AQUATIC RESOURCES DELINEATION REPORT

CITY OF SAN DIEGO – OTAY 2ND PIPELINE PHASE 4 PROJECT (**H207169**)

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ACRONYMS AND ABBREVIATIONS

AMSL	Above Mean Sea Level
ARD	Aquatic Resources Delineation
ARDR	Aquatic Resources Delineation Report
Arid West Supplement	*Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*
Biology Guidelines	*Biology Guidelines of the San Diego Municipal Code's Land Development Code*
BTR	Biological Resources Technical Report
CDFW	California Department of Fish and Wildlife
CFG Code	California Fish and Game Code
CFR	Code of Federal Regulations
City	City of San Diego
County	County of San Diego
CWA	Clean Water Act
DW	Disturbed Wetland
DW-R	Disturbed Wetland – Restoration
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
ft	Foot/Feet
FWM	Freshwater Marsh
GPS	Global Positioning System
HUC	Hydrologic Unit Code
Jepson Manual	*The Jepson Manual: Vascular Plants of California, Second Edition*
MSCP	Multiple Species Conservation Program
NHD	National Hydrography Dataset
NRCS	Natural Resources Conservation Service
NWI	National Wetlands Inventory
NWS	National Weather Service
OHWM Datasheet	*Arid West Ephemeral and Intermittent Streams OHWM Datasheet*
OHWM	Ordinary High-Water Mark
Porter-Cologne Act	Porter-Cologne Water Quality Control Act
Project	Otay 2nd Pipeline Phase 4
RPW	Relatively Permanent Waterway
RWQCB	Regional Water Quality Control Board
SCOTUS	Supreme Court of the United States
SAWRF	Southern Arroyo Willow Riparian Forest
SWS	Southern willow Scrub

TDI	Tierra Data, Inc.
TNW	Traditional Navigable Waterway
USACE	U.S. Army Corps of Engineers
USDA	U.S. Department of Agriculture
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
WETS	Wetlands Climate Tables
WOTUS	Waters of the United States

1 INTRODUCTION

Tierra Data, Inc. (TDI) conducted a formal aquatic resources delineation (ARD) for the City of San Diego's (City's) Otay 2nd Pipeline Phase 4 Project (Project) located in the unincorporated community of Bonita to the south side of Telegraph Canyon Road in the City of Chula Vista.

The purpose of the ARD is to identify areas that may be considered jurisdictional under the U.S. Army Corps of Engineers (USACE) pursuant to Section 404 of the Clean Water Act (CWA); the Regional Water Quality Control Board (RWQCB) pursuant to Section 401 of the CWA and the Porter-Cologne Water Quality Control Act (Porter-Cologne Act); streambed and riparian habitats under California Department of Fish and Wildlife (CDFW) pursuant to California Fish and Game (CFG) Code (§1602); and City wetland resources as defined by the City Municipal Code (§113.0103). This information provided in this ARD Report (ARDR) can be used by these agencies to evaluate potential jurisdictional impacts and permit requirements associated with the project, to assess project conformance with state and federal regulations, and serves as a request for the USACE to complete a Preliminary or Approved Jurisdictional Determination based on the information provided in this report. Appendix A provides a checklist of the information in this ARDR in compliance with the *USACE Los Angeles District's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports* (USACE 2017).

1.1 Project Location

The Project is located east of Interstate (I) 805, south of State Route (SR) 54 and mostly north of Telegraph Canyon Road and occurs in both the unincorporated community of Bonita in the County of San Diego (County) and the City of Chula Vista in southern San Diego County (Figure 1, Figure 2). The existing pipeline is within an existing City of San Diego 50-foot utility easement and on City-owned parcels, and the new pipeline will deviate from the old alignment to minimize impacts to biological resources. The project is within the U.S. Geological Survey (USGS) 7.5-minute National City and Imperial Beach quadrangle maps and the Sweetwater and San Diego Bay watersheds.

The overall Project study area was 332.40 acres which represents a 300-foot buffer to the 4.18-mile-long alignment. The Project's northern end (Lat/Long: 32.65952222, -117.0433583) is just south of Sweetwater Road and west of the Willow St. Bridge in the County of San Diego's Sweetwater Regional Park. After crossing the Sweetwater River, the alignment crosses the parking lot between the Kaiser Permanente facility and the gas station at the corner of Willow Street and Bonita Road in the City of Chula Vista before turning west along Bonita Road which is the boundary between the County and City of Chula Vista. After 900 feet along Bonita Road, the alignment then turns south up Glen Abbey Drive within the Glen Abbey Memorial Park & Mortuary (Glen Abbey) within the County.

After approximately 1,400 feet, the alignment jogs west, then east before continuing south, parallel to The Hill Road, then further south to the County/City of Chula Vista boundary. Following a trail, the alignment continues south, crossing again into the City of Chula Vista, heading mostly directly south through a portion of City of Chula Vista Multiple Species Conservation Program (MSCP) Preserve Management Area (PMA) until it reaches Terra Nova Drive.

At Terra Nova Drive, the alignment begins its in-street portion within the City of Chula Vista, initially heading west then south to East H Street[7]. At East H Steet the alignment heads east and then turns south on Paseo Del

Rey. At the top of Paseo Del Rey, the alignment turns east on East J Street along the mesa, until it reaches Paseo Ladera. Turning south and then southwest on Paseo Ladera until the alignment turns southeast through a final portion of PMA before crossing Telegraph Canyon Road to this phase's terminus just south of Telegraph Canyon Road (32.62381111, -117.0161778) (Figure 2).

The primary areas of study for this ARDR were those areas where potential impacts to waters and wetlands could occur, which are at the beginning of the alignment in Sweetwater River Valley and at the end of the alignment in Telegraph Canyon. At Sweetwater the ARDR Study Area was approximately 17.8 acres (Figure 7) and at Telegraph Canyon, 11.2 acres (Figure 8).

Access to the locations with potential jurisdictional resources is via busy streets, parking on nearby residential streets, and walking to access trails that lead to the pertinent features. TDI and/or City staff would be available to assist agency staff in accessing the Project location and drainage feature(s) upon request.

1.2 Project Description

The Otay 2nd Pipeline Phase 4 project proposes to upsize the existing steel pipe with new cement piping beginning east of the Willow Street bridge across the Sweetwater River to south of Telegraph Canyon Road.

The Project proposes the replacement of approximately 16,910 linear feet (LF) (3.20 miles) of existing 36-inch and 40-inch pipe with new 48-inch Cement Mortar Lined and Tape Coated and Cement Mortar Coated Welded Steel Pipeline (City 2018). A new 8-inch Polyvinyl Chloride (PVC) distribution pipe will also be installed to reconnect City of San Diego water customers from the transmission main to this distribution main. The Project pipeline is currently aligned in the right-of-way, city-owned parcels (Cities of San Diego and Chula Vista), and privately-owned parcels. The recommendation in the Otay 2nd Phase 4 Pipeline Planning Study (City 2018) was for the Project to realign and construct the proposed new main, parallel with the existing water main to keep the existing pipeline in-service during construction. After completion of the new line, the existing alignment will be abandoned. The project will also remove and backfill existing structures abandoned by the Bonita Pipeline (City 2018).

After initial field studies in 2022, City staff determined that impacts to sensitive biological resources could be reduced by placing some of the new pipe in existing roads. As a result, the proposed alignment was redesigned to minimize impacts to sensitive biological resources and now will be 22,050 LF (4.18 miles) of the same construction type as proposed.

Work within undeveloped and open space areas will impact a 45-foot limit of work, and contain a 20-foot graded, unpaved access road with the new 48-inch pipe 5 feet deep within a 16-foot-wide trench. After completion of installation, 25 feet of the 45-foot work width will be restored to habitat matching the habitat adjacent to the alignment.

Work will require mostly open trench construction and will use trenchless Underground Directional Drilling techniques to go under jurisdictional channels, with construction and maintenance access roads, access points on private property, community coordination, permits, and traffic control design as additional elements. A geotechnical study will be required, and work is not anticipated to be near earthquake faults or rail lines.

2 REGULATORY BACKGROUND AND METHODOLOGY BY AGENCY

2.1 Desktop Research

Before the field delineation began, the resources listed below were reviewed to identify potential aquatic resources in the survey area.

- Otay 2nd Pipeline Phase 4 Planning Study (City 2018).
- Aerial imagery from various dates between 1953 and 2025 (Google Earth 2025; Historic Aerials 2022).
- U.S. Geological Survey (USGS) 7.5-minute Point Loma and Imperial Beach, California, topographic quadrangle maps (USGS 1994) (Figure 3).
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) (USFWS 2022) (Figure 3).
- National Hydrography Dataset (NHD) streams (USGS 2022) (Figure 3).
- Watershed maps from the NHD (USGS 2022) (Figure 4).
- U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Soil Survey Geographic database (USDA/NRCS 2022) for the survey area (Figure 5).
- Federal Emergency Management Agency (FEMA) 100-year floodplain maps (FEMA 2022).

The above resources were used to reconfirm the locations of potential aquatic resources that would be subject to regulation by the USACE/RWQCB, CDFW and the City of San Diego within the survey area. Figure 3 depicts NWI aquatic resources and NHD streams but based on the Flood Insurance Rate Map Number 06073C1916G, the Sweetwater River flood plain is a Special Flood Hazard Area Zone A, and the width of the bridge and the Chula Vista Golf Course is in a Regulatory Floodway Zone AE, as is an area west of the bridge between the project's northern Underground Directional Drilling pit and the commercial plaza to the south just east of the bridge (Figure 6). Along East H Street from Del Rey Boulevard west, the valley is designated as having a 1% annual chance of flood discharge per Flood Insurance Rate Map Number 06073C1918G. There is no FEMA Flood Plain along Telegraph Canyon between Paseo Ladera and Paseo Ranchero where the alignment crosses Telegraph Canyon Creek per Flood Insurance Rate Map Number 06073C1919G.

2.2 Field Investigation and Mapping

In 2022, vegetation mapping and general survey of the 3.2-mile original alignment was performed in May and June, with rare plant surveys in July being performed by TDI biologists, Derek Langsford, Ben Van Allen, and Diego Uribe.

On July 19, 2022, TDI Biologists Derek Langsford and Ben Van Allen performed an ARD at Sweetwater River portion of the project. On July 20, 2022, Derek Langsford and Diego Uribe performed an ARD at The Telegraph Canyon Creek portion of the project. These were the only two areas where drainages or wetlands were present at the surface where impacts to potentially jurisdictional resources could occur. The change in the project to a 4.18 LF alignment placed the project in City of Chula Vista streets from Terra Nova Drive to Paseo Ladera and eliminated most for the alignment for consideration of ARD.

The ARD Areas of Study were extended up and downstream for 300 feet from the two locations the project would cross them. Other potential wetlands with the Project Study Area Buffer were not evaluated if the project alignment would not be crossing them or would cross them within a street where design required them to be avoided.

The surveys consisted of walking around the study area identifying features and gaining an understanding of how water fed into features and left the study area. U.S. Army Corps of Engineers (USACE) regulated Waters of the U.S. (WOTUS), including wetlands, and San Diego RWQCB Waters of the State of California were delineated.

The extent of WOTUS was determined based on indicators of an Ordinary High Water Mark (OHWM) per *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (USACE 2008a). Federally regulated wetlands were identified based on the routine determination methods set forth in Part IV, Section D, Subsection 2 of the 1987 *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory 1987) and 2008 *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region*, Version 2.0 (Arid West Supplement; USACE 2008b).

CDFW jurisdiction was delineated by observing and mapping the elevations of banks that confined a stream to a definite course when its waters rise to their highest level and to the extent of associated wetland/riparian vegetation (Brady and Vyverberg 2013). Streambeds considered within CDFW jurisdiction were delineated based on the definition of streambed as "a body of water that flows at least periodically or intermittently through a bed or channel having banks and supporting fish or other aquatic life. This includes watercourses having a surface or subsurface flow that supports riparian vegetation" (Title 14, Section 1.72). Riparian habitat refers to vegetation and habitat associated with a stream. The CDFW jurisdictional habitat includes all riparian shrub or tree canopy that may extend beyond the banks of a stream.

The City has its own criteria for wetlands which are generally the same as the extent of CDFW jurisdiction.

During the field efforts, the Study Area was surveyed on foot where access was possible. Aquatic resource limits were recorded using a GPS and visual estimation of widths. Common plant species observed were identified by visual characteristics and morphology in the field. Taxonomic nomenclature for plants follows *The Jepson Manual: Vascular Plants of California*, Second Edition (Jepson Manual; Baldwin et al. 2012) and the *National Wetland Plant List* (USACE 2020). Vegetation community classifications follow Holland (1986) and Oberbauer et al. (2008).

With changes in federal regulations, described below in Sections 2.3.1 Sackett v EPA, the City now typically requests that the Streamflow Duration Assessment Method (SDAM) be applied to confirm the status of drainages under review, but the presence of water in the two channels during every visit identifies them as being permanent and so the SDAM was unnecessary.

Table 1 shows the date, delineations, and purpose of all TDI site visits.

Table 1. ARDR Field Dates.

DATE	DELINEATORS	PURPOSE
May 26 and June 16, 2022	Derek Langsford Ben Van Allen	Vegetation Mapping and General Surveys
July 19, 2022	Derek Langsford Ben Van Allen Diego Uribe	Rare plant survey
July 19, 2022	Derek Langsford Ben Van Allen	Aquatic Resources Delineation
July 20, 2022	Derek Langsford Ben Van Allen	Aquatic Resource Delineation
May 15, 2023	Derek Langsford Ben Van Allen	Rare plant survey
March 28, April 12 and 25 May 5, 16, and 26, 2023	Beth Sabiston	Light-footed Ridgway's Rail Survey
February 14 and 15, 2024	Diego Uribe Cai Leão	Vegetation Mapping and General Survey Update
June 11, 17 and 25, 2025	Derek Langsford Diego Uribe	Vegetation Mapping and General Survey Updates, Rare Plant surveys, Aquatic Resource Delineation updates

While in the field in 2022, potentially jurisdictional features were recorded by TDI using a hand-held Global Positioning System (GPS) unit with a level of accuracy ranging from 1-3 ft with data processing and refinement occurring in the office to ensure accuracy. Widths for USACE/RWQCB were estimated visually based on presence of the OHWM. CDFW widths were based on the height for which there was evidence of water flow including benches and vegetation. The 2024 fieldwork visited the new alignment sections and noted any changes in features and dimensions. The 2025 fieldwork revisited the areas with sensitive resources along the alignment to determine if conditions had changed.

All figures generated for this ARDR follow the *Updated Map and Drawing Standards for the South Pacific Division Regulatory Program* (USACE 2016).

2.3 Regulatory Background

Several regulations have been established by federal, state, and local agencies to protect and conserve aquatic resources. The descriptions below summarize agency regulations that may apply to the project. Regulatory agencies make the final determination of whether a project requires authorization pursuant to these regulations.

2.3.1 U.S. Army Corps of Engineers

The USACE regulates activities proposed within navigable waters under Section 10 of the Rivers and Harbors Act and Waters of the United States (WoUS) under Section 404 of the CWA. Section 10 of the Rivers and Harbors Act regulates work, structures, obstructions, and alterations occurring within navigable WoUS, which are defined as waters subject to the ebb and flow of the tide shoreward to the mean high-water mark and/or waters presently used to transport interstate or foreign commerce, including those used in the past or susceptible to such use. The survey area does not support navigable waters, so they are not discussed further.

The pre-2015 definition of WoUS, effective on September 3, 2021, established the scope of USACE and U.S. Environmental Protection Agency (EPA) authority under the CWA. It included seven categories of jurisdictional WoUS (33 Code of Federal Regulations [CFR] 328.3[a][1]–[7]) (USACE and EPA 2022). However, in January 2023, the EPA and U.S. Department of the Army (agencies) published a "Revised Definition of Waters of the United States" rule in the Federal Register which took effect in March 2023. Parts of the January 2023 rule to not conform to Sackett v. EPA, decided by the Supreme Court of the U.S. (SCOTUS) on May 25, 2023, so in August 2023, the agencies amended key aspects of the text and published a conforming rule which became effective on September 8, 2023.

The January 2023 Rule is not currently operative in certain states; however, the agencies were implementing the definition of "waters of the United States" under the January 2023 Rule, as amended by the conforming rule in 24 states, including in California' In the other 26 States, the agencies are interpreting ''waters of the United States'' consistent with the pre-2015 regulatory regime and the SCOTUS Sackett v. EPA decision.

On March 12, 2025, the agencies signed a joint memorandum to provide guidance to the agencies' field staff regarding implementation of ''continuous surface connection'' for adjacent wetlands. Consistent with this guidance, and consistent with Sackett v EPA, the agencies are interpreting ''continuous surface connection'' to mean abutting (or touching) requisite jurisdictional water. This resulted in Proposed Rules appearing in the Federal Register on November 20, 2025. Comments were due on January 5, 2026, but a Final Rule has not been issued.

As a result, the following is currently still applicable.

33 CFR 328.3 Definitions

(a) Waters of the United States means:

(1) Waters which are:

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

(ii) The territorial seas; or

(iii) Interstate waters;

(2) Impoundments of waters otherwise defined as WoUS under this definition, other than impoundments of water identified under paragraph (a)(5) of this section

(3) Tributaries of waters identified in paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;

(4) Wetlands adjacent to the following waters:

(i) Waters identified in paragraph (a)(1) of this section; or

(ii) Relatively permanent, standing or continuously flowing bodies of water identified in paragraph (a)(2) or (a)(3) of this section and with a continuous surface connection to those waters;

(5) Intrastate lakes and ponds, streams, or wetlands not identified in paragraphs (a)(1) through (4) of this section that are relatively permanent, standing or continuously flowing bodies of water with a continuous surface connection to the waters identified in paragraph (a)(1) or (a)(3) of this section.

