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13th Street Bridge, Ramona, California Aquatic Resource Delineation Report

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County of San Diego, Department of Public Works

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1. SUMMARY/PURPOSE

The County of San Diego Department of Public Works, in cooperation with the California Department of Transportation, proposes the 13th Street Bridge Project (proposed Project), which includes construction of a bridge where 13th Street crosses Santa Maria Creek, in the unincorporated community of Ramona, in San Diego County, California. The project segment of 13th Street/Maple Street is a dirt roadway, with gravel at the Santa Maria Creek culvert crossing. The existing, undersized corrugated steel culvert does not have sufficient capacity to convey the creek water during storm events; flooding at this crossing makes the roadway impassable for motor vehicles and pedestrians during portions of the rainy season. The objective of the project is to provide an adequate and safe crossing that allows for the conveyance of water from a 100-year storm event. The project would include replacement of the existing culvert crossing with a bridge designed to meet current federal standards, with roadway improvements along 13th Street/Maple Street and Walnut Street, and the addition of stormwater conveyance and treatment features that would ultimately discharge into Santa Maria Creek.

Wetland and non-wetland waters (e.g., streams, rivers, ephemeral drainages) and associated riparian corridors occurring within California may be regulated under federal and state laws. AECOM conducted an aquatic resource delineation for the proposed Project to determine the extent of aquatic resources under the jurisdictional purview of the U.S. Army Corps of Engineers (USACE), the Regional Water Quality Control Board (RWQCB), and/or the California Department of Fish and Wildlife (CDFW). The purpose of this report is to present the results of this delineation.

1.1 PROJECT SETTING/LOCATION

The proposed Project is located within the unincorporated community of Ramona in San Diego County, California (Figures 1 and 2; see Appendix A for all figures referenced herein). The project area includes a section of 13th Street that begins just north of the Ramona Library on Main Street and extends to the north where it terminates adjacent to the southwestern boundary of 405 North Maple Street. The site also includes an approximately 800-foot-long, east-west–trending section of road on Walnut Street, just north of Santa Maria Creek. The project area includes both paved and unpaved sections of road.

North of Santa Maria Creek, the proposed Project area slopes south towards the creek. South of the Santa Maria Creek, the proposed Project area slopes north towards the creek. The elevation for the majority of the Site ranges between 1,419 feet above mean sea level (amsl) and 1,426 feet amsl. The proposed Project area is highly disturbed from foot traffic and traversed by multiple pedestrian footpaths.

To access the proposed Project, take Highway 78 then turn right onto Highway 67. Turn right onto 13th Street and the project begins in approximately 0.1 mile at the end of the asphalt. The center point of the Site is located at Latitude 33.043095°and Longitude -116.875291°.

PART A

2. AQUATIC RESOURCE DELINEATION METHODOLOGY

The aquatic resource delineation included two components: desktop review and field assessment.

2.1 DESKTOP METHODS

Prior to the field investigation, a desktop review was conducted to determine the existing conditions and historical uses of the study area and the surrounding area. The following resources and previous studies were utilized:

- Natural Resources Conservation Service Soil Survey Mapping (USDA-NRCS 2016)
- Hydric soils: Hydric Soils – Criteria and 2014 State List for California (USDA-NRCS 2014); Field Indicators of Hydric Soils in the United States, version 8.2 (USDA-NRCS 2018)
- National Wetlands Inventory (NWI) (USFWS 2018)
- Watershed Boundary Dataset accessed via WATERS GeoViewer (USGS 2018)
- National Hydrography Dataset (NHD) accessed via WATERS GeoViewer (USGS 2018)
- Historical Aerial Imagery (1994 – 2019) (Google 2019)
- Wetland (WETS) Climate Tables (NOAA 2019)
- San Diego Basin Plan (SDRWQCB 2016)
- *The Ecology of Southern California Vernal Pools: A Community Profile* (Zedler 1987)
- *Ramona Vernal Pool Conservation Study, Ramona, California* (TAIC and EDAW 2005)
- 2018 13th Street Bridge Project, Listed Branchiopod Species 90-Day Report of Protocol Wet-Season Surveys, Ramona, San Diego County, California (AECOM 2018)
- 13th Street Bridge Project Natural Environment Study (AECOM 2020)
- Topographic Maps (2 foot contours)

2.2 FIELD ASSESSMENT METHODS

On July 19, 2019 and March 20, 2020, AECOM biologists Keely Craig and Brenda McMillan conducted an aquatic resource delineation for the proposed Project. The delineation field methods described below were conducted within the proposed Project limits and a surrounding 100-foot buffer (i.e., study area). Aquatic features can include both wetlands and non-wetland waters. To be considered a wetland, all three parameters (wetland hydrology, hydric soils, and dominance of wetland vegetation) outlined in the 2008 USACE Arid West Supplement must be met (USACE 2008). USACE defines non-wetland waters based on the presence of an ordinary high water mark.[1] Aquatic features that exhibit only one of the three parameters required to qualify as a

[1] Federal regulations (33 Code of Federal Regulations Part 328.3(e)) define the "ordinary high water mark" (OHWM) as "that line on the shore established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

wetland by USACE may nonetheless be considered wetlands by RWQCB and CDFW. As relevant to the proposed Project, this is discussed further below.

Aquatic features were assessed to determine whether they meet the definition of a Waters of the United States (WOTUS) in 33 Code of Federal Regulations [CFR] Part 328[2]. A case-specific significant nexus test[3] was not warranted for the aquatic features within the proposed Project and is not discussed further in this report. The delineation and vegetation classification were conducted in accordance with the guidance and reference documents listed below:

- *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual* (Lichvar and McColley 2008)
- Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (Curtis and Lichvar 2010)
- Clean Water Act Jurisdiction Following the Supreme Court Decision in Rapanos v. U.S. and Carabell v. U.S. (USEPA 2008)
- *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987)
- *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (*USACE 2008)
- *Field Indicators of Hydric Soils in the United States*, version 8.2 (USDA-NRCS 2018)
- National Wetland Plant List Indicator Rating Definitions. (Lichvar et al. 2016)
- *Draft Vegetation Communities of San Diego County* (Oberbauer et al. 2008)

Prior floral surveys and protocol-level surveys for fairy shrimp within the Study Area had mapped features that ponded water long enough to meet the USFWS criteria to be potential fairy shrimp habitat (Figure 3; fairy shrimp surveys were negative). The potential basins/depressions mapped during the fairy shrimp surveys were not mapped based on formal field wetland delineations per the USACE agency guidelines noted above. Each of the features previously mapped during fairy shrimp surveys, was surveyed during the July 2019 and March 2020 field visits to determine whether these features meet the criteria for wetlands that would be regulated by RWQCB, CDFW, and/or USACE. If the temporarily ponded area did not support wetland vegetation, hydric soils, or wetland hydrology, it was not considered a wetland or a vernal pool. For this Aquatic Resource Delineation Report, the Data Forms from the 2008 USACE Arid West Supplement were used to document the presence/absence of wetlands. Representative wetland sample points were taken at four of these temporarily ponded areas.

An Apple iPad, Arrow 1 Trimble unit (<1 meter accuracy), and the ESRI Collector application (ESRI 2019) were used to collect data to map the boundaries of the aquatic resources present.

[2]On December 2018, the USEPA and USACE issued a prepublication document, signed by both agencies, of a proposed rule revising the definition of "waters of the United States" to clarify federal authority under the Clean Water Act taking a more “common sense” approach. This definition would remove ephemeral features from CWA Section 404 jurisdiction therefore reducing the protections in Southern California. The proposed definition replaces the current one. As of April 21, 2020, the new definition has an implementation date of June 22,2020.

[3] Significant nexus is described in the U.S. Environmental Protection Agency’s 2008 Guidance in Clean Water Act Jurisdiction Following the U.S. Supreme Court’s Decision *in Rapanos v. United States and Carabell v. United States* (USEPA 2008).

Mapped polygons were visually adjusted, as needed, to match the resources as seen on the aerial imagery, the topographic data, and in the field.

3. RESULTS

The results of the desktop analyses, recent floral and faunal surveys conducted for the proposed Project, and the jurisdictional delineation are presented below.

3.1 HYDROLOGY AND RAINFALL

The proposed Project is located within the San Diego watershed (HUC 8 = 18070304). Further, it is located within the San Dieguito Hydrologic Unit, Santa Maria Valley Hydrologic Area and within the Ramona hydrological subarea. Figure 4 shows the location of the proposed Project within the watershed. A named intermittent water, Santa Maria Creek, flows east to west within the study area. Edge effect has significantly altered the hydrology in downtown Ramona, as well as the project area. The hydrological connect between the historical vernal pool complexes that are known to have existed pre-development is thought to be no longer functioning (TAIC and EDAW 2005). North of Santa Maria Creek, the study area slopes south towards the creek. South of Santa Maria Creek, the study area slopes north towards the creek. Aerial photos show the flood cycle of Santa Maria Creek; similarly, inundation and saturation are visible onsite on historical Google Earth images (see Appendix C, Aerial Photographs).

Santa Maria Creek flows to Santa Ysabel Creek, which ultimately flows to the San Dieguito River, a Traditionally Navigable Water (TNW) (USACE 2019). Santa Maria creek is considered a relatively permanent water and receives urban runoff from several Municipal Separate Storm Sewer System (MS4) outfall culverts within the study area. The San Dieguito River is on the Clean Water Act (CWA) Section 303(d) list of impaired waterbodies based on levels of enterococcus, fecal coliform, nitrogen, phosphorus, total dissolved solids, and toxicity. Per the San Diego Basin Plan, the beneficial uses for the Santa Maria Creek include municipal and domestic water supply (MUN), agriculture supply (AGR), industrial service supply (IND), industrial process supply (PROC), water contact recreation (REC1), noncontact water recreation (REC2), warm freshwater habitat (WARM), and wildlife habitat (WILD) (SDRWQCB 2016). The National Wetland Inventory shows only one intermittent stream (R4SBC), Santa Maria Creek, with no other aquatic features mapped within the study area (USFWS 2018).

Based on weather data collected at Ramona Airport Weather Station between 1998 and 2019, the average temperature within the study area is 60.9 degrees Fahrenheit (°F) with a mean low of 45.3°F and a mean high of 76.5°F. Average precipitation within the area of Ramona over the past 20 years is 9.78 inches (NOAA 2019). The majority of rain occurs between October through April. The Wetlands (WETS) Climate Table for the Ramona Airport Weather Station (nearest weather station to the Project) is presented as Table 1.

Table 1
WETS Table for Ramona Airport Weather Station-Ramona, CA.
(Data are representative of years 1998 through 2018.)

Month	Avg Max Temp (F)	Avg Min Temp (F)	Avg Mean Temp (F)	Avg Precip (in)	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more
Jan	66.8	35.4	51.1	2.44	0.78	2.91	4
Feb	65.9	36.8	51.3	–	–	–	–
Mar	68.5	39	53.8	1.3	0.58	1.59	3
Apr	71.3	41.7	56.5	1.02	0.45	1.21	3
May	75.9	47.8	61.9	0.35	0.1	0.36	1
Jun	83.3	51.6	67.4	0.02	0	0.02	0
Jul	89.1	57.4	73.2	0.18	0	0.07	0
Aug	90.4	57.5	74	0.06	0.02	0.06	0
Sep	88	54.3	71.1	0.17	0	0.16	0
Oct	80	47.8	63.9	0.82	0.15	0.7	1
Nov	72.5	39.9	56.2	1.08	0.49	1.28	2
Dec	65.7	34.8	50.2	2.34	0.72	2.78	4
Annual Avg	76.5	45.3	60.9	0.89	–	–	

Source: NOAA 2019- Some results missing due to lack of data available.

The amount of rainfall recorded in Ramona between November 2018 and April 2019 is presented in Table 2. During the 2018–2019 winter and spring months, approximately 17.99 inches fell, well above the average rainfall for that period in the average year. The high precipitation received during that year provides a favorable setting for the field investigations of the study area.

Table 2
Rainfall Data from November 2018 through April 2019 as Recorded at the Ramona Airport Weather Station

Month	Observed Rainfall (inches)
November 2018	1.34
December 2018	2.70
January 2019	3.21
February 2019	8.77
March 2019	1.74
April 2019	0.23
TOTAL	**17.99**

Source: NOAA 2019

3.2 SOILS

Soil survey mapping shows the soils within the Study Area as primarily riverwash, Visalia sandy loam, 0-2% slopes (VaA); Placentia sandy loam, 2 to 9% slopes, warm MAAT, MLRA 19 (PeC); and Fallbrook sandy loam, 15 to 30 percent slopes, eroded (Figure 5). Both VaA and PeC soil

types are classified as a hydric soil on the National Hydric Soils List (USDA-NRCS 2014) and are commonly associated with vernal pools in Ramona (TAIC and EDAW 2005).

Historical Google Earth aerial photography shows continual disturbance throughout the entire study area since it is surrounded by development (see Appendix C, Aerial Photographs). Several walking paths throughout the study area have been present and stayed the same throughout the historical imagery.

3.3 VEGETATION AND VERNAL POOL FLORAL/FAUNAL SPECIES

The vegetation present within the study area is typical for a disturbed riparian/non-native grassland setting. Six vegetation communities and two land cover types were mapped within the Project site and a surrounding 350-foot buffer area (AECOM 2020). The cover types that occur within the Study Area are listed in Table 3 and depicted in Figure 6.

Table 3
Vegetation Communities within the Study Area

Vegetation Communities/ Land Cover Types (Oberbauer et al. 2008)
Riparian and Wetlands
Southern Cottonwood-Willow Riparian Forest
Southern Willow Scrub
Alkali Seep
Disturbed Wetland
Uplands
Diegan Coastal Sage Scrub – Inland Form
Non-Native Grassland
Other Cover Types
Eucalyptus Woodland
Urban/Developed

Per the 2018 vegetation mapping, the riparian habitat along Santa Maria Creek was characterized as southern cottonwood-willow riparian forest and the manufactured stormwater basin (Basin 1) that lies southeast of 13th Street/Maple Street and south of Santa Maria creek was characterized as disturbed wetland with patches of southern willow scrub neighboring the basin.

Note that numerous seasonally ponded areas were recorded as occurring in the study area, primarily southeast of the creek and Maple street, within the gravel lot; others were recorded alongside the roadways that traverse the study area. These features were considered part of the non-native grassland habitat and urban/developed cover within the study area and did not warrant mapping as a separate cover type.

