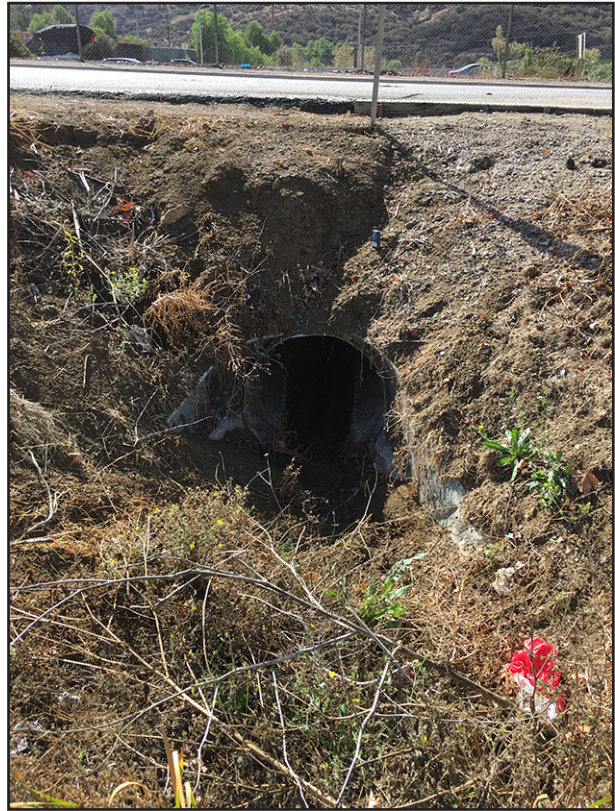




Aerial Source: USGS High Resolution Orthoimagery: <http://viewer.nationalmap.gov/basic/>.



**Photo 1** – View to the north illustrating the ephemeral drainage south of the oak-willow riparian woodland. Non-native bristly-ox tongue (*Helminthotheca echinoides*), tumbleweed (*Salsola australis*), and planted deergrass (*Muhlenbergia* sp.) line the drainage.



**Photo 2** – View to the south of the culvert under Canwood Street at the southern terminus of the ephemeral drainage. The drainage is supplemented by irrigation runoff from the adjacent medical plaza.



**Photo 3** – View to the south illustrating the disced overland sheet flow area where the drainage is poorly defined. Facultative bristly-ox tongue dominates the western drainage limit at the toe of the manufactured slope.



**Photo 4** – View to the north illustrating the poorly defined channel and the adjacent (west) medical plaza with landscape plantings.



**Photo 5** – View to the southwest illustrating the southernmost portion of the Baltic rush (*Juncus balticus*) patch and the northern portion of the drainage.



**Photo 6** – Photo to the north illustrating the understory of the oak-willow riparian woodland.



**Photo 7** – Photo to the northwest illustrating the drought-stress remains of a previously robust rush wetland area. The area is transitioning to a drier ecotype as evidenced by the emergence of valley oak and coast live oak saplings.



**Photo 2D** – Photo of the wetland area associated with the medical plaza culvert outfall. This area had standing water and supported a robust collection of hydrophytic vegetation including non-native dock (*Rumex* sp.) and willow herb (*Epilobium ciliatum* ssp. *ciliatum*).

---

## 2.0 METHODS

An onsite investigation to delineate the amount and type of jurisdictional waters and riparian habitat was conducted on October 31, 2016, in accordance with the 1987 ACOE *Wetlands Delineation Manual* (ACOE 1987), *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Version 2.0) (ACOE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (ACOE 2008b), and *A Field Guide to Mapping Episodic Stream Activity* [where applicable] (Brady and Vyverberg 2013). This investigation updates a previous delineation of the site completed by Envicom Corporation in 2005. Vascular plant species determinations were made using *The Jepson Manual: Vascular Plants of California, 2<sup>nd</sup> edition*. Natural community classifications were correlated with the *List of Vegetation Alliances and Associations (Natural Communities List)* (CDFW, September 2010). Vertebrate wildlife species observed at and in the vicinity of the site were identified by direct observation, sign (e.g., tracks, scat, or burrows), or vocalization. Wildlife species identification relied upon Reid (2006), Sibley (2009), and Stebbins (2003). Several photographs were taken as a record of site conditions at the time of the survey.

### 2.1 Federal Jurisdiction

The ACOE, under Section 404 of the CWA, regulates the filling of WOUS, including associated wetlands (ACOE 1987). The ACOE defines wetlands 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. Wetlands generally include swamps, marshes, bogs and similar areas” (40 CFR 230.3(t)).