Ordinary High-Water Mark Delineation

Aquatic resources with a defined OHWM would be considered potential non-wetland WoUS. USACE regulations at 33 CFR 328.3I(7) define the OHWM as "the line on the shore established by the fluctuation of water and indicated by physical characteristics such as a clean 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" (85 Federal Register 22339, April 21, 2020). The lateral limits of non-wetland WoUS were mapped using guidance provided in *A Field Guide to the Identification of the Ordinary High-Water Mark in the Arid West Region of the Western United States: A Determination Manual* (USACE 2008b) and Regulatory Guidance Letter 05-05 (USACE 2005). TDI created the OHWM Datasheets for representative non-wetland water features within the survey area. Completed OHWM Datasheets are provided in Appendix C, and the location of each OHWM sample point is depicted in Figures 7 through 10. The OHWM Datasheets followed guidance provided in the *Updated Datasheet for the Identification of the Ordinary High-Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2010) during fieldwork in 2022. Common indicators of the OHWM include changes in average sediment texture, a break in the slope, changes in vegetation species, and/or changes in vegetation cover.

Identification of OHWM involves assessments of stream geomorphology and vegetation response to the dominant stream discharge. Determining whether any non-wetland water is a jurisdictional WOTUS involves further assessment in accordance with the regulations, case law, and clarifying guidance as discussed below.

Wetland Delineation

Section 404 wetland WOTUS consist of areas inundated or saturated by surface water or groundwater at a frequency and duration adequate to support, and under normal circumstances support a prevalence of vegetation typically adapted for life in saturated soil conditions. Normally, three criteria (parameters) must be satisfied to classify an area as a wetland: (1) a predominance of plant life that is adapted to life in wet conditions (hydrophytic vegetation); (2) soils that saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part (hydric soils); and (3) permanent or periodic inundation or soil saturation, at least seasonally (wetland hydrology).

The wetland delineation was conducted pursuant to the 1987 *Corps of Engineers Wetland Delineation Manual* (Environmental Laboratory 1987) and the Arid West Supplement (USACE 2008a). TDI surveyed the area for areas that exhibited evidence of wetland hydrology and/or hydrophytic vegetation. No areas supporting hydrophytic vegetation were observed and so no wetland soil pits were dug as the lack of hydrophytic vegetation automatically fails the test for wetland WOTUS presence. If pits had been dug, the *Field Indicators of Hydric Soils in the United States*, Version 8.2 (USDA/NRCS 2018), would have been used to identify hydric soil, vascular plants were identified using Jepson Manual (Baldwin et al. 2012), and nomenclature and associated wetland ratings would follow *Arid West National Wetland Plant List* (USACE

2020). Wetland conditions generally do not change in a few years and apparently have not changed by the time of the field update from 2019.

Special aquatic sites are geographic areas, large or small, possessing special ecological characteristics of productivity, habitat, wildlife protection, or other important and easily disrupted ecological values. These areas are generally recognized as significantly influencing or positively contributing to the general overall environmental health or vitality of the entire ecosystem of a region. Special aquatic sites include sanctuaries and refuges, wetlands, mudflats, vegetated shallows, coral reefs, and riffle, and pool complexes. They are defined in 40 CFR 230 Subpart E.

Supreme Court Decisions

Solid Waste Agency of Northern Cook County

On January 9, 2001, the Supreme Court of the United States (SCOTUS) issued a decision on *Solid Waste Agency of Northern Cook County v. USACE, et al.* addressing whether the USACE could assert jurisdiction over isolated waters. The SCOTUS ruling stated that the USACE does not have jurisdiction over "non-navigable, isolated, intrastate" waters.

Rapanos/Carabell

In the SCOTUS cases of *Rapanos v. United States* and *Carabell v. United States*, the SCOTUS attempted to clarify the extent of USACE jurisdiction under the CWA. The nine SCOTUS justices issued five opinions (one plurality opinion, two concurring opinions, and two dissenting opinions) with no single opinion representing a majority decision. Considering this situation, the USACE asserts jurisdiction over a traditional navigable waterway (TNW), wetlands adjacent to TNWs, non-navigable tributaries of TNWs that are a relatively permanent waterway (RPW) where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a "significant nexus" with a TNW: non-navigable tributaries that are not RPWs, wetlands adjacent to non-navigable tributaries that are not RPWs, and wetlands adjacent to but that do not directly abut a non-navigable RPW.

A significant nexus determination includes an assessment of flow characteristics and functions of the tributary itself, and the functions performed by all wetlands adjacent to the tributary. This assessment is to indicate whether they significantly affect the chemical, physical, and biological integrity of downstream TNWs. Analysis of potentially jurisdictional streams includes consideration of hydrologic and ecological factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snowpack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW, the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

Sackett v. EPA

On August 29, 2023, the EPA issued a final rule under the CWA, effective September 8, 2023, revising the long-contested definition of waters of the United States (WOTUS). This rule conforms to the holding in the May 25, 2023, SCOTUS decision, Sackett v. EPA (598 U.S. 120).

The majority opinion concluded that the *Rapanos* plurality was correct, and that within the scope of the CWA, "the CWA's use of 'waters' encompasses 'only those relatively permanent, standing or continuously flowing bodies of water forming geographical features' that are described in ordinary parlance as 'streams, oceans, rivers, and lakes.' The Court held that waters are not protected by the CWA unless they have a "continuous surface connection" to key lakes and rivers that affect interstate commerce. In addition, only wetlands directly connected to traditional navigable waters are subject to federal jurisdiction.

2.3.2 Regional Water Quality Control Board

The State Water Resources Control Board (SWRCB) was established as the statewide authority, and nine RWQCBs were developed to oversee water quality on a day-to-day basis. The RWQCBs are the primary agencies responsible for protecting water quality in California. The SWRCB through the San Diego RWQCB regulates activities pursuant to Section 401(a)(1) of the CWA and Porter-Cologne Water Quality Control Act.

Through the Porter-Cologne Act, the RWQCB asserts jurisdiction over Waters of the State of California, which is generally the same as WOTUS, but may also include isolated waterbodies. The State Water Code defines Waters of the State of California as “surface water or ground water, including saline waters, within the boundaries of the state.” In accordance with the Porter-Cologne Water Quality Control Act (Water Code, § 13000 et seq.), the RWQCBs are authorized to regulate discharges of waste, which includes discharges of dredged or fill material, that may affect the quality of waters of the state.

Clean Water Act

Section 401 of the CWA specifies that certification from the state is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters.

A water quality certification or waiver pursuant to Section 401 of the CWA is required for all Section 404 permitted actions. The RWQCB is required to provide “certification that there is reasonable assurance that an activity that may result in the discharge to [WOTUS] will not violate water quality standards.” Water Quality Certification must be based on the finding that proposed discharge will comply with applicable water quality standards.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Act provides for statewide coordination of water quality regulations. Pursuant to the Act (Water Code Section 13000 et seq.), the state is given authority to regulate waters of the state, which are defined as any surface water or groundwater, including saline waters. As such, any person proposing to discharge waste into a water body that could affect its water quality must first file a Report of Waste Discharge and receive a Waste Discharge Permit pursuant to Section 13260 of the California Water Code, if a Section 404 Permit is not required for the activity. “Waste” is partially defined as any waste substance associated with human habitation, including fill material discharged into water bodies.

2.3.3 California Department of Fish and Wildlife

California Fish and Game Code Sections 1600-1602

Pursuant to Division 2, Chapter 6, Section 1602 of the CFG Code, CDFW regulates all diversions, obstructions, or changes to the natural flow or bed, channel or bank of any river, stream or lake that supports fish or wildlife. A Notification of Lake or Streambed Alteration must be submitted to CDFW for "any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake." CDFW has jurisdiction over riparian habitats associated with watercourses and wetland habitats supported by a river, lake, or stream. Jurisdictional waters are delineated by the outer edge of riparian vegetation (i.e., drip line) or at the top of the bank of streams or lakes, whichever is wider. CDFW jurisdiction does not include tidal areas or isolated resources. CDFW reviews the proposed actions and, if necessary, submits (to the applicant) a proposal that includes measures to protect affected fish and wildlife resources. The final proposal that is mutually agreed upon by CDFW and applicant is the Lake or Streambed Alteration Agreement.

Evaluation of CDFW jurisdiction follows guidance in the CFG Code and *A Review of Stream Processes and Forms in Dryland Watersheds* (CDFW 2010). In general, under Section 1602 of the CFG Code, CDFW jurisdiction extends to the maximum extent or expression of a stream on the landscape. It has been the practice of CDFW to define a stream as "a body of water that flows perennially or episodically and that is defined by the area in a channel which water currently flows, or has flowed over a given course during the historic hydrologic course regime, and where the width of its course can reasonably be identified by physical or biological indicators" (Brady and Vyverberg 2013). Accordingly, a channel is neither defined by a specific flow event, nor by the path of surface water as this path might vary seasonally; rather, it is CDFW's practice to define the channel based on the topography or elevations of land that confine the water to a definite course when the waters of a creek rise to their highest point, i.e. the top of the bank of the channel.

2.3.4 City of San Diego Wetland Regulations

The City's *Biology Guidelines of the San Diego Municipal Code's Land Development Code* (Biology Guidelines; City 2018) identify wetlands as a sensitive biological resource since "Many of the species included in the Multiple Species Conservation Program… (i.e., Covered Species) are dependent on wetlands for habitat and foraging.

Wetlands are defined as areas which are defined in the City's Municipal Code §113.0103 and characterized by any of the following conditions:

1. All areas persistently or periodically containing naturally occurring wetland vegetation communities characteristically dominated by hydrophytic vegetation, including but not limited to salt marsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodlands, riparian scrub, and vernal pools;
2. Areas that have hydric soils or wetland hydrology and lack naturally occurring wetland vegetation communities because human activities have removed the historic wetland vegetation or catastrophic or recurring natural events or processes have acted to preclude the establishment of wetland vegetation as in the case of salt pans and mudflats;

3. Areas lacking wetland vegetation communities, hydric soils, and wetland hydrology due to non-permitted filling of previously existing wetlands;
4. Areas mapped as wetlands on Map No. C-713 as shown in Chapter 13, Article 2, Division 6 (Sensitive Coastal Overlay Zone).

In addition to the Municipal Code definition, the City's Biology Guidelines (City 2018) further clarify City-jurisdictional wetlands as follows:

> Naturally occurring wetland vegetation communities are typically characteristic of wetland areas. Examples of wetland vegetation communities include saltmarsh, brackish marsh, freshwater marsh, riparian forest, oak riparian forest, riparian woodland, riparian scrub and vernal pools. Common to all wetland vegetation communities is the predominance of hydrophytic plant species (plants that are adapted for life in anaerobic soils).
>
> …Seasonal drainage patterns that are sufficient enough to etch the landscape (i.e., ephemeral/intermittent drainages) may not be sufficient enough to support wetland dependent vegetation. These types of drainages would not satisfy the City [of San Diego]'s wetland definition unless wetland dependent vegetation is either present in the drainage or lacking due to past human activities. Seasonal drainage patterns may constitute "waters of the United States" which are regulated by the [USACE] and/or the [CDFW].

Impacts to City-jurisdictional wetlands in the coastal zone must be avoided and only those uses identified in Section 143.0130(d) of the Environmentally Sensitive Lands Regulations shall be permitted, which are limited to aquaculture, nature study projects or similar resource dependent uses, wetland restoration projects, and incidental public service projects. The project is not within the coastal zone.

2.3.5 Contact Information

Applicant

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Agency access to the pertinent sites can be coordinated with the applicant and/or agent upon request.

3 ENVIRONMENTAL SETTING

The project alignment is in south San Diego County, south of the main metropolitan area of the City of San Diego, and zigzags from the Sweetwater River Valley in the unincorporated area to Telegraph Canyon Road in the City of Chula Vista (Figure 2). Between the beginning and end of the 4.18-mile alignment the river valleys and canyons are mostly undeveloped and protected, except for roads, with various easements and designations within the County and City of Chula Vista whereas the ridges and mesas are mainly developed with residential development.

The focus of this ARDR is two locations in the alignment, one is that the north end where the project begins just north of, but passes through, the riparian-dominated habitat of the northeast to southeast - trending Sweetwater River and Sweetwater Regional Park in the unincorporated area west of Sweetwater Road and the Willow Street Bridge. The other is at the end of Phase 4 where the alignment crosses the east-west trending Telegraph Canyon Creek just north of Telegraph Canyon Road (Historic Aerials 2024; Google Earth 2024).

The Sweetwater River Valley in the north is a mixture of open space and recreational parcels that keep the most flood-prone areas undeveloped. On the hillside to the north are older residential communities south of SR 54, whereas to the south, some pockets of older unincorporated areas occur, including Glen Abbey, but more recent residential communities in the City of Chula Vista are prevalent.

At Telegraph Canyon, the expansion of Telegraph Canyon Road to six lanes from two in 1980 resulted in modification of the creek by channelization with a soft bottom and banks just north of the road. The land rises north and south onto the ridges which started to be developed by 1980 to the north and 2000 to the south (Historic Aerials 2024). The slopes above the canyon bottom to the north are undeveloped and protected as part of the City of Chula Vista PMA but development largely impinges on the south except for one block of habitat between Paseo Ladera and Mount Owen Court (Google Earth 2024).

3.1 Topography

At the Sweetwater River Valley, the river is in a broad relatively flat east-northeast to west-southwest trending valley bottom, approximately 1,200 feet across with the location where the alignment crosses the main river channel being 58 feet above mean sea level (amsl). The developed ridge to the north rises to approximately 220 feet amsl while the southern mesa/ridge rises quickly to 275 feet amsl at the southern end of Glen Abbey and peaks at 375 feet amsl at Terra Nova Drive (Figure 3. USGS Topography, NWI, and NHD Data.

The Telegraph Canyon site is situated in Telegraph Canyon that runs east to west in this location. The creek along the valley bottom drops from 330 amsl at Paseo Ranchero to 287 feet amsl at Paseo Ladera. The creek at the crossing is approximately 300 feet amsl. The six-lane road to the south is approximately 8 feet above the creek. The canyon rises to developed ridgetops approximately 450 feet amsl to the north and 460 feet amsl to the south (Figure 3).

3.2 Land Use

The Project alignment is in a mostly developed landscape crossed by canyons with natural slopes that are protected and form part of the City of Chula Vista's MSCP Central PMA (Figure 2). While the development is mostly residential, commercial development is focused on the south side of Bonita Road, east of the alignment in the north, and along the north side of East H Street in Chula Vista Street where the alignment passes within East H. Street. The initial climb out of the Sweetwater Valley is adjacent to the open but manicured grounds of Glen Abbey.

Sweetwater Regional Park along the Sweetwater River Valley has natural open space areas and recreational facilities, some operated by the County of San Diego Department of Parks and Recreation (Sweetwater Regional Park, Sweetwater County Park), others by the City of Chula Vista (Chula Vista Golf Course, Rohr Park). Both native and non-native vegetation communities characterize the river valley. West of the alignment the river corridor is mostly natural and contains the river as it heads toward its tidal portion and outfall to San Diego Bay.

Telegraph Canyon is an east-west canyon in central Chula Vista that arcs from SR 125 to I-805 before is opens out onto the coastal plain on which the older part of Chula Vista was built, and Telegraph Canyon Creek is carried by concretized channels and culverts west of I-805 to San Diego Bay. In the central portion of Telegraph Canyon, where the crossing of the alignment occurs, slopes are protected to the north, below ridgetop development, and support native and naturalized communities within City of Chula Vista PMA. Slopes to the south are much shorter and so development gets closer to Telegraph Canyon Road with much less land in the PMA.

3.3 Watershed

The proposed project Study Area is in two distinct watersheds. From the northern end of the alignment to the ridge between East H Street and Telegraph Canyon Road the alignment is within the San Diego Hydrologic Unit Code (HUC) 8-18070304, Lower Sweetwater River HUC 10-1807030409 (Figure 4). Telegraph Canyon, where the alignment ends is in its own watershed south of the Lower Sweetwater River watershed but is included in the San Diego Bay HUC 10 1807030412, and drains directly into San Diego Bay (Figure 4).

The Sweetwater River is a major river in San Diego County originating in the Cuyamaca Mountains and draining out toward into San Diego Bay to the west. Telegraph Canyon Creek is a local drainage that originates in the Otay Ranch area to the east and is carried by concretized channels and culverts west of I-805 to San Diego Bay.

3.4 Hydrology

The USFWS NWI identifies many drainage features along the alignment with the Sweetwater River channel being a Riverine, Lower Perennial, Unconsolidated Bottom, Permanently Flooded feature (Figure 3). Upstream of the Willow Street Bridge, the channel continues but is bordered by a narrow strip Freshwater Forested/Shrub Wetland (PSS/EM1Cx). Downstream, there are various kinds of Freshwater Forested/Shrub Wetland in the river's floodplain including seasonally and temporarily flooded, forest and scrub-shrub wetlands mapped (PFOC along the channel and PFOA and PSSA beyond).

A feature coming in from the north is considered to have Freshwater Emergent Wetland (PEM1Cx) and drains into the main channel east of the bridge, but a branch has been mapped which goes under the bridge and into the channel west of the bridge. East of the bridge this feature is bordered by Freshwater Forested/Shrub Wetland (PFO/SSAx).

Between the Sweetwater River and where the alignment goes into Terra Nova Drive, there are short reaches of Riverine, Intermittent, Streambed, Temporarily Flooded (R4SBA) fed by Palustrine, Scrub-shrub, Temporarily Flooded features (PSSA), none of which cross the alignment (Figure 3).