Twenty-two of the seasonally ponded areas within the study area were considered potential fairy shrimp habitat, of which 19 met the wet season sampling criteria (contained at least 3 centimeters of water 24 hours after a rain event and remained inundated for at least 7 days). These 19 basins were sampled for listed vernal pool branchiopod species January through March 2018 by AECOM. Then, in May 2018, dry season sampling within the basins was conducted by AECOM (AECOM 2018). Previous fairy shrimp surveys conducted by ICF International during 2012 and

2013 coincided with the current Study Area. No listed or special-status vernal pool wildlife species were detected within the onsite basins during these surveys, and the study area does not support designated critical habitat for listed fairy shrimp species.

The *Ramona Vernal Pool Conservation Study* (TAIC and EDAW 2005) documents the presence of seasonal ponds in several parcels in downtown Ramona. In this study, pools are documented in the parcel southwest of 13th Street and A Street as well as in the parcel two blocks south of the proposed Project site (i.e., between B Street and Main Street); however, no vernal pools were documented as occurring within the study area.

The City of San Diego Vernal Pool Habitat Conservation Plan notes that a seasonally flooded depression is considered a vernal pool when it contains at least one or more indicator species (City of San Diego 2017). An initial floral survey of the basins onsite was conducted by AECOM as part of the 2018 wet season fairy shrimp surveys noted above. A late season visit to the study area to check floral conditions was conducted July 19, 2019. Additionally, a growing season survey was conducted in March 2020. Regionally, 2019 was an important year for vernal pool surveys both for plants and wildlife due to the amount of rain received and the duration of ponding. Spring and early summer 2019 were unseasonably cool resulting in an extended flowering season throughout San Diego County. Vernal pool plant species were still identifiable by flowers and fruits and vegetative features on the July 19, 2019 visit.

The results of the recent floral and faunal species surveys conducted by AECOM for the basins onsite are summarized in Table 4. As noted above, the large Basin 1 that lies southeast of 13th Street and A Street is manufactured. Except for Basin 1, all have shallow topography. Vernal pool indicator plants and/or invertebrate species were observed in three basins; see other notes in Table 4. None of the basins, including the three with indicator species, are considered a vernal pool.

Table 4
Basins with Vernal Pool Indicator Species Detected Onsite or within Study Area

Basin ID[1]	Indicator Plant Species Observed (2018 and/or 2019)[2] [3, 4]	Fairy Shrimp Wet Season Survey Indicator Species Observed (2018)	Vernal Pool Determination
1	*Crassula aquatica*, OBL (2018, 2019) *Eleocharis macrostachya* (2018, 2019) *Lythrum hyssopifolium*, OBL (2018, 2019) *Marsilea vestita*, OBL (2019)	Copepods (*Acanthocyclops* sp.)	No. This disturbed wetland supports a small number of vernal pool species but does not function like a vernal pool.
19	*Juncus bufonius* (2019) *Lythrum hyssopifolium*, OBL (2019)	–	No, the indicator plant species were sparse (fewer than five plants observed).
24	*Juncus bufonius* (2019) *Lythrum hyssopifolium*, OBL (2019)	–	No, the indicator plant species were sparse (fewer than five plants observed).

[1] Basins 3, 4, 5, and 14 were part of a previous study that included areas outside of the current study area; these four basins are not considered herein. No vernal pool indicator species were detected in Basins 2, 6–13, 15–18, 20–23, and 25–26; a representative wetland datasheet is included in Appendix D and these basins are not discussed further herein.

[2] Because vernal pool plants and animals are so restricted to vernal pool ecosystems, presence or absence of certain species is an indication that the seasonal pond is a vernal pool. The floral and faunal species listed above are considered vernal pool indicator species (City of San Diego 2017).

[3] Obligate (OBL) plant species occur almost always (estimated probability >99%) under natural conditions in wetlands; Facultative Wetland (FACW) plant species usually occur in wetlands (estimated probability 67% to 99%)

but occasionally are found in non-wetlands; Facultative (FAC) plant species are equally likely to occur in wetlands or non-wetlands (estimated probability 34% to 66%).
[4] An area is determined to support hydrophytic vegetation if more than 50% of the dominant species are listed as Obligate Wetland (OBL), Facultative Wetland (FACW), or Facultative (FAC) species on the 2016 National Wetland Plant List (Arid West) (Lichvar et al. 2016).

3.4 AQUATIC RESOURCE DELINEATION FIELD RESULTS

AECOM delineated 3.94 acres of wetlands and other waters within the Study Area, including 1.94 acres of wetland waters. As previously noted, in accordance with the Arid West Supplement (USACE 2008), a feature must meet three parameters—wetland hydrology, hydric soils, and dominance of wetland vegetation—to qualify as a wetland. Table 5 below presents the jurisdictional resources present within the Study Area by feature type. Aquatic resources delineated within the Study Area are also shown in Figure 7. Approximately 111 photos were taken within the study area and a photolog with map are included in Appendix B.

Table 5
Aquatic Resources within the Study Area

Feature Name *Vegetation community/Feature Width*	**Classification (Cowardin)**	**Non-wetland (acres)**	**Linear Feet[1]**	**Wetland (acres)**	**Total (acres)**
Santa Maria Creek-(Streambed) *Southern Cottonwood Willow Riparian Forest/ 8 to 22 ft*	Riverine-Intermittent-Streambed-Seasonally Flooded	0.33	1,239	1.82	**2.15**
Santa Maria Creek -Streambanks & Riparian Extent *Southern Cottonwood Willow Riparian Forest*	Riverine-Intermittent-Streambed-Seasonally Flooded	1.35	1,239	0	**1.35**
Stormwater Basin *Non-native grassland/ Disturbed Wetland/102 ft*	(Not Applicable-Artificial)	0.28	N/A	0.07	**0.35**
Stormwater Detention Channel 1 *Non-native Grassland/ 10 ft*	(Not Applicable-Artificial)	0.04	162		**0.04**
Stormwater Detention Channel 2 *Southern Cottonwood Willow Riparian Forest/ 30 ft*	(Not Applicable-Artificial)	0	70	0.05	**0.04**
Total		**2.00**	**1,471**	**1.94**	**3.94**

[1]Linear feet are provided only for applicable non-wetland features, as required. Santa Maria creek is counted twice in this table to differentiate between streambed and banks; however, the linear feet is the same for both portions. This is only counted once in the total.

3.4.1 Stormwater Detention Basin

A portion of Basin 1 is a disturbed wetland as it met all three wetland parameters to qualify as a wetland, however, this feature is an engineered stormwater detention facility designed to drain stormwater runoff from both the road and the Ramona Library parking lot. It was dominated by *Rumex crispis* (FAC) with 15% coverage, and *Artemisia douglasiana* (FACU) and *Polypogon monspeliensis (FACW)* with 5% coverage each. This meets the wetland vegetation dominance test and has a prevalence index of 2.83 (see Appendix D, Wetland Sample Point 3 Datasheet). Basin 1 exhibited strong indicators of wetland hydrology based on the presence of aquatic

invertebrates, in addition to the observation of consistent inundation for multiple weeks during the 2019 and 2020 rainy season. Subsurface investigations were conducted within Basin 1 and the soils exhibited the depleted matrix (F3) hydric soil indicator.

Other areas within the basin were non-wetland waters dominated by non-native grasses such as *Bromus madritensis (UPL)* with 40% cover and *Salix gooddingii* (*FACW) at 25%.* This vegetation community shift, along with the change in elevation, delineated the line between wetland and non-wetland waters in the basin. There was no evidence that this stormwater detention basin connects to Santa Maria Creek as the basin was designed to capture the street and runoff from the Ramona Library parking lot and prevent it from reaching the creek. If the basin were to overflow, water would flow to the east towards the location of Wetland Sample point 2 rather than along 13th Street/Maple Street towards Santa Maria Creek.

3.4.2 Stormwater Detention Channel 1

AECOM biologists surveyed a riprap stormwater detention channel facility that feeds into Basin 1. The feature failed to meet all three parameters to be considered a wetland. The feature was dominated by *Ambrosia psilostachya* (FACU) at 60% cover and *Bromus madritensis* (UPL) at 25% cover. The feature also did not exhibit an OHWM. A datasheet is provided for this feature in Appendix D.

3.4.3 Stormwater Detention Channel 2

AECOM biologists visually mapped an observed potential wetland within a storm drain channel on the adjacent parcel north of the cul-de-sac on 12th street. The vegetation community within the channel is southern cottonwood willow riparian forest. Wetland sample points were not taken for this location as it is outside of proposed project disturbance limits; however, all potential aquatic resources found within the survey area were mapped. This channel is not discussed further in this report.

3.4.4 Santa Maria Creek

Santa Maria Creek flows through the northern portion of the Study Area. This creek is a typical ephemeral drainage in the arid west that changes physically based on flood cycles and effective discharges. As evident in aerial photos (see Appendix C), vegetation within Santa Maria Creek grows denser during the years between effective discharges; however, as the creek experiences flash flooding or high velocity rain events, the low flow channels shift within the bed and remove the vegetation. Several MS4 outlets release into the creek within the study area. Wetland sample points taken within the creek (outside of the ordinary high water) exhibited all three wetland parameters. There is a clear ordinary high water throughout the creek but in some locations vegetative and other debris have caused blockages that have created an active floodplain and allowed some vegetation to establish in these low terraces. The channel width varies within the creek between 8 feet and 22 feet. There is excessive trash and recently deposited sediment throughout the feature. To map the feature, an active floodplain and ordinary high water was delineated within the bank full channel. Representative datasheets are included in Appendix D.

The extent of bed/banks and riparian canopy of Santa Maria Creek was also delineated. This was mapped to the edge of the drip line of the riparian extent (canopy) or the top of bank where a canopy did not exist. Additionally, some riparian extent on the southeastern side of the creek within the study area was mapped based upon its clear connection to the creek.

Part B

4 JURISDICTIONAL DETERMINATION AND IMPACT ANALYSIS

4.1 PROJECT PURPOSE

The 13th Street crossing at Santa Maria Creek frequently becomes impassable for motor vehicles and pedestrians due to flooding during the rainy season because the existing corrugated metal culvert crossing does not have sufficient capacity to convey the volume of water following storm events. The objective of the proposed Project is to provide an adequate and safe crossing that allows for conveyance of water from 100-year flood events.

4.2 PROJECT DESCRIPTION

The proposed Project consists of improvements to 13th Street/Maple Street between Main Street and Walnut Street and construction of a bridge over Santa Maria Creek to replace the existing undersized corrugated steel culvert. The proposed bridge would be a 4-span cast-in-place pre-stressed, post-tensioned concrete box girder structure, approximately 480-feet long and approximately 42-feet wide with three singular-column bents and two abutments. The bridge and approaches would include two 12-foot travel lanes, 3-foot shoulders on each side, and an approximately 8-foot wide multi-use pathway to accommodate pedestrians, bicyclists, and equestrians. In addition, three bridge barriers with a total width of approximately 4-feet, consisting of two edge deck rails and one pedestrian barrier would be installed to separate pathway users from the travel lane and creek. The pathway across the bridge would connect to the existing southern segment near the Ramona County Library and transition users across the bridge to existing and planned facilities north of the bridge. The grade of 13th Street/Maple Street would be raised approximately 10-feet at the Santa Maria Creek crossing to comply with current Federal Highway Administration requirements.

Storm drain systems are proposed directly to the north and south of the bridge to capture runoff and direct it towards the existing creek. Permeable pavement areas would be incorporated into the project as Green Street features to facilitate meeting water quality requirements and for storm-water management. An existing bio-retention basin located south of the bridge that currently treats stormwater from the library and associated parking lot would be redesigned to continue treating those existing areas in addition to the proposed paved roads south of Santa Maria Creek.

Construction is anticipated to last approximately 12 months and will require the placement of fill within the creek. During the bridge foundation construction, dewatering may be required for the proposed project.

4.3 USACE

4.3.1 Regulatory Setting

Under the CWA Section 404, USACE regulates the discharge of dredged or fill material into any aquatic feature that meets the definition of WOTUS as defined in 33 CFR 328. The U.S. Environmental Protection Agency (USEPA) and USACE published a Final Rule (April 21, 2020) that revises and amends the definition of WOTUS in 33 CFR 328 and specifically excludes ephemeral features (e.g., streams, swales, and pools) from coverage under the Clean Water Act; this new definition is scheduled to become effective June 22. 2020.

Per the USACE Regulatory Guidance Letter (RGL) No. 16-01 *Jurisdictional Determinations*, an official determination that there are, or are not, jurisdictional aquatic resources on a parcel can be made by USACE upon request. An Approved Jurisdictional Determination (AJD) prepared by USACE may remove or add portions of the delineated waters summarized herein from being considered jurisdictional and/or may include additional waters that were not considered as jurisdictional during the field delineation. In lieu of an AJD, the County of San Diego could elect to treat the aquatic resources on the parcel as jurisdictional and request a Preliminary Jurisdictional Determination (PJD) from USACE. Without an AJD or PJD, the aquatic resources that were delineated within the study area are considered potential WOTUS.

4.3.2 Jurisdictional Determination

The delineation and analysis presented herein indicate that "potential" (a)(5) WOTUS are present within the Study Area in the form of Santa Maria Creek; however, only USACE can make the official determination. Basin 1 and Stormwater Detention Channel 1 lack a connection to Santa Maria Creek and were therefore not considered WOTUS. Santa Maria Creek is coded on NWI as an intermittent feature; however, within the Study area the feature was not observed flowing during surveys , but was flowing later in the year after another late rain event. As a result, under the new definition of WOTUS the USACE may not take jurisdiction over Santa Maria Creek since it flows only in direct response to rainfall.. Given the survey and this report were completed prior to the date the new definition is in effect (i.e., June 22, 2020), this report assumes these features are potential WOTUS.

4.3.3 Impacts

The proposed project will temporarily impact 0.27 acre of WOTUS and permanently impact <0.01 acre (0.002 acre) of WOTUS. Table 6 presents the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement from its current condition. Figure 8 shows the proposed project impacts in relation to WOTUS in the study area.

Table 6
Proposed Impacts to (a)(5) WOTUS

	Permanent		Temporary		Total
Santa Maria Creek[1]	***Acres***	***LF***	***Acres***	***LF***	***Acres (LF)***
Non-Wetland (Ordinary High Water)	0	0	0.03	0	0.03 (<1)
Wetland (Active Floodplain)	<0.01	9	0.24	336	0.24 (345)
Total	**<0.01**	**9**	**0.27**	**336**	**0.27 (346)**

LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.3.4 Permitting Discussion

Per the analysis presented herein and current regulations, proposed discharges of fill to Santa Maria Creek would require authorization by USACE. Per the Los Angeles District's Final Regional Conditions that were issued for USACE's 2017 Nationwide Permit (NWP) Program, the project may be authorized to proceed under NWPs 14- Linear Transportation Projects and/or 27- Aquatic Habitat Restoration, Establishment, and Enhancement Activities, with the submission of a Pre-Construction Notification.

