

The logo for the Southwestern Water Conservation Agency (SWCA) is positioned vertically on the left side of the page. It consists of the letters 'S', 'W', 'C', and 'A' in a large, stylized, light blue font, stacked one above the other.

Aquatic Resources Delineation Report for the Seville 5 Solar Project Imperial County, California

FEBRUARY 2025

PREPARED FOR

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PREPARED BY

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AQUATIC RESOURCES DELINEATION REPORT FOR THE SEVILLE 5 SOLAR PROJECT, IMPERIAL COUNTY, CALIFORNIA

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EXECUTIVE SUMMARY

SWCA Environmental Consultants (SWCA) was retained by Apex Energy Solutions, LLC to provide aquatic resources services in support of the Seville 5 Solar Project (project), a proposed 65-megawatt solar development with a 130-megawatt battery energy storage system that would be located in unincorporated Imperial County, California, at approximately 33.122711°N, 116.021758°W. The project area consists of 267 acres and is situated south of Highway 78. The review area, including a 100-foot buffer around the project area, was assessed for potentially jurisdictional aquatic resources and consists of 303 acres.

This aquatic resource delineation report has been prepared in accordance with the U.S. Army Corps of Engineers (USACE) *Wetland Delineation Manual* (USACE 1987) and USACE regional supplements, including the *Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0)* (USACE 2008a), *A Field Guide to the Identification of the Ordinary High Water Mark in the Arid West Region of the Western United States* (USACE 2008b), and USACE Ordinary High Water Mark Identification Regulatory Guidance Letter No. 05-05 (USACE 2005). Jurisdiction was assessed under Section 401 and 404 of the Clean Water Act pursuant to the 2023 Clean Water Act rule (USACE 2023), the Porter-Cologne Water Quality Control Act, and Section 1600 of the Fish and Game Code.

All agency jurisdictional resources and extent presented in this report represent the professional judgement of SWCA and final determinations are at the discretion of the applicable agencies.

The aquatic resource findings of this report are summarized below:

Total acreage of the review area: 303 acres

Number and total area of aquatic resources within the review area: 17 aquatic features (F01-F17) totaling approximately 13.5 acres.

Total Impacts to Aquatic Resources:

Temporary: 7.924 acres, 7,897 linear feet.

Permanent: 4.855 acres, 4,493 linear feet.

Impacts to USACE Jurisdictional Resources:

(Temporary and Permanent): 0 acre, 0 linear feet.

Impacts to Regional Waters Quality Control Board Jurisdiction Resources:

Temporary: 0.644 acre, 5,492 linear feet.

Permanent: 0.328 acre, 2,939 linear feet.

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1 INTRODUCTION

This Aquatic Resources Delineation Report was prepared by SWCA Environmental Consultants (SWCA) in support of the Seville 5 Solar Project (project). SWCA was retained by Apex Energy Solutions, LLC (Apex Energy), to conduct aquatic resources services to provide the technical basis for the assessment of potential impacts to aquatic resources that may result from implementation of the project. In addition to a description of the existing conditions, this report describes how aquatic resources will be potentially affected by the construction, operation, and maintenance of the project. This report may be used to support the environmental documentation and evaluation of the project pursuant to the California Environmental Quality Act (CEQA).

1.1 Regulatory Background

The purpose of this report is to identify and describe aquatic resources in the review area, which includes the 267-acre project area and a 100-foot buffer around the project area, for a total of 303 acres. This report facilitates efforts to:

1. Provide background information about the site and environmental conditions.
2. Document aquatic resource boundary data for review by regulatory authorities.
3. Plan and design the proposed project to avoid and minimize impacts to aquatic resources.

This Aquatic Resources Delineation Report provides the framework, methods, and results of a jurisdictional delineation for aquatic resources. The purpose of the delineation is to record the extent of aquatic resources and make a preliminary determination of state and federal jurisdiction potentially subject to regulation by the U.S. Army Corps of Engineers (USACE) under Section 404 of the Clean Water Act (CWA), State or Regional Water Quality Control Board (California Water Boards) under Section 401 of the CWA and the Porter-Cologne Water Quality Control Act, and California Department of Fish and Wildlife (CDFW) under Section 1602 of the California Fish and Game Code (2017).

A *Revised Definition of Waters of the United States* rule (88 Federal Register 3004) was published in January 2023, and following the May 2023 *Sackett v. EPA* court decision, the rule was amended into the *Waters of the United States Conforming Rule* (88 Federal Register 61964), which took effect September 8, 2023. The current *Definition of Waters of the United States* (33 Code of Federal Regulations [CFR], Part 328.3; 40 CFR 120.2) is as follows:

(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 waters of the United States under this definition, other than impoundments of waters identified under paragraph (a)(5) of this section;

(3) Tributaries of waters identified in paragraph (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 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.*

In summary, the categories of above waters are Traditional Navigable Waters (a)(1)(i), The Territorial Seas (a)(1)(ii), Interstate Waters (a)(1)(iii), Impoundments (a)(2), Tributaries (a)(3), Adjacent Wetlands (a)(4), and Additional Waters (a)(5).

Non-jurisdictional aquatic resources, for example, could be tributaries that are non-relatively permanent waters, non-tidal wetlands that do not have a continuous surface connection to a jurisdictional water, or excluded waters (33 CFR 328.3(b)) (*waste treatment systems, prior converted cropland, ditches lacking relatively permanent flow, artificially irrigated areas, artificial lakes or ponds, artificial pools, waterfilled depressions for construction, swales and erosional features*), such as those with a discontinuous ordinary high water mark (OHWM) or otherwise poorly defined bed and bank.