Along East H Street drainages come down the side canyons are labeled as Riverine Intermittent Streambed Intermittently Flooded (R4SBJ) but all get captures and presumably into a pipe under East H Street. The main portion of Rice Canyon joins from the northeast with a channel of Palustrine, Scrub-shrub Emergent, Persistent, Seasonally Flooded feature into a Palustrine, Scrub-shrub Emergent, Persistent, Seasonally Flooded, Diked/Impounded basin (PSSAh). This also drains into a pipe or culvert under East H. Street (Figure 3).

No features cross Paseo Del Rey going up the canyon slope to East J Street, and down the south of the ridge along Paseo Ladera off which the alignment cuts across vacant land to Telegraph Canyon Creek, which is identified as a Palustrine, Scrub-shrub, Seasonally Flooded feature (PSSC). The alignment ends just to the south of Telegraph Canyon Road (Figure 3).

NHD streams mostly follow the linear features identified in the NWI, but being tied to dated topography shows a stream in Rice Canyon along where East H Street runs where water is clearly in an underground conduit. It even shows the more direct alignment of the existing Otay 2nd Pipeline.

Both the Sweetwater River and Telegraph Canyon Creek flows into the Pacific Ocean, a TNW.

TDI accessed Wetlands Climate Tables (WETS) data through the NRCS Agricultural Applied Climate Information System database for the San Diego Brown Field California NWS station in San Diego County. The proposed Project starts 7. 25 miles and ends 4.2 miles north-northwest of the weather station which receives an average of 9.13 inches of rain per year (NRCS 2024).

WETS tables are used to define the range of normal precipitation and growing season for NWS stations. WETS tables define the “normal” range at the 30th and 70th percentile of all the data in the precipitation record for that station. TDI requested data for the past 30 years (1992-2022) for 30 years prior to the ARD to provide the pertinent pre-site visit precipitation data (Table 2; Appendix B).

Table 2 and Appendix B indicate that the field survey dates of July 19 and 20, 2022 occurred in the middle of the dry season of what turned in to be an average year the region (9.35”) and after two years of very similar average years (8.97’ in 2021 and 9.67” in 2020). The previous winter/spring was notably wet with an average (9.66”) after a drier winter/spring in 2021 (5.98”). The NRCS does not calculate a growing season length for this station since none of the threshold temperatures were recorded throughout the 30-year period.

Table 2. Precipitation Data (1992-2023).

MONTH	AVG. MAX. TEMP. (°F)	AVG. MIN. TEMP. (°F)	AVG. MEAN TEMP. (°F)	AVG. PRECIP. (in.)	30% CHANCE PRECIP. LESS THAN (in.)	30% CHANCE PRECIP. MORE THAN (in.)	AVG. NO. DAYS PRECIP. 0.10 OR MORE	AVG. SNOWFALL
Jan	67.6	44.1	55.8	1.44	0.50	1.73	3	-
Feb	66.7	44.6	55.7	1.94	0.75	2.35	4	-
Mar	68.0	47.1	57.5	1.20	0.60	1.47	3	-
Apr	70.1	49.9	60.0	0.83	0.36	0.97	2	-
May	71.8	54.6	63.2	0.29	0.04	0.26	1	-
Jun	74.8	58.4	66.6	0.05	0.00	0.05	0	-
Jul	78.7	62.0	70.3	0.03	0.00	0.03	0	-
Aug	80.6	63.1	71.8	0.02	0.00	0.01	0	-
Sep	80.6	61.2	70.9	0.14	0.04	0.14	0	-
Oct	77.1	55.6	66.4	0.51	0.09	0.48	1	-
Nov	72.2	48.7	60.5	0.94	0.40	1.11	2	-
Dec	66.7	44.0	55.3	1.73	0.70	2.10	3	-
Annual:				7.12	10.48			
Average	72.9	52.8	62.8	-	-	-	-	-
Total	-	-	-	9.13			20	-

GROWING SEASON DATES			
Years with missing data:	24 deg = 4	28 deg = 5	32 deg = 5
Years with no occurrence:	24 deg = 26	28 deg = 26	32 deg = 24
Data years used:	24 deg = 26	28 deg = 26	32 deg = 26
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent*	No occurrence	No occurrence	No occurrence
70 percent*	No occurrence	No occurrence	No occurrence
* Percentage chance of the growing season occurring at the Beginning and Ending dates			

Source: WETS Station, San Diego Brown Field, California; Requested Years 1992-2022.

3.5 Soils

The length of this project means it passes through a sizable number of different soil types (10) though none are particularly rare (USDA 2024; Figure 5).

The Project starts in the Sweetwater River Valley with Riverwash and Tujunga Sand. Moving out of the valley bottom, the alignment passes through Terrace Escarpments, and Gaviota fine sandy loam soil in Glen Abbey. Passing through Linne clay loam and emerging on the ridge with Olivenhain cobbly loam on the ridge/mesa. Heading south on Terra Nova Drive, the soils change back to Terrace Escarpments into Rice Canyon (Figure 5).

Rice Canyon has Salinas clay loam along its bottom with Linne Clay loam soils on the slopes. Moving up to East J Street, the alignment alternates between Olivenhain cobbly loam and Linne cobbly loam as it descends down Paseo Ladera, until it hits the bottom of Telegraph Canyon with more Salinas clay loam (Figure 5).

According to the USDA (2024) Olivenhain cobbly loam in depressions and Tujunga sand in drainage ways can be hydric. The Sweetwater River is within Tujunga sand 0-5% slopes bounded by Riverwash both north and south in the valley bottom. At Telegraph Canyon the creek runs along Salinas Clay loam. The soils in which potential waters and wetlands that might be affected occur are described in more detail below.

- **Tujunga Sand, 0 to 5 Percent Slopes (Tub).**
  Tujunga Sand is a somewhat excessively drained soil found in floodplains and consists of alluvium derived from granite (NRCS 2024). The soil does not have a hydric rating except when in a drainage way as is present at this location.
- **Riverwash (Rm).**
  Riverwash is an excessively drained, sandy, gravelly, or cobbly alluvium derived from mixed sources (NRCS 2024). The soil does not have a hydric rating except when in a drainage way as is present at this location. The soil does not have a hydric rating.
- **Salinas Clay Loam, 2-9% slopes (SbC)**
  The NRCS identifies Salinas Clay Loam, 2-9% slopes as a well-drained, high runoff soil found in alluvial fans at the base of slopes, consisting of alluvium from different sources not prone to ponding with no hydric soil rating (NRCS 2024). It can be classified as Prime Farmland if irrigated.
- **Linne clay loam, 9-30% slopes (LsE)**
  The NRCS identifies Linne Clay Loam, 9-30% slopes as moderately deep, well-drained soils that formed in material weathered from fairly soft shale and calcareous sandstone. The soil does not have a hydric rating.

With these kinds of soils, potential wetlands might occur at the Sweetwater portion of the alignment but less so at Telegraph canyon.

4 DELINEATION RESULTS

4.1 Features Observed

4.1.1 Sweetwater River

The Sweetwater River in the Sweetwater River Valley is mostly in the unincorporated community which has a narrow low-flow channel with a broad flood plain where the pipeline will cross. The situation at the Willow Street Bridge area was changed somewhat in 2017 through 2019 by the replacement of the previous 2- lane bridge with a 4-lane bridge with bike lanes and sidewalks, resulting in reconfiguration of the channels east of the bridge, and use of the floodplain on either side of the bridge for staging areas and construction. East of the bridge the main channel was left alone as preconstruction surveys had detected federal and state listed as endangered Light-footed Ridgway's rail (*Rallus obsoletus levipes*).

Feature 1

The main channel of the Sweetwater River runs continuously from the Cuyamaca Mountains through the site to the Pacific Ocean. And while it is one of the major river systems in San Diego County, the volume of water in the main channel in this portion of the river is controlled by release from the Sweetwater Reservoir Dam and so is protected from some of the variation of flows that would occur in a natural watershed. The river leaves the base of the dam but is soon joined by a drainage that drains the neighborhoods to the north of the Sweetwater Reservoir. The river then passes through the Bonita Golf Course, before becoming more natural with a broad floodplain supporting willow forest and marsh in the portion of Sweetwater Park north of Central Avenue. After passing under Central Avenue and passing through into the Chula Vista Golf Course the willows narrow and the channel becomes Open Water with cattail (I sp.) and Freshwater Marsh until reaching Willow Street Bridge.

Just east of the Willow Street Bridge, the channel widens, and supports some arroyo willows (*Salix lasiolepis*) and a patch of Arundo (*Arundo donax*) (Photos 1 and 2) before passing under a pedestrian bridge and merging with the channelized drainage from the north (Feature 1A; Figure 11)

The river then passes under the Willow Street Bridge as a much wider, approximately 20-foot-wide channel with no vegetation in it or on its banks (Photos 5 and 6) until it emerges on the other side of the bridge. As soon as it emerges into daylight the river channel narrows to approximately 6-feet wide in mostly native freshwater marsh vegetation communities along the river with cattail (*Typha* sp.) (Photo 11) then black willow (*Salix goodingii*) and arroyo willow-dominated woodland within another section of the Sweetwater Regional Park that extends for many miles to the west. Other species in the Sweetwater River Valley include sandbar willow (*Salix exigua*), mule fat (*Baccharis salicifolia*), broom baccharis (*Baccharis sarothroides*), plus many exotic species including Peruvian pepper (*Schinus molle*), and any large clumps and of Arundo plus perennial herbs such as ragweed (*Ambrosia psilostachya*), eastern annual aster (*Symphyotrichum subulatum*), and salt heliotrope (*Heliotropium curassavicum*) and many exotic weedy annuals close to the river including celery (*Apium graveolens*), fat hen (*Atriplex prostrata*), brass buttons (*Cotula coronopifolia*), bristly ox-tongue (*Helminthotheca echioides*) and common plantain (*Plantago major*).

In the vicinity of the alignment a wide trail comes off Sweetwater Road north of the Willow Street Bridge and descends down into the river floodplain beside Southern Arroyo Willow Riparian Forest (SAWRF) with mature

willows and exotic trees including pecan (*Carya illinoinensis*) then Southern Willow Scrub (SWS) dominated by sandbar willow before the trail heads west (Photo 13). The wetland restoration area is to the east and south of the trail along the bridge (Photo 12) with mule fat, broom Baccharis and salt heliotrope. A mixture of SAWRF and Arundo patches (Disturbed Wetland) occur on both sides of the river channel (photo 11) where the alignment passes before emerging in the parking lot for the commercial buildings at the corner of Willow Street and Bonita Road (Photos 15 and 16 and Figure 11).

The Sweetwater River Valley undergoes periodic flooding during significant storms but while significant rainfall events occurred in 2023 and 2024, prior years were more typical and the evidence of regular flow was limited to the low-flow channel. The events in 2023 and 2024 were extraordinary and did not extend the main channel out into the flood plain.

Feature 1a

Feature 1a starts approximately 1.2 miles to the north then east at the entrance to Rohr Park off Sweetwater Road as a roadside ditch and follows Sweetwater Road to the Willow Street Bridge. Feature 1a underwent significant alteration during the Willow Street Bridge project when a basin was created to allow trails to be built (Photos 17 and 18). While the basin was likely planted with the California bulrush (*Schoenoplectus californicus*) and cattail adjacent plantings on the banks of the basin and linear portion of Feature 1a, have been invaded by exotics including a Arundo, Acacia (*Acacia* sp.), Mexican fan palms (*Washingtonia robusta*), and exotic weeds such as prickly Russian thistle (*Salsola tragus*). From the basin, Feature 1a heads south toward Feature 1 getting increasingly under the east side of the bridge supporting mostly cattail along the channel until the trail bridge crosses over Feature 1a as it merges with Feature 1 (Photo 20). During peak flows, excess water in Feature 1a spills into an overflow channel that was created to take excess water directly under the Willow Street Bridge at its north end, then spills onto the north-south trail on the west side of the bridge and spreads out into the SAWRF to the west of the trail. There was no evidence of bed or bank or any OHWM in these areas.

4.1.2 Telegraph Canyon

The alignment crosses Telegraph Canyon Creek approximately 1,300 feet east of Paseo Ladera. The creek originated historically (1953) in the area northeast of the c the intersection of SR 125 and East H Street in what is now San Miguel Ranch (Historic Aerials 2024). Since then, the lands in the areas have been developed and the creek channelized or culverted until it emerges west of the SR 125 S exit ramp for Otay Lakes Road. The creek then heads southwest on the north side of Otay Lakes Road before crossing to the south side at the entrance to Otay Lakes Lodge. Otay Lakes Road becomes Telegraph Canyon Road, and the creek crosses back to the north 800 feet east of Paseo Ranchero/Heritage Road. The creek then passes under Paseo Ranchero and continues west until reaching the Study Area and alignment.

Telegraph Canyon Creek continues west, passes under Paseo Ladera but 2,350 feet to the west the creek has been channelized until it enters a culvert to go under I-805 and reemerges to the west of I-805 where it is carried by concretized channels and culverts all the way to San Diego Bay.

At the alignment, the channel (Feature 2) is a uniform 6-foot-wide channel with mostly pampas grass (Photo 23), Tamarisk (*Tamarix* sp.), Peruvian pepper (*Schinus molle*), and weeds including wild celery and bristly ox-tongue (Photo 22). A few willows are scattered along Feature 2 in the ARD Study Area and to

the east. V-ditches run along the slope above the creek (Photo 26), capturing water from the slopes and residences during rain events and direct it into the creek rather than allowing erosional channels to form.

4.1.3 Description of Survey and Sample Points

To figure out the extent of potential jurisdictional areas at the features, Wetland Sampling Points (WSPs) were taken to evaluate vegetation, soils, and hydrology.

Sweetwater River

At the Sweetwater River two WSPs were evaluated west of Willow Street Bridge near to the actual location that the alignment crosses the river and one WSP was to evaluate east of Willow Street Bridge. All WSP Wetland Determination Data Forms are presented in Appendix C.

WSP #1 (Figure 7 and Figure 9) was taken above the channel in what appeared to be an area that had been part of the restoration of temporary impacts from the widening of the Willow street bridge. The planning area was dominated by mule fat (Faculative) with a few black willow saplings (Faculative Wetland) and a mixture of native and non-native Obligate Wetland, Faculative, and Faculative Upland forbs (Appendix C). The vegetation worked out to be hydrophytic, and while there was some evidence of hydrology in the form of drift deposits, the soil had no features of a hydric soil (Photo 10). And so, the WSP did not meet the criteria to be considered a USACE wetland.

WSP #2 (Figure 7 and Figure 9) was at the edge of the cattails on the north side of the channel (Photo 8 and 9). The soil was clearly moist, although it was mid-July. The area had the same but fewer of the tree and shrub species as WSP #1. The forbs were different, with several being Faculative Wetland (Appendix C). The vegetation was clearly hydrophytic. The soil was stratified, had textures of sandy clay loams, but had sandy redox evident making it a hydric soil. The fact the soil was saturated in mid-July meant it was being kept moist by the water in the creek. WSP #2 met all three criteria for being considered a potential USACE wetland.

WSP #3, was under willows east of the bridge between the channel and the path of Arundo to the channel (Photo 2). Vegetation was hydric with back willow and Arundo being dominant in the tree stratum, and wild celery dominating the herb stratum. Soil had sandy redox in the stratified clay loam soil (Photo 3 and 4). And the soil was saturated with several other wetland hydrology indicators being present (Appendix C). WSP #3 met all three criteria for being considered a potential USACE wetland.

While the Sweetwater River always has water, and is a perennial stream, Updated Arid West Ephemeral and Intermittent OHWM Datasheets (Curtis and Lichvar 2010) were completed (see Figure 7 and Appendix C OHWM Sheets # 1 and 2). These forms were used to help identify the OHWM and determine the width of the WOTUS. West of the bridge (OHWM #1), the permanent low-flow channel was within previously manipulated banks, and the floodplain was potentially planted as part of a prior restoration. At OHWM #2, under the new bridge, the channel is much wider and shallower with no vegetation and a broad floodplain which showed some evidence of past water presence but no obvious indicator of an OHWM.

Telegraph Canyon

WSP #4 was just above the linear creek that held over 12: depth of solely moving water (Photo 25s). The vegetation was mostly weeds and not hydrophytic. While layered, the soil had no redox features. Lastly, no signs of hydrology added confirmation this was not a potential USACE wetland.

WSP # 5 was as close to the creek as physically possible which meant wetland weed species dominated which here was wild celery and bristly ox-tongue. Despite the vegetation being considered hydrophytic, the soil had a single layer and no redox features (Photo 24). And despite being closer to the creek, no saturation was present though below 2" the soil was moist. It appears WSP #5 is within the manufactured bank of the creek that was graded when Telegraph Canyon Road was widened in the early 1980s.

Telegraph Canyon Creek seems to always have water and be a permanent stream and despite this, an Arid West Ephemeral and Intermittent OHWM Datasheet was prepared (see Figure 8 and Appendix C OHWM Sheets # 3). The OHWM seemed not far above the low-flow channel, with no clear evidence of the water extending very far up the slope to the north. While the low-flow channel kept soil moist near it (WSP #5), the angle of the slope prevented that moisture from extending much beyond the lower slope of the bank.

4.2 Jurisdictional Resources and Analyses

Sweetwater River

Feature 1, the main channel of the Sweetwater River, is a perennial drainage feature and is certainly under USACE, RWQCB, and CDFW/City jurisdiction as a WOTUS and Water of the State/City wetland. Some vegetation associated with the main channel is also under the jurisdiction of all three agencies and the City including the SWS east of Willow Street Bridge, and the FWM west of the bridge as wetland WOTUS and CDFW/City wetlands. The remainder of the floodplain which supports SWS, SAWRF, and DW, some of which is undergoing restoration of the impacts of the Willow Street Bridge widening, is likely only under the jurisdiction of CDFW/City. While the valley can flood after extreme weather events, like those which occurred in January 2024, the river is shielded to some degree from high flows from most rainfall events by it being just below the Sweetwater Dam. The river is only approximately 6" wide as it heads west from the Willow Steet Bridge.