Under the new definition of WOTUS scheduled to become effective June 2020, the USACE may or may not regulate proposed discharges of dredge or fill to Santa Maria Creek. An AJD may be required to determine whether the USACE considers the creek ephemeral and therefore, non-jurisdictional within the study area, or if it could be considered intermittent and thus jurisdictional. If the USACE takes jurisdiction over the creek under this new definition, then the same permitting is recommended as above. If the USACE does not take jurisdiction over the creek under the new definition, no permitting with USACE would be required.

4.4 RWQCB

4.4.1 Regulatory Setting

Under Section 401 of the CWA and in accordance with the 1969 Porter-Cologne Water Quality Control Act, RWQCB regulates the discharges of wastes, which include discharges of dredged or fill material, which may affect the quality of waters of the State (WOTS). WOTS include all natural wetlands and some, but not all, artificial wetlands, as well as other non-wetland features, including the oceans, lakes, and rivers. On May 28, 2020 the, State's Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019) will go into effect. The RWQCB, through these Procedures, adopted the first part of the "Wetland Riparian Area Protection Policy" that defines what constitutes a wetland and how wetlands should be delineated and protected in the state (SWRCB 2019). The extent of waters of the State (WOTS) subject to the authority of RWQCB was also considered to include all WOTUS, as discussed above.

4.4.2 Jurisdictional Determination

The delineation and analysis presented herein indicate that "potential" WOTS are present within the Study Area in the form of Santa Maria Creek; however, only RWQCB can make the official determination. As noted above, Basin 1 and Stormwater Detention Channel 1 lack a connection to Santa Maria Creek and were therefore, not considered WOTUS. Moreover, these two features would qualify for the exemption to RWQCB's wetland policy and Porter Cologne Act due to their designed intent of stormwater detention. As such, these are not discussed further in impacts.

4.4.3 Impacts

The proposed project will temporarily impact 0.27 acre of WOTS under the purview of RWQCB. The proposed project will permanently impact <0.01 acre (0.002 acre) of WOTS under the purview of RWQCB. Table 7 shows the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement from its current condition. Figure 9 shows the proposed project impacts in relation to WOTS in the study area.

Table 7
Proposed Impacts to Waters of the State (RWQCB)

Santa Maria Creek[1]	Permanent		Temporary		Total
	Acres	*LF*	*Acres*	*LF*	*Acres (LF)*
Non-Wetland (Ordinary High Water)	0	0	0.03	0	0.03 (<1)
Wetland (Active Floodplain)	<0.01	9	0.24	336	0.24(345)
Total[2]	**<0.01**	**9**	**0.27**	**336**	**0.27 (346)**

LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.4.4 Permitting Discussion

Proposed discharges of dredge or fill to the aquatic resources within the Study Area that are regulated under RWQCB policy or the CWA would require a Water Quality Certification (WQC) and/or Waste Discharge Requirements (WDRs) issued by RWQCB. If proposed impacts qualify for authorization via an NWP, then an individual WQC would need to be obtained unless the applicable NWP has been pre-certified by the State. Currently, neither NWP 14 or NWP 27 (noted above as possible NWP authorizations) are pre-certified by the State.

If USACE determines through a formal AJD process or a PJD that the waters within the study area are non-jurisdictional under the CWA, then RWQCB would regulate proposed discharges of fill to Santa Maria Creek under the State's Procedures for Discharges of Dredged or Fill Material to Waters of the State (SWRCB 2019). In this case, the County of San Diego would need to obtain individual authorization from RWQCB, which would include Waste Discharge Requirements applicable to the proposed Project. Under the new Procedures, applications for discharges of dredge or fill in WOTS would need to include an alternatives analysis. Due to the low impacts of the project, it is not expected to require compensatory mitigation; therefore, it is unlikely that the RWQCB would require a full watershed profile as detailed in the Procedures.

4.5 CDFW

4.5.1 Regulatory Setting

Under California Fish and Game Code (CFGC) Sections 1600–1616, CDFW regulates activities that would result in (1) any potential detrimental impacts associated with the substantial diversion or the obstruction of the natural flow of a stream; (2) substantial changes to the bed, channel, or banks of a stream, or the use of any material from the bed, channel, or banks; and (3) the disposal of debris or waste materials that may pass into a stream.

4.5.2 Jurisdictional Determination

Santa Maria Creek and associated riparian habitat falls under the jurisdiction of CDFW. The types of CDFW waters identified in the Study Area are as follows: streambed, streambanks, and associated riparian extent.

4.5.3 Impacts

The proposed project will temporarily impact 0.64 acre and permanently impact 0.06 acre of stream and associated riparian, that would be subject to CFGC Sections 1600–1616. Table 8 shows the proposed impacts by water type. The purpose of the project is to improve water quality within the creek and replace the undersized culvert with a bridge. This project is an enhancement

from its current condition. Figure 10 shows the proposed project impacts in relation to CDFW jurisdictional resources in the study area.

Table 8
Proposed Impacts to CDFW Jurisdictional Resources

Santa Maria Creek[1]	Permanent		Temporary		Total
	Acres	LF	Acres	LF	Acres (LF)
Unvegetated streambed (non-wetland)	0	0	0.03	96	0.03 (96)
Vegetated streambed (wetland)	<0.01	9	0.24	373	0.24 (382)
Streambanks and Associated Riparian Canopy	0.06	216	0.33	695	0.39 (911)
Total	***0.06***	***225***	***0.64***	***1239***	***0.70 (1,464)***

Note: LF = linear feet
[1] Southern Cottonwood Willow Riparian Forest vegetation community

4.5.4 Permitting Discussion

Proposed impacts to the aquatic resources within the Study Area are regulated under CFGC Sections 1600–1616 and the proposed Project would need to obtain a Streambed Alteration Agreement from CDFW.

5 CONCLUSION

As presented above, the wetland delineation and analysis of potential jurisdiction have led to the conclusion that Santa Maria Creek is an aquatic resource that may be regulated by USACE, and would be regulated by RWQCB and CDFW. All jurisdictional determinations presented in this report are based upon the best available knowledge and considered preliminary until concurrence from the resource agencies is received. Impacts from the proposed project to Santa Maria Creek cannot be avoided, therefore, authorization from these agencies will be required. Compensatory mitigation is not expected to be required for the project based upon the net gain of wetlands and/or waters that will occur as a result of replacement of the undersized culvert and existing roadbed with a bridge. The bridge will allow for approximately 0.89 acres of wetlands/waters/streambed to be restored underneath the new bridge and enhance current conditions to encourage better water quality within Santa Maria Creek through the removal of the existing culvert.

6 REFERENCES

AECOM. 2018. Letter Report for 13th Street Bridge Project, Listed Branchiopod Species 90-Day Report of Protocol Wet-Season Surveys. June 26.

AECOM. 2020. *13th Street Bridge Project Natural Environment Study*. April.

California State Water Resources Control Board (SWRCB). 2019. *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State.* April.

City of San Diego. 2017. *Final City of San Diego Vernal Pool Habitat Conservation Plan*. October. Available at https://www.sandiego.gov/sites/default/files/vph-cp.pdf.

Curtis, Katherine E., and Robert W. Lichvar. 2010. Updated Datasheet for the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States. Wetland Regulatory Assistance Program, ERDC/CRREL TN-10-1. July. Available at https://www.spl.usace.army.mil/Portals/17/docs/regulatory/JD/UpdatedDatasheetforIDOHWM_ERDC_2010.pdf.

Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, Mississippi.

ESRI. 2019. *Collector* [Mobile Application Software]. Apple App Store.

Google Earth. 2019. Website and Software. Accessed at http://www.google.com/earth/.

Lichvar, R. W., D. L. Banks, W. N. Kirchner, and N. C. Melvin. 2016. The National Wetland Plant List: 2016 wetland ratings. *Phytoneuron* 2016-30:1–17. Published 28 April 2016. ISSN 2153 733X. Available at http://www.phytoneuron.net/.

Lichvar, R. W., and S. M. McColley. 2008. *A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States: A Delineation Manual*. ERDC/CRREL Technical Report 08-12. Available at http://www.crrel.usace.army.mil/library/technicalreports/ERDC-CRREL-TR-08-12.pdf.

National Oceanic and Atmospheric Administration (NOAA) Regional Climate Centers. 2019. *AgACIS for San Diego County*. October. Available at http://agacis.rcc-acis.org/?fips=06073.

Oberbauer, T., M. Kelly, and J. Buegge. 2008. *Draft Vegetation Communities of San Diego County.* Based on *Preliminary Descriptions of the Terrestrial Natural Communities of California*, Robert F. Holland, Ph.D., October 1986. 74 pp.

San Diego Regional Water Quality Control Board (SDRWQCB). 2016. Water Quality Control Plan for the San Diego Basin.

TAIC and EDAW, Inc. 2005. *Ramona Vernal Pool Conservation Study, Ramona, California.* January. Available at https://www.sandiegocounty.gov/pds/mscp/docs/NCMSCP/Ramona_Vernal_Pool_Study_complete.pdf.

U.S. Army Corps of Engineers (USACE). 2008. *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)*. ERDC/EL TR-08-28. 133p. September. Available at http://www.usace.army.mil/CECW/Documents/cecwo/reg/trel08-28.pdf; http://www.usace.army.mil/Portals/2/docs/civilworks/regulatory/reg_supp/trel08-28.pdf.

U.S. Army Corps of Engineers (USACE), Department of Army, Department of Defense, and Environmental Protection Agency (USEPA). 2015. *Clean Water Rule: Definition of "Waters of the United States."* June.

U.S. Army Corps of Engineers (USACE), Los Angeles District. 2019. *Navigable Waters in Los Angeles District.* Accessed 2/6/19 at https://www.spl.usace.army.mil/Missions/Regulatory/Jurisdictional-Determination/Navigable-Waterways/.

U.S. Department of Agriculture, Natural Resources Conservation Service (USDA-NRCS). 2014. National Hydric Soils List. Available at http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/use/hydric/.

-------. 2016. Web Soil Survey. Accessed 11/16/16 at http://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx.

-------. 2018. *Field Indicators of Hydric Soils in the United States*, version 8.2.

U.S. Environmental Protection Agency (USEPA). 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. United States & Carabell v. United States*, December 2.

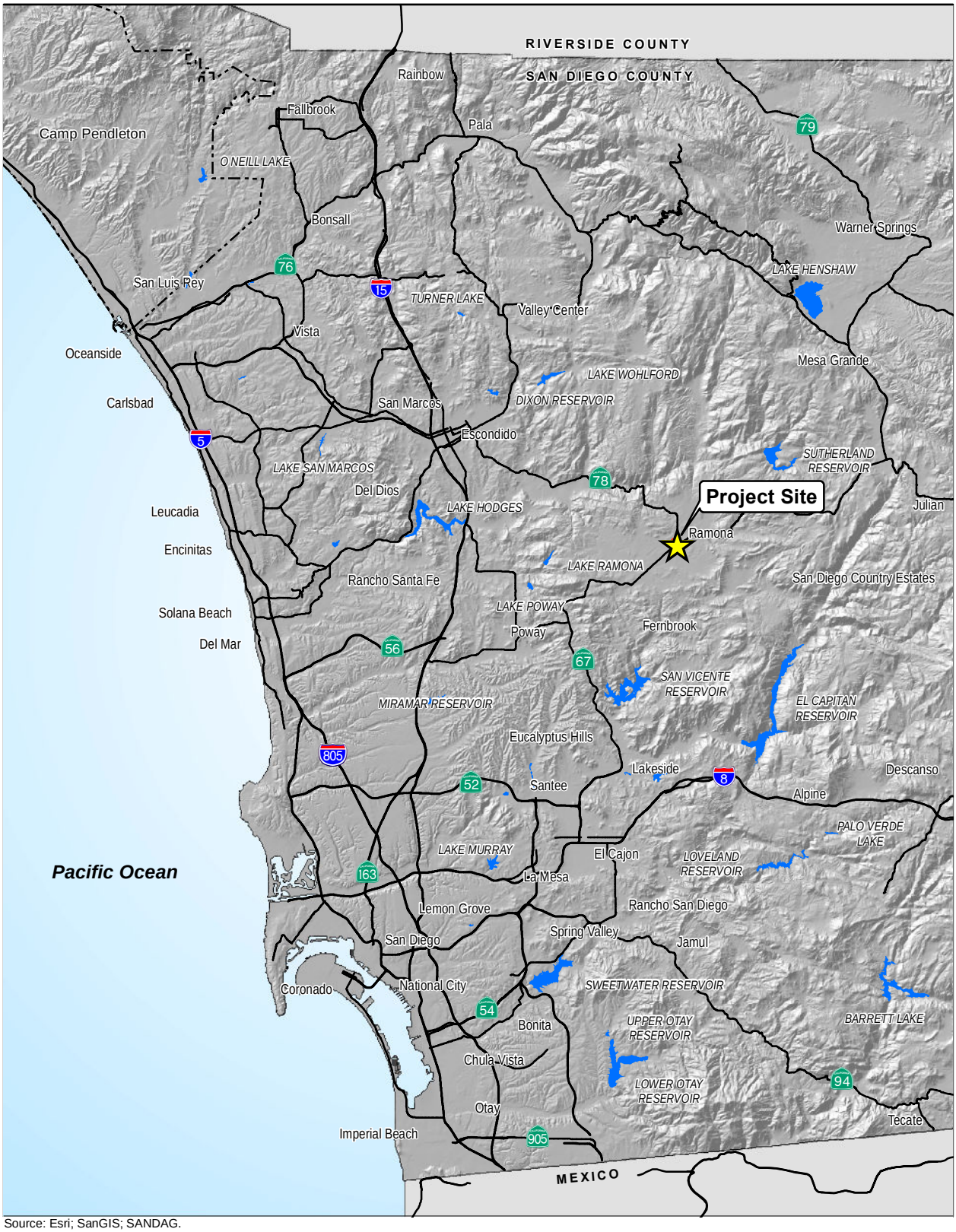
U.S. Fish and Wildlife Service (USFWS). 2018. Website. National Wetlands Inventory – Wetlands On-Line Mapper. Accessed at http://wetlandsfws.er.usgs.gov/wtlnds/launch.html; http://wetlandsfws.er.usgs.gov/NWI/codes.html.

U.S. Geological Survey (USGS). 2018. *National Hydrography Dataset*. Available at https://nhd.usgs.gov/. August.

Zedler, P. H. 1987. National Wetlands Research Center (U.S.). *The Ecology of Southern California Vernal Pools: A Community Profile*. Washington, D.C.: Fish and Wildlife Service, U.S. Dept. of the Interior.

