Aquatic Resources Delineation

Flint Canyon Wash Trail Restoration Project

City of La Cañada Flintridge, Los Angeles County, California

Prepared For:

PACE| Advanced Water Engineering
17520 Newhope Street, Suite 200
Fountain Valley, California 92708
on behalf of
City of La Cañada Flintridge

February 25, 2021

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

CONTENTS

LIST OF TABLES

LIST OF FIGURES

LIST OF ATTACHMENTS

LIST OF ACRONYMS AND ABBREVIATIONS

CARI	California Aquatic Resource Inventory
CFR	Code of Federal Regulations
CWA	Clean Water Act
FR	Federal Register
NRCS	Natural Resources Conservation Service
OHWM	Ordinary high water mark
PJD	Preliminary Jurisdictional Determination
TNW	Traditional Navigable Waters
USACE	U.S. Army Corps of Engineers
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

1.0 INTRODUCTION

On behalf of PACE Advanced Water Engineering, ECORP Consulting, Inc. conducted an aquatic resources delineation for the ±20-acre Flint Canyon Wash Trail Restoration Project (Project site) located in Los Angeles County, California. The Project site is located south of Berkshire Place, north of Oak Grove Drive, east of Berkshire Avenue, and west of Hahamonga Watershed Park (Figure 1. *Project Vicinity*). The DA corresponds to a portion of Section 7, Township 1 North, and Range 12 West (San Bernardino Base Meridian) of the "Pasadena Quadrangle, California" 7.5-minute quadrangle (U.S. Geological Survey [USGS] 2020) (Figure 1. *Project Location*). The approximate center of the DA is located at 34.111576° latitude and -118.104981° longitude within the Los Angeles River Watershed (Hydrologic Unit Code #18070105, Natural Resources Conservation Service [NRCS], USGS, and U.S. Environmental Protection Agency [USEPA] 2016). Driving directions to the DA are included as Attachment A.

This report describes aquatic resources identified within the Delineation Area (DA) that may be regulated by the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the federal Clean Water Act (CWA). The information presented in this report provides data required by the USACE Los Angeles District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017). The aquatic resource boundaries depicted in this report represent a calculated estimation of the jurisdictional area within the DA and are subject to modification following the USACE verification process.

The purpose of this report is to provide adequate information to USACE for the issuance of a Preliminary Jurisdictional Determination (PJD).

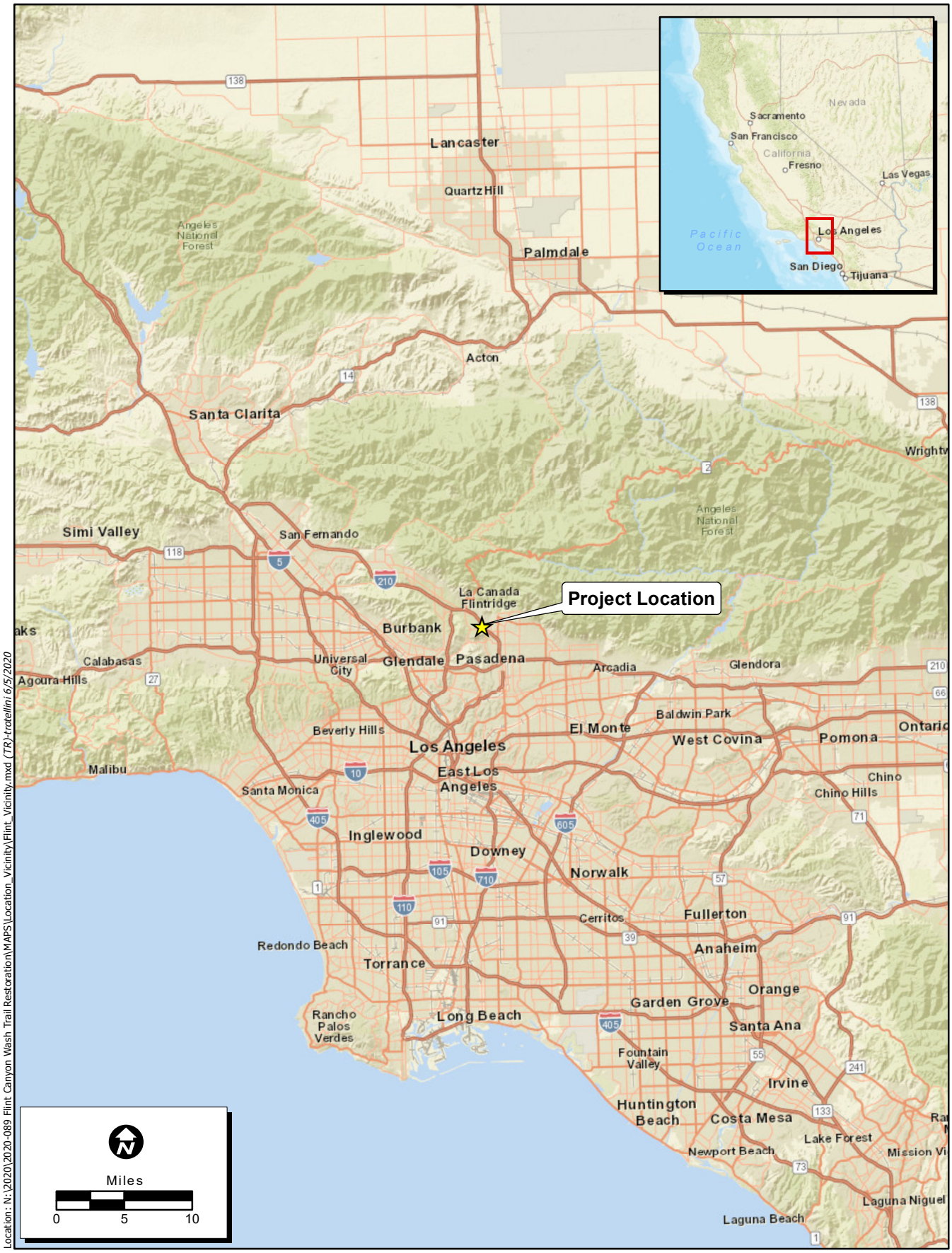
2.0 REGULATORY SETTING

2.1 Waters of the United States

This report describes aquatic resources, including wetlands, that may be regulated by USACE under Section 404 and/or the Regional Water Quality Control Board (RWQCB) under Section 401 of the federal CWA. The following sections define these regulations.

2.1.1 Wetlands

Wetlands are "*those areas that are inundated or saturated by surface or groundwater 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*" [51 Federal Register (FR) 41250, Nov. 13, 1986, as amended at 58 FR 45036, Aug. 25, 1993]. Wetlands can be perennial or intermittent.



Location: N:\2020\2020-089 Flint Canyon Wash Trail Restoration\MAPS\Location_Vicinity\Flint_Vicinity.mxd (TR)-tratellini 6/5/2020

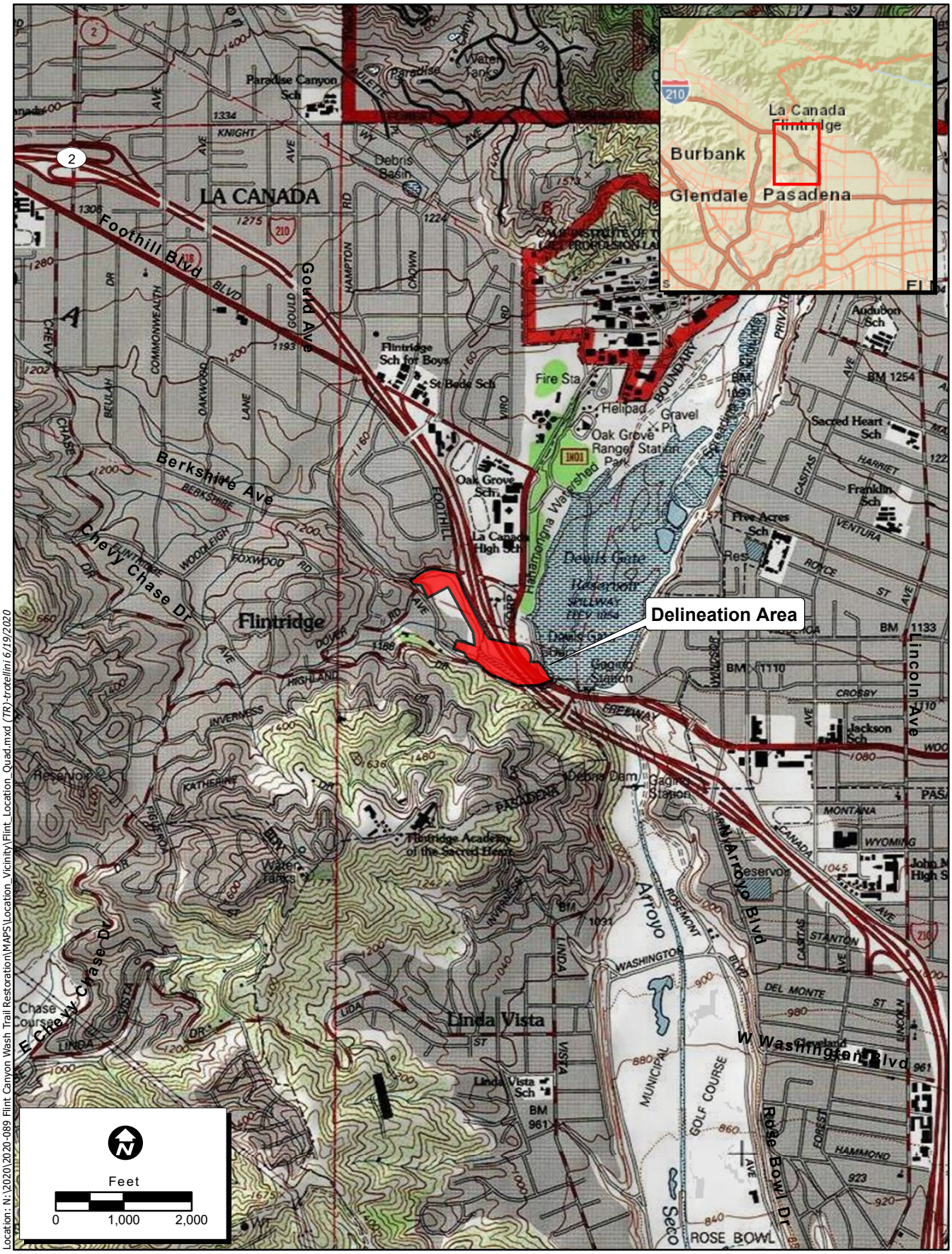
Map Date: 6/5/2020

Sources:

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 1. Project Vicinity

2020-089 Flint Canyon Wash Trail Restoration



Location: N:\2020\2020-089 Flint Canyon Wash Trail Restoration\MAPS\Location_Vicinity\Flint_Location_Quad.mxd *(TR)-trotellini 6/19/2020*

Map Date: 6/19/2020

Service Layer Credits: Sources: Esri, HERE, Garmin, USGS, Intermap, INCREMENT P, NRCan, Esri Japan, METI, Esri China (Hong Kong), Esri Korea, Esri (Thailand), NGCC, (c) OpenStreetMap contributors, and the GIS User Community

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 2. Project Location

2020-089 Flint Canyon Wash Trail Restoration

2.1.2 Other Waters

Other waters are nontidal, perennial, and intermittent watercourses and tributaries to such watercourses [51 FR 41250, Nov. 13, 1986, as amended at 58 FR 45036, August 25, 1993]. The limit of USACE jurisdiction for nontidal watercourses (without adjacent wetlands) is defined in 33 Code of Federal Regulations (CFR) 328.4(c)(1) as the "ordinary high water mark" (OHWM). The OHWM is defined as the "line on the shore established by the fluctuations of water and indicated by physical characteristics such as 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" approximation of the lateral limit of USACE jurisdiction. The upstream limits of other waters are defined as the point where the OHWM is no longer perceptible.

2.2 Clean Water Act

The USACE regulates discharge of dredged or fill material into Waters of the U.S. under Section 404 of the CWA. "Discharges of fill material" is defined as the addition of fill material into Waters of the U.S., including, but not limited to the following: placement of fill necessary for the construction of any structure, or impoundment requiring rock, sand, dirt, or other material for its construction; site-development fills for recreational, industrial, commercial, residential, and other uses; causeways or road fills; and fill for intake and outfall pipes, and subaqueous utility lines [33 CFR § 328.2(f)]. In addition, Section 401 of the CWA (33 U.S. Code 1341) requires any applicant for a federal license or permit to conduct any activity that may result in a discharge of a pollutant into Waters of the U.S. to obtain a certification that the discharge will comply with the applicable effluent limitations and water quality standards.

Substantial impacts to wetlands, over 0.5 acre of impact, may require an individual permit. Projects that only minimally affect wetlands, less than 0.5 acre of impact, may meet the conditions of one of the existing Nationwide Permits. A Water Quality Certification or waiver pursuant to Section 401 of the CWA is required for Section 404 permit actions; this certification or waiver is issued by the Regional Water Quality Control Board (RWQCB), in this case the Los Angeles RWQCB.

2.3 Jurisdictional Assessment

On April 21, 2020, the USEPA and the Department of the Army published the Navigable Waters Protection Rule to define "Waters of the United States" in the FR. The agencies are streamlining the definition so that it includes four categories of jurisdictional waters, provides clear exclusions for many water features that traditionally have not been regulated, and defines terms in the regulatory text that have never been defined before. The Navigable Waters Protection Rule regulates Traditional Navigable Waters (TNW) and the core tributary systems that provide perennial or intermittent flow into them.

The four categories of federally regulated waters are:

- the territorial seas and TNW,
- perennial and intermittent tributaries to those waters,

- certain lakes, ponds, and impoundments, and
- wetlands adjacent to jurisdictional waters.

The final rule also details 12 categories of exclusions, features that are not "waters of the United States," such as features that only contain water in direct response to rainfall (e.g., ephemeral features), groundwater, many ditches, prior converted cropland, and waste treatment systems.

The final rule clarifies key elements related to the scope of federal CWA jurisdiction, including the following:

- Providing clarity and consistency by removing the proposed separate categories for jurisdictional ditches and impoundments.
- Refining the proposed definition of "typical year," which provides important regional and temporal flexibility and ensures jurisdiction is being accurately determined in times that are not too wet and not too dry.
- Defining "adjacent wetlands" as wetlands that are meaningfully connected to other jurisdictional waters, for example, by directly abutting or having regular surface water communication with jurisdictional waters.

The Navigable Waters Protection Rule is the second step in a two-step process to review and revise the definition of "waters of the United States" consistent with the February 2017 Presidential Executive Order entitled "Restoring the Rule of Law, Federalism, and Economic Growth by Reviewing the 'Waters of the United States.'" This final rule became effective on June 22, 2020 and has replaced the Step One Rule published in October 2019.

2.4 Porter-Cologne Water Quality Act

The RWQCB implements water quality regulations under the federal CWA and the Porter-Cologne Water Quality Act. These regulations require compliance with the National Pollutant Discharge Elimination System (NPDES), including compliance with the California Storm Water NPDES General Construction Permit for discharges of storm water runoff associated with construction activities. General Construction Permits for projects that disturb one or more acres of land require development and implementation of a Storm Water Pollution Prevention Plan. Under the Porter-Cologne Water Quality Act, the RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, with any region that could affect the water of the state" (Water Code 13260(a)). Waters of the State are defined as "any surface water or groundwater, including saline waters, within the boundaries of the state" (Water Code 13050 (e)). The RWQCB regulates all such activities, as well as dredging, filling, or discharging materials into Waters of the State, that are not regulated by the USACE due to a lack of connectivity with a navigable water body. The RWQCB may require issuance of a Waste Discharge Requirements for these activities).

3.0 METHODS

This aquatic resources delineation was conducted in accordance with the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and the *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (Arid West Region Supplement) (USACE 2008). The boundaries of aquatic resources were delineated through standard field methods (e.g., paired sample set analyses) and aerial photograph interpretation. Field data were recorded on Wetland Determination Data Forms – Arid West Region (Attachment B). A color aerial photograph (1"=100' scale, NAIP 2018) was used to assist with mapping and ground-truthing. *Munsell Soil Color Charts* (Munsell Color 2009) and the Web Soil Survey (NRCS 2020a) were used to aid in identifying hydric soils in the field. The Jepson Manual, 2nd Edition (Baldwin et al. 2012) was used for plant nomenclature and identification.

Field surveys were conducted on July 21, 2020 by ECORP biologist Scott Taylor. Mr. Taylor walked the entire approximately 20-acre DA to determine the location and extent of aquatic resources within the DA. Paired locations were sampled to evaluate whether or not the vegetation, hydrology, and soils data supported an aquatic resource determination. At each paired location, one point was located such that it was within the estimated aquatic resource area, and the other point was situated outside the limits of the estimated aquatic resource area. Additional non-paired locations were sampled to document marginal areas that were determined not to be aquatic resources because they lacked hydrophytic vegetation, hydric soils, and/or wetland hydrology. Aquatic resources within the DA were recorded in the field using a post-processing capable global positioning system unit with sub-meter accuracy (Trimble GeoXT).

3.1 Routine Determinations for Wetlands

To be determined a wetland, the following three criteria must be met:

- A majority of dominant vegetation species are wetland-associated species;
- Hydrologic conditions exist that result in periods of flooding, ponding, or saturation during the growing season; and
- Hydric soils are present.

3.1.1 Vegetation

Hydrophytic vegetation is defined as the sum total of macrophytic plant life that occurs in areas where the frequency and duration of inundation or soil saturation produce permanent or periodically saturated soils of sufficient duration to exert a controlling influence on the plant species present (Environmental Laboratory 1987). The definition of wetlands includes the phrase "*a prevalence of vegetation typically adapted for life in saturated soil conditions*." Prevalent vegetation is characterized by the dominant plant species comprising the plant community (Environmental Laboratory 1987). The dominance test is the basic hydrophytic vegetation indicator and was applied at each sampling point location. The "50/20 rule" was used to select the dominant plant species from each stratum of the community. The rule states that for each stratum in the plant community, dominant species are the most abundant plant species (when ranked in descending order of coverage and cumulatively totaled) that immediately exceed 50 percent of

the total coverage for the stratum, plus any additional species that individually comprise 20 percent or more of the total cover in the stratum (USACE 1992, 2008).

Dominant plant species observed at each sampling point were then classified according to their indicator status (probability of occurrence in wetlands; Table 1), *North American Digital Flora: National Wetland Plant List* (Lichvar et al. 2016). If the majority (more than 50 percent) of the dominant vegetation on a site are classified as obligate (OBL), facultative wetland (FACW), or facultative (FAC), the site was considered to be dominated by hydrophytic vegetation.

Table 1. Classification of Wetland-Associated Plant Species[1]

Plant Species Classification	Abbreviation	Probability of Occurring in Wetland
Obligate	OBL	Almost always occur in wetlands
Facultative Wetland	FACW	Usually occur in wetlands, but may occur in non-wetlands
Facultative	FAC	Occur in wetlands and non-wetlands
Facultative Upland	FACU	Usually occur in non-wetlands, but may occur in wetlands
Upland	UPL	Almost never occur in wetlands
Plants That Are Not Listed (assumed upland species)	N/L	Does not occur in wetlands in any region.

[1]Source: Lichvar et al. 2016

In instances where indicators of hydric soil and wetland hydrology were present, but the plant community failed the dominance test, the vegetation was re-evaluated using the Prevalence Index. The Prevalence Index is a weighted-average wetland indicator status of all plant species in the sampling plot, where each indicator status category is given a numeric code (OBL=1, FACW=2, FAC=3, FACU=4, and UPL=5) and weighting is by abundance (percent cover). If the plant community failed the Prevalence Index, the presence/absence of plant morphological adaptations to prolonged inundation or saturation in the root zone was evaluated.

3.1.2 Soils

A hydric soil is defined 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 2003). Indicators that a hydric soil is present include, but are not limited to, histosols, histic epipedon, hydrogen sulfide, depleted below dark surface, sandy redox, loamy gleyed matrix, depleted matrix, redox dark surface, redox depressions, and vernal pools.