Feature 1A is a partially manufactured wetland as the source of the water is mostly from street runoff from Sweetwater Road while the basin and channel were channelized as part of the Willow Street Bridge widening. The FWM in the basin and along the length are likely jurisdictional to all three agencies as wetland WOTUS and CDFW/City wetlands. The slopes along these features are mostly highly disturbed riparian or wetland adjacent areas with invasive trees, shrubs and weeds that would come under the jurisdiction CDFW/City.

The respective potential jurisdiction at the Sweetwater River is illustrated in Figure 7 and Figure 9

Telegraph Canyon

At Telegraph Canyon Creek, Feature 2, is a perennial drainage with an approximately 6' uniform width because the channel was channelized when Telegraph Canyon Road was widened. It is jurisdictional to all three wetland permitting agencies and the City as WOTUS and CDFW Streambed. The DW that lines the creek, mostly Pampas grass, Mexican fan palm, and tamarisk mixed with natives, is likely under CDFW/City

jurisdiction, though removal and replacement of non-native species with native species would increase its biological value.

The respective potential jurisdiction at the Telegraph Canyon is illustrated in Figure 8 and Figure 10.

Tables 3 and 4 provide the approximate acreage and linear feet of potential jurisdictional resources, per each applicable regulating federal and state agency, as delineated within the project survey area, and as shown in Figure 7 through Figure 10.

City wetlands include all the wetland and riparian resources at Sweetwater Regional Park and at Telegraph Canyon and are the same as potential CDFW jurisdictional (Table 4).

Table 5 provides the vegetation community acreages within the whole project survey area, and the vegetation at the delineated features is presented in Figure 11 and Figure 12. Conditions had not changed much between 2022 and 2025. Wetland resources remained at their previously identified locations with similar widths and areas. The wetland restoration at Sweetwater Regional Park continues to slowly improve, but no arundo patches had been removed, while at Telegraph Canyon, the pampas grass has become more dominant in the Disturbed Wetland almost obscuring the channel completely.

Table 3. Potential Jurisdictional Resources within the ARDR Study Area: USACE/RWQCB.

FEATURE NAME	CHANNEL ACREAGE	LINEAR FEET	COWARDIN CODE	LOCATION (LAT, LONG)	WETLANDS*[1]		TOTAL
					Freshwater Marsh	Southern Willow Scrub	
Sweetwater River Feature 1	0.121	681.4	R2UB4H	32.65892, -117.04238	0.044	0.113	0.278
Sweetwater River Feature 1A	0.075	660.5	R2UB4D	32.659583, -117.042776	0.107	-	0.182
Telegraph Canyon Creek Feature 2	0.027	197.1	R2UB4H	32.623880, -117.01646338	-	-	0.027
Total	0.223	1,539	-	-	0.151	0.113	0.487

*[1] Dominant vegetation species descriptions have been added in Section 4.1.1, Section 4.1.2 and in the sample plot forms.

Table 4. Potential Jurisdictional Resources within the ARDR Study Area: CDFW/City.

FEATURE NAME	ACREAGES OF RESOURCES						
	Streambed	Freshwater Marsh	Southern Willow Scrub	Southern Arroyo Willow Riparian Forest	Disturbed Wetland	Disturbed Wetland - Restoration	Total
Sweetwater River Feature 1	0.129	0.044	0.519	3.052	0.814	0.555	5.113
Sweetwater River Feature 1A	0.075	0.107		-	0.444	-	0.626
Telegraph Canyon Creek Feature 2	0.027		0.048	-	0.221	-	0.296
Total	0.231	0.151	0.567	3.052	1.479	0.555	6.035

Table 5. Vegetation Communities within Study Area

Vegetation Community/Habitat in the Study Area (Holland Code)	MSCP Tier	Total Area Mapped
Freshwater Marsh (52400)	Wetland	2.671
Disturbed Wetland (11200)	Wetland	1.818
Disturbed Wetland - Restoration	Wetland	0.555
Southern Arroyo Willow Riparian Forest (61320)	Wetland	6.027
Southern Willow Scrub (63320)	Wetland	0.855
Open Water (64100)	Wetland	0.031
	Subtotal	***11.958***
Maritime Succulent Scrub (32400)	Tier I	0.81
	Subtotal	***0.81***
Diegan Coastal Sage Scrub (32500)	Tier II	83.59
Diegan Coastal Sage Scrub – Restoration (32500)	Tier II	0.87
Diegan Coastal Sage Scrub - Disturbed (32500)	Tier II	0.60
	Subtotal	***85.06***
Non-native grassland (42200)	Tier IIIB	1.76
	Subtotal	***1.76***
Non-Native Vegetation (11000)	Tier IV	16.82
Eucalyptus Woodland (79100)	Tier IV	9.39
Disturbed Habitat (11300)	Tier IV	7.99
Developed (12000)	Tier IV	198.60
	Subtotal	***232.80***
	TOTAL	**332.40**

5 CONCLUSION

There are two Study Areas of focus for this ARDR for this project: the Sweetwater River location supports one primary and tributary feature, Features 1 and 1A, whereas the Telegraph Canyon Creek location supports one primary feature, Feature 2, that are potentially jurisdictional to the USACE, RWQCB, CDFW, and City as detailed in Table 3 and Table 4, and shown on Figure 7 through Figure 10.

The aquatic features described above are a total of approximately 0.223 acre (1,539 linear ft) of potential USACE/RWQCB non-wetland WOTUS and 0.487 acre of Wetland WOTUS. For CDFW, there are 6.035 acres of potential CDFW wetlands and Riparian habitat including 0.231 acre of Streambed along those 1,539 linear ft within the ARDR Study Areas. City jurisdiction is the same 6.035 acres at the two sites as potential CDFW jurisdiction.

By using Underground Direction Drilling to go under the channels, the project design is avoiding all potential USACE/RWQCB jurisdictional features while temporary impacts to 0.172 acre of potential CDFW/City jurisdiction would occur at Sweetwater River Park from staging and digging a pit for the Underground Direction Drilling.

Assuming concurrence with the provided jurisdictional delineation and the potential impacts, the proposed project would not require a Section 404 authorization from the USACE, and therefore no Section 401 water quality certification from the RWQCB. If RWQCB impacts to Waters of the State are avoided, then no certification or Waste Discharge Permit would be applicable. A Stormwater Pollution Prevention Plan (SWPPP) with active construction BMPs would need to be prepared by a Qualified SWPPP Developer/ Qualified SWPPP Practitioner (QSD/QSP) for the project. While a Lake and Streambed Alteration Agreement from CDFW may be needed, the small impact and lack of substantial effect on any streambed, may not be enough for CDFW to regulate the project, when restoration and mitigation will be provided.

Please note that the applicable agencies will make the final jurisdictional determinations. TDI recommends early coordination with the resource agencies to determine the final jurisdictional boundaries, applicable permitting processes, compensatory mitigation requirements, if any, and other potential permitting issues specific to the proposed project. Agency representatives may request access to the site to field-verify the results of this jurisdictional delineation report with the project applicant, or a designated representative.

The information provided in this report should remain valid for up to five years from the date of the last field effort for the jurisdictional delineation unless site conditions change substantially, or a regulatory agency requires an updated report.

6 QUALIFICATIONS AND CERTIFICATIONS

The following individuals contributed to the fieldwork and/or preparation of this ARDR.

Derek H. Langsford	Ph.D., Ecology, UC Davis/San Diego State University, 1996 B.Sc., (Hons.), Ecological Science, University of Edinburgh, 1985 ESA Certified Senior Ecologist, San Diego County Approved Biologist
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Diego Uribe	M.S., Biology/Ecology, San Diego State University, 2022 B.A., International Business, San Diego State University, 2009
Cai Leão	M.S., Biology. California State University, San Marcos, 2022 B.S., Ecology and Evolution. University of California, Santa Barbara, 2017

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8 FIGURES

Figure 1. Project Regional Location Map.

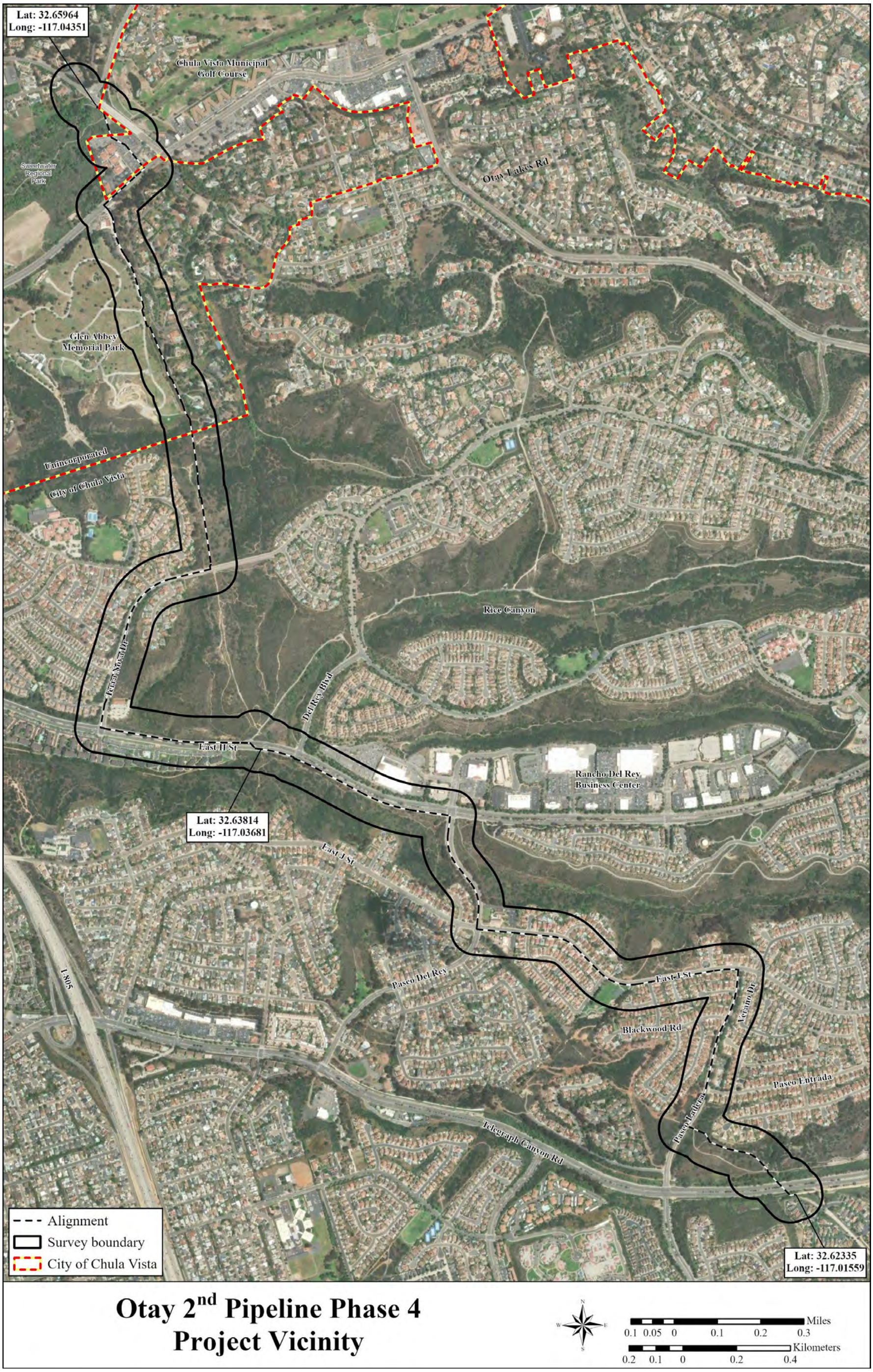
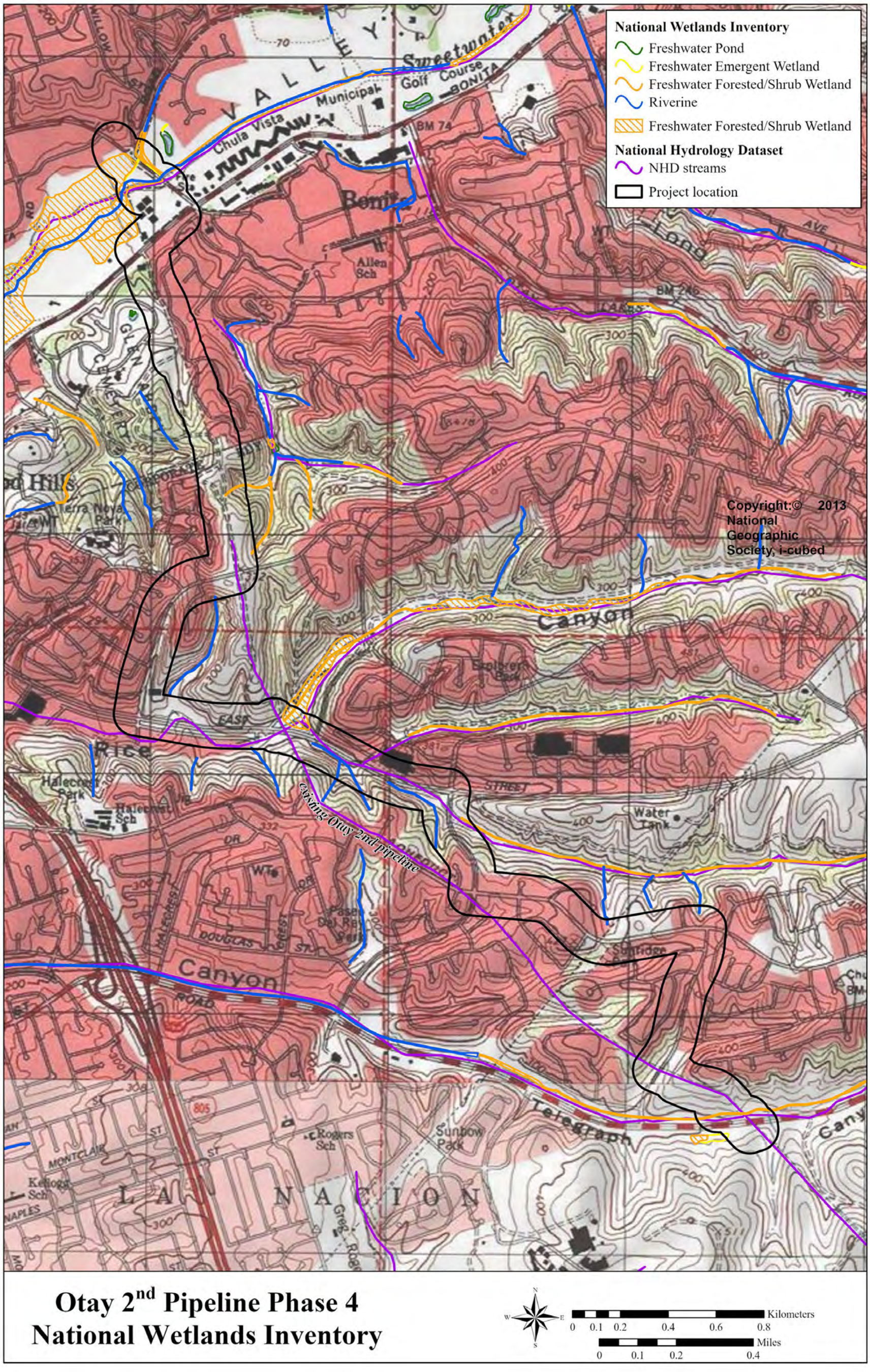


Figure 2. Project Vicinity Map



U.S. Geological Survey (USGS) 7.5-minute National City and Imperial Beach quadrangles. Lat/Long 32.6370, -117.0338, From Township 17S, Range 2W to Township 17S, Range 1W

Figure 3. USGS Topography, NWI, and NHD Data.