Appendix A

Figures



Source: Esri; SanGIS; SANDAG.

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Scale: 1:506,880; 1 inch = 8 miles

Figure 1
Regional Map

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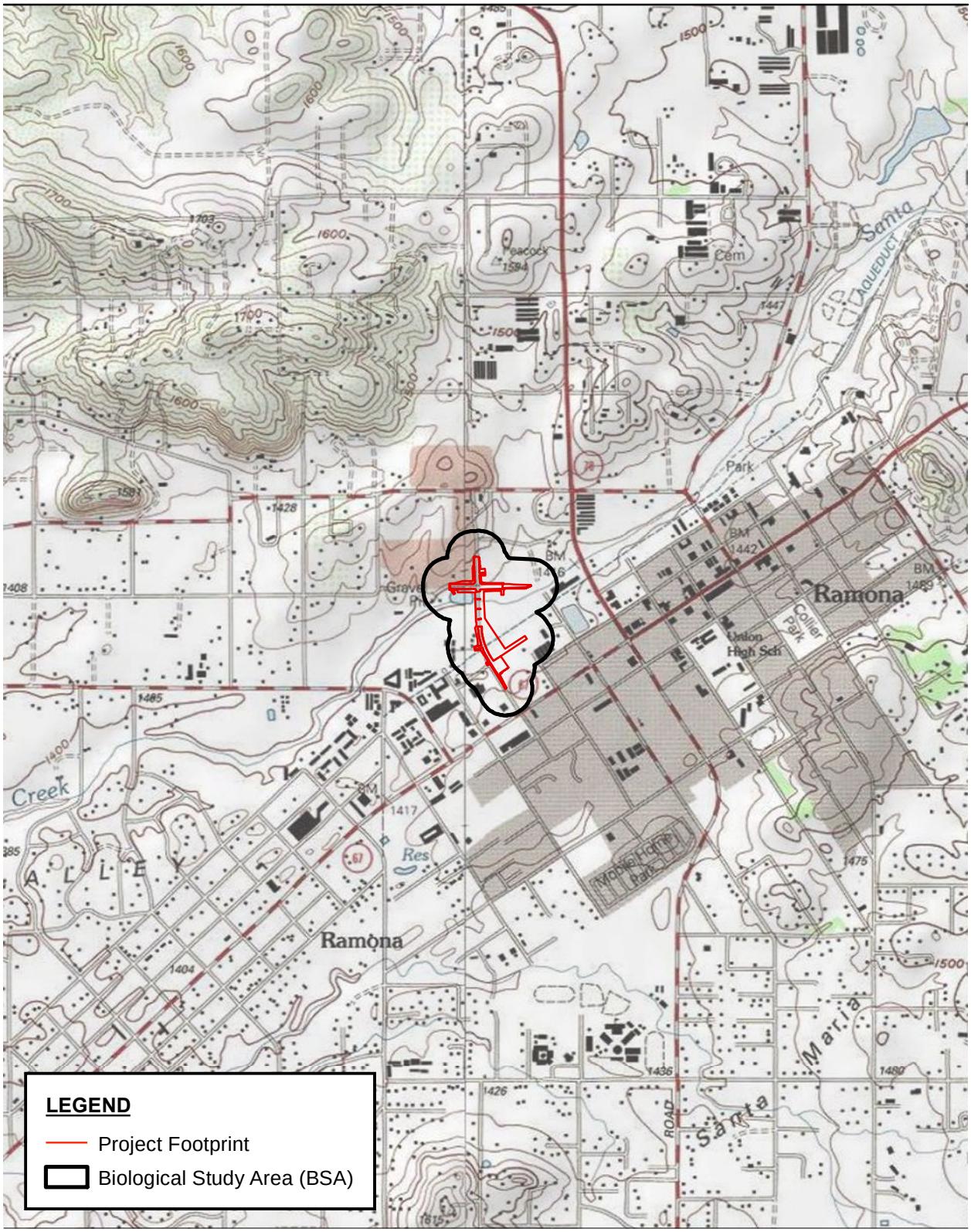

Source: USGS 7.5' Quadrangle San Pasqual, Calif 1984, Ramona, Calif. 1985; Esri, Copyright:© 2013 National Geographic Society, i-cubed

Figure 2
Vicinity Map

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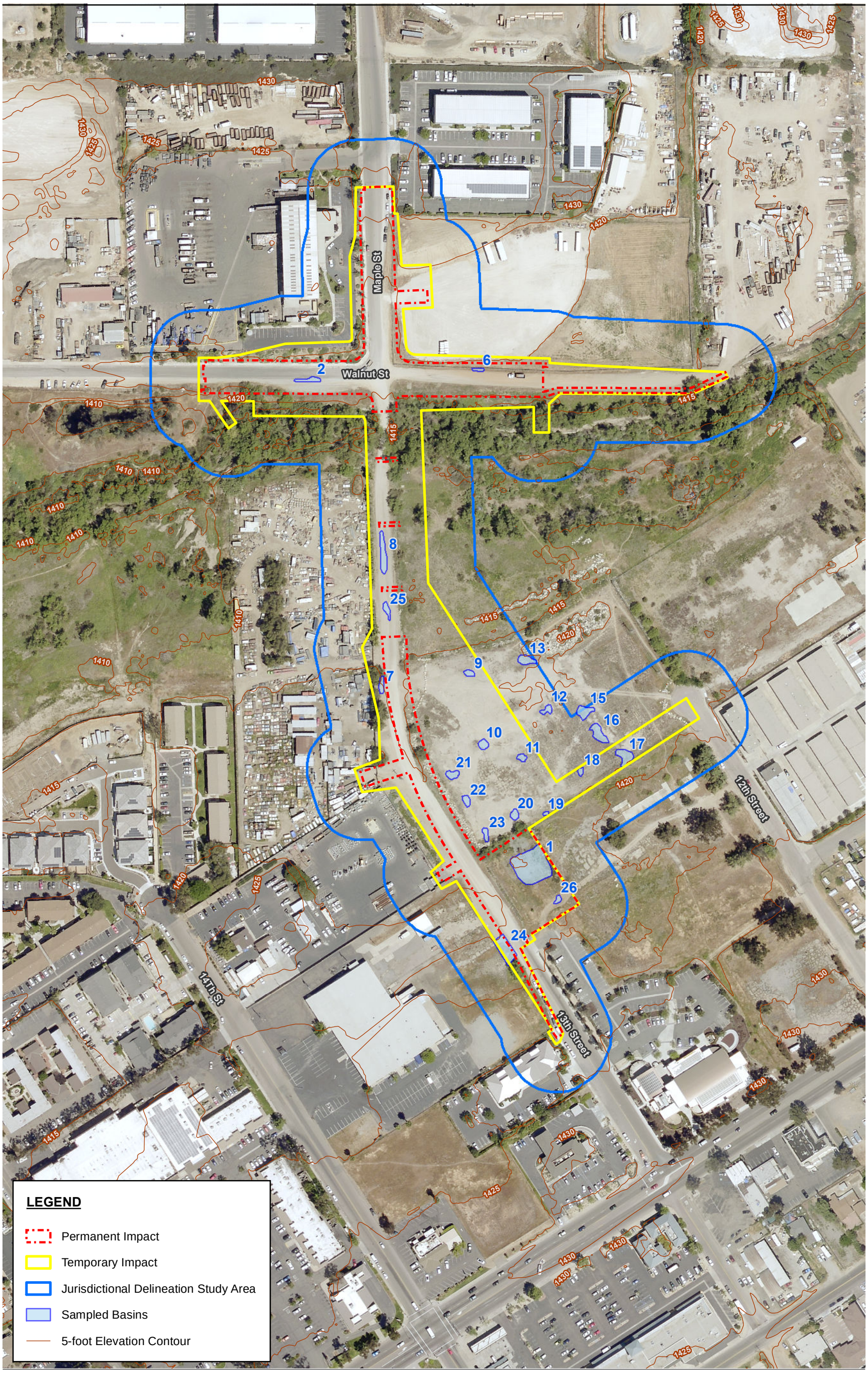

Source: SANDAG 2017; SanGIS 2015

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Scale: 1:2,400; 1 inch = 200 feet

Figure 3
Topography and Numbered Basins

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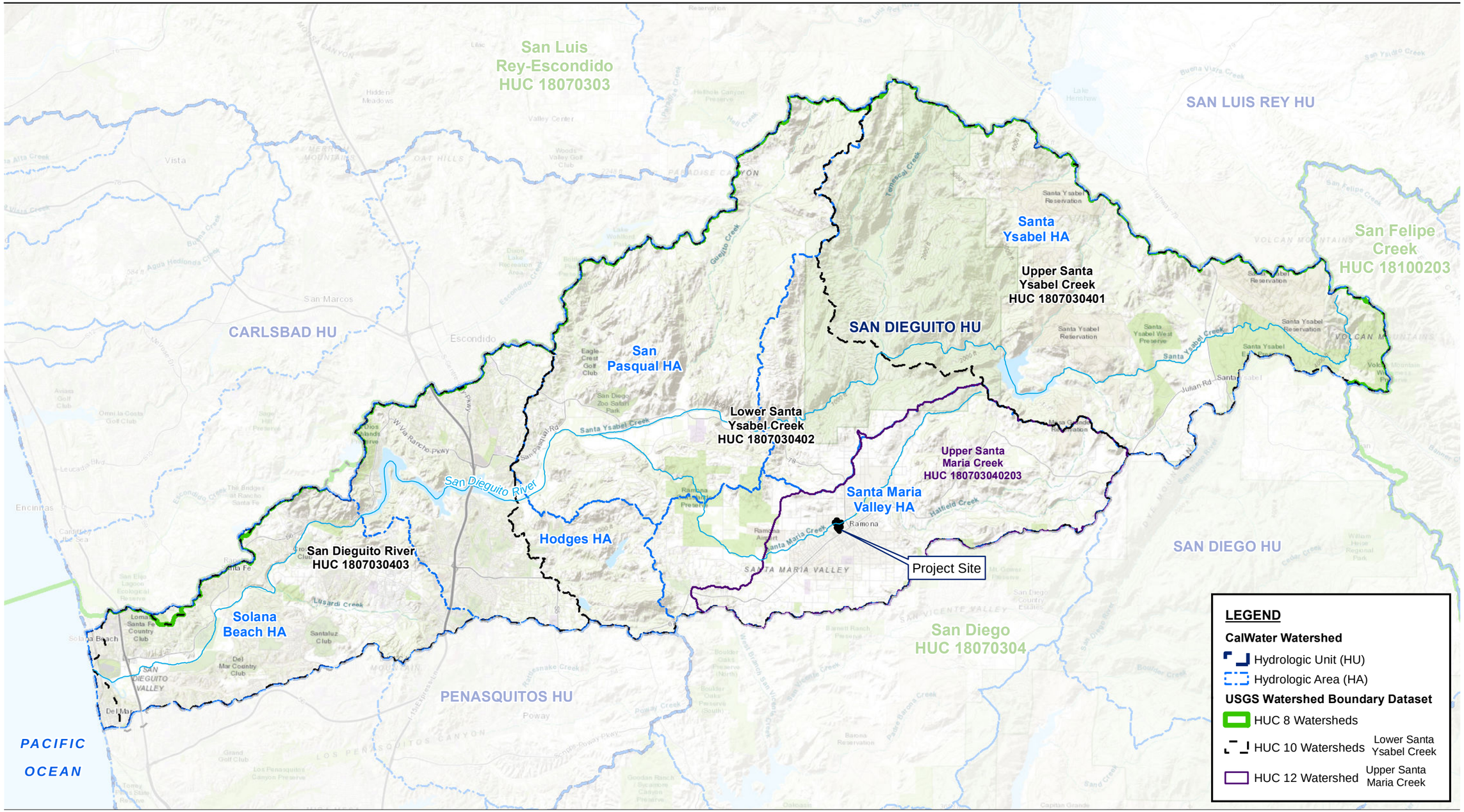


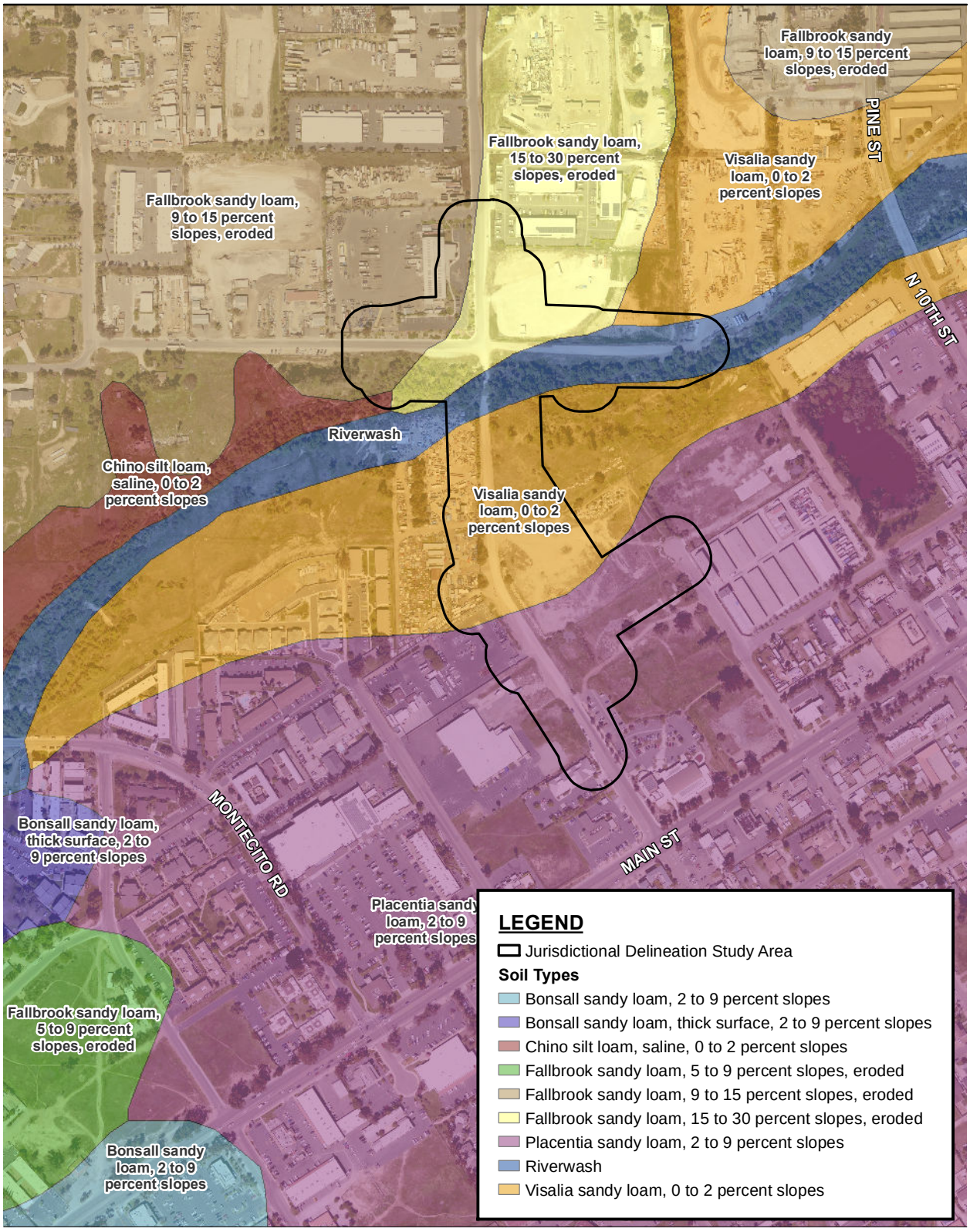
Source: California Interagency Watershed Mapping Committee 2004; USGS NHD 2018; Esri Basemaps, 2019