At each sampling point a soil pit was excavated to the depth needed to document an indicator, to confirm the absence of indicators, or until refusal at each sampling point. The soil was then examined for hydric soil indicators. Soil colors were determined while the soil was moist using the *Munsell Soil Color Charts* (Munsell Color 2009). Hydric soils are formed predominantly by the accumulation or loss of iron, manganese, sulfur, or carbon compounds in a saturated and anaerobic environment. These processes and the features in the soil that develop can be identified by looking at the color and texture of the soils.

3.1.3 Hydrology

Wetlands, by definition, are seasonally or perennially inundated or saturated at or near (within 12 inches of) the soil surface. Primary indicators of wetland hydrology include, but are not limited to: visual observation of saturated soils, visual observation of inundation, surface soil cracks, inundation visible on aerial imagery, water-stained leaves, oxidized rhizospheres along living roots, aquatic invertebrates, water marks (secondary indicator in riverine environments), drift lines (secondary indicator in riverine environments), and sediment deposits (secondary indicator in riverine environments). The occurrence of one primary indicator is sufficient to conclude that wetland hydrology is present. If no primary indicators are observed, two or more secondary indicators are required to conclude wetland hydrology is present. Secondary indicators include, but are not limited to: drainage patterns, crayfish burrows, FAC-neutral test, and shallow aquitard.

4.0 RESULTS: EXISTING SITE CONDITIONS

The DA is located within canyon terrain situated in an urban portion of the City of La Canada Flintridge at an elevational range of approximately 1,019 to 1,108 feet above mean sea level in the South Coast Subregion of the Southwestern California floristic region of the California Floristic Province (Baldwin et. al. 2012). The average winter low temperature in the vicinity of the DA is 47.7˚F and the average summer high temperature is 88.1 degrees Fahrenheit (˚F). Average annual precipitation is approximately 21.24 inches, which falls as rain (National Oceanic and Atmospheric Administration [NOAA] 2020).

The DA is primarily aligned with Flint Canyon Wash through the southeast portion of the City of La Canada Flintridge. The canyon is channelized with natural sides and bottom, but contains abundant rock protection along its bottom and portions of the sides. Surrounding land uses are primarily low density residential developments along with portions of recreation (tennis courts) and the portions of a bridge associated with SR-210. A public trail runs along the north side of the canyon. The trail has been eroded on its downslope due to severe rainstorms and runoff from the Flint Canyon Wash. In 2009 the City completed extensive repairs with grant funds to the eroded areas on the upslope of the trail. Although the upslope was repaired, the downslope has continued to erode.

The DA supports native habitats and is mostly undeveloped, but it has been subjected to disturbances from recreational use and surrounding urbanization. Plants observed within the DA consisted mainly of species typically found in coastal sage scrub, oak woodland, and riparian habitats. In addition, nonnative species, including wild oat (*Avena fatua*), black mustard (*Brassica nigra*), brome grasses (*Bromus* sp.), Italian thistle (*Carduus pycnocephalus*), red-stemmed filaree (*Erodium cicutarium*), eucalyptus (*Eucalyptus* sp.), and Mexican fan palm (*Washingtonia robusta*) were abundant throughout the project area. Native plant species observed within the coastal sage scrub communities included deer weed (*Acmispon glaber*), chamise (*Adenostoma fasciculatum*), California sagebrush (*Artemisia californica*), California buckwheat (*Eriogonum fasciculatum*), white sage (*Salvia apiana*), and black sage (*Salvia mellifera*). Native plant species observed within the oak woodland communities included coast live oak, western sycamore, blue elderberry (*Sambucus nigra* ssp. *cerulea*), and poison oak (*Toxicodendron diversilobum*). Native plant species observed within the riparian communities included black willow (*Salix gooddingii*), western sycamore, and coast live oak.

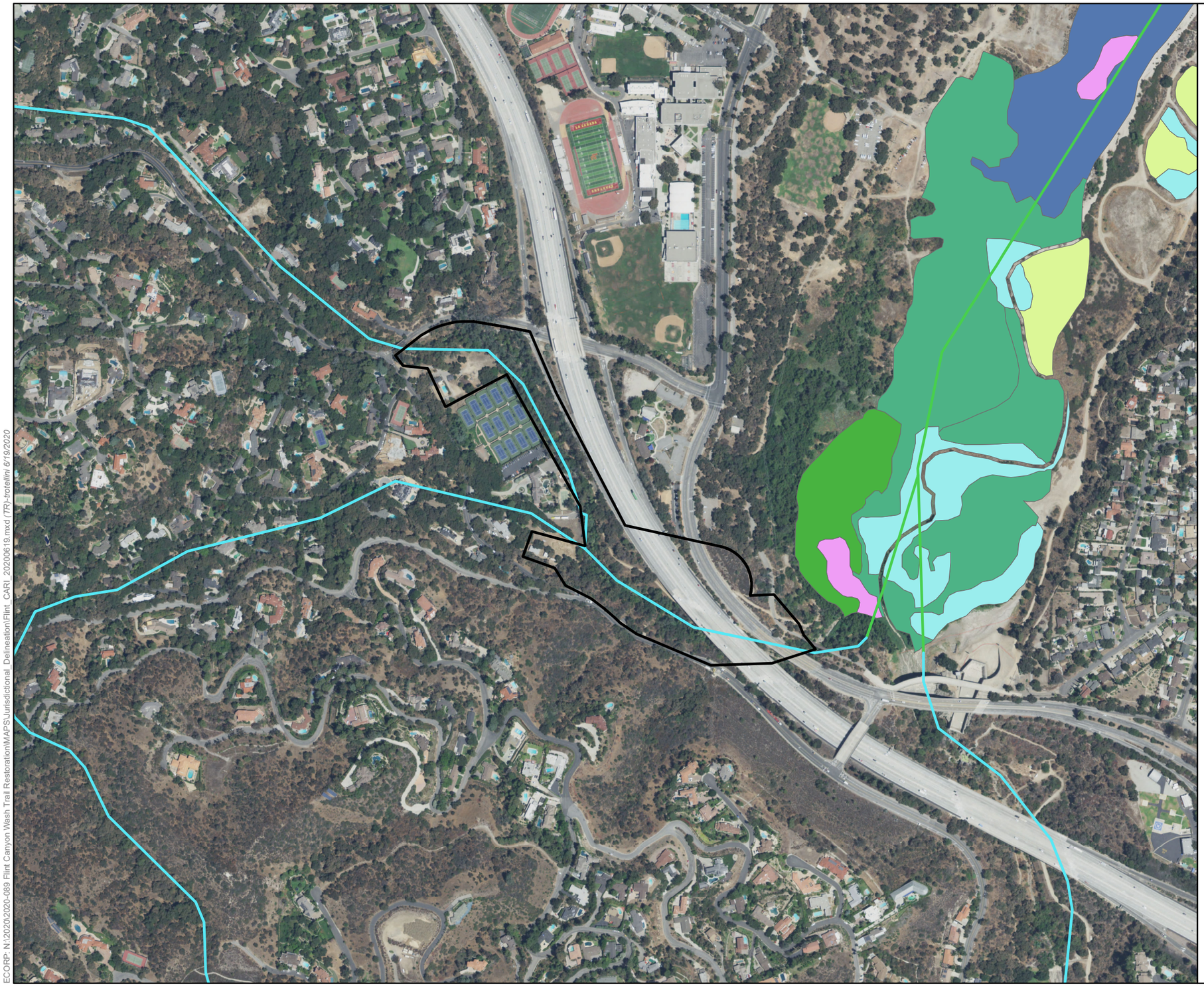
Four native vegetation communities and one nonnative vegetation community were identified within the project area. Eucalyptus – tree of heaven – black locust groves (*Eucalyptus spp. - Ailanthus altissima - Robinia pseudoacacia* Woodland Semi-Natural Alliance) was the only nonnative vegetation community identified during the survey effort; however, portions of some of the native vegetation communities were mapped as disturbed due to the abundance of nonnative species present. One of the native vegetation communities identified during the survey, Goodding's willow – red willow riparian woodland and forest (*Salix gooddingii - Salix laevigata* Woodland & Forest Alliance) is considered a special-status community. Four land cover types, including disturbed, landscaped, developed, and developed/landscaped, were mapped within the DA. See Section 4.2 for detailed descriptions of the vegetation associated with aquatic resources within the DA.

This aquatic resources delineation was conducted in the summer, outside the typical blooming season for many of the expected annual plant species. The survey was conducted at an acceptable time of the year to observe wetland hydrology, and many wetland plant species were in bloom at the time of the survey. Most plants were identifiable to species based upon vegetative, flower or fruit morphology. During the 2019-2020 water year prior to the field survey (October 1, 2019 to July 1, 2020), the Los Angeles River Basin received 14.86 inches of precipitation at the USC reporting station (NOAA 2020b), located approximately seven miles from the DA. Precipitation recorded for the 2019-2029 water year through July 1, 2020 was approximately 70 percent of the historic October-through-November average (NOAA 2020b). The most recent significant precipitation event prior to the surveys occurred from April 5 to 9, 2020 with a total of 2.5 inches of rain occurring over four days. The last recorded precipitation event prior to the surveys was on May 17, 2020 and was approximately 0.1 inch (NOAA 2020b).

4.1.1 California Aquatic Resource Inventory

The California Aquatic Resource Inventory (CARI; San Francisco Estuary Institute [SFEI] 2017) is a statewide map of surface waters and related habitats combining multiple national and regional datasets, including the National Wetlands Inventory and the National Hydrography Dataset. CARI includes aquatic resource features mapped using a variety of remote sensing and modeling techniques. As such, these aquatic features may or may not exist as represented. In addition, CARI data varies in detail, accuracy, and age, and is meant to be used as a tool to assist with an aquatic resource delineation but not as the only source of information (SFEI 2017).

According to CARI (SFEI 2017), there is one aquatic feature mapped within the DA (Figure 3. *California Aquatic Resource Inventory Features*). This includes a single stream feature mapped as fluvial natural, which roughly corresponds to the onsite perennial drainage. There is also a side tributary mapped that is also considered as fluvial natural. Figure 3 also shows CARI wetlands outside of the DA within Hahamongna Watershed Park and mapped as depressional perennial unnatural emergent, depressional seasonal natural shrub-scrub, depressional seasonal unnatural emergent, depressional seasonal unnatural forest, depressional seasonal unnatural non-vegetated and depressional seasonal unnatural shrub-scrub.