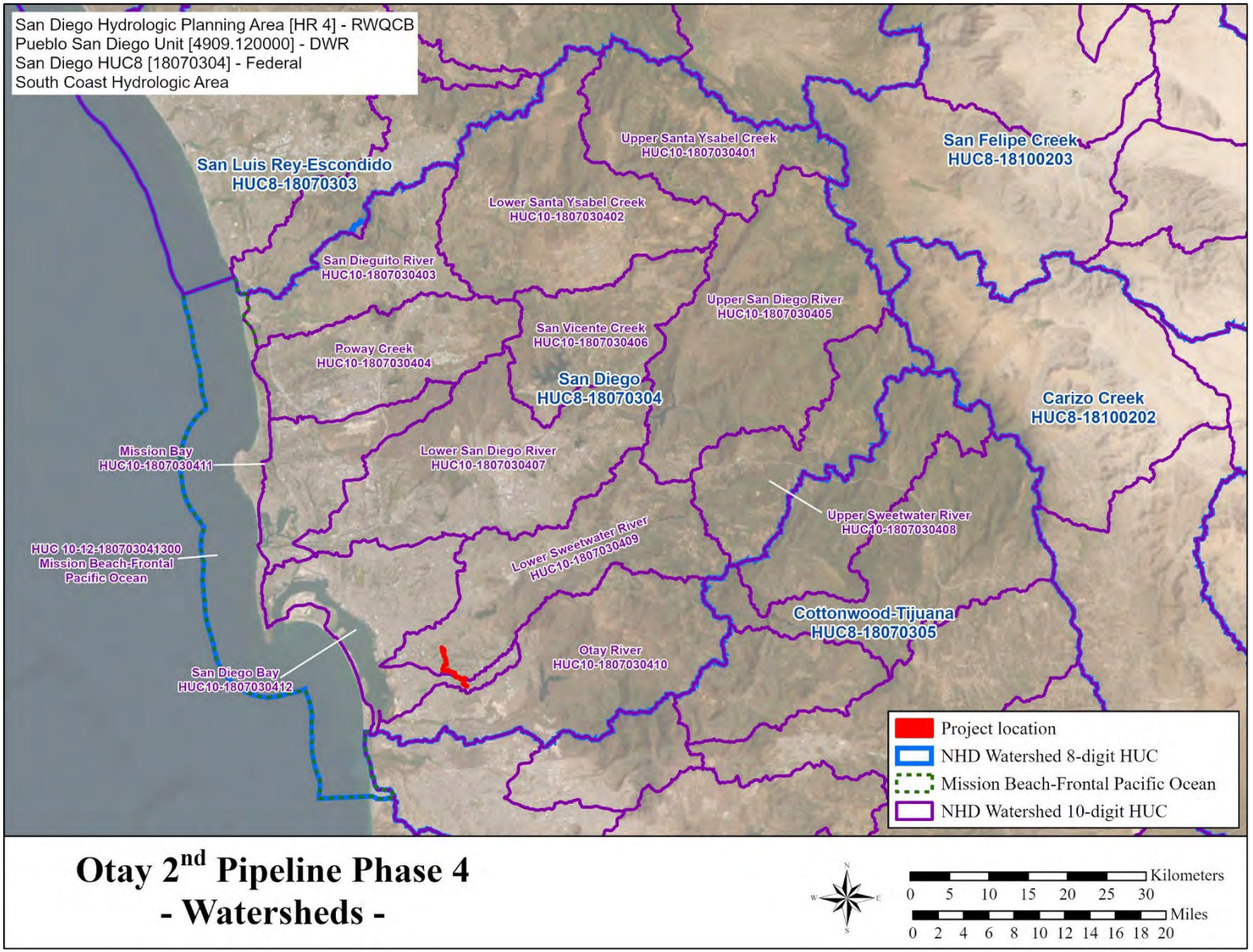


Figure 4. NHD Watersheds

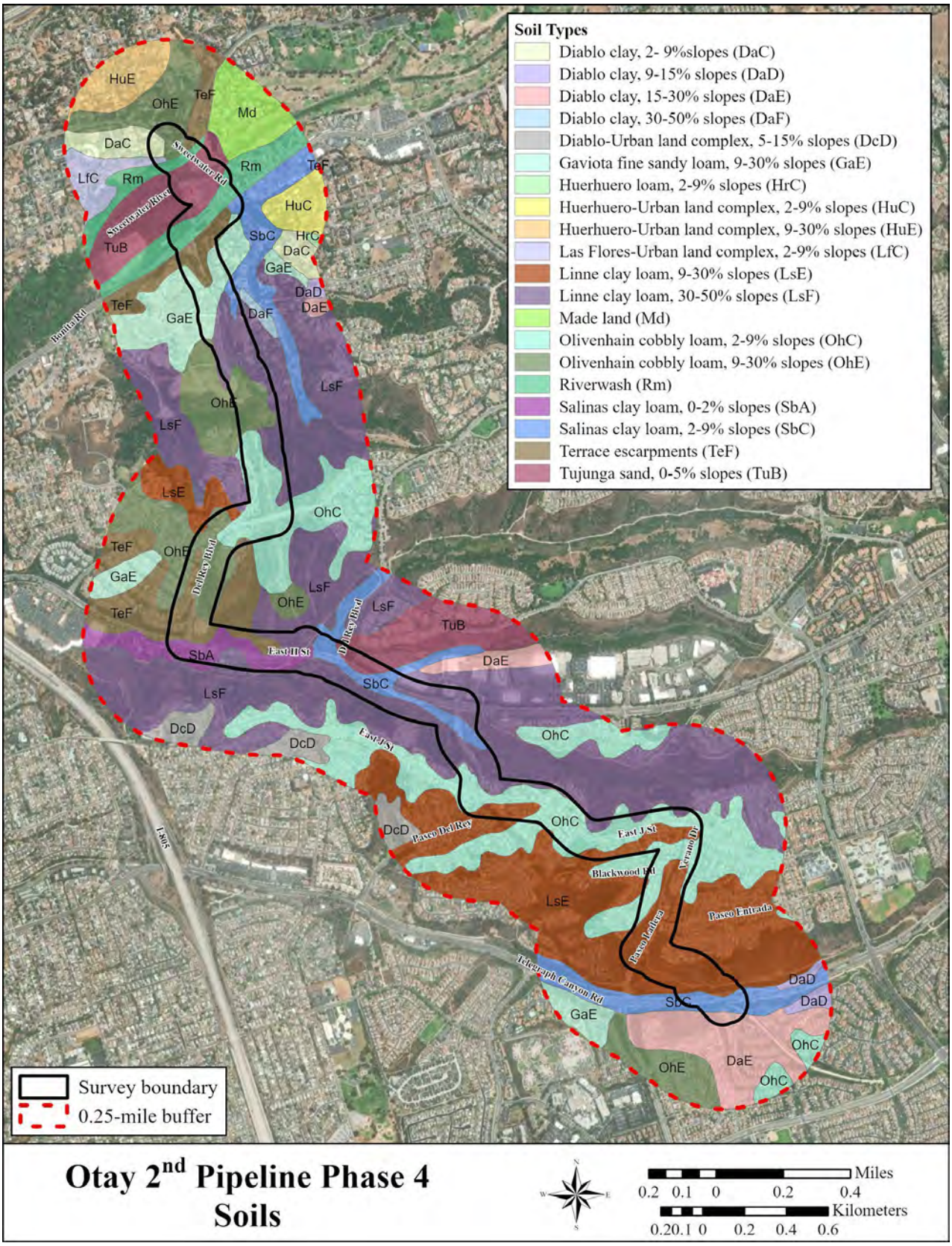


Figure 5. NRCS Soils.

Figure 6. Portion of FEMA Map showing floods areas at Sweetwater River.

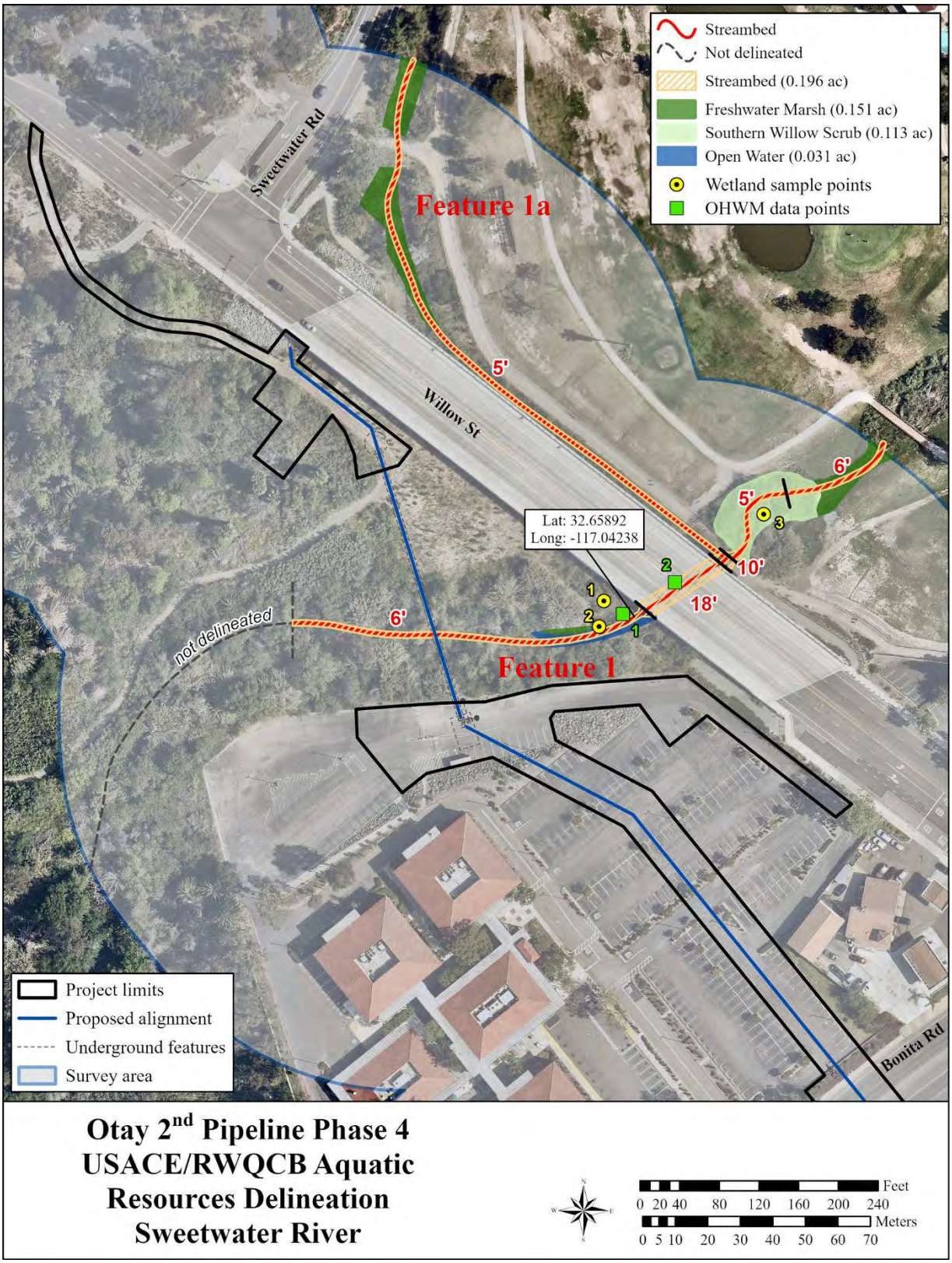


Figure 7. Sweetwater River potential USACE jurisdictional areas

Figure 8. Telegraph Canyon potential USACE jurisdictional areas.

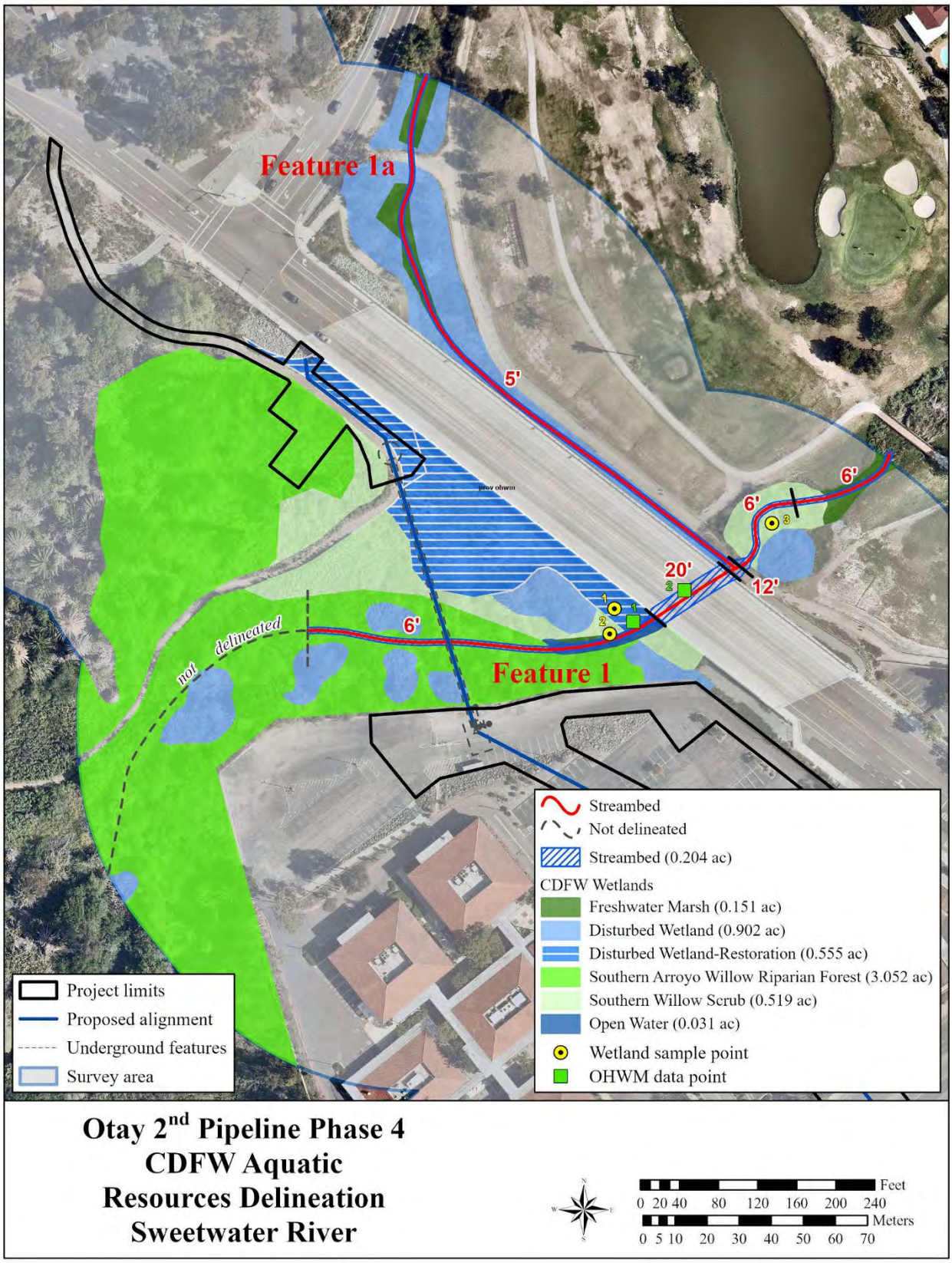


Figure 9. Sweetwater River potential CDFW jurisdictional areas.

Figure 10. Telegraph Canyon potential CDFW jurisdictional areas.

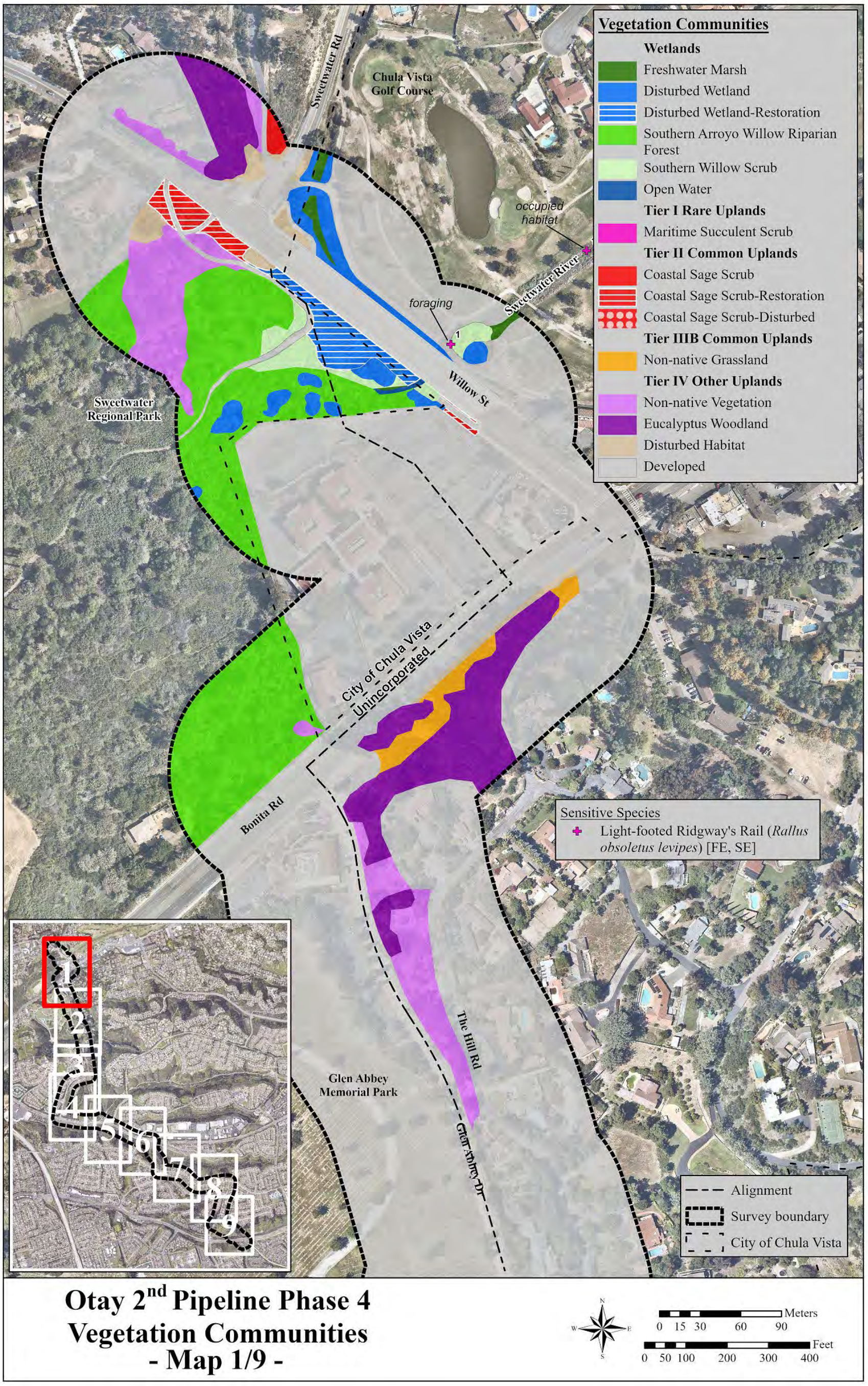


Figure 11. Vegetation & Sensitive Resources mapping for Sweetwater River area (alignment + 300-foot buffer).