3 1.5 0 3 Miles

Scale: 1:190,080 1 inch = 3 miles

Figure 4
Watersheds

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\JD\Fig4_Watersheds.mxd, 4/2/2020, augellop



Source: SANDAG 2017; NRCS 2007

500 250 0 500 Feet

Scale: 1:6,000; 1 inch = 500 feet

Figure 5
Soils

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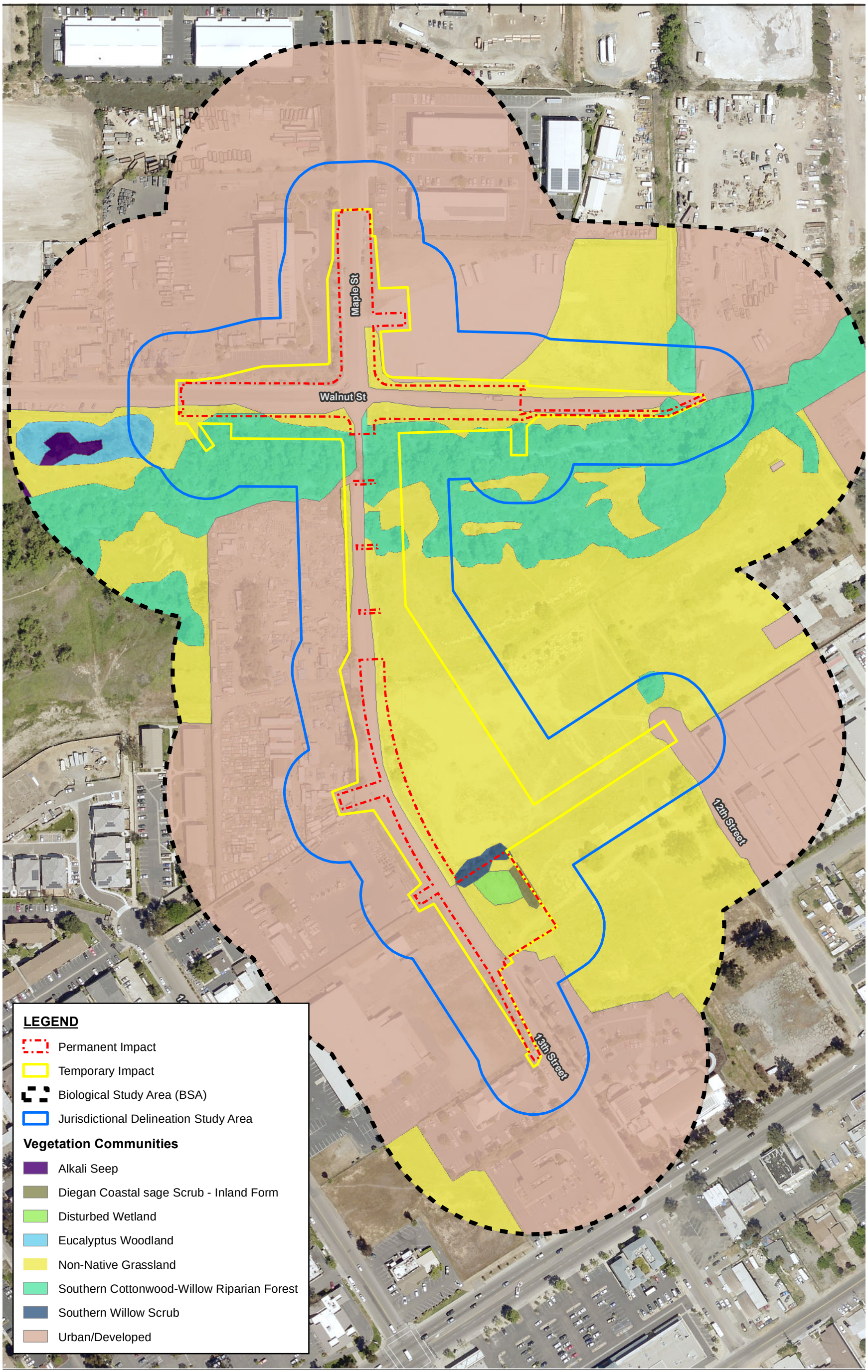

Source: SANDAG 2017; GeomorphIS 2018

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Scale: 1:2,400; 1 inch = 200 feet

Figure 6
Vegetation Communities

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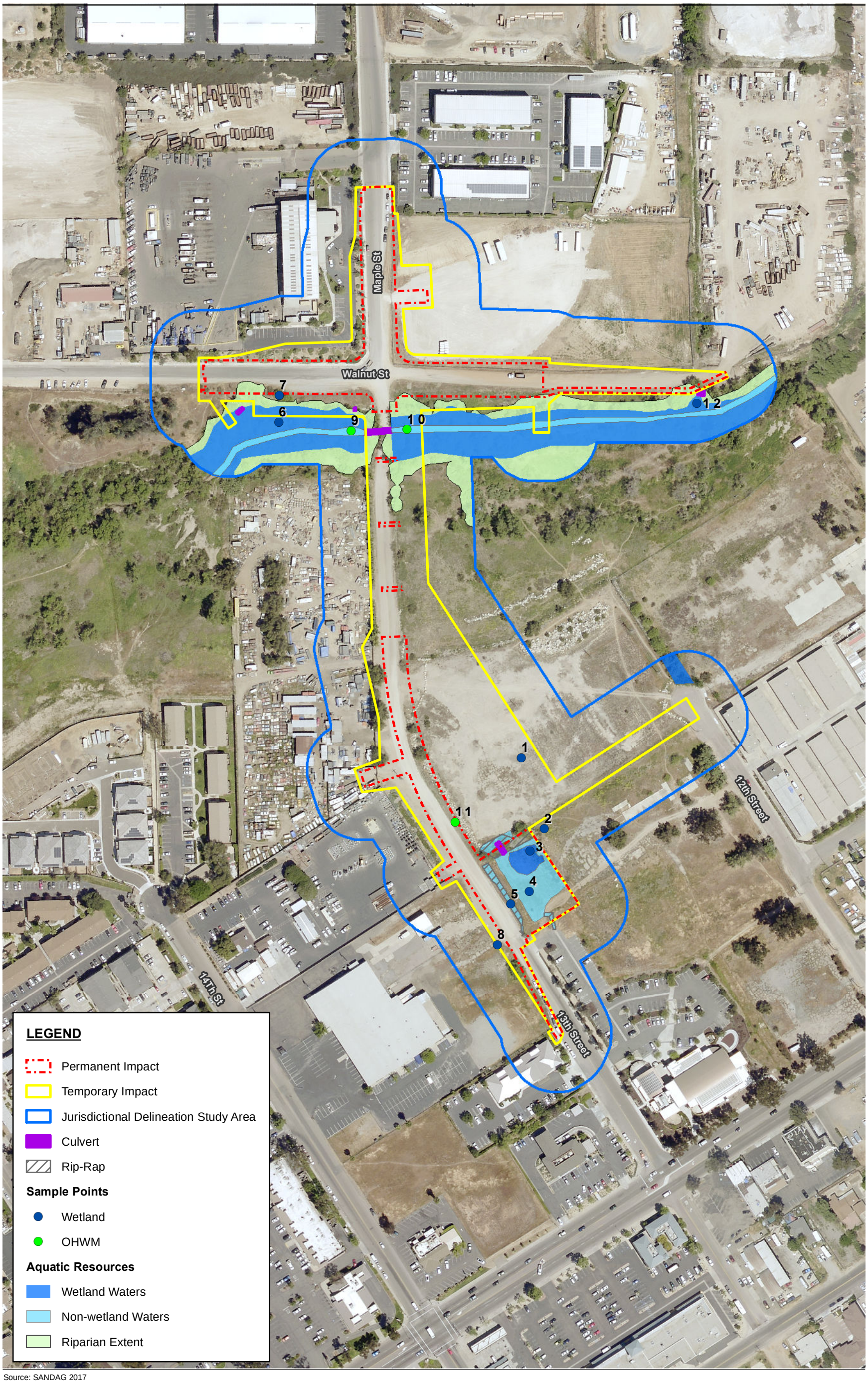

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 7
Aquatic Resource Delineation Results

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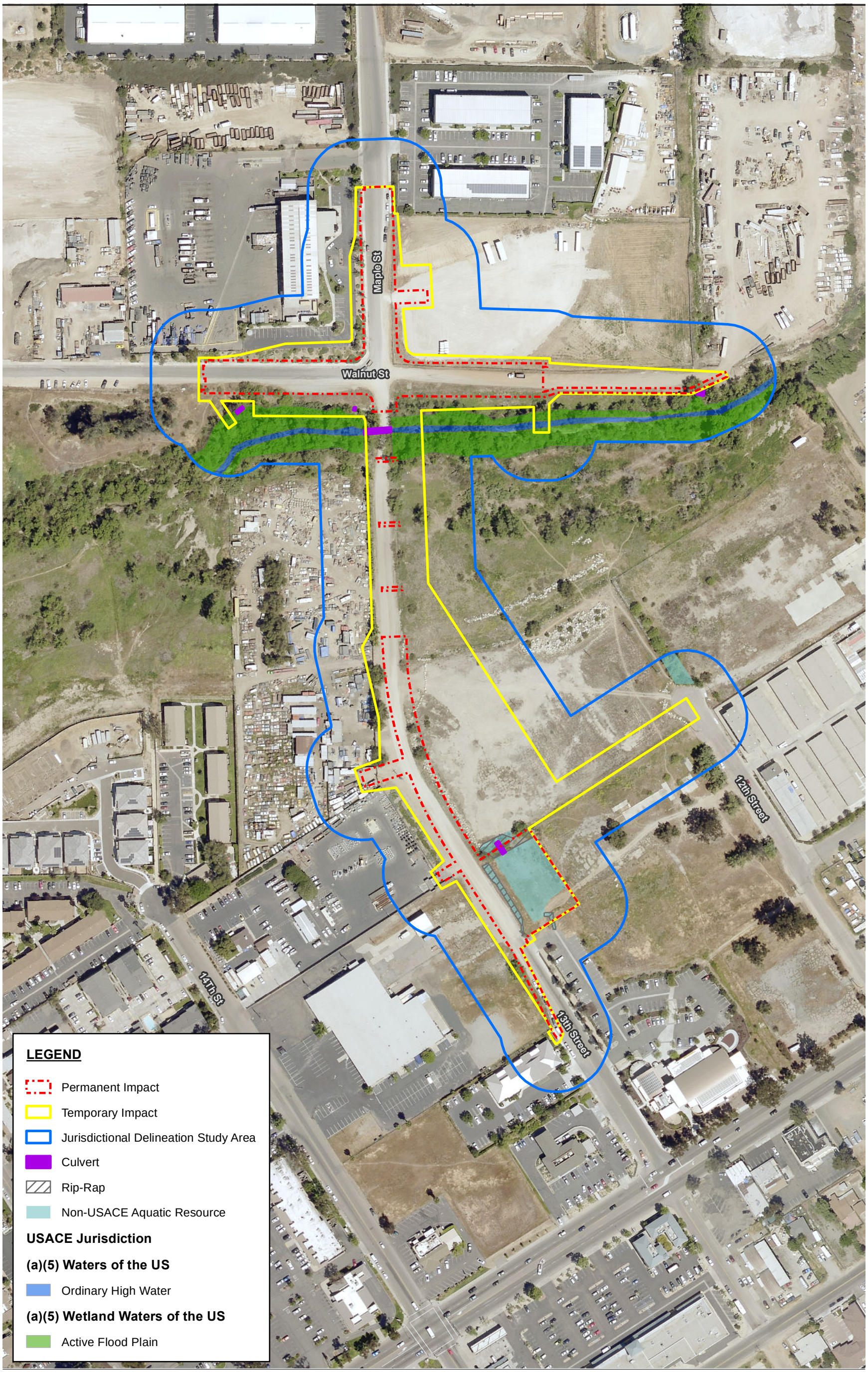

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 8
USACE Jurisdictional Impact Analysis