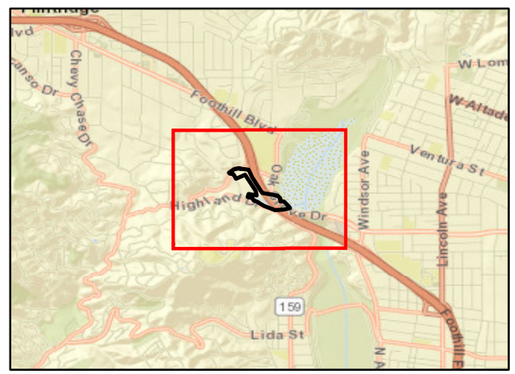
Map Features

- Project Area

CARI Features

- Fluvial Natural
- Fluvial Unnatural
- Depressional Perennial Unnatural Emergent
- Depressional Seasonal Natural Shrub-Scrub
- Depressional Seasonal Unnatural Emergent
- Depressional Seasonal Unnatural Forested
- Depressional Seasonal Unnatural Non-vegetated
- Depressional Seasonal Unnatural Shrub-Scrub

Sources: NAIP 2018



ECORP- N:\2020\2020-089 Flint Canyon Wash Trail Restoration\MAPS\Jurisdictional_Delineation\Flint_CARI_20200619.mxd (TR)-trotellini 6/19/2020

Map Date: 6/19/2020

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Scale in Feet
0 250 500

Figure 3. California Aquatic Resource Inventory

2020-089 Flint Canyon Wash Trail Restoration

4.1.2 Soils

According to the Web Soil Survey (NRCS 2020a), six soil units, or types, have been mapped within the DA (Table 2; Figure 4. *Natural Resources Conservation Service Soil Types*):

- 1266 – Soboba and Tujunga Soils, 0 to 5 percent slopes, frequently flooded
- 1210 – Urban Land-Montebello-Xerothents Complex, 0 to 15 percent slopes, terraced
- 1006 – Urban Land-Soboba Complex, 0 to 5 percent slopes
- 1011 – Urban Land-Soboba-Tujunga Complex, 5 to 15 percent slopes
- 1235 – Urban Land-Typic Xerothents Coarse-Vista Complex, 10 to 35 percent slopes, and
- 1148 – Vista-Fallbrook-Cieneba Complex, 30 to 75 percent slopes.

None of the recorded soils are listed as hydric (NRCS 2020b). or are known to contain any listed hydric components (NRCS 2020b).

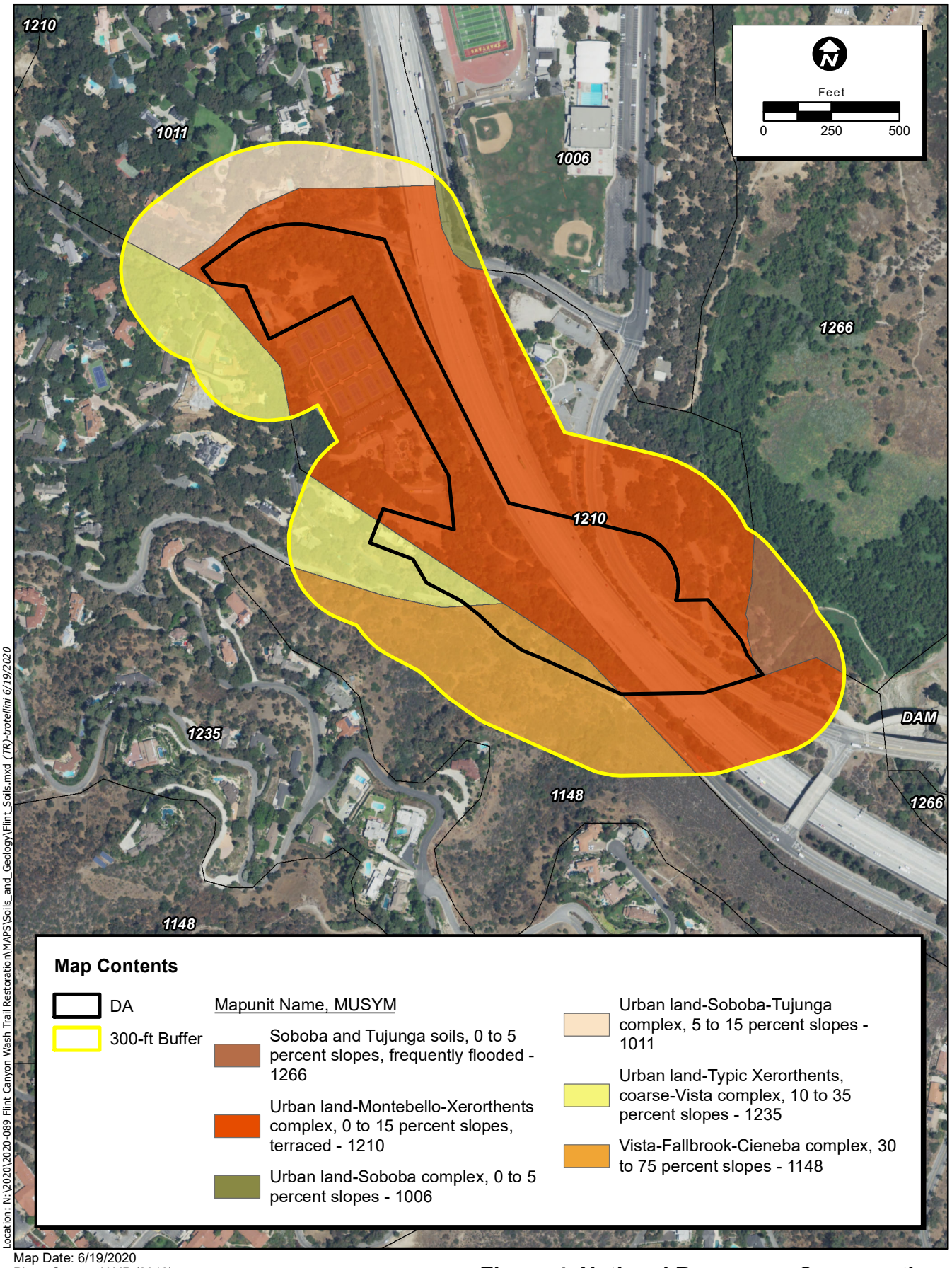
Table 2. Soil Units Occurring within the DA[1]

Soil Unit	Hydric Components[2]	Hydric Component Landform
1266 – Soboba and Tujunga Soils, 0 to 5 percent slopes, frequently floodedDurixeralfs, 0 to 1 percent slopes	None	N/A
1210 – Urban Land-Montebello-Xerothents Complex, 0 to 15 percent slopes, terraced	None	N/A
1006 – Urban Land-Soboba Complex, 0 to 5 percent slopes	None	N/A
1011 – Urban Land-Soboba-Tujunga Complex, 5 to 15 percent slopes	None	N/A
1235 – Urban Land-Typic Xerothents Coarse-Vista Complex, 10 to 35 percent slopes	None	N/A
1148 – Vista-Fallbrook-Cieneba Complex, 30 to 75 percent slopes	None	N/A

[1]Source: NRCS 2020a
[2]Source: NRCS 2020b

Within the DA, most of the wash itself is associated with Urban Land-Montebello-Xerothents Complex, 0 to 15 percent slopes, terraced. Smaller portions of the wash are associated with Urban Land-Typic Xerothents Coarse-Vista Complex, 10 to 35 percent slopes and Vista-Fallbrook-Cieneba Complex, 30 to 75 percent slopes. The landform is considered to be derived from an ancient alluvial fan, but the dominant soil types (connoted by the "urban" designation) consist of human-transported soils associated with alluvium derived from granite. The DA is composed largely of fill material that was used in the development of the region.

The soils were observed in the field to be consistent with the mapped soil series, showing signs of heavy disturbance and land manipulation. The creek bottom was largely covered by large rocks, bank to bank, to prevent excessive erosion. The sides of the channel were very steep and most sections showed signs of having been graded at one point.



Location: N:\2020\2020-089 Flint Canyon Wash Trail Restoration\MAPS\Soils_and_Geology\Flint_Soils.mxd (TR)-trotellini 6/19/2020

Map Date: 6/19/2020
Photo Source: NAIP (2018)
Soil Data: gSSURGO (2019)

ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

Figure 4. National Resources Conservation Service Soil Types

2020-089 Flint Canyon Wash Trail Restoration

5.0 RESULTS: AQUATIC RESOURCES

5.1 USACE Waters of the U.S.

A total of 2.34 acres of potential USACE aquatic resources have been mapped within the DA (Table 3). The wetland determination data forms are included in Attachment B, and a list of plant species observed within the DA is included as Attachment C. A discussion of the aquatic resources is presented below, and the aquatic resources delineation map is presented in Figure 5. *USACE Aquatic Resources Delineation*.

Representative site photographs are included as Attachment D. The USACE Operations and Maintenance Business Information Link Regulatory Module (ORM) aquatic resources table of potential Waters of the U.S. is included in Attachment E.

Table 3. Aquatic Resources (Within DA)

Type	Acreage[1]
USACE Wetlands	0
USACE Non-Wetland Waters	
Perennial Drainage	2.34
USACE Total	**2.34**
Type	**Acreage[1]**
CDFW Habitats	
Goodings Willow-Red Willow Riparian Forest	0.46
Goodings Willow-Red Willow Riparian Forest-Disturbed	2.36
Streambed	1.39
Individual Trees (39)	2.28
CDFW Total	**6.48**

[1]Acreages represent a calculated estimation and are subject to modification following the USACE verification process.

5.1.1 Wetlands

No wetlands were identified within the DA. A total of five sample points were taken along the length of the DA, most along the edge of the stream banks. Points were chosen based on topography, where the ground was flat and subject to flooding, and proximity to the stream. Most areas that were chosen also contained suspected wetland plant species.

Areas that had potential to be wetlands along the length of the wash were sampled and found to contain hydrophytic vegetation and hydrology indicators, but hydric soils were found to be lacking. The soil sampling was complicated by the presence of embedded large boulders and other debris along the stream banks. Due to the presence of these hard surfaces, digging of soil pits was largely not possible. Instead of soil pits, therefore, the surface areas were examined for typical signs of wetland soils, such as Thick Dark Surface (A12) or Hydrogen Sulfide (A4). There were obligate wetland (OBL) plant species present in some of the sample points, such as paper reed (*Cyperus papyrus*) and narrow-leaved cattail (*Typha latifolia*), though the sample points typically also contained non-wetland plant species as dominant species.

