

4.4 Vegetation Summary

Four vegetation communities/land use/land conditions were mapped within the study area. Vegetation series from the Manual of California Vegetation (Sawyer et al. 2009) were used to classify the vegetation within the study area. Each of the vegetation communities/land use/land conditions is discussed below.

4.4.1 Developed

Developed lands were mapped in association with the residential structures and surface roads within the study area. This land cover type includes ornamental vegetation typically associated with developed areas, such as Mexican fan palm (Washingtonia robusta), eucalyptus (Eucalyptus sp.), Magnolia tree (Magnolia sp.) and many types of shrubs and forbs.
4.4.2 Disturbed/Ruderal

Disturbed/ruderal lands were mapped on the northern edge of the Los Angeles River and are associated with vacant lots surrounded by developed lands and parks to the north, east, and west. These areas are dominated by non-native and native annual and perennial species such as wild oat (Avena fatua), black mustard (Brassica nigra), telegraphweed (Heterotheca grandifolia), cheeseweed (Malva parviflora), and Bermuda grass (Cynodon dactylon). There is a small strip along the northern edge of the Los Angeles River at the top of the bank within the study area that appears to have been planted with native coastal sage scrub plant species. This strip is very small and contains a large amount of non-native weeds giving it no substantial function or value as coastal sage scrub and is thus included within the disturbed/ruderal habitat type.

4.4.3 Open Water

Open Water was mapped as the flowing portion of the Los Angeles River at the time of the delineation, which varies throughout the year depending on rainfall amounts within the watershed.

4.4.4 Salix gooddingii Woodland Alliance (Black Willow Thickets - Disturbed)

Black Willow Thickets are a deciduous woodland type that typically tower above the surrounding vegetation, with Gooding’s black willow (Salix gooddingii) as the dominant or co-dominant species. Other species that may occur in the canopy/subcanopy include Fremont’s cottonwood (Populus fremontii), arroyo willow (Salix lasiolepis), red willow (Salix laevigata), and white alder (Alnus rhombifolia). The understory can be dense to open and can consist of shrubs and small trees 3 to 16 feet tall, including mulefat (Baccharis salicifolia), coyote brush (Baccharis pilularis), sandbar willow (Salix exigua), and black elderberry (Sambucus nigra). The herbaceous stratum varies in composition and coverage but is characterized by mixed annuals and short-lived perennials. Within the study area, Black Willow Thickets is disturbed and consists of a few mature black willow trees interspersed among dense stands of non-native arundo (Arundo donax). It occurs within the Los Angeles River as small isolated stands or narrow bands that parallel the stream channel.

4.5 Soils

4.5.1 Soil Series

The Natural Resources Conservation Service has mapped the following soil series as occurring within the study area based on the SSURGO database (USDA/NRCS 2011): Handford and Tujunga. Appendix A, Figure 5, depicts the Project study area and the SSURGO data. A description of the series included within the SSURGO mapping units is provided below based on the official soil descriptions provided by USDA (USDA/NRCS 2011).

4.5.1.1 Tujunga

The Tujunga series consists of very deep, somewhat excessively drained soils that formed in alluvium from granitic sources. Tujunga soils are on alluvial fans and floodplains, including urban
areas. Slopes range from 0 to 9 percent. The soil becomes moist below a depth of about 12 inches some time from October to December and remains moist in some part between depths of about 12 to 35 inches until April or May. This series is somewhat excessively drained, negligible to low runoff, and high saturated hydraulic conductivity. Flooding is none to frequent. The following Tujunga soil type has been mapped within the study area:

- Tujunga Fine Sandy Loam. This soil type is not identified as a hydric soil (USDA/NRCS 2014).

### 4.5.1.2 Hanford

The Hanford soils are on stream bottoms, floodplains, and alluvial fans at elevations of 150 to 3,500 feet. Slopes range from 0 to 15 percent. The soils formed in deep, moderately coarse textured alluvium dominantly from granite and other quartz bearing rocks of similar texture. The climate is dry subhumid mesothermal with hot, dry summers and cool, moist winters. The mean annual precipitation is 9 to 20 inches. The following Hanford soil type has been mapped within the study area:

- Hanford Fine Sandy Loam. This soil type is not identified as a hydric soil (USDA/NRCS 2014).
Chapter 5

Jurisdictional Delineation Results

This chapter describes the delineated features and expected jurisdictional status within the study area and does not include an impacts analysis. An impact analysis of potential jurisdictional resources is included under separate cover in the *Taylor Yard Bikeway/Pedestrian Bridge over the LA River Project Biological Resources and Habitat Assessment Report* (ICF 2016).