Wetlands are considered a subset of WOUS. This broad term incorporates aquatic systems that fall under the regulatory jurisdiction of the CWA (Section 404) and the Rivers and Harbors Act (Section 10), including deep-water aquatic habitats and special aquatic sites such as wetlands and mudflats (ACOE 1987). Waters of the US include the territorial sea, coastal and inland waters, lakes, rivers, and streams.

### 2.2 State Jurisdiction

The California State Water Resources Control Board (SWRCB) and the RWQCB maintain regulatory responsibility for management of wetlands and waterbodies in California and may review wetland delineations in concert with the ACOE. With specific regard to wetlands, the delineation of boundaries of WOS is usually based on the ACOE’s multi-parameter approach, as outlined in the 1987 Wetlands Delineation Manual and 2008 Regional Supplement. “Waters of the State” are defined in Section 13050 of the California Water Code as “any surface water or groundwater, including saline waters, within the boundaries of the state.” Surface waters are non-tidal wetlands, rivers, streams, and lakes, estuarine wetlands, estuarine waters, and coastal waters, and include waters in both natural and artificial channels.

Pursuant to California Fish and Game Code Section 1600, CDFW has authority over all perennial, intermittent, and ephemeral rivers, streams, and lakes in the state, and requires any person, state or local governmental agency, or public utility to notify the CDFW before beginning any activity that would “substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake” that supports fish or wildlife resources.

A stream is defined as a “body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports or has supported riparian vegetation” (California Code of Regulations, Title 14 §1.72). A Lake or Streambed Alteration Agreement may be required for any proposed project that would result in an adverse impact to a river, stream, or lake. CDFW jurisdiction typically extends to the top of the bank and out to the outer edge of adjacent riparian vegetation, if present. However, CDFW can take jurisdiction over a body of flowing water and the landform that conveys it, including water sources and adjoining landscape elements that are byproducts of and affected by interactions with flowing water without regard to size, duration, or the timing of flow (Brady and Vyverberg 2013).

### **2.3 Pre-Field Evaluation**

Prior to engaging in fieldwork, Envicom staff reviewed background reference materials to familiarize personnel with the survey area and determine potential wetland, waterbody, and drainage areas to be further evaluated. These materials included historic and current aerial photographs (Google Earth 2016, Microsoft 2016), the NRCS web soil survey (USDA 2016), the National Hydrography Dataset (NHD), and the National Wetland Inventory (NWI) (USFWS 2016). NWI and NHD datasets provide representation of wetlands and other surface water features that may be present in an area (**Figure 6, National Hydrography Dataset and National Wetlands Inventory Data**). Soils in the area are illustrated in **Figure 7, NRCS Soils**. Database records are compiled from historic and contemporary data collection efforts, and thus they are a good starting point for indications of surface hydrology and soils; however, the data must be field verified as on-the-ground conditions are usually undergoing continuous anthropogenic modifications and aquatic features can be lost or highly altered.

### **2.4 Field Evaluation**

After preliminary identification of potential wetland areas based on the pre-field evaluation with the aid of color aerial photographs and engineering-grade topographic maps, an Envicom wetland biologist examined the project site. Jurisdictional non-wetland WOUS (ACOE and RWQCB) include areas within onsite drainages below the plane of the ordinary high water mark, while CDFW jurisdictional areas extend from bank to bank, and include the landward edge of riparian vegetation, where present.

Test plots were recorded to determine the ACOE, RWQCB, and CDFW jurisdictional areas within the survey area. The plot locations were mapped with GPS coordinates, and the Wetland Determination Data Form was used to record observations of vegetation, soils and hydrology. The completed forms are included in **Appendix 2**. The test plot locations were mapped in the field using a Trimble GPS with sub-meter accuracy.

### **2.5 Global Positioning System and Mapping**

For this survey, Envicom used a Trimble R1 GNSS Receiver (sub-meter accuracy) Global Positioning System (GPS) unit with TerraFlex to map aquatic community boundaries. Information was exported to a database format using ArcGIS software and edited before linking with a geographic information system. All of the survey data was recorded in the WGS 1984 geographic coordinate system and then projected into the NAD-83 State Plane Zone 5 coordinate system for post-processing (e.g., GIS acreage calculations). The extent of CDFW riparian habitat was delineated based on measurements collected in the field and aerial imagery.



Aerial Source: USGS High Resolution Orthoimagery: <http://viewer.nationalmap.gov/basic/>.