Figure 5
USACE Aquatic Resource Delineation

Map Features

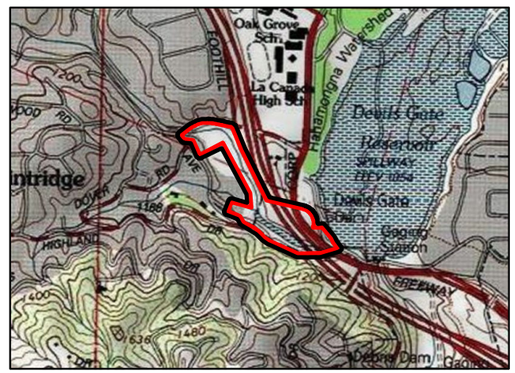
- Study Area
- Delineation Area
- Reference Coordinate (NAD83)
- Sample Point

Waters of the U.S.

- Perennial Stream (2.34 ac.)

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

** The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2020-089 Flint Canyon Wash Trail Restoration

Scale in Feet
0 200

Photo Source: NAIP 2018
Boundary Source: CVWD
Delineator: S Taylor
Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet

Map Date: 9/24/2020

ECORP: N:\2020\2020-089 FLINT CANYON WASH TRAIL RESTORATION\MAPS\JURISDICTIONAL_DELINEATION\FLINT_ARD_ACOE_20200830.MXD-MGUIDRY 9/25/2020

Wetland hydrology indicators observed within the sample points included surface water (A1), saturation (A3), sediment deposits (B2, riverine), and drift deposits (B3, riverine) (Attachment A). The boundary of the stream was demarcated adjacent upland areas by the presence of flowing water.

5.1.2 Non-wetland Waters

Perennial Creek

Perennial creeks are linear features that exhibit a bed and bank, OHWM, and flow continuously year-round. Perennial creeks differ from intermittent drainages in that they flow continuously throughout the year. The perennial creeks mapped within the DA can be sparsely or sometimes heavily vegetated depending on the depth and velocity of flowing water and usually support a riparian corridor. Hydrophytic vegetation may be present along the banks of these creeks and in areas of sediment accumulation that provide a substrate suitable for plant establishment and growth.

All of the sample points were taken within the perennial creek and exhibited an OHWM that was delineated based on the presence of surface water (indicator A1) and drift deposits (B3). Wetland hydrology indicators were not observed in the upland areas adjacent to the perennial drainage. The canyon through which Flint Wash flows is confined by surrounding developed areas and the wash is subject to sediment degradation processes that leave little soil material along the riverbed. In sections of the canyon, there are excessive erosional areas.

The wash is supported hydrologically by a combination of storm water flows and urban runoff. Storm water flows, while present, probably contribute to larger winter flows but during the summer months there are no storm flows and the wash is supported primarily by continual urban runoff from the surrounding landscaping and residential areas.

5.1.3 Jurisdictional Assessment

Flint Wash is a perennial tributary to the Los Angeles River via the Arroyo Seco. The USACE Los Angeles District has identified the Los Angeles River as a navigable water. Therefore, Flint Wash is jurisdictional by definition and subject to regulation under Section 404 of the CWA and under the Los Angeles RWQCB jurisdiction as waters of the State.

5.2 CDFW Jurisdiction

A total of 6.48 acres of potential CDFW aquatic resources have been mapped within the DA, including Goodings Willow-Red Willow Riparian Forest, streambed and 39 individual trees (Table 3; Figure 6. *CDFW Aquatic Resources Delineation*). Flint Wash and associated riparian vegetation located within the DA, including individual trees would be considered jurisdictional to the CDFW, under their respective regulations.

Figure 6.
CDFW Aquatic Resource Delineation

Tree ID	Species	Acres
1-7	Western Sycamore	0.630
8	Black Willow, Western Sycamore	0.029
9	Black Willow	0.045
10	Box elder	0.007
11	Box elder	0.007
12-14	Black Willow, Box Elder, Western Sycamore	0.295
15	Black Willow	0.029
16-17	Box Elder, Black Willow, Western Sycamore,	0.268
18	Mulefat	0.002
19	Mulefat	0.004
20	Black Willow	0.029
21	Black Willow, Red Willow, Western Sycamore	0.180
22-23	Black Willow, Western Sycamore, Red Willow	0.091
24	Black Willow	0.016
25	Western Sycamore, Black Willow	0.065
26	Black Willow	0.016
27	Western Sycamore	0.045
28	Black Willow	0.065
29	Black Willow	0.002
30-31	Western Sycamore, Black Willow	0.154
32	Black Willow, Western Sycamore, Mulefat	0.065
33	Western Sycamore, Black Willow	0.065
34-37	Black Willow, Western Sycamore, Mulefat	0.034
38-39	Black Willow, Western Sycamore	0.134

Map Features

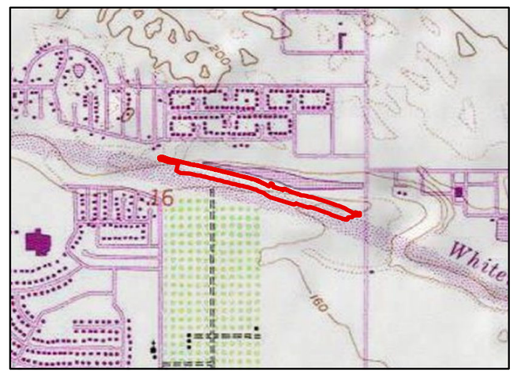
- Study Area
- Delineation Area
- Tree Location (Tree ID)
- Tree Buffers

CDFW Habitat

- Streambed
- Goodding's Willow - Red Willow Riparian Woodland & Forest
- Goodding's Willow - Red Willow Riparian Woodland & Forest - Disturbed

Vegetation Community/Land Cover

- California Sagebrush Scrub
- California Sagebrush - California Buckwheat Scrub
- California Sagebrush - California Buckwheat Scrub - Disturbed
- Coast Live Oak Woodland
- Eucalyptus – Tree of Heaven – Black Locust Groves
- Landscaped
- Disturbed
- Developed/Landscaped
- Developed



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2020-089 Flint Canyon Wash Trail Restoration

Scale in Feet
0 200

Photo Source: NAIP 2018
Boundary Source: CVWD
Delineator: S Taylor
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Map Date: 9/25/2020

ECORP: N:\2020\2020-089 FLINT CANYON WASH TRAIL RESTORATION\MAPS\JURISDICTIONAL_DELINEATIONFLINT_ARD_CDFW_20200830.MXD-MGUIDRY 9/25/2020

6.0 IMPACTS (USACE AND CDFW)

The Project would encompass permanent impacts due to trail erosion protection, as the majority of impacts. Because the features to be installed represent permanent erosion control measures, these impacts are considered to be permanent. Additional impacts would occur due to erosion monitoring measures to be installed and staging areas. The staging areas contain no jurisdictional resources. Currently, the total impact to USACE aquatic resources associated with the Project is anticipated to encompass 0.562 acre and 700 linear feet (Table 4; Figure 7).

Table 4. Aquatic Resources Impacts (Within Project Area)

Type/Identifier	Acreage and Linear Feet[1]	Cowardin Type	OHWM/Wetland Presence	Dominant Vegetation	Latitude and Longitude
USACE Non-Wetland Waters					
Ephemeral Drainage (Non-jurisdictional)	0.562/700	Fluvial Natural	OHWM	Non-vegetated	34.111576, -118.104981
CDFW Jurisdiction					
Streambed	0.425/700	Fluvial Natural	N/A	Non-vegetated	34.111576, -118.104981
Gooding's Willow-Red Willow Riparian Forest	0.210/N/A	N/A	N/A	Riparian	

[1]Acreages represent a calculated estimation and are subject to modification following the USACE verification process.

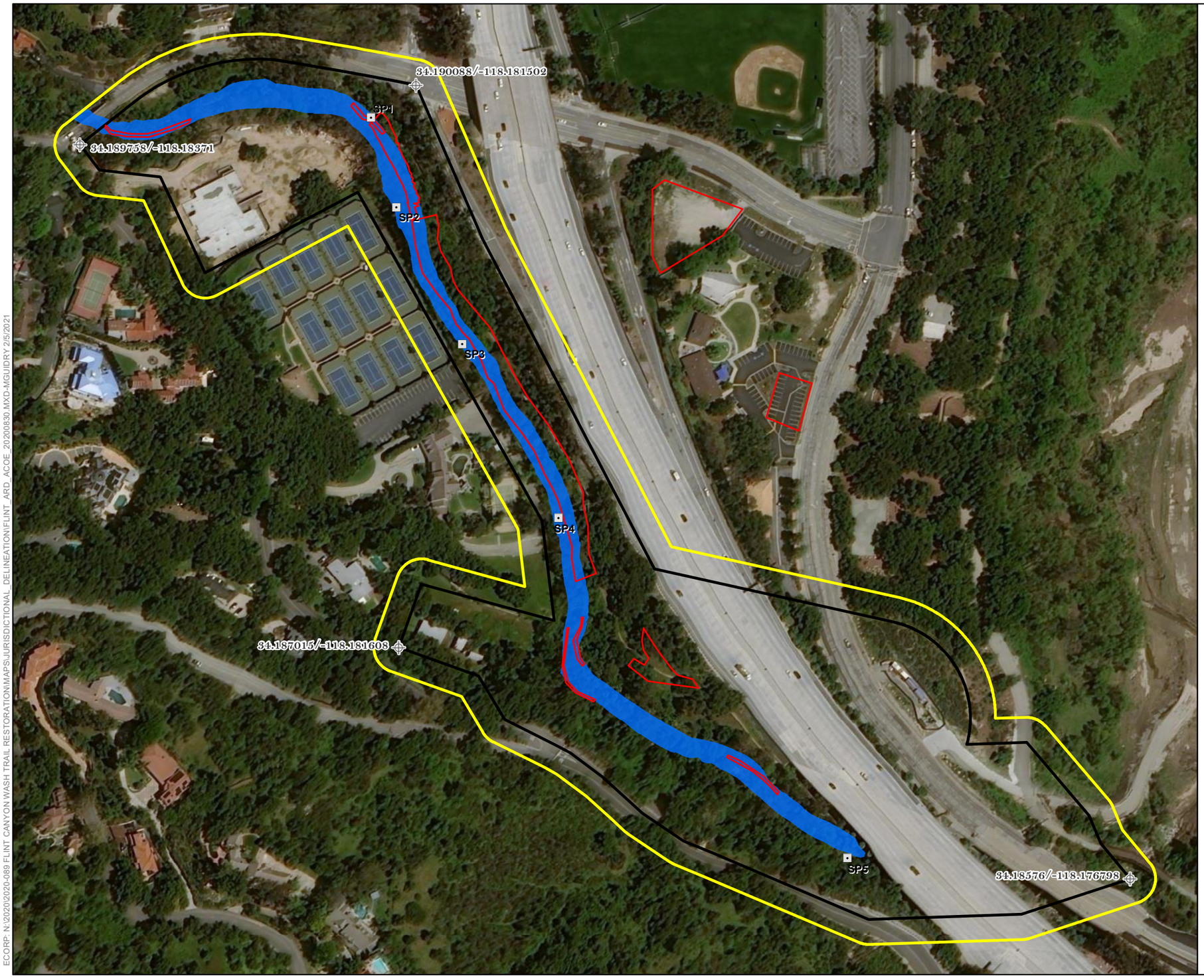
Because the aquatic resource is a perennial Water of the U.S., the placement of dredged or fill material into the delineated would require a permit pursuant to Section 404 of the CWA with the USACE.