The information and results included herein document the investigation, best professional judgment, and conclusions of ICF. It is correct and complete to the best of our knowledge. However, all jurisdictional determinations should be considered preliminary until reviewed and approved by the regulatory agencies.

5.1 Delineated Feature Descriptions

The study area contains one aquatic feature, the Los Angeles River, which meets the definition of a potential WoUS and contains areas that meet the definition of a USACE wetland as regulated by USACE under Section 404 of the CWA. As such, the Los Angeles River would be regulated by the RWQCB and EPA as a WoS under Section 401 of the CWA. In addition, the Los Angeles River within the study area meets the definition of an aquatic feature with defined bed and banks that would be regulated by CDFW under Sections 1600–1616 of the California Fish and Game Code. The Los Angeles River is described in detail below.

5.1.1 Los Angeles River

The Los Angeles River within the study area consists of a constructed trapezoidal channel with concrete walls and an earthen bottom. The concrete-lined portion is devoid of vegetation. The earthen channel bottom contains areas of open water and vegetation dominated by giant reed (FACW) and to a lesser extent arroyo willow (FACW), Gooding’s black willow (FACW), Mexican fan palm (FACW), tall umbrella sedge (*Cyperus eragrostis*, FACW), and cat-tail (*Typha domingensis*, OBL). Vegetated areas meet the USACE three-parameter wetland criteria. The study area is identified by the U.S. Fish and Wildlife Service National Wetland Inventory as Riverine within the open water portions and Freshwater Forested/Shrub Wetland within the vegetated portions (Appendix A, Figure 6).

OHWM indicators were observed high up on the concrete walls indicating significant episodic high flows. In addition, large trash and debris wracks are present over 12-15 feet above the low flow elevation at the time of the delineation in the woody vegetation. OHWM indicators included staining and debris wracks on the concrete walls. An OHWM data sheet prepared for the feature is included in Appendix B.

Within the study area, the Los Angeles River contains 2.94 acres (1,311 linear feet) of potential non-wetland WoUS/WoS and 1.86 acres (852 linear feet) of wetlands. The Los Angeles River within the study area also contains 4.43 acres (1,311 linear feet) of CDFW jurisdiction, 1.86 acres (852 linear feet) of which consists of riparian vegetation (Table 5-1). Detailed maps depicting USACE and CDFW jurisdiction are included in Appendix A, Figures 7 and 8, respectively.
Table 5-1. Jurisdictional Delineation Summary

<table>
<thead>
<tr>
<th>Drainage</th>
<th>U.S. and State Nonwetland Waters (acres/linear feet)</th>
<th>U.S. and State Wetland Waters (acres/linear feet)</th>
<th>CDFW Unvegetated Streambed (acres/linear feet)</th>
<th>CDFW Riparian (acres/linear feet)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Los Angeles River</td>
<td>2.94/1,311</td>
<td>1.86/852</td>
<td>4.43/1,311</td>
<td>1.86/852</td>
</tr>
<tr>
<td>Total</td>
<td>2.94/1,311</td>
<td>1.86/852</td>
<td>4.43/1,311</td>
<td>1.86/852</td>
</tr>
</tbody>
</table>

5.2 List of Delineators and Report Preparers/Reviewer

Greg Hoisington, Irvine Regional Biology Manager—Delineator and Report Preparer

Colleen Martin, Biologist—Report Reviewer

Brittany Buscombe, GIS Specialist—GIS Support
Chapter 6

References


Figure 1
Regional Vicinity Map
Taylor Yard Bikeway/Pedestrian Bridge over L.A. Bridge Project
Figure 2
USGS Topographic Map
Taylor Yard Bikeway/Pedestrian Bridge over L.A. River Project
Figure 3
National Hydrography Dataset Map
Taylor Yard Bikeway/Pedestrian Bridge over L.A. River Project
Figure 4a
Watershed - HUC 8
LABOE Taylor Yard Bikeway Pedestrian Bridge Project
Figure 4b
Watershed - HUC 10
LABOE Taylor Yard Bikeway Pedestrian Bridge Project
Figure 5
Soils Map
Taylor Yard Bikeway/Pedestrian Bridge over L.A. River Project
Figure 6
National Wetlands Inventory Map
Taylor Yard Bikeway/Pedestrian Bridge over L.A. River Project
Figure 7, Sheet 1 of 2
USACE Jurisdictional Waters Impacts
Taylor Yard Bikeway/Pedestrian Bridge over L.A. River Project