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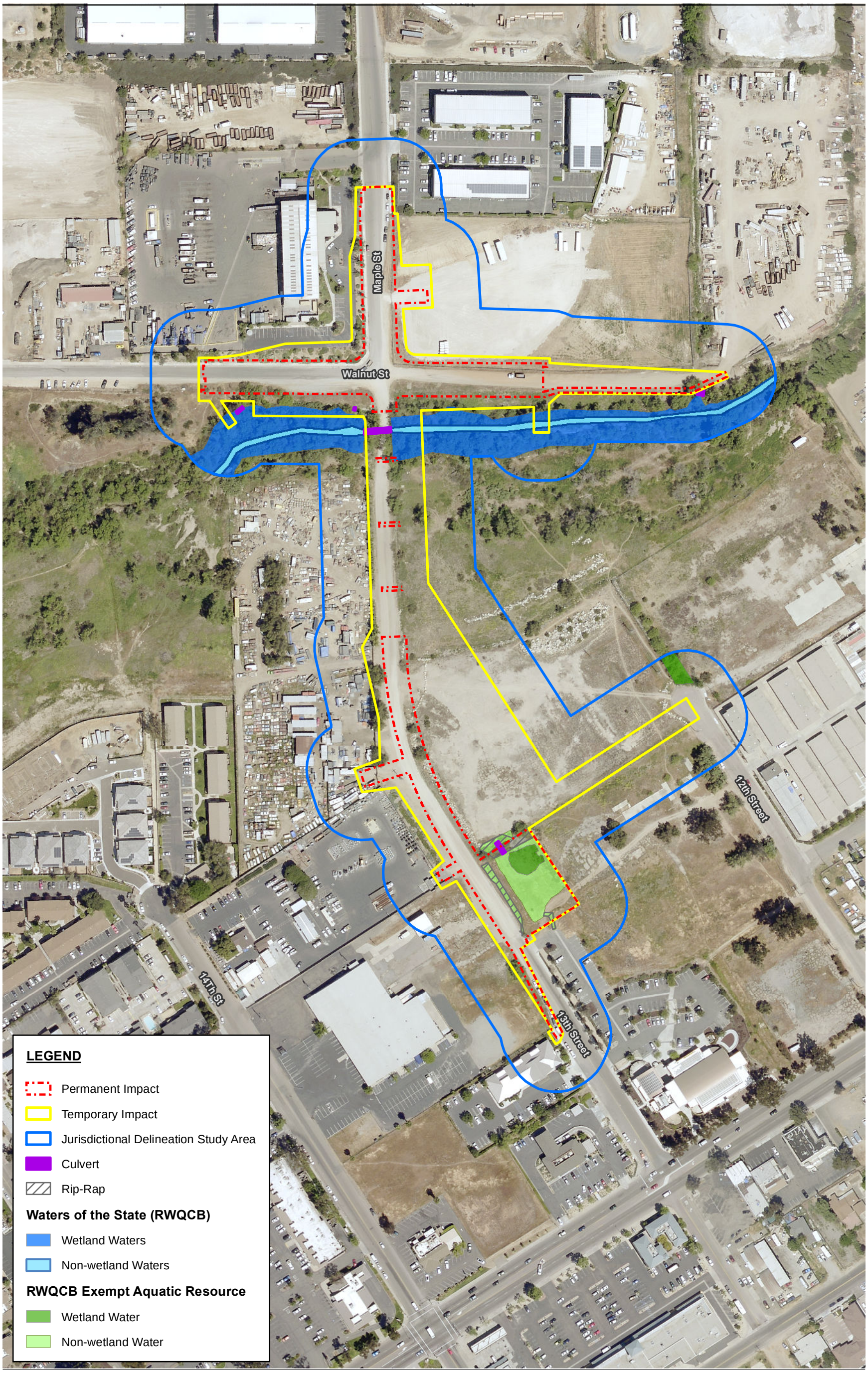

Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Figure 9
RWQCB Jurisdictional Impact Analysis

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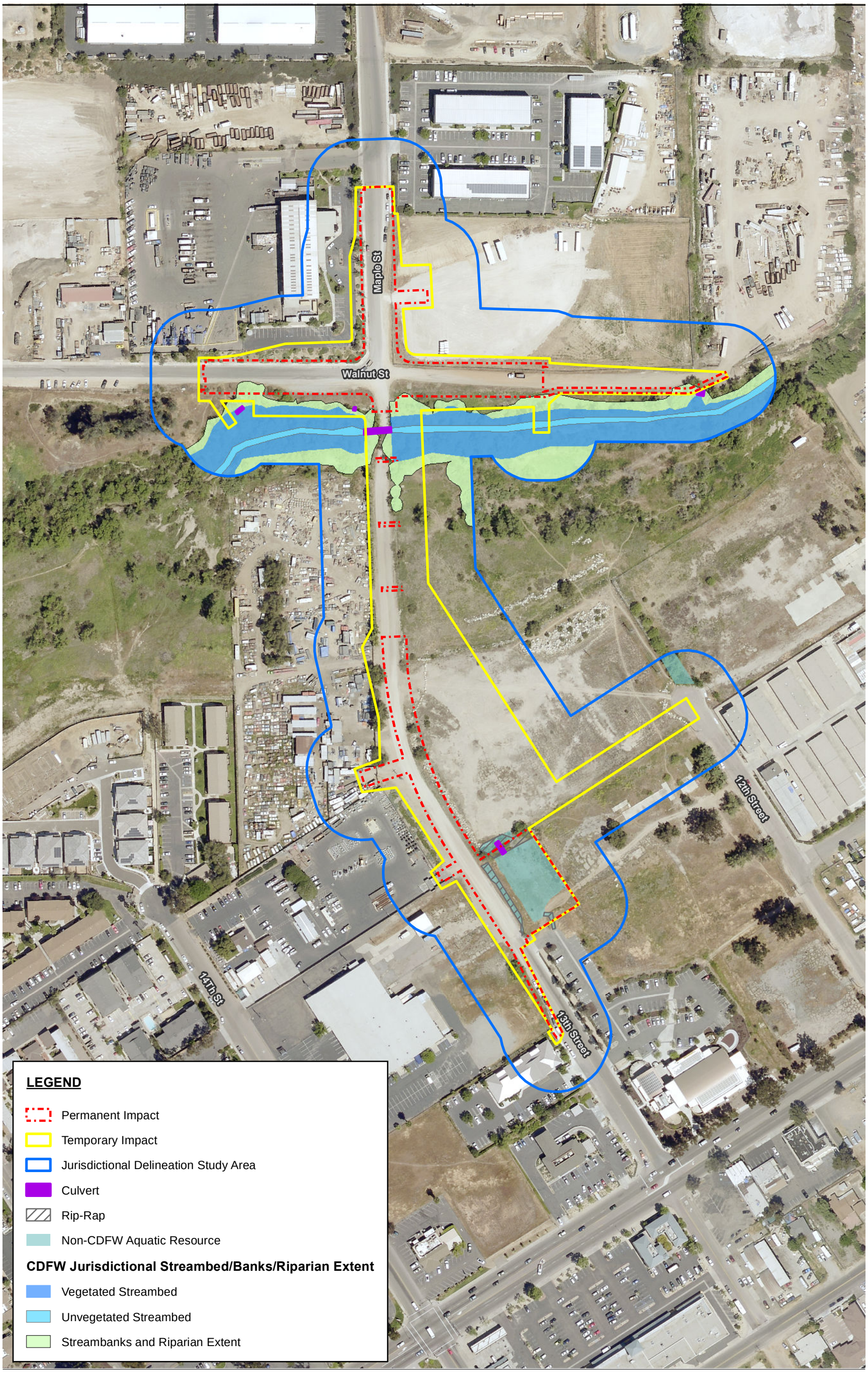

Source: SANDAG 2017

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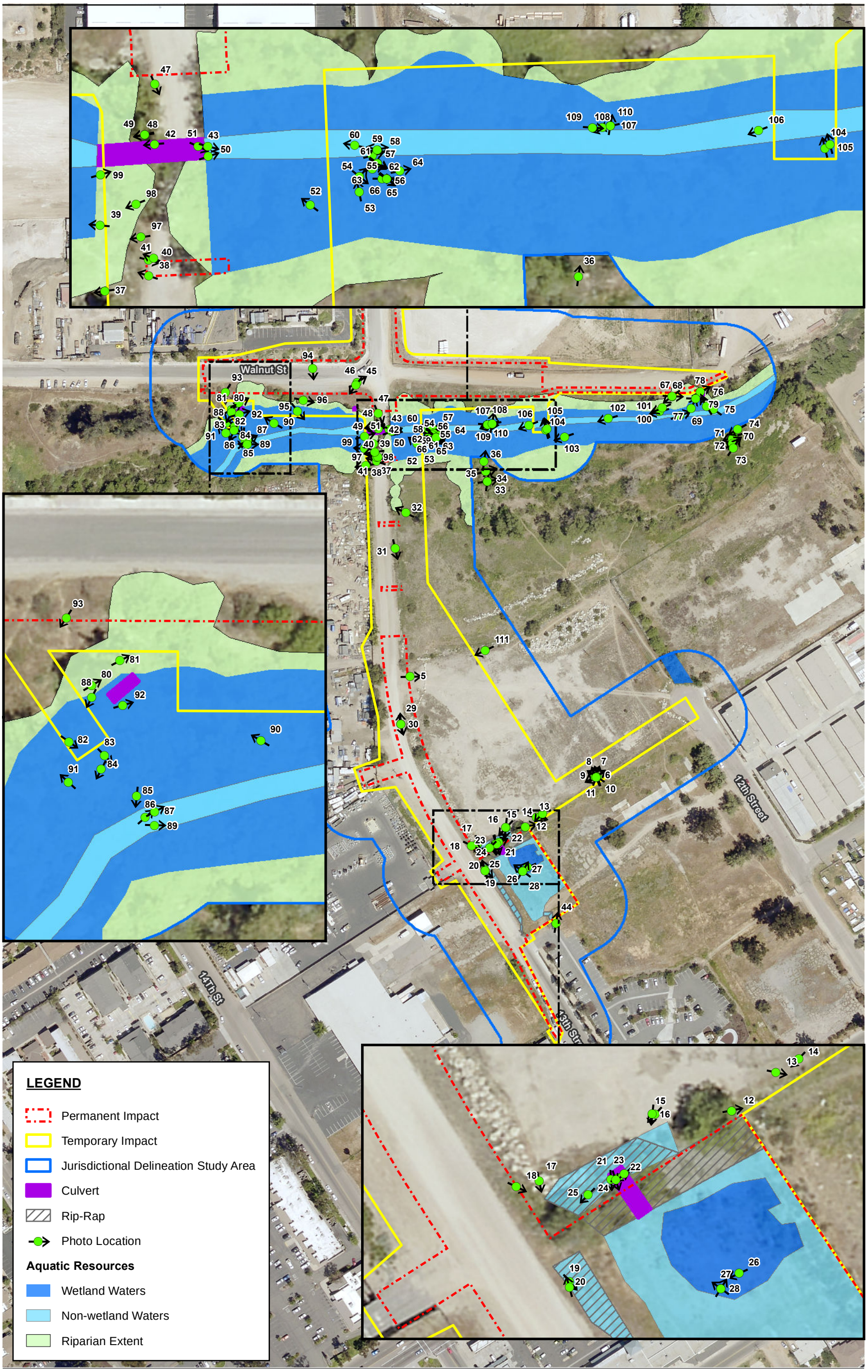
Scale: 1:2,400; 1 inch = 200 feet

Figure 10
Potential Impacts to CDFW Jurisdictional Streambed/Banks/Riparian Extent

Path: P:_6056\60562978_13thStBridge\900-CAD-GIS\920 GIS\map_docs\mxd\JD\Fig10_JD_CDFW.mxd, 5/15/2020, augellop

Appendix B

Photolog



Source: SANDAG 2017

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Scale: 1:2,400; 1 inch = 200 feet

Appendix B
Photolog Map

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1. View of wetland sample point 1.

2. View of wetland sample point 3.

3. View of wetland sample point 4.

4. View of wetland sample point 5.

5. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

6. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

7. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

8. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

9. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

10. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

11. View of the vacant lot to the east of 13th street, the proposed location of a laydown yard. This lot is the location of several basins.

12. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

13. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

14. View of vegetation to the east of the outfall of Basin 1. This area appears to have received some flow from Basin 1 in a large rain event.

15. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

16. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

17. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

18. View of the arroyo willows that were planted around the outlet (and north) of Basin 1.

19. View of stormwater detention swale between 13th street road and Basin 1. This receives water from the paved 13th street to the south.

20. View of stormwater detention swale between 13th street road and Basin 1. This receives water from the paved 13th street to the south.

21. View of stormwater culvert and detention basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

22. View of stormwater detention basin where the water from Basin 1 drains. Debris surrounding basin.

23. View of stormwater culvert and basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

24. View of stormwater culvert and basin that drains Basin 1. This receives water from the library parking lot and the stormwater detention swale/13th street.

25. View of stormwater detention basin where the water from Basin 1 drains. Debris surrounding basin.

26. View of biotic crusting and soil cracking within Basin 1.

27. View of culvert in Basin 1 taken from within Basin 1.

28. View of Basin 1 taken from within Basin 1.

29. View of 13th Street facing north.

30. View of 13th Street facing south.

31. View of riparian extent along Santa Maria Creek.

32. View within Santa Maria Creek.

33. View of riparian extent along Santa Maria Creek.

34. View of riparian extent along Santa Maria Creek.

35. View of riparian extent and Santa Maria Creek.

36. View of riparian extent and Santa Maria Creek.

37. View of riparian extent and Santa Maria Creek.

38. View of riparian extent and Santa Maria Creek.

39. View of riparian extent and Santa Maria Creek.

40. View of riparian extent and Santa Maria Creek.

41. View of riparian extent and Santa Maria Creek.

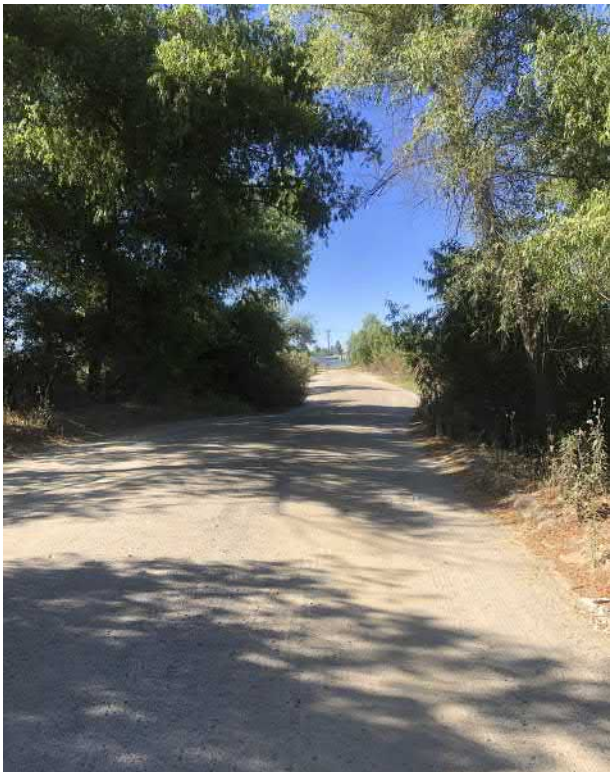
42. View of riparian extent and Santa Maria Creek.

43. View of riparian extent and Santa Maria Creek.

44. View of riprap stormdrain channel from the Ramona Library parking lot to Basin 1.

45. View along Maple St and Santa Maria Creek.

46. View along Maple St and Santa Maria Creek.



47. View along 13th Street and Santa Maria Creek.

48. View of Santa Maria creek.

49. View of Santa Maria creek.

50. View of Santa Maria creek.

51. View of Santa Maria creek.

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65. View of Santa Maria creek.