All of the above acreage for USACE is also considered to be CDFW-jurisdictional. The Project would also impact an additional 0.635 acre of CDFW jurisdiction, including 0.425 acre of streambed and 0.210 acre of Gooding's Willow-Red Willow Riparian Forest (Figure 8). Alterations to these areas will require permitting with the CDFW under Section 1600 of the California Fish and Game Code.

7.0 CONCLUSION

A total of 2.34 acres of USACE aquatic resources and 6.48 acres of CDFW aquatic resources have been mapped within the DA, and the project would impact 0.562 acre of USACE aquatic resources and 0.635 acre of CDFW aquatic resources. These acreages represent a calculated estimation of the extent of aquatic resources within the DA and is subject to modification following USACE review and/or the verification process and CDFW review. The placement of dredged or fill material into jurisdictional features would require a permit pursuant to Section 404 of the CWA and certification or waiver in compliance with Section 401 of the CWA, as well as permitting under Section 1600 of the California Fish and Game Code. Per Regulatory Guidance Letter 16-01, an applicant may request a PJD "in order to move ahead expeditiously to obtain a Corps permit authorization where the requestor determin*es that it is in his or her best interest to do so … even where initial indications are that the aquatic resources on a parcel may not be jurisdictional*" (USACE 2016).

Figure 7.
USACE Aquatic Resource Delineation



Map Features

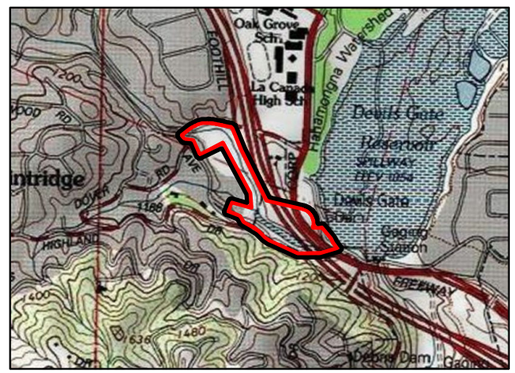
- Project Area
- Project Impact Area
- Delineation Area
- Reference Coordinate (NAD83)
- Sample Point

Waters of the U.S.

- Perennial Stream (2.34 ac.)

[1] *Subject to U.S. Army Corps of Engineers verification. This exhibit depicts information and data produced in accord with the wetland delineation methods described in the 1987 Corps of Engineers Wetland Delineation Manual and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region Version 2.0 as well as the Updated Map and Drawing Standards for the South Pacific Division Regulatory Program as amended on February 10, 2016, and conforms to Los Angeles District specifications. However, feature boundaries have not been legally surveyed and may be subject to minor adjustments if more accurate locations are required.*

** The acreage value for each feature has been rounded to the nearest 1/100 decimal. Summation of these values may not equal the total potential Waters of the U.S. acreage reported.*



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

ECORP: N:\2020\2020-089 FLINT CANYON WASH TRAIL RESTORATION\MAPS\JURISDICTIONAL_DELINEATIONFLINT_ARD_ACOE_20200830.MXD-MGUIDRY 2/5/2021

2020-089 Flint Canyon Wash Trail Restoration

DRAFT

Scale in Feet
0 200

Photo Source: NAIP 2018
Boundary Source: CVWD
Delineator: S Taylor
Coordinate System: NAD 1983 StatePlane California VI FIPS 0406 Feet

Map Date: 2/5/2021

Figure 8.
CDFW Aquatic Resource Delineation

Tree ID	Species	Acres
1-7	Western Sycamore	0.630
8	Black Willow, Western Sycamore	0.029
9	Black Willow	0.045
10	Box elder	0.007
11	Box elder	0.007
12-14	Black Willow, Box Elder, Western Sycamore	0.295
15	Black Willow	0.029
16-17	Box Elder, Black Willow, Western Sycamore,	0.268
18	Mulefat	0.002
19	Mulefat	0.004
20	Black Willow	0.029
21	Black Willow, Red Willow, Western Sycamore	0.180
22-23	Black Willow, Western Sycamore, Red Willow	0.091
24	Black Willow	0.016
25	Western Sycamore, Black Willow	0.065
26	Black Willow	0.016
27	Western Sycamore	0.045
28	Black Willow	0.065
29	Black Willow	0.002
30-31	Western Sycamore, Black Willow	0.154
32	Black Willow, Western Sycamore, Mulefat	0.065
33	Western Sycamore, Black Willow	0.065
34-37	Black Willow, Western Sycamore, Mulefat	0.034
38-39	Black Willow, Western Sycamore	0.134

Map Features

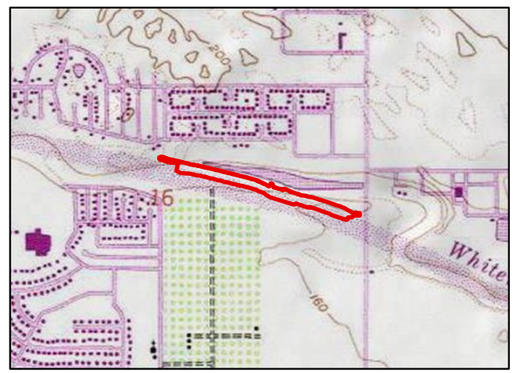
- Project Area
- Delineation Area
- Tree Location (Tree ID)
- Tree Buffers

CDFW Habitat

- Streambed
- Goodding's Willow - Red Willow Riparian Woodland & Forest
- Goodding's Willow - Red Willow Riparian Woodland & Forest - Disturbed

Vegetation Community/Land Cover

- California Sagebrush Scrub
- California Sagebrush - California Buckwheat Scrub
- California Sagebrush - California Buckwheat Scrub - Disturbed
- Coast Live Oak Woodland
- Eucalyptus – Tree of Heaven – Black Locust Groves
- Landscaped
- Disturbed
- Developed/Landscaped
- Developed



ECORP Consulting, Inc.
ENVIRONMENTAL CONSULTANTS

2020-089 Flint Canyon Wash Trail Restoration

DRAFT

Scale in Feet
0 200

Photo Source: NAIP 2018
Boundary Source: CVWD
Delineator: S Taylor
Coordinate System: NAD 1983 StatePlane California V FIPS 0405 Feet

Map Date: 9/25/2020

ECORP: N:\2020\2020-089 FLINT CANYON WASH TRAIL RESTORATION\MAPS\JURISDICTIONAL_DELINEATIONFLINT_ARD_CDFW_20200830.MXD-MGUIDRY 2/5/2021

8.0 REFERENCES

Baldwin, B. G., Goldman G. H., Keil D. J., Patterson R., Rosatti T. J., Wilken D. H. 2012. *The Jepson Manual; Vascular Plants of California, Second Edition*. Berkeley, CA: University of California Press.

Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1 (On-line edition). Vicksburg, Mississippi: U.S. Army Engineer Waterways Experiment Station. p. 143. January 1987.

Lichvar, R. W., Banks D. L., Kirchner W. N., Melvin N. C. 2016. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron*. 2016:30:1-17. April 28, 2016.

Munsell Color. 2009. Munsell Soil Color Book. Munsell Color. Grand Rapids, Michigan.

NOAA. 2020a. NCDC 1981-2010 Climate Normals for Pasadena Ranger Station, California. https:/www.ncdc.noaa.gov/cdo-web/datatools/normals. Accessed July 13, 2020.

_____. 2020b. Climate Data Online: Daily Precipitation Summaries for Pasadena Ranger Station, California. Available Online: https://www.ncdc.noaa.gov/cdo-web/search. Accessed July 13, 2020.

NRCS. 2020a. Web Soil Survey. http://websoilsurvey.nrcs.usda.gov/. Accessed July 13, 2020.

_____. 2020b. Soil Data Access Hydric Soils List. https://www.nrcs.usda.gov/wps/portal/nrcs/mail/soils/use/hydric/. Accessed November 6, 2018.

_____. 2003. *National Soil Survey Handbook*. http://soils.usda.gov/technical/handbook

NRCS, USGS, USEPA. 2016. Watershed Boundary Dataset for California. http://datagateway.nrcs.usda.gov.

SFEI. California Aquatic Resource Inventory (CARI) Version 0.3. 2017. http://www.sfei.org/data/california-aquatic-resource-inventory-cari-version-03-gis-data#sthash.0SjnlwfO.dpbs.

USACE. 2016. Regulatory Guidance letter 16-01, Jurisdictional Determinations. October 2016.

_____. 2017. Minimum Standards for Acceptance of Aquatic Resources Delineation Reports. U.S. Army Corps of Engineers. p. 20. March 2017.

_____. 2008a. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.

_____. 2008b. Regulatory Guidance Letter 08-02, Jurisdictional Determinations. June 26, 2008.

_____. 1992. Clarification and Interpretation of the 1987 Manual. Memorandum from Major General Arthur E. Williams. Dated 6 March 1992.