Legend
- OHWM Form
- Wetland Sample Point
- USACE Non-Wetland
- USACE Wetland
- Jurisdictional Delineation Study Area
- Permanent Impact
- Temporary Impact

Source: ESRI World Imagery (2014)
Map Prepared: 9/15/2016
Appendix B

Ordinary High Water Mark Data Sheets
Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Taylor Yard Bicycle Path
Project Number: 000000.16
Stream: LA River
Investigator(s): C. MONROE, K. D. MILLER

Date: 15 Apr 2016
Town: Glendale
Photo begin file#: Photo end file#
State: CA

Location Details:
Projection: UTM
Datum:
Coordinates: 286000 E, 3773299 m N

Y ☑/ N ☐ Do normal circumstances exist on the site?
Y ☐ / N ☑ Is the site significantly disturbed?

Potential anthropogenic influences on the channel system:
Confined channel bound by concrete and roadbed
yards

Brief site description:
< 40% vegetated portion of LA River; heavy flows present evidenced by debris
< 10’ above active low flow channel.
Cobble/sand substrate. < 12’ flowing water

Checklist of resources (if available):
☑ Aerial photography
Dates: 2014
☐ Topographic maps
☐ Geologic maps
☐ Vegetation maps
☐ Soils maps
☐ Rainfall/precipitation maps
☐ Existing delineation(s) for site
☑ Global positioning system (GPS)
☐ Other studies

☐ Stream gage data
Gage number:
Period of record:
☐ History of recent effective discharges
☐ Results of flood frequency analysis
☐ Most recent shift-adjusted rating
☐ Gage heights for 2-, 5-, 10-, and 25-year events and the
most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units
Active Floodplain
Low Terrace
Low-Flow Channels
OHWM
Paleo Channel

Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:
1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and
vegetation present at the site.
2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units.
3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units.
   a) Record the floodplain unit and GPS position.
   b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the
      floodplain unit.
   c) Identify any indicators present at the location.
4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section.
5. Identify the OHWM and record the indicators. Record the OHWM position via:
   ☑ Mapping on aerial photograph
   ☑ GPS
   ☐ Digitized on computer
   ☐ Other:
<table>
<thead>
<tr>
<th>Millimeters (mm)</th>
<th>Inches (in)</th>
<th>Wentworth size class</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.08</td>
<td>256</td>
<td>Boulder</td>
</tr>
<tr>
<td>2.56</td>
<td>84</td>
<td>Cobble</td>
</tr>
<tr>
<td>0.157</td>
<td>4</td>
<td>Pebble</td>
</tr>
<tr>
<td>0.079</td>
<td>2.00</td>
<td>Granule</td>
</tr>
<tr>
<td>0.039</td>
<td>1.00</td>
<td>Very coarse sand</td>
</tr>
<tr>
<td>0.020</td>
<td>0.50</td>
<td>Coarse sand</td>
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<tr>
<td>0.0098</td>
<td>0.25</td>
<td>Medium sand</td>
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<td>0.005</td>
<td>0.125</td>
<td>Fine sand</td>
</tr>
<tr>
<td>0.0025</td>
<td>0.0625</td>
<td>Very fine sand</td>
</tr>
<tr>
<td>0.0012</td>
<td>0.031</td>
<td>Coarse silt</td>
</tr>
<tr>
<td>0.00081</td>
<td>0.0156</td>
<td>Medium silt</td>
</tr>
<tr>
<td>0.00031</td>
<td>0.0078</td>
<td>Fine silt</td>
</tr>
<tr>
<td>0.00015</td>
<td>0.0039</td>
<td>Very fine silt</td>
</tr>
<tr>
<td>0.00012</td>
<td>0.0025</td>
<td>Coarse silt</td>
</tr>
<tr>
<td>0.000081</td>
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<td>Fine silt</td>
</tr>
<tr>
<td>0.000015</td>
<td>0.00039</td>
<td>Very fine silt</td>
</tr>
</tbody>
</table>

0 cm | 1  | 2  | 3  | 4  | 5  | 6  | 7  | 8  |
0 in | 1  | 2  | 3  |
**Project ID:**

**Cross section ID:**

**Date:** 15 Apr 2016  **Time:** 1003

**Cross section drawing:**

[Diagram of a cross section with various annotations]

---

**OHWM**

**GPS point:** Some as flood plain unit

**Indicators:**

- [ ] Change in average sediment texture
- [ ] Change in vegetation species
- [ ] Change in vegetation cover
- [ ] Break in bank slope
- [x] Other: Some stability on concrete wall; hard to discern.
- [ ] Other: Some areas on northern bank, southern bank is clear.