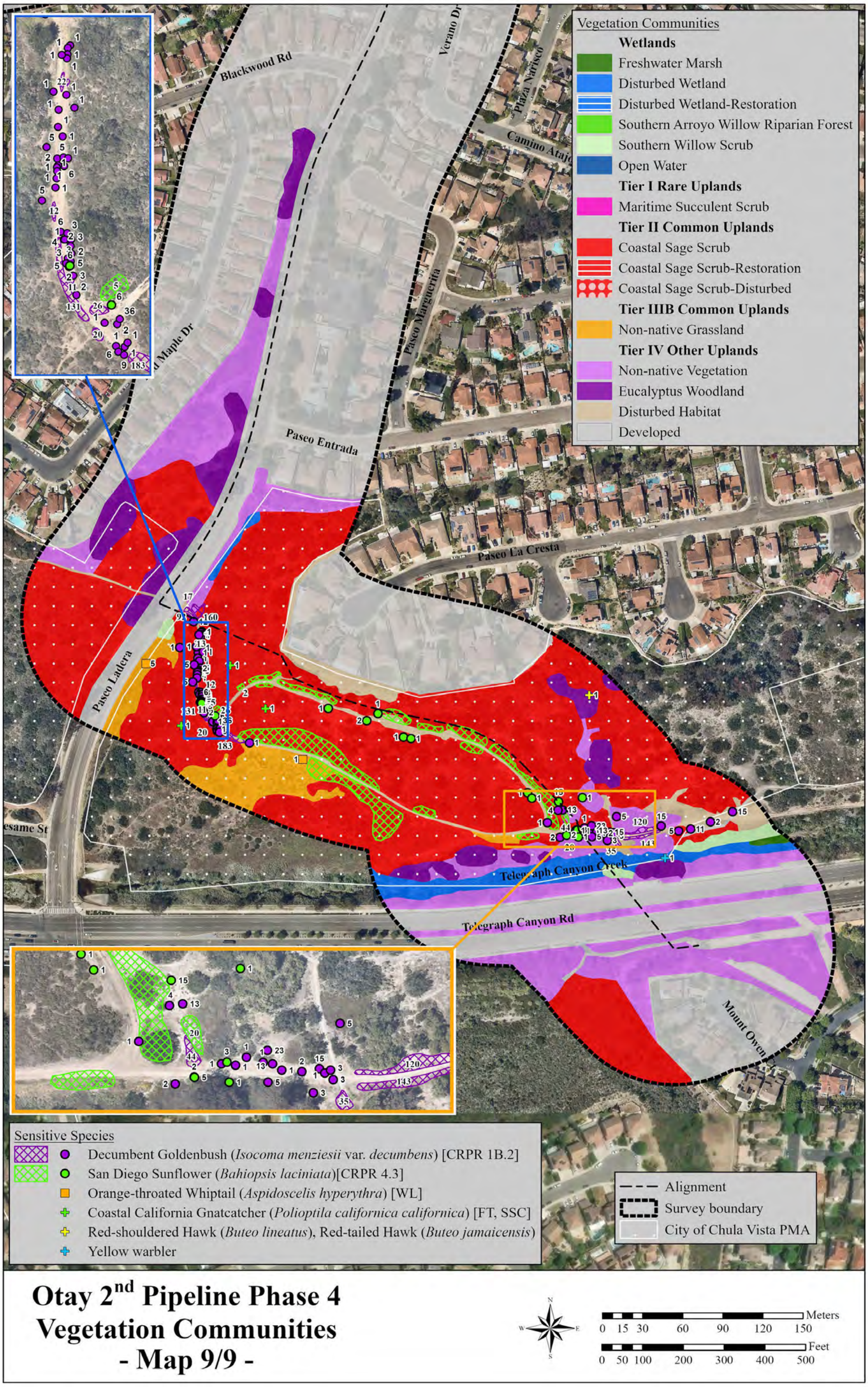


Figure 12. Vegetation & Sensitive Resources mapping for Telegraph Canyon (alignment + 300-foot buffer).

APPENDIX A

CHECKLIST: MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS

REPORT SECTION/ PAGE NUMBER	MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS	ADDITIONAL NOTES
Cover Letter	JD REQUEST AND FORMS: A cover letter indicating whether you are requesting a jurisdictional determination (JD). If you are requesting a JD, you must complete, sign, and return the Request for USACE Jurisdictional Determination (JD) sheet. For preliminary jurisdictional determinations, the Preliminary Jurisdictional Determination Form must be signed and submitted.	To be Provided by Applicant. Forms are included in Appendix E
Section 2.3.5	CONTACT INFORMATION: Contact information for the applicant(s), property owner(s), and agent(s).	
Section 1.1	SITE ACCESS: If the property owner or their representatives will not accompany the USACE to the site, a signed statement from the property owner(s) allowing USACE personnel to enter the property and to collect samples during normal business hours. If the property lacks direct access by public roads (in other words, access requires passage through private property not owned by the applicant), the owner or proponent must obtain permission from the adjacent property owner(s) to provide access for USACE personnel.	Property owner and/or representatives will accompany agency staff for a site visit upon request.
Section 1.1	LOCATION: Directions to the survey area, an address (if available) and one or more set of geographic coordinates expressed in decimal degrees.	
Section 2.3.1, page 7	DELINEATION MANUAL CONFIRMATION: A statement confirming the delineation has been conducted in accordance with the *1987 Corps of Engineers Wetlands Delineation Manual* and applicable regional supplement(s). The regional supplement(s) used must be identified. For OHWM delineations, a statement must be included confirming the use of the OHWM field guide or that it is not applicable.	
Section 4.1	AQUATIC RESOURCE(S) DESCRIPTION: A narrative describing all aquatic resources on-site and an explanation of the mapped boundaries and any complex transition zones. If the site contains resources that only meet one or two of the three wetland criteria or do not exhibit a clear OHWM, describe the rationale for their inclusion or exclusion from the delineation. Also explain if any erosional features, upland swales, ditches and other potential aquatic features were considered but not included in the delineation.	
Figure 7 through 8; Tables 3 and 4	AQUATIC RESOURCE MAPPING AND ACREAGE: Map the outside survey boundary, total extent of aquatic and proposed non-aquatic features, type of feature(s) (WoUS or wetland),and include the total acreage for each polygon.	
Table 1	FIELD WORK DATES: Date(s) field work was completed.	
Tables 3, and 4	AQUATIC RESOURCE TABLE: A table listing all aquatic resources. The table must include the name of each aquatic resource (actual or arbitrary), its Cowardin type, acreage, summary of OHWM/wetland presence, dominant vegetation for each, and location (latitude/longitude in decimal degrees). For linear features, the table must show both acreage and linear feet as well as channel measurements (active channel width).	No OHWM presence or dominant veg info needed in Tables per 2025 guidance. Now described in text.

REPORT SECTION/ PAGE NUMBER	MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS	ADDITIONAL NOTES
Sections 1.1, 2, and 3.2; Table 1; Appendix B	FIELD CONDITIONS: A description of existing field conditions, including current land use, normal conditions, flood/drought conditions, irrigation practices, past or recent manipulation to the site, and characteristics considered atypical (for criteria see OHWM and wetland supplement guides). Include WETS tables or pre-site visit precipitation data as appropriate: https://www.wcc.nrcs.usda.gov/climate/wets_doc.html.	
Section 3.3	HYDROLOGY: A discussion of the hydrology at the site, including all known surface or subsurface sources, drainage gradients, downstream connections to the nearest TNW or interstate water, and any influence from manmade water sources such as irrigation.	
Sections 2.1 and 3.2	REMOTE SENSING: If remote sensing was used in the delineation, provide an explanation of how it was used and include the name, date and source of the tools and data used and copies of the maps/photographs.	Google Maps and Google Earth
Section 3.4, Figure 5	SOILS: Soil descriptions, soil map(s), soil photos, and a discussion of hydric soils (for wetland delineations only).	
Figure 2	USGS QUADRANGLE: A site location map on a 7.5-minute USGS quadrangle. The map must provide the name of the USGS quadrangle, Section, Township, Range, and the latitude and longitude in decimal degree format.	
N/A	BULK UPLOAD FORM: For sites with three or more separate aquatic features a completed copy of the ORM Bulk Upload Aquatic Resources or Consolidated Excel spreadsheet must be submitted.	Only one main and one tributary aquatic feature assessed
Figure 7-Figure 10	FIGURES: Map(s) of all delineated aquatic resources in accordance with the Final Map and Drawing Standards for the South Pacific Division Regulatory Program, available at: http://www.spd.usace.army.mil/Missions/Regulatory/Public-Notices-and-References/Article/651327/updated-map-and-drawing-standards	
Appendix E	SITE PHOTOGRAPHS: Ground photographs showing representative aquatic resource sites (or lack of), as well as an accompanying map of photo-points and table of photographic information (see Final Map and Drawing Standards for the South Pacific Division Regulatory Program item no. 8 a-c).	
Appendix C	DATA FORMS: Completed data forms including all essential information to make a jurisdictional determination [e.g. 2006 Wetland Determination Data Form—Arid West Supplement; 2010 Arid West Ephemeral and Intermittent Streams OHWM Datasheet].	Features are perennial so no OHWM Datasheets are provided
Section 2.1 and 2,2	METHODS: A description of the methods used to survey the aquatic resource boundaries. If GPS data is used, the level of accuracy must be included. Ideally, the GPS equipment should have the capability of sub-meter (<=1 meter) level horizontal accuracy.	

REPORT SECTION/ PAGE NUMBER	MINIMUM STANDARDS FOR ACCEPTANCE OF AQUATIC RESOURCES DELINEATION REPORTS	ADDITIONAL NOTES
Appendix G	GIS DATA: Digital data for the site, aquatic resource boundaries, and data point locations must be provided in a geographic information system (GIS) format, preferably either ESRI shapefiles or Geodatabase format, but Google Earth KMZ or KML files may be acceptable non-complex projects. Each GIS data file must be accompanied by a metadata file containing the appropriate geographic coordinate system, projection, datum, and labeling description. If GIS data is unavailable or otherwise cannot be produced and the USACE determines a site visit is necessary, the aquatic resource boundaries should be physically marked with numbered flags or stakes to facilitate verification by the USACE.	TBP

APPENDIX B

NRCS WETS TABLE

WETS Station: SAN DIEGO BROWN FIELD, CA
Requested years: 1992 - 2022

Month	Avg Max Temp	Avg Min Temp	Avg Mean Temp	Avg Precip	30% chance precip less than	30% chance precip more than	Avg number days precip 0.10 or more	Avg Snowfall
Jan	67.6	44.1	55.8	1.44	0.5	1.73	3	-
Feb	66.7	44.6	55.7	1.94	0.75	2.35	4	-
Mar	68	47.1	57.5	1.2	0.6	1.47	3	-
Apr	70.1	49.9	60	0.83	0.36	0.97	2	-
May	71.8	54.6	63.2	0.29	0.04	0.26	1	-
Jun	74.8	58.4	66.6	0.05	0	0.05	0	-
Jul	78.7	62	70.3	0.03	0	0.03	0	-
Aug	80.6	63.1	71.8	0.02	0	0.01	0	-
Sep	80.6	61.2	70.9	0.14	0.04	0.14	0	-
Oct	77.1	55.6	66.4	0.51	0.09	0.48	1	-
Nov	72.2	48.7	60.5	0.94	0.4	1.11	2	-
Dec	66.7	44	55.3	1.73	0.7	2.1	3	-
Annual:					7.12	10.48		
Average	72.9	52.8	62.8	-	-	-	-	-
Total	-	-	-	9.13			20	-

GROWING SEASON DATES			
Years with missing data:	24 deg = 5	28 deg = 5	32 deg = 5
Years with no occurrence:	24 deg = 26	28 deg = 26	32 deg = 24
Data years used:	24 deg = 26	28 deg = 26	32 deg = 26
Probability	24 F or higher	28 F or higher	32 F or higher
50 percent *	No occurrence	No occurrence	No occurrence
70 percent *	No occurrence	No occurrence	No occurrence

* Percent chance of the growing season occurring between the Beginning and Ending dates.

STATS TABLE - total precipitation (inches)

Yr	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annl
1945				M0.02		M0.50	M0.01	MT	0.01	MT	M0.22	M0.40	1.16
1946	0.11	0.58	1.4	0.01	MT								2.1
1947													
1948													
1949													
1950													
1951													
1952													
1953													
1954										T	0.6	0.53	1.13
1955	3.97	0.93	M0.38	M0.90	1.55	0.02	0.04	0.06	T	T	0.57	0.96	9.38
1956	2.09	0.38	T	1.75	0.36	T	0.02	T	0	0.48	0	M0.04	5.12
1957	6.59	0.34	1.78	1.26	1.65	M0.55	T	0.01	0.08	2.24	1.27	0.98	16.8
1958	0.66	M3.01	3.8	2.9	0.22	0	0	0.22	0.12	0.08	0.83	0.04	11.9
1959	0.69	4.27	T	0.48	M0.02	T	T	0.02	0.02	0.33	0.01	2.07	7.91
1960	3.85	1.7	0.53	0.97	0.24	T	T	T	M0.48	M0.13	1.09	0.18	9.17

1961	0.85	0.09	1.69	0.01		2.64
1962						
1963						
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1996													
1997													
1998				1.85	0.91	0.11	0.03	0.17	0.13	0.31	0.97	1.2	5.68
1999	1.96	0.61	1.25	1.64	0.03	0.14	0.18	0.01	0.14	0.03	0.09	0.39	6.47
2000	0.22	3.19	1.06	0.98	M0.03	M0.09	0.01	0.11	0.04	1.01	0.21	0.16	7.11
2001	3.04	2.97	1.12	1.63	0.09	0.06	0.04	0	0.07	0.09	1.21	0.75	11.1
2002	0.51	0.1	0.49	0.5	T	M0.00	0	0.01	0.32	0.01	0.43	M0.57	2.94
2003	0.09	2.68	1.81	1.7	0.29	M0.08	0.03	0.02	0.02	0.02	0.59	0.5	7.83
2004	0.41	3.58	M0.14	0.84	T	0	0	0	M0.00	4.25	0.86	2.81	12.9
2005	4.15	4.33	1.38	0.29	0.03	0.1	0.12	0	0.01	0.39	0.11	0.14	11.1
2006	0.4	1.47	2.03	1.05	0.59	0.08	0.17	0.01	0	1.02	0.22	0.6	7.64
2007	0.86	2.99	0.22	0.52	0.01	0	T	T	0.14	0.13	0.91	0.58	6.36
2008	2.8	1.04	0.39	T	0.19	0.02	0.01	T	0.02	0.12	1.76	3.88	10.2
2009	0.07	2.4	0.16	0.22	0.03	0.01	0	T	0.01	0.04	0.41	2.57	5.92
2010	3.57	2.77	0.74	1.83	0.01	0	T	0	0.18	1.77	0.7	4.08	15.7
2011	0.55	3	1.51	0.34	0.3	0.35	0.01	0	0.15	0.3	3.02	0.78	10.3
2012	0.63	M1.32	1.66	1.28	0.01	0	T	0.04	0.06	0.61	0.28	2.38	8.27
2013	1.89	0.65	1.06	0.1	0.22	0	0.02	T	T	0.54	0.41	0.37	5.26
2014	0.07	0.97	0.72	0.57	0.02	0	0.06	0.02	0.02	T	0.29	3.05	5.79
2015	0.36	0.36	1.47	0.25	1.25	0.01	M0.09	T	0.86	0.88	1.35	1.54	8.42
2016	2.48	0.01	1.03	1.04	0.8	0	T	0	0.74	0.01	0.95	4.17	11.2
2017	3.97	4.18	0.09	0	1.32	T	0.01	T	0.13	T	0.31	0.09	10.1
2018	1.58	0.93	1.03	0.07	0.13	T	T	MT	T	0.11	1.18	1.98	7.01
2019	2.06	4.58	0.92	0.29	1.05	0.04	T	0	0.18	T	4.42	4.94	18.5
2020	0.31	0.79	3.61	3.36	T	0.08	0	0	0	0.12	0.44	0.96	9.67

2021	2.09	0.24	2	0.13	0.05	T	T	T	0.06	0.93	0	3.47	8.97
2022	0.5	1.33	3	0.37	0.01	T	T		0	0.28	0.18	2.41	1.27	9.35

Notes:
Data missing in any month have an "M" flag.
A "T" indicates a trace of precipitation.

Data missing for all days in a month or year is blank.

Creation date: 2024-06-24

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APPENDIX C

WETLAND DETERMINATION AND OHWM DATA FORMS

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WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Otay 2nd Pipeline, Phase 4 City/County: San Diego Sampling Date: 7/20/22

Applicant/Owner: City of San Diego State: CA Sampling Point: #1

Investigator(s): Derek Langsford, Ben Van Allen Section, Township, Range: NA

Landform (hillslope, terrace, etc.): flat Local relief (concave, convex, none): T17S, R2W Slope (%): <1%

Subregion (LRR): C Lat: 32.658995 Long: -117.042493 Datum: WGS 84

Soil Map Unit Name: Tujunga sand NWI classification: None

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

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

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

Remarks:

WSP #1 was 20' away from WSP #2 and within an area that may have been restored from the bridge project.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 10 x 20)			
1. Baccharis salicifolia	50%	Y	FAC
2. Salix gooddingii	10%	N	FACW
3.			
4.			
5.			
	60% = Total Cover		
Herb Stratum (Plot size: _____)			
1. Ambrosia psilostachya	5%	Y	FACU
2. Symphyotrichum subulatum	2%	Y	OBL
3. Plantago ovata	1%	N	FACU
4. Helminthoteca echioides	1%	N	FAC
5. Heliotropium curassavicum	1%	N	FACU
6.			
7.			
8.			
	10% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	2	x 1 =	2
FACW species	10	x 2 =	20
FAC species	50	x 3 =	150
FACU species	7	x 4 =	28
UPL species		x 5 =	
Column Totals:	69 (A)		200 (B)

Prevalence Index = B/A = 2.9

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #1

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-14	10YR 4/3						LS	one single layer of hte same soil

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: NA

Depth (inches): ___

Hydric Soil Present? Yes ___ No ✓

Remarks:

No redox. Soil had one horizon. Likely had previosuly been worked as part of restoration.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

Within FP of Sweetwater River but not close enough to the channel to stay wet.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Otay 2nd Pipeline, Phase 4 City/County: San Diego Sampling Date: 7/20/22

Applicant/Owner: City of San Diego State: CA Sampling Point: #2

Investigator(s): Derek Langsford, Ben Van Allen Section, Township, Range: T17S, R2W

Landform (hillslope, terrace, etc.): floodplain Local relief (concave, convex, none): none Slope (%): <2%

Subregion (LRR): C Lat: 32.658930 Long: -117.04251 Datum: WGS 84

Soil Map Unit Name: Tujunga sand NWI classification: None

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

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

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

Remarks:

Location was close enough to the channel for the soil to be saturated below the surface. Location was within area mapped as FWM .