USGS. 2020. "Pasadena, California" 7.5-minute Quadrangle. In: Survey. G, editor. Denver, Colorado.

LIST OF ATTACHMENTS

Attachment A – Driving Directions to DA

Attachment B – Wetland Determination Data Forms - Arid West

Attachment C – Plant Species Observed Onsite

Attachment D – Representative Site Photographs

Attachment E – USACE ORM Aquatic Resources Table

Attachment F – Wetland Delineation Shape File (to be included with USACE submittal only)

ATTACHMENT A

Driving Directions to DA

YOUR TRIP TO:

Hahamongna Watershed Park

19 MIN | 15.5 MI

Est. fuel cost: $2.09

Trip time based on traffic conditions as of 9:08 AM on March 1, 2021. Current Traffic: Light

1. Start out going **southeast** on Wilshire Blvd toward S Figueroa St.

Then 0.07 miles — 0.07 total miles

2. Turn **left** onto S Figueroa St.

If you reach Lebanon St you've gone a little too far.

Then 0.19 miles — 0.27 total miles

3. Merge onto CA-110 N via the ramp on the **left**.

Then 2.63 miles — 2.90 total miles

4. Merge onto I-5 N via EXIT 26A on the **left** toward **Sacramento**.

Then 1.92 miles — 4.81 total miles

5. Merge onto CA-2 N via EXIT 139A toward **Glendale**.

Then 7.63 miles — 12.44 total miles

6. Merge onto I-210 E via EXIT 21A toward **Pasadena/CA-2**.

Then 1.90 miles — 14.34 total miles

7. Take the **Gould Ave** exit, EXIT 21.

Then 0.31 miles — 14.65 total miles

8. Turn **right** onto Gould Ave.

Then 0.12 miles — 14.77 total miles

9. Turn **left** onto Foothill Blvd.

If you reach Richmond Rd you've gone a little too far.

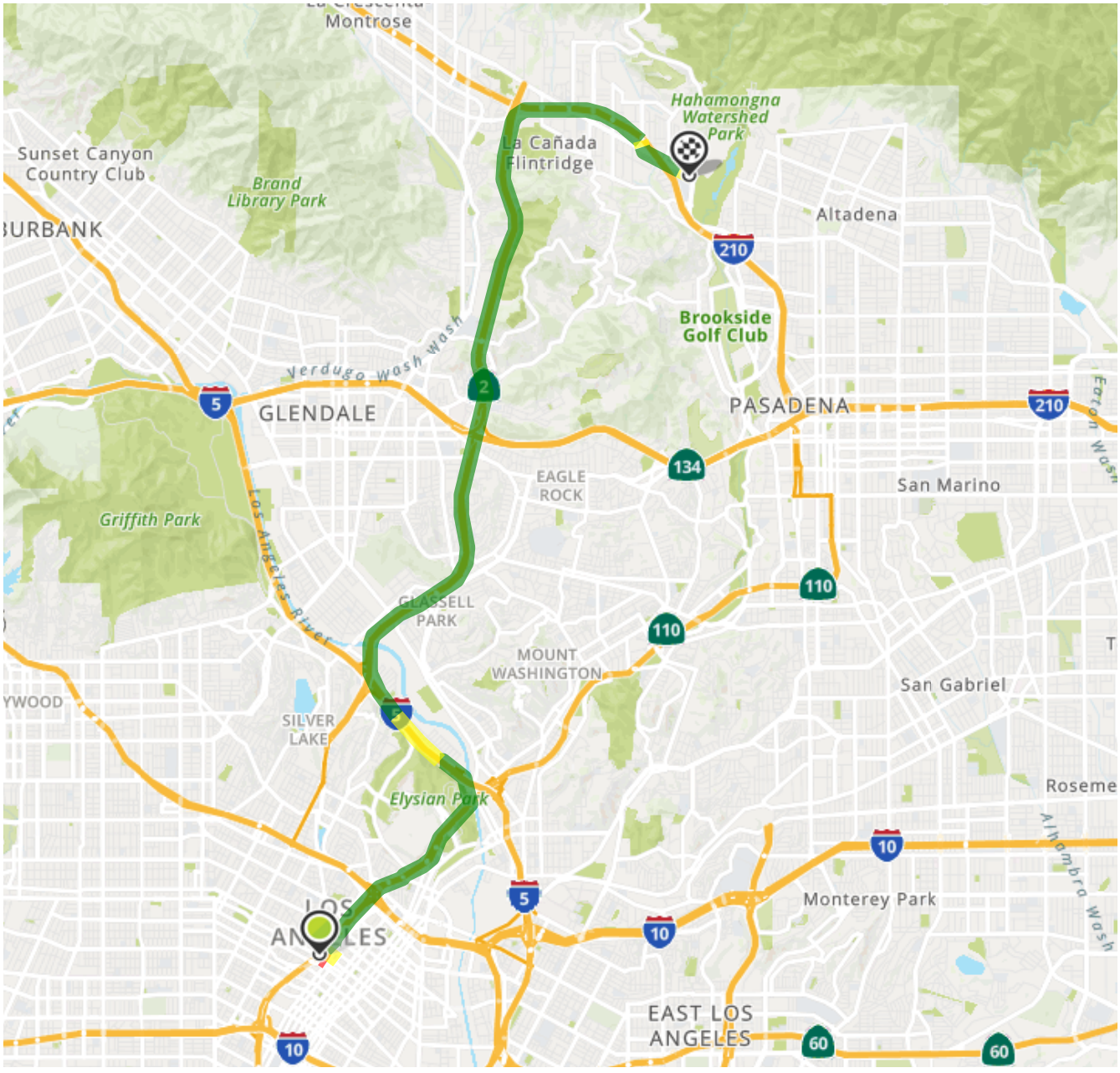
Then 0.75 miles — 15.52 total miles

10. Hahamongna Watershed Park, 101 Foothill Blvd, La Canada Flintridge, CA, 101 FOOTHILL BLVD is on the **left**.

Your destination is just past Viro Rd.

If you reach Oak Grove Dr you've gone a little too far.

Save to My Maps



ATTACHMENT B

Wetland Determination Data Forms - Arid West Region

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Flint Wash Trail Restoration Project City/County: Los Angeles County Sampling Date: 7/21/2020

Applicant/Owner: City of La Canada Flintridge State: CA Sampling Point: SP 1

Investigator(s): Scott Taylor Section, Township, Range: Unsectioned, T1N, R12W

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

Subregion (LRR): LRR-C Lat: 34.189935 Long: -118.181775 Datum: NAD83

Soil Map Unit Name: Urban land- Montebello-Xerothents NWI classification: Fluvial natural

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? N Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (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:

Area subject to urban runoff

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washintonia robusta	10	Y	FACW
2.			
3.			
4.			
	10 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Washingtonia robusta	15	Y	FACW
2.			
3.			
4.			
5.			
	15 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cyperus papyrus	10	Y	OBL
2. Ehrarta erecta	20	Y	UPL
3. Juncus mexicanus	5	N	FACW
4.			
5.			
6.			
7.			
8.			
	35 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
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	10	x 1 =	10
FACW species	30	x 2 =	60
FAC species		x 3 =	
FACU species		x 4 =	
UPL species	20	x 5 =	100
Column Totals:	60 (A)		170 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation is an odd mixture of non-natives, mostly from escaped landscaping

SOIL

Sampling Point: SP 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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 5/2	100					Loam	Rocky

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators present. Rocks underly the SP

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 5

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: Flint Wash Trail Restoration Project City/County: Los Angeles County Sampling Date: 7/21/2020

Applicant/Owner: City of La Canada Flintridge State: CA Sampling Point: SP 2

Investigator(s): Scott Taylor Section, Township, Range: Unsectioned, T1N, R12W

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

Subregion (LRR): LRR-C Lat: 34.189434 Long: -118.181574 Datum: NAD83

Soil Map Unit Name: Urban land- Montebello-Xerothents NWI classification: Fluvial natural

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? N Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (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:

Area subject to urban runoff, constant input of water from landscaping

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus velutina	10	Y	FAC
2. Quercus agrifolia	5	N	UPL
3. Salix goodingii	30	Y	FACW
4.			
	45	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Typha latifolia	15	Y	OBL
2. Cyperus papyrus	15	Y	OBL
3.			
4.			
5.			
	30	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Cyperus papyrus	10	Y	OBL
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	10	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
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: 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	40	x 1 =	40
FACW species	30	x 2 =	60
FAC species	10	x 3 =	30
FACU species		x 4 =	
UPL species	5	x 5 =	25
Column Totals:	85 (A)		155 (B)

Prevalence Index = B/A = 1.8

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Oaks are not rooted in the sample area. Its a pretty wet zone alongside the creek. Vegetation seems to be supported by water perching on an aquitard (rocks, etc.)

SOIL

Sampling Point: SP 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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 5/2	100					Loam	Rocky

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ____ No ✓

Remarks:

No indicators present. The area was difficult to dig due to a heavy root mass from surrounding trees plus rocky underlying soils

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No ____ Depth (inches): 5

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: Flint Wash Trail Restoration Project City/County: Los Angeles County Sampling Date: 7/21/2020

Applicant/Owner: City of La Canada Flintridge State: CA Sampling Point: SP 3

Investigator(s): Scott Taylor Section, Township, Range: Unsectioned, T1N, R12W

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

Subregion (LRR): LRR-C Lat: 34.189709 Long: -118.181163 Datum: NAD83

Soil Map Unit Name: Urban land- Montebello-Xerothents NWI classification: Fluvial natural

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? N Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (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:

Area subject to urban runoff, this is directly across from the lower tennis courts

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washintonia robusta	10	Y	FACW
2. Quercus agrifolia	5	N	UPL
3. Platanus racemosa	10	Y	FAC
4. Salix goodingii	5	N	FACW
	30	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Washingtonia robusta	20	Y	FACW
2.			
3.			
4.			
5.			
	20	= Total Cover	
Herb Stratum (Plot size: _____)			
1. Partenocissus inserta	25	Y	FACU
2. Ficus carica	30	Y	FACU
3.			
4.			
5.			
6.			
7.			
8.			
	55	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
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: 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 _____	x 1 =	_____
FACW species 35	x 2 =	70
FAC species 10	x 3 =	30
FACU species 55	x 4 =	220
UPL species 5	x 5 =	25
Column Totals: 105 (A)		345 (B)

Prevalence Index = B/A = 3.3

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation is an odd mixture of non-natives, mostly from escaped landscaping. The area is somewhat problematic.