**Comments:**

Trash layer in mature trees ≤ 10' above active low flow channel clear.

---

**Floodplain unit:**

[ ] Low-Flow Channel  [✓] Active Floodplain  [ ] Low Terrace

**GPS point:** Troubble GPS point

**Characteristics of the floodplain unit:**

- Average sediment texture: Very coarse sand/cobble
- Total veg cover: 40%  Tree: 15%  Shrub: 15%  Herb: 10%

**Community successional stage:**

- [ ] NA
- [x] Early (herbaceous & seedlings)
- [ ] Mid (herbaceous, shrubs, saplings)
- [✓] Late (herbaceous, shrubs, mature trees)

**Indicators:**

- [ ] Mudcracks
- [ ] Ripples
- [✓] Drift and/or debris
- [✓] Presence of bed and bank
- [ ] Benches
- [ ] Soil development
- [ ] Surface relief
- [ ] Other: ______________________________________
- [ ] Other: ______________________________________
- [ ] Other: ______________________________________

**Comments:**
Project ID: Taylor Yd. Cross section ID: 1  Date: 15 APR 2016 Time: 1003

Floodplain unit:  □ Low-Flow Channel  ✔ Active Floodplain  □ Low Terrace

GPS point: DHWM Form point (Trouble Data)

Characteristics of the floodplain unit:
Average sediment texture: Very coarse sand and gravel/Pebble/Cobble
Total veg cover: 40%  Tree: 15%  Shrub: 15%  Herb: 10%
Community successional stage:
□ NA
□ Early (herbaceous & seedlings)
□ Mid (herbaceous, shrubs, saplings)
□ Late (herbaceous, shrubs, mature trees)

Indicators:
□ Mudcracks
□ Ripples
□ Drift and/or debris
□ Presence of bed and bank
□ Benches

□ Soil development
□ Surface relief
□ Other: ________________
□ Other: ________________
□ Other: ________________

Comments:
Cross section is in active floodplain of LA River. Confined concrete banks (concrete and rock/cobble)
Appendix C

Wetland Determination Data Forms
WETLAND DETERMINATION DATA FORM – Arid West Region

Project Site: TAILOR YARD RELIC PROJECT
Applicant/Owner: LABOE
Investigator(s): GROSSBERG (D. MILLER)

Landform (hillslope, terrace, etc.): FLOOD CHANNEL
Subregion (LUR): C

Soil Map Unit Name: TULJUNA FIN BEAN SANDY LOAM

Are climatic / hydrologic conditions on the site typical for this time of year? Yes ☑ No ☐ (If no, explain in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ significantly disturbed? Yes ☑ No ☐ (If needed, explain any answers in Remarks.)
Are Vegetation ☐, Soil ☐, or Hydrology ☐ naturally problematic? Yes ☑ No ☐ (If needed, explain any answers in Remarks.)

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

<table>
<thead>
<tr>
<th>Hydrologic Vegetation Present?</th>
<th>Yes ☑ No ☐</th>
<th>Is the Sample Area within a Wetland?</th>
<th>Yes ☑ No ☐</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydric Soil Present?</td>
<td>Yes ☑ No ☐</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wetland Hydrology Present?</td>
<td>Yes ☑ No ☐</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Remarks: SAMPLE LOCATION MEETS ALL THREE WETLAND CRITERIA
IS PAVED UPLAND POINT POSSIBLE – CONCRETE OR CORKSEL BOTTOM

VEGETATION – Use scientific names of plants.