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: 20x8)			
1. Baccharis salicifolia	5%	Y	FAC
2. Salix gooddingii	10%	Y	FACW
3.			
4.			
5.			
	15% = Total Cover		
Herb Stratum (Plot size: _____)			
1. Apium graveolens	30%	Y	NI
2. Symphyotrichum subulatum	20%	Y	OBL
3. Ambrosia psilostachya	10%	N	FACU
4. Juncus effusus	1%	N	FACW
5. Atriplex prostrata	5%	N	FACW
6. Cotula coronopifolia	5%	N	OBL
7.			
8.			
	71% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

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

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	25	x 1 =	25
FACW species	16	x 2 =	32
FAC species	5	x 3 =	15
FACU species	10	x 4 =	40
UPL species		x 5 =	
Column Totals:	86 (A)		112 (B)

Prevalence Index = B/A = 1.30

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

SOIL

Sampling Point: #2

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

Depth (inches)	Matrix Color (moist)	Matrix %	Redox Features Color (moist)	Redox Features %	Type[1]	Loc[2]	Texture	Remarks
0-0.5	5YR 2.5/2	100%					SCL	
0.5-6	10YR 4/2	100%					SCL	
6-7	10YR 3/2	100%					LS	
7-12	10YR 4/2	98%	5YR 5/6	2%		M	SCL	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: NA

Depth (inches): ___

Hydric Soil Present? Yes ✓ **No** ___

Remarks:

Soil layer differences were subtle but clear enough to be distinctive. 7-12 inch layer has redox and black streaks. Soil may be early in its hydric development enhanced by nearby sprinkler head. Soil was moist despite no rain in > 3 mo.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

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

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

Remarks:

Soil moist despite no rain in > 3 mo. Sprinkler for nearby restortion may be keep soil moist.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Otay 2nd Pipeline, Phase 4 City/County: San Diego Sampling Date: 7/20/22

Applicant/Owner: City of San Diego State: CA Sampling Point: #3

Investigator(s): Derek Langsford, Ben Van Allen Section, Township, Range: T17S, R2W

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

Subregion (LRR): C Lat: 32.659186 Long: 117.04200 Datum:

Soil Map Unit Name: NWI classification:

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

Are Vegetation ____, Soil ____, or Hydrology ____ significantly disturbed? Are "Normal Circumstances" present? Yes ✓ No ____

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 ____	**Is the Sampled Area within a Wetland?** Yes ✓ No ____
Hydric Soil Present?	Yes ✓	No ____	
Wetland Hydrology Present?	Yes ✓	No ____	

Remarks:

Under the canopy of willows east of the bridge, ground quite moist at depth. Soil had dark streaks of decaying organic matter.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: ____)	Absolute % Cover	Dominant Species?	Indicator Status
1. Salix gooddingii	60%	Y	FACW
2. Arundo donax	30%	Y	FACW
3. Phoenix canaraiensis	10%	N	UPL
4.			
	100%	= Total Cover	
Sapling/Shrub Stratum (Plot size: ____)			
1.			
2.			
3.			
4.			
5.			
		= Total Cover	
Herb Stratum (Plot size: ____)			
1. Apium graveolens	30%	Y	NI
2. Helinthothecum echioides	1%	N	FAC
3. Acmispon tomentosus	2%	N	UPL
4. Lysimachia arvensis	1%	N	UPL
5. Xanthium strumarium	1%	N	FAC
6.			
7.			
8.			
	35%	= Total Cover	
Woody Vine Stratum (Plot size: ____)			
1.			
2.			
		= Total Cover	

% Bare Ground in Herb Stratum 20% % Cover of Biotic Crust 0

Dominance Test worksheet:

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

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

Percent of Dominant Species That Are OBL, FACW, or FAC: 66.7% (A/B)

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 90	x 2 =	180
FAC species 2	x 3 =	4
FACU species	x 4 =	
UPL species 13	x 5 =	65
Column Totals: 105 (A)		249 (B)

Prevalence Index = B/A = 2.37

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

✓ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No ____

Remarks:

SOIL

Sampling Point: #3

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-4	2.5Y 5/2	100%					Sand	
4-7	10YR 3/2	80%	7.5YR 5/4	10%	RM	PL	CL	Roots
7-11	7.5YR 4/4	60	2.5YR 4/6	40%	CS	M	sand	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes ✓ No ___

Remarks:

Sandy floodplain; moist at depth. 3 distinct layers but no chroma <2 so does not meet criterion A5. But clear redox layer and saturaion at depth indicates hydric soil.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

Saturation Present? (includes capillary fringe) Yes ✓ No ___ Depth (inches): 7-11

Wetland Hydrology Present? Yes ✓ No ___

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Otay 2nd Pipeline Ph. 4 - Telegraph Canyon Road City/County: San Diego, CA Sampling Date: 7/19/2022

Applicant/Owner: City of San Diego State: CA Sampling Point: #4

Investigator(s): Derek Langsford, Josediego Uribe Section, Township, Range: T18S, R1W

Landform (hillslope, terrace, etc.): Channel Local relief (concave, convex, none): Concave Slope (%): 5-10%

Subregion (LRR): C-Mediterranean Lat: 32.623965 Long: -117.016277 Datum: WGS 84

Soil Map Unit Name: Linne Clay Loam 9-30% slopes NWI classification: None

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

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

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

Remarks:

Upland above the soft sides channelized drainage

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: 10x10)			
1. Centauria melitensis	10%	Y	NI
2. Gutierrezia californica	5%	N	NI
3. Brassica nigra	5%	N	NI
4. Helminthotheca echioides	10%	N	FAC
5. Foeniculum vulgare	1%	N	NI
6.			
7.			
8.			
	31% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 69% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:
OBL species _____	x 1 = _____
FACW species _____	x 2 = _____
FAC species 10	x 3 = 30
FACU species _____	x 4 = _____
UPL species 21	x 5 = 104
Column Totals: 31 (A)	134 (B)

Prevalence Index = B/A = 4.3

Hydrophytic Vegetation Indicators:

___ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes _____ No ✓

Remarks:

NI are all treated as UPL as they are rarely, if ever, found in wetlands

SOIL

Sampling Point: #4

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

Depth (inches)	Matrix Color (moist)	%	Redox Features Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-3	10YR 3/2	100%					Loamy sa	
3-4	2.5Y 6/2	100%					Sandy loa	Somewhat clay-like texture
4-12	2.5Y 5/2	100%					Loamy sa	

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

No redox features. Clearly an upland soil

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Above bank of contained channel.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: Otay 2nd Pipeline Ph. 4 - Telegraph Canyon Road City/County: San Diego, CA Sampling Date: 7/19/2022

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

Investigator(s): Derek Langsford, Josediego Uribe Section, Township, Range: T18S, R1W

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

Subregion (LRR): C-Mediterranean Lat: 32.623911 Long: -117.016228 Datum: WGS4

Soil Map Unit Name: Linne clay loamm 9-30% slopes NWI classification: PSSC

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

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

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

Remarks:

North side of creek. Channel may have been excavated when Telegraph Canyon Road was widened in 1980 and soils adjacent to permanently but very slowly running creek have not been saturated.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status
1.			
2.			
3.			
4.			
	_____ = Total Cover		
Sapling/Shrub Stratum (Plot size: _____)			
1.			
2.			
3.			
4.			
5.			
	_____ = Total Cover		
Herb Stratum (Plot size: _____)			
1. Apium graveolens	55%	Y	NI
2. Helminthotheca echioides	40%	Y	FAC
3. Foeniculum vulgare	2%	N	NI
4. Melilotus albus	2%	N	NI
5. Euthamia occidentalis	1%	N	FACW
6. Heliotropium curassavicum	1%	N	FACU
7.			
8.			
	100% = Total Cover		
Woody Vine Stratum (Plot size: _____)			
1.			
2.			
	_____ = Total Cover		

% Bare Ground in Herb Stratum 69% % Cover of Biotic Crust 0%

Dominance Test worksheet:

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

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

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

Prevalence Index worksheet:

Total % Cover of:	Multiply by:	
OBL species	x 1 =	
FACW species 1	x 2 =	1
FAC species 40	x 3 =	120
FACU species 1	x 4 =	4
UPL species 4	x 5 =	20
Column Totals: 46 (A)		145 (B)

Prevalence Index = B/A = 3.15

Hydrophytic Vegetation Indicators:

✓ Dominance Test is >50%

___ Prevalence Index is ≤3.0[1]

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

___ Problematic Hydrophytic Vegetation[1] (Explain)

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

Hydrophytic Vegetation Present? Yes ✓ No _____

Remarks:

Close to the water of perennial creek. Apium was omitted from calcs but Melilotus and Foeniculum were treated as UPL.

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
0-12	10YR 4/3	100%					Clay loam	Moist but not saturated at depth

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

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

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

Indicators for Problematic Hydric Soils[3]:

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

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No ✓

Remarks:

Singular soil layer. Lighter top 2" just drier.

HYDROLOGY

Wetland Hydrology Indicators:

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

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

Secondary Indicators (2 or more required)

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

Field Observations:

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

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

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

Wetland Hydrology Present? Yes _____ No ✓

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

Remarks:

Location on bank by channel. Apparently channel levels does not rise for long enough to saturate soils to create wetland soils. Most plants were non-native and channel was graded 45 years ago.

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Otay 2nd Pipeline Ph 4
Project Number: T2207
Stream: Feature 1
Investigator(s): Derek Langsford/Ben Van Allen

Date: 7/21/22 **Time:** 10:45
Town: San Diego **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: Just west of Willow St Bridge on Feature 1

Projection: Mercator **Datum:** WGS84
Coordinates: 32.658947,-117.042436

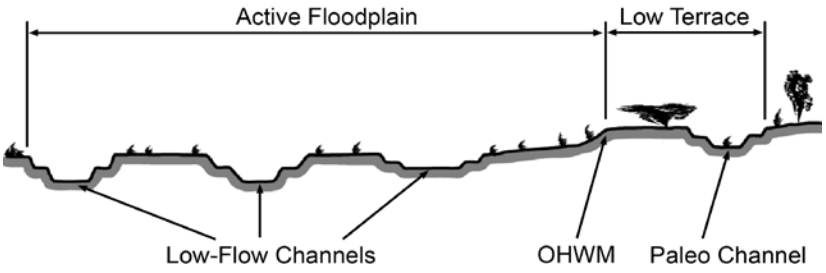
Potential anthropogenic influences on the channel system:
Recent construction of the new Willow Street Bridge and restoration work may have changed drainage patterns but the channel and immedate area appears normal.

Brief site description:
A section of the Sweetwater River just west of the Willow Street Bridge in Sweetwaer Regional Park within a broad floodplain.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Apr 2015 though Jul 2021
- [X] Topographic maps
- [X] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

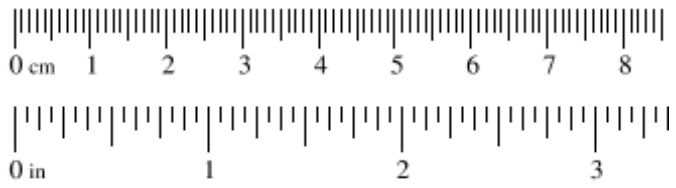


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

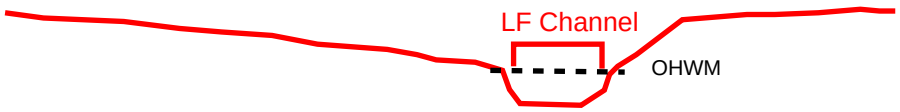
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: T2207 **Cross section ID:** OHWM #1 **Date:** 7/21/22 **Time:** 10:45

Cross section drawing:



OHWM

GPS point: 32.658947, -117.042436

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Perceived limit of regular season flow. Channel may have been excavated because of linearity and work during bridge construction 2017-2019.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 32.658947, -117.042436

Characteristics of the floodplain unit:

Average sediment texture: NA

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

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

Indicators:

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

Comments:

Water present in low flow channel likely through managed release from Sweetwater Dam upstream plus run offf from limited watershed, residential and Golf Course irrigation.

Project ID: T2213-06 **Cross section ID:** OHWM #1 **Date:** 7/21/22 **Time:** 10:45

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

GPS point: 32.659186, -117.042850

Characteristics of the floodplain unit:

Average sediment texture: sandy loam

Total veg cover: _____ % Tree: _____% Shrub: 5 % Herb: 3 %

Community successional stage:

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

Indicators:

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

Comments:

Area in restoration, no evidence of water flow or presence of standing water. Plants struggling despite 3 years in ground.

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Otay 2nd Pipeline Ph 4
Project Number: T2207
Stream: Feature 1
Investigator(s): Derek Langsford/Ben Van Allen

Date: 7/21/22 **Time:** 10:15
Town: San Diego **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [X] / N [ ] Is the site significantly disturbed?

Location Details: Under Willow St Bridge on Feature 1

Projection: Mercator **Datum:** WGS84
Coordinates: 32.658907, -117.042088

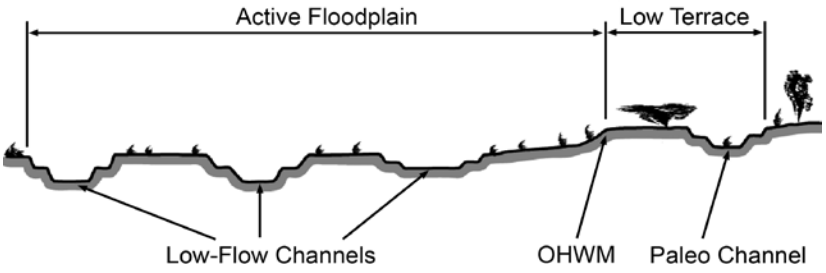
Potential anthropogenic influences on the channel system:
Recent construction of the new Willow Street Bridge with area under bridge devoid of vegetation and channel far wider then weast or west.

Brief site description:
A section of the Sweetwater River just west of the Willow Street Bridge in Sweetwaer Regional Park within a broad floodplain.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Apr 2015 though Jul 2021
- [X] Topographic maps
- [X] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
- [ ] History of recent effective discharges
- [ ] Results of flood frequency analysis
- [ ] Most recent shift-adjusted rating
- [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

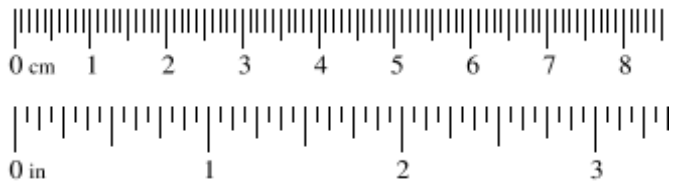


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

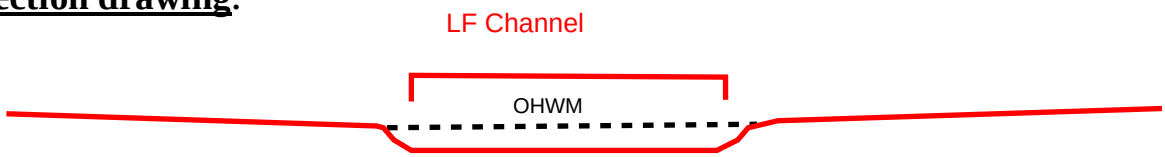
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: T2207 **Cross section ID:** OHWM #2 **Date:** 7/21/22 **Time:** 10:15

Cross section drawing:



OHWM

GPS point: 32.658907, -117.042088

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☐ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Perceived limit of regular season flow. Wide channel visible before bridge widened but now under wider bridge is devoid of vegetation. Floodplain heavily used by people tough some erosion around bridge piles shows some rain events likely flood the majority of land under the bridges.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 32.658947, -117.042436

Characteristics of the floodplain unit:

Average sediment texture: NA

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

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

Indicators:

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

Comments:

Water present in low flow channel likely through managed release from Sweetwater Dam upstream plus run offf from limited watershed, residential and Golf Course irrigation.

Project ID: T2213-06 **Cross section ID:** OHWM #1 **Date:** 7/21/22 **Time:** 10:15

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

GPS point: 32.659186, -117.042850

Characteristics of the floodplain unit:

Average sediment texture: sandy loam

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

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

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☐ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: erosion around piles
- ☐ Other: _____
- ☐ Other: _____

Comments:

Potentially graded under side of bridge with low flow-channel and no vegetation but some indicators of water presence during large rainfall events or dam releases.

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____ % Shrub: _____ % Herb: _____ %

Community successional stage:

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

Indicators:

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

Comments:

Arid West Ephemeral and Intermittent Streams OHWM Datasheet

Project: Otay 2nd Pipeline Ph 4
Project Number: T2207
Stream: Feature 1 Telegraph Canyon
Investigator(s): Derek Langsford/Diego Uribe

Date: 7/19/22 **Time:** 15:25
Town: San Diego **State:** CA
Photo begin file#: **Photo end file#:**

Y [X] / N [ ] Do normal circumstances exist on the site?