SOIL

Sampling Point: SP 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
0-4	10 YR 5/2	100					Loam	Rocky

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators present. Rocks underly the SP

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Capillary fringe, essentially

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Flint Wash Trail Restoration Project City/County: Los Angeles County Sampling Date: 7/21/2020

Applicant/Owner: City of La Canada Flintridge State: CA Sampling Point: SP 4

Investigator(s): Scott Taylor Section, Township, Range: Unsectioned, T1N, R12W

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

Subregion (LRR): LRR-C Lat: 34.187724 Long: -118.180560 Datum: NAD83

Soil Map Unit Name: Urban land- Montebello-Xerothents NWI classification: Fluvial natural

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? N Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (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:

Area subject to urban runoff, this is also near the lower tennis courts

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Fraxinus velutina	15	Y	FAC
2. Quercus agrifolia	30	Y	UPL
3.			
4.			
	45 = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1. Cyperus papyrus	20	Y	OBL
2.			
3.			
4.			
5.			
	20 = Total Cover		
Herb Stratum (Plot size: _____)			
1. Cyperus papyrus	10	Y	OBL
2. Ehrharta erecta	30	Y	UPL
3.			
4.			
5.			
6.			
7.			
8.			
	40 = Total Cover		
Woody Vine Stratum (Plot size: _____)			
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: 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	30	x 1 =	30
FACW species	_____	x 2 =	_____
FAC species	15	x 3 =	45
FACU species	_____	x 4 =	_____
UPL species	60	x 5 =	300
Column Totals:	105 (A)		375 (B)

Prevalence Index = B/A = 3.6

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation is an odd mixture of non-natives, with dominants represented by both obligates and upland species. The area is somewhat problematic.

SOIL

Sampling Point: SP 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 %	Redox Features Type[1]	Redox Features Loc[2]	Texture	Remarks
0-4	10 YR 5/2	100					Loam	Rocky

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators present. Rocks underly the SP

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No _____ Depth (inches): 0-5

Wetland Hydrology Present? Yes ✓ No _____

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

Remarks:

Partly saturated

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Flint Wash Trail Restoration Project City/County: Los Angeles County Sampling Date: 7/21/2020

Applicant/Owner: City of La Canada Flintridge State: CA Sampling Point: SP 5

Investigator(s): Scott Taylor Section, Township, Range: Unsectioned, T1N, R12W

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

Subregion (LRR): LRR-C Lat: 34.185941 Long: -118.178540 Datum: NAD83

Soil Map Unit Name: Urban land- Montebello-Xerothents NWI classification: Fluvial natural

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? N Are "Normal Circumstances" present? Yes ✓ No _____

Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? N (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:

Area subject to urban runoff, this is underneath the SR-210 bridge

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Washingtonia robusta	15	Y	FACW
2. Ficus carica	10	N	FACU
3. Faxinus velutina	25	Y	FAC
4. Platanus racemosa	10	N	FAC
	60	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)			
1. Fraxinus velutina	5	Y	FAC
2.			
3.			
4.			
5.			
	5	= Total Cover	
Herb Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
	40	= Total Cover	
Woody Vine Stratum (Plot size: _____)			
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 _____	x 1 =	_____
FACW species 15	x 2 =	30
FAC species 35	x 3 =	105
FACU species 10	x 4 =	40
UPL species _____	x 5 =	_____
Column Totals: 60 (A)		175 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Vegetation is generally sparse and dominated by trees overhanging the area. Very little understory is present due to shading

SOIL

Sampling Point: SP 5

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

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No indicators present. Rocky area, no pit dug

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

Surface Water Present? Yes ✓ No _____ Depth (inches): 8-10

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:

ATTACHMENT C

Plant Species Observed Onsite

APPENDIX C – FLINT CANYON WASH PLANT COMPENDIUM

Scientific Name	Common Name
VASCULAR PLANTS	
GYMNOSPERS	
Pinaceae	**Pine Family**
*Pinus canariensis**	Canary Island pine
ANGIOSPERMS (DICOTYLEDONS)	
Adoxaceae	**Elderberry Family**
Sambucus nigra ssp. cerulea (= S. mexicana)	blue elderberry
Anacardiaceae	**Sumac Family**
Malosma laurina	laurel sumac
Rhus aromatica	fragrant sumac
Toxicodendron diversilobum	poison oak
Apiaceae	**Carrot Family**
*Conium maculatum**	poison hemlock
Apocynaceae	**Dogbane Family**
*Nerium oleander**	oleander
Asteraceaea	**Sunflower Family**
Artemisia californica	California sagebrush
Artemisia douglasiana	mugwort
Baccharis salicifolia	mulefat
Baccharis pilularis	coyote brush
*Carduus pycnocephalus**	Italian thistle
*Centaurea melitensis**	tocalote
Encelia farinosa	brittlebush
Erigeron canadensis	Canada horseweed
Heterotheca grandiflora	telegraph weed
*Lactuca serriola**	wild prickly lettuce
Pseudognaphalium californicum	ladies' tobacco
*Salsola tragus**	Russian thistle
*Sonchus asper**	spiny sowthistle
Betulaceae	**Birch Family**
Alnus rhombifolia	white alder
Boraginaceae	**Borage Family**
Phacelia cicutaria	caterpillar phacelia
Brassicacaeae	**Mustard Family**
*Brassica nigra**	black mustard
*Sisymbrium irio**	London rocket
Caprifoliaceae	**Honeysuckle Family**
Lonicera sp.	honeysuckle
Caryophyllaceae	**Carnation Family**
*Stellaria media**	chickweed
Cistaceae	**Rock Rose Family**
*Cistus incanus**	hairy rockrose
Convolvulaceae	**Bindweed Family**
*Convolvulus arvensis**	field bindweed

Scientific Name	Common Name
VASCULAR PLANTS continued	
ANGIOSPERMS (DICOTYLEDONS) continued	
Euphorbiaceae	**Spurge Family**
*Ricinus communis**	castorbean
Fabaceae	**Legume Family**
*Acacia sp.**	acacia
Acmispon americanus	Spanish lotus
Acmispon glaber	deerweed
*Melilotus indicus**	sourclover
*Robinia pseudoacacia**	black locust
*Spartium junceum**	Spanish broom
Fagaceae	**Oak Family**
Quercus agrifolia	coast live oak
Gernaniaceae	**Geranium Family**
*Erodium cicutarium**	red stemmed filaree
Juglandaceae	**Walnut Family**
*Juglans californica***	Southern California black walnut
Lamiaceae	**Mint Family**
*Marrubium vulgare**	white horehound
Salvia apiana	white sage
Salvia mellifera	black sage
Malvaceae	**Mallow Family**
*Malva parviflora**	cheeseweed mallow
Moraceae	**Mulberry Family**
*Ficus carica**	common fig
Myrtaceae	**Myrtle Family**
*Eucalyptus camaldulensis**	red gum
*Eucalyptus globulus**	blue gum
Oleaceae	**Olive Family**
*Fraxinus uhdei**	shamel ash
Fraxinus velutina	velvet ash
Onagraceae	**Evening Primrose Family**
Eulobus californicus	California primerose
Oenothera elata	evening primerose
Plantaginaceae	**Plantain Family**
Penstemon spectabilis	showy penstemon
Phrymaceae	**Lopseed Family**
Diplacus aurantiacus	sticky monkeyflower
Platanaceae	**Plane Tree Family**
Platanus racemosa	western sycamore
Polygonaceae	**Buckwheat Family**
Eriogonum fasciculatum	California buckwheat
*Rumex crispus**	curly dock
Rosaceae	**Rose Family**
Adenostoma fasciculatum	chamise

Scientific Name	Common Name
VASCULAR PLANTS continued	
ANGIOSPERMS (DICOTYLEDONS) continued	
Rosaceae continued	**Rose Family**
Heteromeles arbutifolia	toyon
Prunus ilicifolia	holly leaf cherry
Rubus ursinus	California blackberry
Rubiaceae	**Bedstraw Family**
Galium aparine	common bedstraw
Salicaceae	**Willow Family**
Salix gooddingii	black willow
Salix laevigata	red willow
Salix lasiolepis	Arroyo willow
Sapindaceae	**Soapberry Family**
Acer negundo	boxelder
Simaroubaceae	**Quassia Family**
*Ailanthus altissima**	tree of heaven
Solanaceae	**Nightshade Family**
Datura wrightii	jimsonweed
*Nicotiana glauca**	tree tobacco
Solanum americanum	common nightshade
Ulmaceae	**Elm Family**
Ulmus sp.	elm
ANGIOSPERMS (MONOCOTYLEDONS)	
Arecaceae	**Palm Family**
*Washingtonia robusta**	Mexican fan palm
Cyperaceae	**Sedge Family**
Cyperus eragrostis	umbrella sedge
Poaceae	**Grass Family**
*Avena fatua**	wild oat
*Bromus madritensis**	red brome
*Bromus tectorum**	cheat grass
Elymus condensatus	giant wild rye
*Hordeum murinum**	foxtail barley
Phragmites australis	common reed

*Nonnative species

** Federally endangered or threatened/State endangered or threatened or CNPS designated

ATTACHMENT D

Representative Site Photographs

Photo 1. Lower Reach (Above SR-210)

Photo 2. Underneath SR-210 Bridge

Photo 3. Just upstream of SR-210 Bridge

Photo 4. Habitat within Middle Reach

Photo 5. Middle Reach (typical channel)

Photo 6. Upper Reach

Photo 7. Upper Reach

Photo 8. Sample Point 1 Location

Photo 9. Sample Point 2 Location

Photo 10. Sample Point 3 Location

Photo 11. Sample Point 4 Location

Photo 12. Sample Point 5 Location

ATTACHMENT E

USACE ORM Aquatic Resources Table

Waters_Name	State	Cowardin_Code	HGM_Code	Meas_Type	Amount	Units	Waters_Type	Latitude	Longitude	Local_Waterway
WWRSC	CALIFORNIA	R3RB	RIVERINE	Area	2.34	ACRE	RPW	33.73591900	-116.36137200	Flint Wash

ATTACHMENT F

Wetland Delineation Shape File (to be included with USACE submittal only)