<table>
<thead>
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<th>Tree Strata (Plot size: 30&quot;)</th>
<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
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</thead>
<tbody>
<tr>
<td>1. NA</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>2.</td>
<td></td>
<td></td>
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<td>3.</td>
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<td>4.</td>
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<tr>
<td>50% = ___, 20% = ___________</td>
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<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
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<td>2.</td>
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<td>6.</td>
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<tr>
<td>50% = ___, 20% = ___________</td>
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<th>Absolute % Cover</th>
<th>Dominant Species?</th>
<th>Indicator Status</th>
</tr>
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<tr>
<td>1. Aristolochdon saxifrage</td>
<td>100 Y FACW</td>
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<td></td>
</tr>
<tr>
<td>2.</td>
<td></td>
<td></td>
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<tr>
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<td>8.</td>
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<tr>
<td>50% = ___, 20% = ___________</td>
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<th>Woody Vine Stratum (Plot size: 30&quot;)</th>
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<td></td>
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<tr>
<td>2.</td>
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<tr>
<td>8.</td>
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<tr>
<td>50% = ___, 20% = ___________</td>
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</table>

<table>
<thead>
<tr>
<th>% Bare Ground in Herb Stratum</th>
<th>% Cover of Biotic Crust</th>
</tr>
</thead>
<tbody>
<tr>
<td>40</td>
<td>30</td>
</tr>
</tbody>
</table>

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: 
  - OBL species: __________
  - FACW species: __________
  - FAC species: __________
  - FACU species: __________
  - UPL species: __________
- Column Totals: __________
- Prevalence Index = B/A = __________ (B)

Hydrophytic Vegetation Indicators:
- ☑ Dominance Test is >50%
- ☐ Prevalence Index is ≤30%
- ☐ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
- ☐ Problematic Hydrophytic Vegetation ¹ (Explain)

Hydrophytic Vegetation Present? Yes ☑ No ☐

Remarks: Monotypic Arundo stand

US Army Corps of Engineers Arid West – Version 2.0
### SOIL

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

<table>
<thead>
<tr>
<th>Depth (Inches)</th>
<th>Matrix</th>
<th>Redox Features</th>
<th>Texture</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Color (Moist)</td>
<td>%</td>
<td>Color (Moist)</td>
</tr>
<tr>
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</tbody>
</table>

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

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

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A8) (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:**

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

**Restrictive Layer (if present):**

- Type: COBBLE/ROCK
- Depth (Inches): _

**Remarks:** Hydric Problematic sandy soils - hydric soils assumed, impossible to dig soil pit due to large cobble/rock.

### HYDROLOGY

**Wetland Hydrology Indicators:**

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

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

**Secondary Indicators (2 or more required):**

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

**Field Observations:**

- Surface Water Present? _Yes_ _No_ _Depth (inches):_ _Surf_
- Water Table Present? _Yes_ _No_ _Depth (inches):_ _ _____
- Saturation Present? (Includes capillary fringe) _Yes_ _No_ _Depth (inches):_ _ _____

**Wetland Hydrology Present?** _Yes_ _No_ _ _____

**Remarks:** Ponds/flowing water
Appendix D

Site Photographs
<table>
<thead>
<tr>
<th>Photograph #</th>
<th>1</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo Date</td>
<td>4/15/2016</td>
</tr>
<tr>
<td>Location</td>
<td>North side of L.A River</td>
</tr>
<tr>
<td>Direction</td>
<td>Southwest</td>
</tr>
<tr>
<td>Comment</td>
<td>Photo depicts approximate location where the bike bridge will be constructed across the L.A. River.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photograph #</th>
<th>2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo Date</td>
<td>4/15/2016</td>
</tr>
<tr>
<td>Location</td>
<td>South side of L.A. River</td>
</tr>
<tr>
<td>Direction</td>
<td>Northeast</td>
</tr>
<tr>
<td>Comment</td>
<td>Photo depicts approximate location where the bridge will be constructed over the L.A. River.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Photograph #</th>
<th>3</th>
</tr>
</thead>
<tbody>
<tr>
<td>Photo Date</td>
<td>4/15/2016</td>
</tr>
<tr>
<td>Location</td>
<td>L.A. River</td>
</tr>
<tr>
<td>Direction</td>
<td>West</td>
</tr>
<tr>
<td>Comment</td>
<td>Photo showing open water/flowing portion of the low flow portion of the L.A. River.</td>
</tr>
<tr>
<td>Photograph #</td>
<td>4</td>
</tr>
<tr>
<td>-------------</td>
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</tr>
<tr>
<td>Photo Date</td>
<td>4/15/2016</td>
</tr>
<tr>
<td>Location</td>
<td>L.A. River</td>
</tr>
<tr>
<td>Direction</td>
<td>East</td>
</tr>
<tr>
<td>Comment</td>
<td>Photo near the bridge footing location to be located on the bank to the left.</td>
</tr>
</tbody>
</table>