Y [ ] / N [X] Is the site significantly disturbed?

Location Details: North of Telegraph Cyn Rd, east of Peseo Ladera

Projection: Mercator **Datum:** WGS84
Coordinates: 32.624050, -117.016229

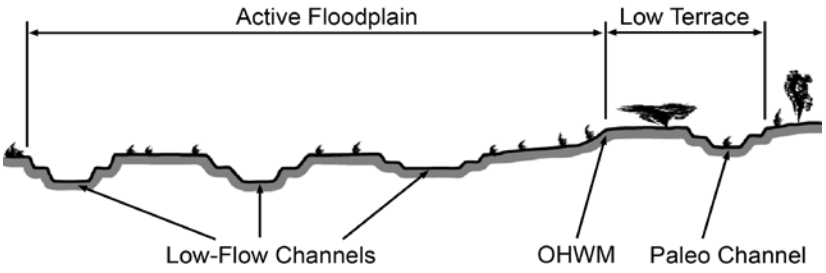
Potential anthropogenic influences on the channel system:
Channel was graded when Telegraph Canyon Rd was widned in the early 1980s. Profile is unform along the street because it was graded.

Brief site description:
Gradual slope from the north to the channel with a much steeper bank up to Telegraph Canyon Rd and is now overwhelmed by exotic species. Channel was accsessed from the south in an opening of exotic forbs.

Checklist of resources (if available):

- [X] Aerial photography
  Dates: Apr 2015 though Jul 2021
- [X] Topographic maps
- [X] Geologic maps
- [X] Vegetation maps
- [X] Soils maps
- [ ] Rainfall/precipitation maps
- [ ] Existing delineation(s) for site
- [ ] Global positioning system (GPS)
- [ ] Other studies
- [ ] Stream gage data
  Gage number:
  Period of record:
  - [ ] History of recent effective discharges
  - [ ] Results of flood frequency analysis
  - [ ] Most recent shift-adjusted rating
  - [ ] Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event

Hydrogeomorphic Floodplain Units

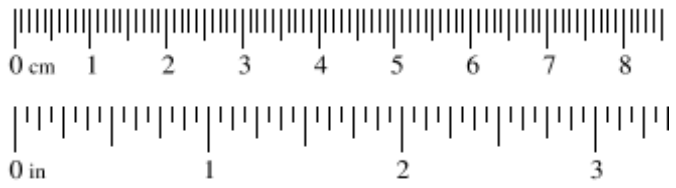


Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM:

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

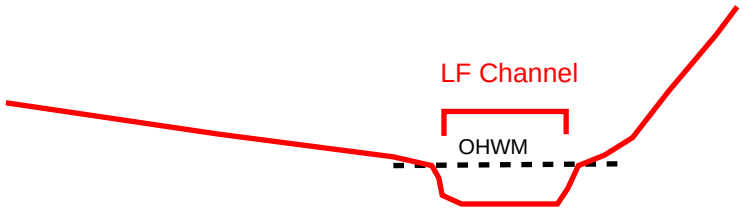
Wentworth Size Classes

Inches (in)	Millimeters (mm)	Wentworth size class	
10.08	256	Boulder	
		Cobble	Gravel
2.56	64	Pebble	
0.157	4	Granule	
0.079	2.00	Very coarse sand	
0.039	1.00	Coarse sand	
0.020	0.50	Medium sand	Sand
1/2 0.0098	0.25	Fine sand	
1/4 0.005	0.125	Very fine sand	
1/8 0.0025	0.0625	Coarse silt	
1/16 0.0012	0.031	Medium silt	
1/32 0.00061	0.0156	Fine silt	Silt
1/64 0.00031	0.0078	Very fine silt	
1/128 0.00015	0.0039	Clay	Mud



Project ID: T2207 **Cross section ID:** OHWM #3 **Date:** 7/19/22 **Time:** 15:25

Cross section drawing:



OHWM

GPS point: 32.623911, -117.016208

Indicators:

- ☐ Change in average sediment texture
- ☐ Change in vegetation species
- ☒ Change in vegetation cover
- ☒ Break in bank slope
- ☐ Other: _____
- ☐ Other: _____

Comments:

Channel was uniform along north side of Telegraph Canyon Rd having been created >40 years ago. Water in channel moving very slowly kept channel clear of vegetation. Immediately above water vegetation grew. On north bank grew annual weeds, on south bank perennial exotics.

.

Floodplain unit:

☒ Low-Flow Channel ☐ Active Floodplain ☐ Low Terrace

GPS point: 32.623911, -117.016208

Characteristics of the floodplain unit:

Average sediment texture: NA

Total veg cover: 0 % Tree: 0 % Shrub: 0 % Herb: 0 %

Community successional stage:

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

Indicators:

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

Comments:

Water present in low flow channel likely from run off from residential and landscape irrigation upstream.

Project ID: T2213-06 **Cross section ID:** OHWM #1 **Date:** 7/19/22 **Time:** 15:25

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

GPS point: 32.623911, -117.016208

Characteristics of the floodplain unit:

Average sediment texture: clay loam

Total veg cover: 100 % Tree: 0 % Shrub: 0 % Herb: 100 %

Community successional stage:

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

Indicators:

- ☐ Mudcracks
- ☐ Ripples
- ☐ Drift and/or debris
- ☒ Presence of bed and bank
- ☐ Benches
- ☐ Soil development
- ☐ Surface relief
- ☒ Other: Some plant material bent above waterline
- ☐ Other: _____
- ☐ Other: _____

Comments:

Small active floodplain adjacent to top of bank on south side.

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

GPS point: _____

Characteristics of the floodplain unit:

Average sediment texture: _____

Total veg cover: _____ % Tree: _____% Shrub: _____% Herb: _____%

Community successional stage:

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

Indicators:

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

Comments:

APPENDIX D

SITE PHOTOS

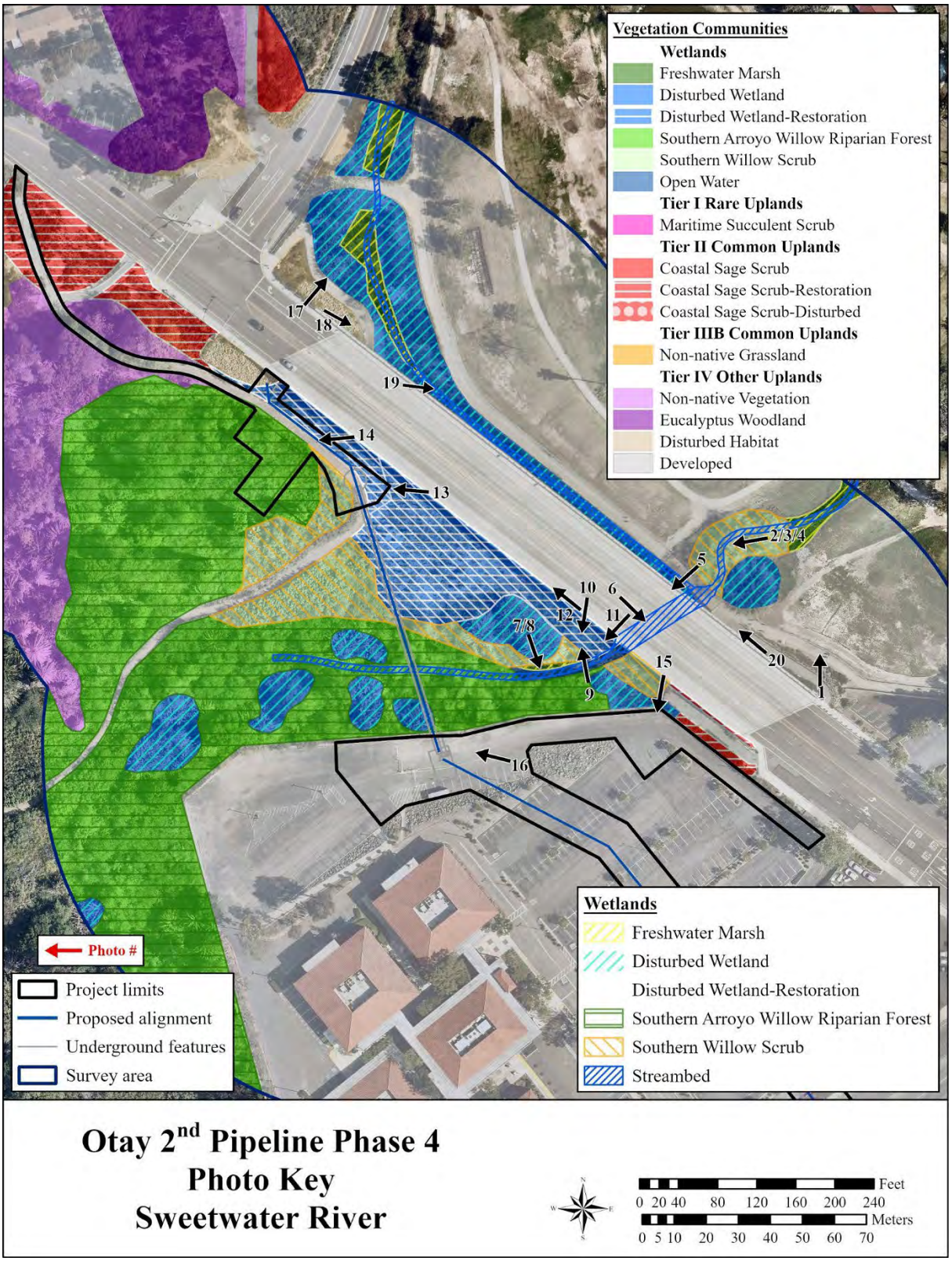


Photo Key for Sweetwater River area

Sweetwater River – Feature 1

Photo 1. Looking north from the access ramp from the west side of the Willow Street Bridge to the Chula Vista Gold Course Trail across to the main Sweetwater River channel with DW (Arundo) on the left, SWS behind and to its right, then cattail FWM heading east from middle to right. (July 20, 2022).

Photo 2. Within the SWS visible in Photo 1 looking west toward the pedestrian bridge and river channel before it passes under the Willow Street Bridge (July 20, 2022).

Photo 3: Slice of soil from wetland sample point #3 in the SWS showing moisture and redox indicators of a wetland soil July 20, 2022).

Photo 4: Wetland Sampling pit #3
(July 20. 2022)

Photo 5: Sweetwater River Channel under the Willow Street Bridge approximately 20 feet wide, looking west (July 20, 2022).

Photo 6: Looking south across the Sweetwater River to the south abutment of the Willow Street Bridge (July 20, 2022).

Photo 7: Soil in FWM adjacent to channel west of Willow Street Bridge, clearly anaerobic and a hydric soil. (July 20, 2022).

Photo 8: Location of Wetland sample point #2 at edge of FWM (July 20, 2022).

Photo 9: Wetland sample point #2 just at the edge of FWM, soil seemed to be a hydric loamy sand (July 20, 2022).

Photo 10: Wetland sample point #1 even further from FWM than sample point #2, and soil is even paler and more of a sandy clay loam (July 20, 2022).

Photo 11: Looking west down the Sweetwater River Channel where sampling pits were dug this side of the Arundo on the right both near and a few feet away from the Channel (July 20. 2022)

Photo 12: Looking west northwest, channel is to the left, location of the northern Underground Direction Drilling pit is to the right of the palm on the right in the distance on the other side of the restoration area (July 20. 2022).

Photo 13: Looking northwest at the location of the northern Underground Direction Drilling pit (July 20, 2022).

Photo 14: DW that is going to be impacted from the Underground Direction Drilling (July 20, 2022).

Photo 15: Looking from the Willow Street Bridge to the commercial parking lot in which the southern Underground Direction Drilling pit will be located (July 20, 2022).

Photo 16: Location in the commercial parking lot where the southern Underground Direction Drilling pit will be located (July 20, 2022).

Sweetwater River – Feature 1a

Photo 17: Looking northeast from the Willow Street Bridge to a basin in Feature 1a at the is at the corner of Willow Street and Sweetwater Road. California bulrush forms FWM but it is bored by a mixture of native and non-native trees and shrubs (May 26, 2022).

Photo 18: the trail in Photo 17 goes under the Willow Street Bridge and joins the trail on the west side of the bridge. (May 26, 2022).

Photo 19: The 5'-foot channel of Feature 1a with cattails (FWM) and DW either side (May 26, 2022).

Photo 20: Looking north on the east side of the Willow Street Bridge toward where Feature 1a enters the main Sweetwater River Channel (Feature 1) on left of trail and pedestrian bridge (May 26, 2022).

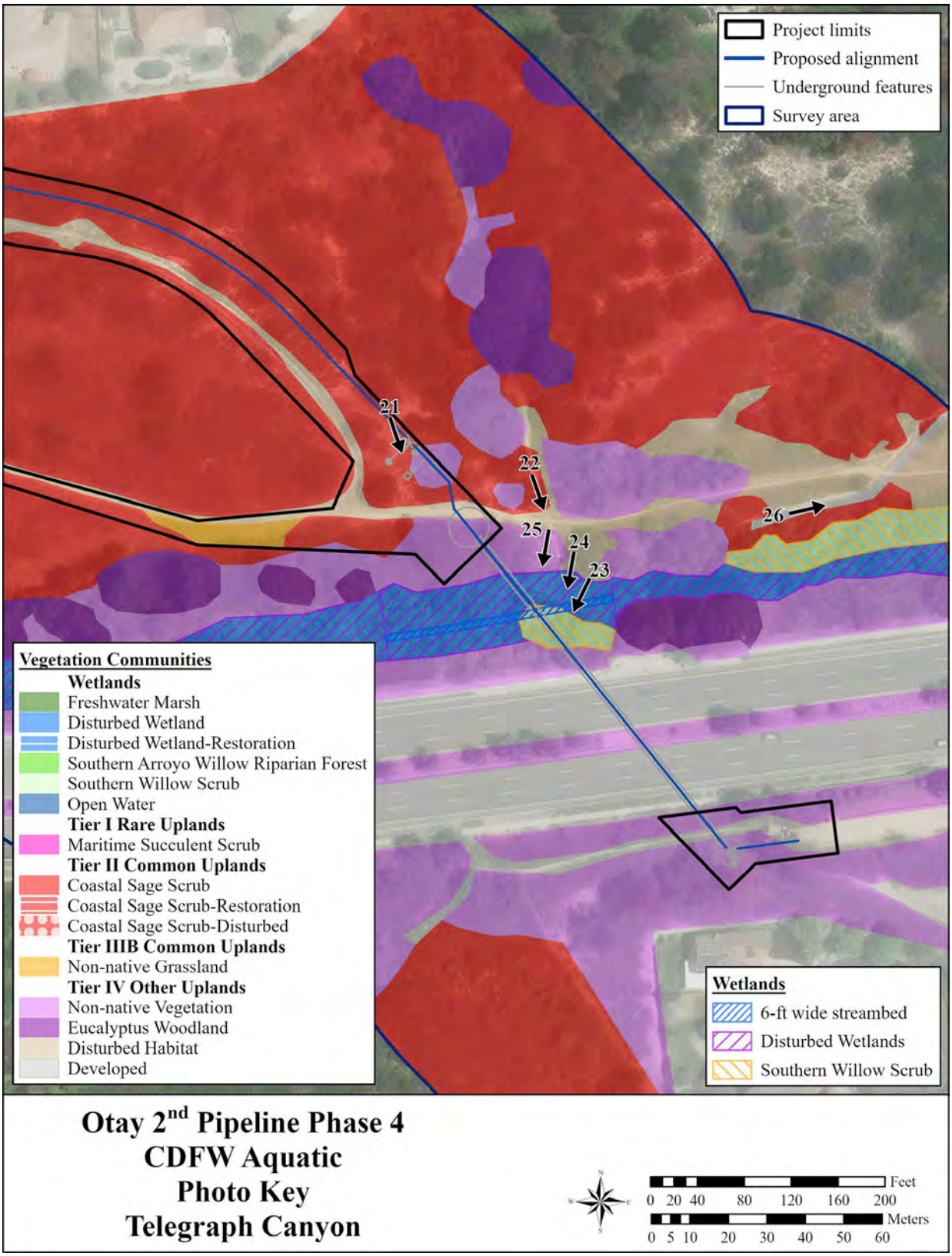


Photo Key for Telegraph Canyon Creek River area

Telegraph Canyon Creek – Feature 2

Photo 21: Looking south from the north side of Telegraph Canyon Creek at approach to the location of the northern Underground Direction Drilling pit with the creek, Telegraph Canyon Road, and the canyon's south slope beyond (June 16, 2022)

Photo 22: Looking into where wetland sample pits were dug. The creek is choked with Pampas grass and tamarisk with the odd willow growing on the bank. Photo facing south (June 16, 2022).

Photo 23: Looking into Telegraph Canyon Creek with 6’ width with water (July 19, 2022).

Photo 24: Wetland sample pit #5, a clay loam, while close to the creek and supporting hydrophytic weeds, showed no soil layers and no indicators of being hydric (July 19, 2022).

Photo 25: Wetland sample pit #4, a loamy sand layers sandwiched a sandy loam layer. The only hydric soil was in the creek (July 19, 2022).

Photo 26: A v-ditch that feeds into Telegraph Canyon Creek east of the project area. A series of such ditches occur north of the Creek along Telegraph Canyon Road and drain into the creek. (July 19, 2022).

APPENDIX E

JD REQUEST FORMS

Jurisdictional Determination form requesting that no permit be required (Form 6247) from:

https://www.usace.army.mil/Missions/Civil-Works/Regulatory-Program-and-Permits/Regulatory-Program-Forms/

A separate form has been completed for each of the two locations.

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APPENDIX F

BULK UPLOAD FORM

Not required

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APPENDIX G

GIS DATA

Provided by Tierra Data to the City

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