66. View of Santa Maria creek.

67. View of Santa Maria creek.

68. View of Santa Maria creek.

69. View of Santa Maria creek.

70. View along southeastern side of Maria creek.

71. View along southeastern side of Maria creek.

72. View along southeastern side of Maria creek.

73. View along southeastern side of Maria creek.

74. View along southeastern side of Maria creek.

75. V iew of area surrounding wetland sample point 12.

76. V iew of area surrounding wetland sample point 12.

77. V iew of area surrounding wetland sample point 12.

78. V iew of area surrounding wetland sample point 12.

79. View of wetland sample point 12.

80. View of culvert outlet in Santa Maria Creek.

81. View of Santa Maria creek.

82. View of Santa Maria creek.

83. View of Santa Maria creek.

84. View of Santa Maria creek.

85. View of Santa Maria creek.

86. View of Santa Maria creek.

87. View of Santa Maria creek.

88. View of Santa Maria creek.

89. View of Santa Maria creek.

90. View of wetland sample point 6.

91. View of culvert outlet in Santa Maria Creek.

92. View of Santa Maria creek.

93. View of Santa Maria creek.

94. View of Santa Maria creek.

95. View of Santa Maria creek.

96. View of Santa Maria creek.

97. View of Santa Maria creek.

98. View of Santa Maria creek.

99. View of culvert outlet in Santa Maria Creek.

100. View of Santa Maria creek.

101. View of Santa Maria creek.

102. View of Santa Maria creek.

103. View of Santa Maria creek.

104. View of Santa Maria creek.

105. View of Santa Maria creek.

106. View of Santa Maria creek.

107. View of Santa Maria creek.

108. View of Santa Maria creek.

109. View of Santa Maria creek.

110. View of Santa Maria creek.

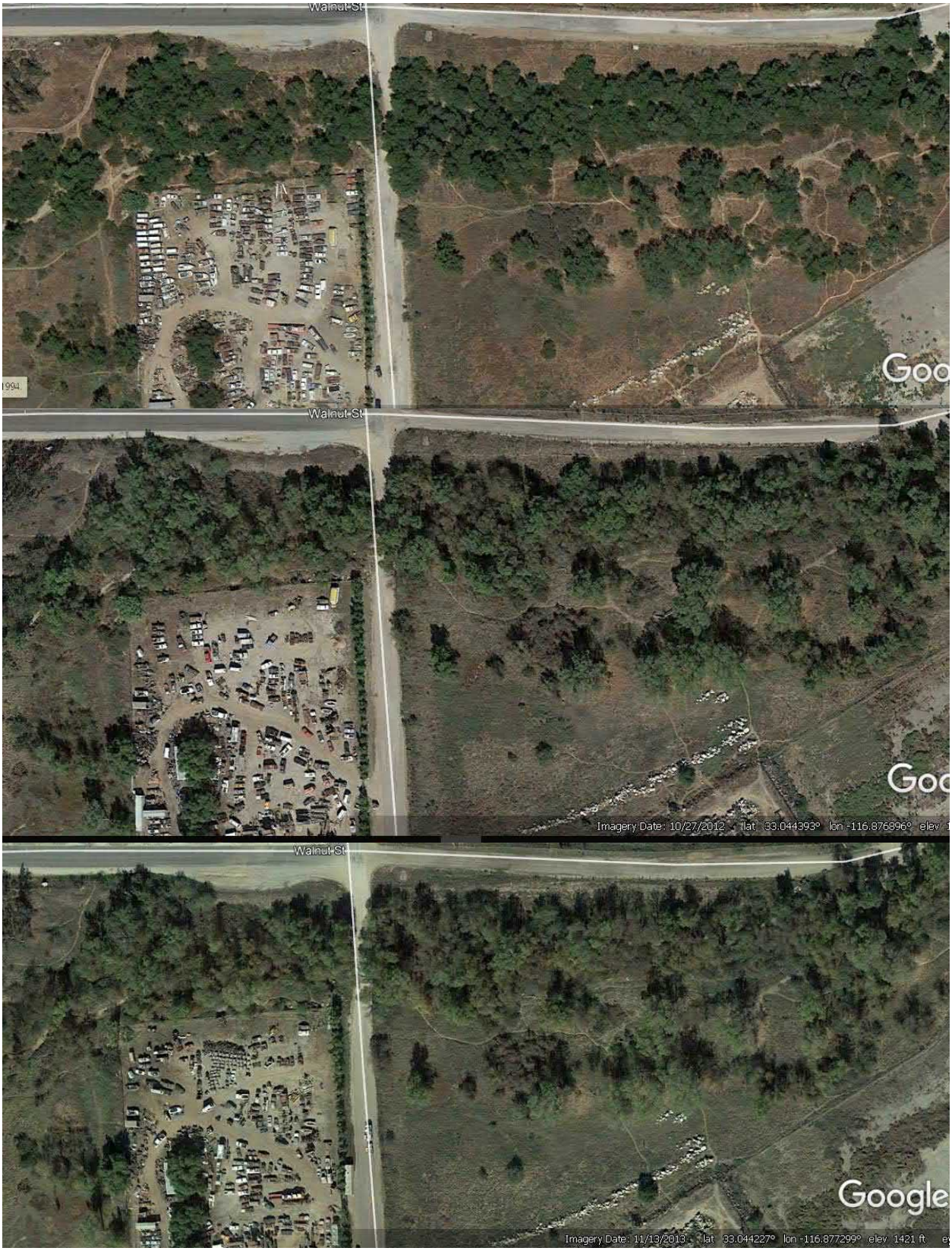
111. View of vacant lot within the temporary disturbance limits.

Appendix C

Aerial Photographs

13th Street Bridge Site Aerials 2008-2019

The following aerial photos dated 2008 – 2018 are from Google Earth.


Walnut St
Walnut St
Imagery Date: 10/27/2012
Walnut St
Imagery Date: 11/13/2013
Google


Walnut St
Imagery Date: 5/11/2014 lat 33.044694° lon -116.877403° elev 1425 ft
Walnut St
Google
Imagery Date: 12/22/2014 lat 33.044561° lon -116.877245° elev 1421 ft
Walnut St
Google
Imagery Date: 4/14/2015 lat 33.044091° lon -116.877628° elev 1420 ft


Walnut St
Google
Imagery Date: 3/22/2016 lat 33.044264° lon -116.876873° elev 1425 ft
Walnut St
Google
Imagery Date: 12/7/2017 lat 33.043992° lon -116.875039° elev 1416 ft
Walnut St
Google
Imagery Date: 9/13/2018 lat 33.044056° lon -116.877070° elev 1420 ft

Appendix D

Datasheets

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 1
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) depression Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) lrr c Lat: 33.0418528333 Long: -116.873991 Datum: WGS84
Soil Map Unit Name placentia NWI classification:
Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No (If no, explain in Remarks.)
Are Vegeatation X, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes No X
Are Vegeatation X, Soil , or Hydrology X naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes No X
Hydric Soil Present? Yes No X
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? **Yes** **No** X

Remarks: Recent storm explains water present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size:)			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size:)			
Centaurea melitensis	15	Yes	UPL
Erodium cicutarium	2	No	UPL
Erigeron bonariensis	15	Yes	FACU
Spergularia bocconi	1	No	FACW
Crassula aquatica	1	No	OBL
Erodium moschatum	1	No	UPL
Sonchus asper	1	No	FAC
Deinandra fasciculata	1	No	FACU
Pectocarya linearis subsp. ferocula	1	No	UPL
Schismus barbatus	1	No	UPL
Hirschfeldia incana	2	No	UPL
Dittrichia graveolens	10	No	UPL
	51	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum 60 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 0 (A
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species 0 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	1	x 1 =	1
FACW species	1	x 2 =	2
FAC species	1	x 3 =	3
FACU species	16	x 4 =	64
UPL species	32	x 5 =	160
Column Totals:	51	(A)	230 (B)

Prevalence Index = B/A = 4.51

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** X

Remarks:

SOIL

Sample Point: 33.041832,-116.87391183333332

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-12	5Y 3/2	100					Sandy	

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: rocks

Depth (inches): 12

Hydric Soil Present? **Yes** ___ **No** X

Remarks: very large rocks an gavel. evidence of prior disturbance

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X 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)

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ___ Depth (inches): 1

Water Table Present? Yes X No ___ Depth (inches): 1

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 12

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks: .75 inch rain event in past 24 hours. This is seasonal flooding only due to that rain.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 2
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) Depression Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0414293333 Long: -116.874232833 Datum: WGS84
Soil Map Unit Name Pec NWI classification: NA

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

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

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

Remarks: Recent rain explain surface water present.

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size:)	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
Eriogonum fasciculatum var. fasciculatum	1	No	UPL
	1	= Total Cover	
Herb Stratum (Plot Size:)			
Rumex crispus	10	Yes	FAC
Silybum marianum	25	Yes	UPL
Hirschfeldia incana	10	No	UPL
Polypogon monspeliensis	10	Yes	FACW
Dittrichia graveolens	1	No	UPL
Melilotus albus	1	No	UPL
Sonchus asper	5	No	FAC
Speragularia bocconi	1	No	FACW
Juncus bufonius var. bufonius	1	No	UPL
Schismus barbatus	1	No	UPL
Centaurea melitensis	15	Yes	UPL
Erodium brachycarpum	1	No	UPL
Bromus diandrus	1	No	UPL
Bromus madritensis	1	No	UPL
Eriaeron bonariensis	1	No	FACU
Amsinckia intermedia	1	No	UPL
	75	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species 50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	11	x 2 =	22
FAC species	15	x 3 =	45
FACU species	1	x 4 =	4
UPL species	59	x 5 =	295
Column Totals:	86	(A)	366 (B)

Prevalence Index = B/A = 4.26

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 X

Remarks:

SOIL

Sample Point: 33.04144083333333,-116.87421416666666

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-18	5YR 3/2	100					Sandy loam	

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 Fill in types, NA

Depth (inches): 18

Hydric Soil Present? **Yes** ____ **No** X

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- ___ High Water Table (A2)
- X 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)

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ____ Depth (inches): 1 cm

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

Saturation Present? Yes X No ____ Depth (inches): 18

(includes capillary fringe)

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks: Standing water is due to recent .75 inch rain event.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 3
Investigator(s) Keely Craig, Paula Jacks Section, Township, Range
Lanform (hillslope, terrace, etc.) depresion Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0413413095 Long: -116.874280488 Datum: WGS84
Soil Map Unit Name PeC NWI classification: NA

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 10)	Absolute % Cover	Dominant Species?	Indicator Status
Salix gooddingii	20	Yes	FACW
Tamarix parviflora	25	Yes	FAC
	45	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Rumex crispus	15	Yes	FAC
Artemisia douglasiana	5	No	FAC
Lythrum hyssopifolia	1	No	UPL
Polypogon monspeliensis	5	Yes	FACW
Dittrichia graveolens	1	No	UPL
Bromus madritensis	1	No	UPL
Erodium cicutarium	1	No	UPL
Centaurea melitensis	1	No	UPL
Avena barbata	1	No	UPL
	50	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A)
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	45	x 3 =	135
FACU species	0	x 4 =	0
UPL species	6	x 5 =	30
Column Totals:	76	(A)	215 (B)

Prevalence Index = B/A = 2.83

Hydrophytic Vegetation Indicators
X Dominance Test is >50%
X 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** X **No**

Remarks:

SOIL

Sample Point: 33.041337411881464,-116.87428233224607

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-6	5YR 3/2	100					sandy loam.	organics mixed in layer
6-18	5YR 4/2	100					sandy loam	

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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric[3] Soils

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

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

Restrictive Layer (if present):

Type NA

Depth (inches): 18

Hydric Soil Present? **Yes** X **No** ___

Remarks: engineered and graded so prior disturbed soil as well. redox may not have had time to develop yet.

HYDROLOGY

Wetland Hydrology Indicators:

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

- X Surface Water (A1)
- X High Water Table (A2)
- X 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)

Wetland Hydrology Indicators:

Surface Water Present? Yes X No ___ Depth (inches): 6

Water Table Present? Yes X No ___ Depth (inches): 6

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks: recent rain explain large amount of water

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th St Bridge Project City/County: Ramona, San Diego Sampling Date 3/20/2020
Applicant/Owner County of San Diego State: CA Sampling Point: 4
Investigator(s) Keely Craig, Brenda M Section, Township, Range
Lanform (hillslope, terrace, etc.) depression Local relief (concave, convex, none concave Slope (%): 1-3
Subregion (LRR) LRR C Lat: 33.0409935862 Long: -116.874211086 Datum: WGS84
Soil Map Unit Name PeC NWI classification: NA- Engineered Stormwater Basin

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

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

Hydrophytic Vegetation Present? Yes No X
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? **Yes** **No** X

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: 10)			
Salix gooddingii	25	Yes	FACW
	25	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Bromus madritensis	40	Yes	UPL
Hirschfeldia incana	1	No	UPL
Erodium cicutarium	1	No	UPL
Dittrichia graveolens	1	No	UPL
Sonchus asper	1	No	FAC
Melilotus albus	1	No	UPL
	45	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A
Total Number of Dominant Species Across All Strata: 2 (B)
Percent of Dominant Species 50 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	25	x 2 =	50
FAC species	1	x 3 =	3
FACU species	0	x 4 =	0
UPL species	44	x 5 =	220
Column Totals:	70	(A)	273 (B)

Prevalence Index = B/A = 3.9

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** X

Remarks:

SOIL

Sample Point: 33.04094467780836,-116.87436020012653

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
4-18	2.5YR 5/1	100					sandy loam	
0-3	2.5 YR 3/2	100					sandy	

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)
- X Depleted Matrix (F3)
- ___ Redox Dark Surface (F6)
- ___ Depleted Dark Surface (F7)
- ___ Redox Depressions (F8)
- ___ Vernal Pools (F9)

Indicators for Problematic Hydric[3] Soils

- ___ 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: na

Depth (inches): 18

Hydric Soil Present? **Yes** X **No** ___

Remarks: Previously graded

HYDROLOGY

Wetland Hydrology Indicators:

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

- ___ Surface Water (A1)
- ___ High Water Table (A2)
- X 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)

Wetland Hydrology Indicators:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes X No ___ Depth (inches): 18

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks: false positive due to large recent rain events

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, County of San Diego Sampling Date: 3/20/2020

Applicant/Owner: County of San Diego State: CA Sampling Point: 5

Investigator(s): Keely Craig, Brenda MacMillan Section, Township, Range:

Landform (hillslope, terrace, etc.): roadside drainage Local relief (concave, convex, none): none Slope (%): 1-3

Subregion (LRR): LRR C Lat: 33.040905 Long: -116.87435 Datum: WGS84

Soil Map Unit Name: PeC NWI classification: NA

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

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

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

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

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

Remarks: Roadside and has definitely been graded.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
Total Cover:			
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Ambrosia psilostachya	60	Y	FACU
2. Avena barbata	1	N	UPL
3. Bromus madritensis	25	Y	UPL
4. Hypochaeris glabra	1	N	UPL
5. Amsinkia intermedia	1	N	UPL
6. Achillea millefolium	1	N	FACU
7. Hirschfeldia incana	1	N	UPL
8. Heterotheca grandiflora	1	N	UPL
Total Cover:	91		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 9 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species	x 2 =	
FAC species	x 3 =	
FACU species 60	x 4 =	240
UPL species 25	x 5 =	125
Column Totals: 85 (A)		365 (B)

Prevalence Index = B/A = 4.29

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 5

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-3	2.5 YR 4/2	100					clay loam	appears to be scum runoff from street
3-18	2.5 YR 4/4	100					sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: NA

Depth (inches): 18

Hydric Soil Present? **Yes** ____ **No** X

Remarks: Soil has been graded and driven over many times. Stormwater detention channel so imported rock and soils.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 6

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks: Recent rain event may be giving false positive.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 7/19/2019
Applicant/Owner County of San Diego State: CA Sampling Point: 6
Investigator(s) Brenda McMillan, Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) terrace Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) LLR C Lat: 33.0411811333 Long: -116.874282717 Datum: WGS84
Soil Map Unit Name Riverwash NWI classification: Riverine,Intermittent,Unconsolidated Bottom,Sand

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

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

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

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
Salix gooddingii	70	Yes	FACW
Salix lasiolepis	30	No	FACW
Salix exigua var. hindsiana	20	No	UPL
Populus fremontii subsp. fremontii	10	No	UPL
Tamarix sp.	5	No	FAC
Parkinsonia aculeata	10	No	FAC
	75	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 20)			
Baccharis salicifolia	60	Yes	FAC
	60	= Total Cover	
Herb Stratum (Plot Size: 10)			
Stipa miliacea var. miliacea	75	Yes	UPL
	75	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

% Bare Ground in Herb Stratum % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 2 (A)
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species 66.67 % (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species 0	x 1 = 0
FACW species 100	x 2 = 200
FAC species 75	x 3 = 225
FACU species 0	x 4 = 0
UPL species 105	x 5 = 525
Column Totals: 280 (A)	950 (B)

Prevalence Index = B/A = 3.39

Hydrophytic Vegetation Indicators
X 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** X **No**

Remarks:

SOIL

Sample Point: 33.04374156666667,-116.87600644999999

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	10YR 3/1	100					loamy sand	Riverine active floodplain with sand/gravel bars throughout.

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)
- X Other (Explain in Remarks)

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

Restrictive Layer (if present):

Type NA

Depth (inches): 18

Hydric Soil Present? **Yes** X **No** ___

Remarks: Riverine active channel with sand and gravel bars throughout. Recently deposited materials & sand/gravel bars qualify as problematic hydric 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)

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

Wetland Hydrology Indicators:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks: strong hydrology indicators present. Seed Shrimp found

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: San Diego, San Diego Sampling Date 7/19/2019
Applicant/Owner County of San Diego State: CA Sampling Point: 7 & upland rep for 12
Investigator(s) Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) top of bank Local relief (concave, convex, none none Slope (%): 1-3
Subregion (LRR) LRR C Lat: 32.7873209864 Long: -117.178445254 Datum: WGS84
Soil Map Unit Name Fallbrook sandy loam NWI classification: Riverine,Intermittent,top of bank

Are climatic / hydrologic conditions on the site typical for this time of year? Yes X No _____ (If no, explain in Remarks.)
Are Vegeatation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes X No _____
Are Vegeatation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

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

Remarks:

VEGETATION – Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status
Tree Stratum (Plot Size: _____)			
	0	= Total Cover	
Sapling/Shrub Stratum (Plot Size: 10)			
Baccharis salicifolia	25	Yes	FAC
	25	= Total Cover	
Herb Stratum (Plot Size: 10)			
Bromus diandrus	25	Yes	UPL
Brassica nigra	30	Yes	UPL
	55	= Total Cover	
Woody Vine Stratum (Plot Size: _____)			
	0	= Total Cover	

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 1 (A
Total Number of Dominant Species Across All Strata: 3 (B)
Percent of Dominant Species 33.33 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0	x 1 =	0
FACW species	0	x 2 =	0
FAC species	25	x 3 =	75
FACU species	0	x 4 =	0
UPL species	55	x 5 =	275
Column Totals:	80	(A)	350 (B)

Prevalence Index = B/A = 4.38

Hydrophytic Vegetation Indicators
____ Dominance Test is >50%
____ Prevalence Index is ≤3.0 [1]
____ Morphological Adaptations [1](Provide supporting data in Remarks or on a separate sheet)
____ Problematic Hydrophytic Vegetation[1](Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sample Point: 33.043934, -116.8761

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 3/3	100					sandy loam	

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 Fill in types, Rocks

Depth (inches): 18

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

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

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

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

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

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

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

Remarks: not in the correct place in the landscape.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, County of San Diego Sampling Date: 3/20/2020

Applicant/Owner: County of San Diego State: CA Sampling Point: 8

Investigator(s): Keely Craig, Brenda MacMillan Section, Township, Range:

Landform (hillslope, terrace, etc.): roadside drainage Local relief (concave, convex, none): none Slope (%): 1-3

Subregion (LRR): LRR C Lat: 33.040776 Long: -116.874489° Datum: WGS84

Soil Map Unit Name: PeC NWI classification: NA

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

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

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

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

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

Remarks: Roadside and has definitely been graded.

VEGETATION

Tree Stratum (Use scientific names.)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	20	Y	FACW
2.			
3.			
4.			
Total Cover:	20		
Sapling/Shrub Stratum			
1.			
2.			
3.			
4.			
5.			
Total Cover:			
Herb Stratum			
1. Hordeum marinum	50	Y	UPL
2. Lythrum hyssopifolia	1	N	UPL
3. Vicia americana	1	N	FAC
4. Dittrichia graveolens	1	N	UPL
5. Avena barbata	1	N	UPL
6. Hirschfeldia incana	1	N	UPL
7.			
8.			
Total Cover:	55		
Woody Vine Stratum			
1.			
2.			
Total Cover:			

% Bare Ground in Herb Stratum 45 % Cover of Biotic Crust _____

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species 20	x 2 = 40
FAC species _____	x 3 = _____
FACU species _____	x 4 = _____
UPL species 50	x 5 = 250
Column Totals: _____ (A)	_____ (B)

Prevalence Index = B/A = 4.14

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No X

Remarks:

SOIL

Sampling Point: 8

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-18	7.5 YR 3/2	100					sandy loam	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present.

Restrictive Layer (if present):

Type: NA

Depth (inches): 18

Hydric Soil Present? **Yes** ____ **No** X

Remarks: Soil has been graded and driven over many times.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (any one indicator is sufficient)

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

Secondary Indicators (2 or more required)

- ___ Water Marks (B1) (**Riverine**)
- ___ Sediment Deposits (B2) (**Riverine**)
- ___ Drift Deposits (B3) (**Riverine**)
- ___ Drainage Patterns (B10)
- ___ Dry-Season Water Table (C2)
- ___ Thin Muck Surface (C7)
- ___ Crayfish Burrows (C8)
- ___ Saturation Visible on Aerial Imagery (C9)
- ___ Shallow Aquitard (D3)
- ___ FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes X No ____ Depth (inches): 4

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

Saturation Present? (includes capillary fringe) Yes X No ____ Depth (inches): 18

Wetland Hydrology Present? **Yes** X **No** ____

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

Remarks: Recent rain event may be giving false positive.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: 13th Street Bridge Project **Date:** 7/19/2019 **Time:** 2:32 PM
Project Number **Town:** Ramona **State:** CA
Stream:Santa Maria Creek **Photo begin file#:** **Photo end file#:**
Investigator(s): Keely Craig

Y ☑ / N ☐ Do normal circumstances exist on the site

Y ☑ / N ☐ Is the site significantly disturbed?

Location Details:

Projection: GCS WGS1984 **Datum:** WGS84
Coordinates: 33.04351933333333,-116.87626421666667

Potential antheropogenic influences on the channel system

Fed by urban runoff. Several stormdrains. trash and debris throughout

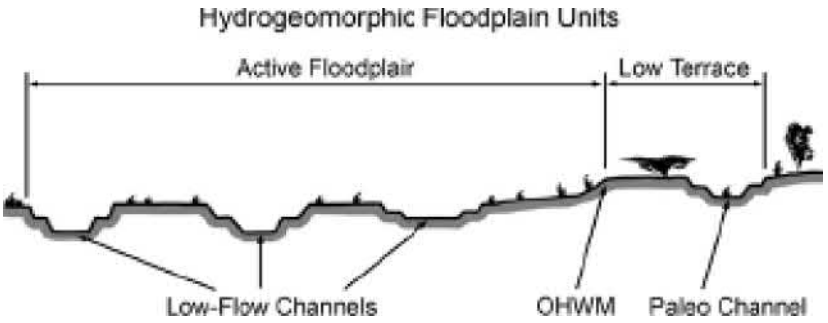
Brief site description:

intermittent stream run east to West

Checklist of resources (if available):

☑ Aerial Photography
Dates: 7/19/1994 to 7/19/2019
☐ Topographic maps
☑ Geologic maps
☑ Vegetation maps
☑ Soils maps
☐ Rainfall/precipitation maps
☑ Existing delineation(s) for site
☐ Global positioning system (GPS)
☐ Other studies

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



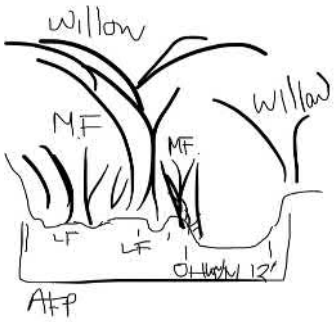
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHW

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

☐ Mapping on aerial photograph ☑ GPS
☐ Digitized on computer ☐ Other:

Project ID: 13th Street Br Cross section ID 9 Date 7/19/2019 Time: 2:35 PM

Cross section drawing:



1W

OHWM

GPS point: 33.0435109,-116.87626096666666

Indicators:

- ☑ Change in average sediment textur
- ☐ Change in vegetation species
- ☑ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other:

Comments Low flow channel appears

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

GPS point: 33.043511683333335,-116.87625386666664

Floodplain unit:

Average sediment texture Sand

Total veg cover: 80% Tree: 60% Shrub 20% Herb: 40%

Community successional stage

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

Floodplain unit:

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

Comments Several Low flow channels and remnant low flow channels that appear to have filled in recently

Project ID: 13th Street Br Cross section ID 10 Date 7/19/2019 Time: 3:44 PM

Cross section drawing:

OHWM

GPS point: 33.043683083333335,-116.87539621666669

Indicators:

- ☐ Change in average sediment textur
- ☑ Change in vegetation species
- ☐ Change in vegetation cover
- ☑ Break in bank slope
- ☐ Other:

Comments Streambed Vegetated here.

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

GPS point: 33.04369198333333,-116.87541056666666

Floodplain unit:

Average sediment texture Sand

Total veg cover: 80% Tree: 40% Shrub 20% Herb: 75%

Community successional stage

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

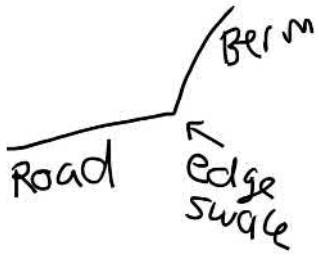
Floodplain unit:

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

Comments

Project ID: 13th Street Br Cross section ID 11 Date 7/19/2019 Time: 12:25 PM

Cross section drawing:



OHWM

GPS point: 33.041435, -116.874811

Indicators:

- ☐ Change in average sediment textur
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☐ Break in bank slope
- ☑ Other: None observed

Comments no evidence observed of flow

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: 13th Street Bridge Project City/County: Ramona, San Diego Sampling Date 7/15/2019
Applicant/Owner County of SD State: CA Sampling Point: 12
Investigator(s) Keely Craig Section, Township, Range
Lanform (hillslope, terrace, etc.) terrace Local relief (concave, convex, none concave Slope (%): 1-2
Subregion (LRR) LRR C Lat: 33.0409599329 Long: -116.874318794 Datum: WGS84
Soil Map Unit Name Riverwash NWI classification: Riverine,Intermittent,Emergent,Other

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

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

Hydrophytic Vegetation Present? Yes X No
Hydric Soil Present? Yes X No
Wetland Hydrology Present? Yes X No

Is the Sampled Area within a Wetland? **Yes** X **No**

Remarks:

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot Size: 25)	Absolute % Cover	Dominant Species?	Indicator Status
Washingtonia robusta	5	No	FACW
Salix lasiolepis	40	Yes	FACW
	45	= Total Cover	
Sapling/Shrub Stratum (Plot Size:)			
	0	= Total Cover	
Herb Stratum (Plot Size: 10)			
Xanthium strumarium	30	Yes	FAC
Cyperus esculentus	70	Yes	FACW
Raphanus sativus	10	No	UPL
Lythrum hyssopifolium	10	No	OBL
Sonchus asper subsp. asper	3	No	UPL
Oenothera elata	50	Yes	FACW
Heliotropium curassavicum	5	No	FACU
Apium graveolens	1	No	UPL
Chenopodium californicum	1	No	UPL
	90	= Total Cover	
Woody Vine Stratum (Plot Size:)			
	0	= Total Cover	

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

Dominance Test worksheet:
Number of Dominant Species That Are OBL, FACW, or FAC: 4 (A
Total Number of Dominant Species Across All Strata: 4 (B)
Percent of Dominant Species 100 % (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	10	x 1 =	10
FACW species	165	x 2 =	330
FAC species	30	x 3 =	90
FACU species	5	x 4 =	20
UPL species	15	x 5 =	75
Column Totals:	225	(A)	525 (B)

Prevalence Index = B/A = 2.33

Hydrophytic Vegetation Indicators
X Dominance Test is >50%
X 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** X **No**

Remarks:

SOIL

Sample Point: 33.043865266666664,-116.87314198333334

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
1-3	10yr3/2	100					sandy loam	roots & organics throughout
3-9	10YR 2/1	80	10yr3/2	20			sandy loam	

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)
- X Sandy Redox (S5)
- X 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[3] Soils

- ___ 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: Cobble

Depth (inches): 18

Hydric Soil Present? **Yes** X **No** ___

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Wetland Hydrology Indicators:

Surface Water Present? Yes ___ No X Depth (inches): ___

Water Table Present? Yes ___ No X Depth (inches): ___

Saturation Present? (includes capillary fringe) Yes ___ No X Depth (inches): ___

Wetland Hydrology Present? **Yes** X **No** ___

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

Remarks:

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San Diego, CA 92101
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