Relative to the definition of wetlands, “adjacent” means “having a continuous surface connection” with another water of the United States. As described in an approved jurisdictional determination memorandum decision by the U.S. Environmental Protection Agency (EPA) and USACE (2024), “artificial structures do not divide a wetland if a hydrological connection is maintained” and “agencies may also consider if a subsurface hydrologic connection is maintained, using indicators such as hydric soils, the permeability of the artificial structure, and/or the permeability of the soils below the artificial structure.”

Under the *Conforming Rule*, federal non-wetland waters of the United States (WOUS) that are relatively permanent waters (RPW) are jurisdictional waters of the United States. Features that are non-relatively permanent waters (non-RPW) either in their own right, or collectively, as determined by a stream order reach assessment, and/or are lacking a continuous surface connection to downstream waters of the United States, are not federal WOUS. The flow regime status of WOUS tributaries must be evaluated for the entire reach of the tributary that is of the same Strahler stream order,¹ following methodologies described in the January 2023 Revised Definition of Waters of the United States rule preamble. Ephemeral features are those aquatic resources with a flow duration supported only by precipitation and may need to be evaluated along the entire reach to assess the feature’s best representative flow regime.

An area must contain all three wetland parameters as follows, or otherwise meet criteria of a problematic wetland, to be a wetland WOUS: 1) a predominance of hydrophytic vegetation meeting the rapid, dominance, or prevalence indicator; 2) hydric soil indicators occurring as a result of biological activity from prolonged inundation and anaerobic conditions; and 3) the presence of wetland hydrology indicators consisting of inundation or saturation near the ground surface.

The indicator status rating of vegetation, as provided in the USACE National Wetland Plant List (USACE 2020), was used to assess vegetation community dominance criteria. Indicator status ratings include obligate (OBL) (almost always occur in wetlands), facultative-wetland (FACW) (usually occur in wetlands but may occur in non-wetlands), facultative (FAC) (occur in wetlands and non-wetlands),

¹ Stream order is a common, scientific concept of assigning whole numbers to indicate the relative branches of a stream network.

facultative-upland (FACU) (usually occur in non-wetlands, but may occur in wetlands), upland (UPL) (almost never occur in wetlands), and not listed (NL).

All WOUS are waters of the State (WOS). Features that are not WOUS may still be WOS under the Porter-Cologne Water Quality Control Act regulated by the California State Water Resources Control Board and its Regional Water Quality Control Boards (RWQCB). Under Section 1600 of the California Fish and Game Code, CDFW Section 1602 jurisdiction includes the waterway's streambed that has a bed and bank and associated riparian vegetation/habitat if present (referred to as CDFW 1600 Streambed/Riparian).

Under the Water Boards' *Implementation Guidance for the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, all WOUS resources are regulated by the Water Boards and are considered WOS (Water Boards 2020). Additionally, all aquatic resources exhibiting an OHWM are considered WOS. An area must meet the following parameters to be considered a wetland WOS: 1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; 2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and 3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation (less than 5% areal coverage of plants at the peak of the growing season). Effectively, a wetland that lacks vegetation may not be federally jurisdictional but may be jurisdictional WOS.

2 PROJECT LOCATION

Apex Energy proposes to construct a 65-megawatt (MW) solar facility with a 130-MW battery energy storage system (BESS) on approximately 267 acres located in unincorporated Imperial County, California (Figure 1). The proposed project is located just south of State Route (SR) 78, approximately 7 miles east of Ocotillo Wells and approximately 9 miles west of SR 86. The project area is also approximately 14 miles from the southern tip of the Salton Sea and 4 miles east of the Imperial County–San Diego County line. The project is located on one privately owned parcel, Imperial County Assessor's Parcel Number (APN) 018-010-043.

The project area is partially situated on San Felipe Creek, and the general area surrounding the site is either vacant land consisting of sand dunes and local washes or developed solar fields. The project is bound to the north by SR 78, with Ocotillo Wells OHV State Recreation Area on the north side of SR 78. Vacant land is to the east. Developed portions of Seville 1 and Seville 2 Solar facilities are located immediately to the southeast of the project, and the Titan 1 Solar facility is located further southeast. The proposed Seville 4 Solar project is immediately to the south, on currently vacant land. Vacant land is to the west, with the Ocotillo Recreational Vehicle (RV) Resort approximately 0.5 mile west. The site exhibits a generally planar and flat-lying topography, which can be partially attributed to previous agricultural activities that included in-filling of the former creek bottom of San Felipe Creek.

The project area is in Sections 15 and 22, Township 12 South, Range 9 East, as depicted on the U.S. Geological Survey (USGS) Borrego Mountain SE, California, 7.5-minute topographic quadrangle (Figure 1).

3 PROJECT DESCRIPTION

The project applicant proposes improvements for the 65-MW solar project that will consist of solar photovoltaic (PV) arrays, inverter transformer stations, a 130-MW BESS, numerous underground cable raceways, a substation, maintenance access roads, and maintenance buildings. The project proposes to use

solar PV technology modules mounted on horizontal single-axis tracker systems. The fixed-frame PV module arrays would be mounted on racks that would be supported by driven piles, arranged in arrays spaced up to 30 feet apart (pile to pile) to maximize performance and to allow access for panel cleaning. Solar modules would be a maximum of 10 feet high. These arrays would be separated from each other and the perimeter security fence by at least 20-foot-wide interior roads to provide access to all areas for maintenance and emergency vehicles.

Electricity generated by the PV modules would be collected by a direct current (DC) collection system routed underground in trenches. This DC power would be delivered to pad-mounted inverters in weatherproof enclosures located within the arrays.

The proposed BESS will be constructed at the southeast corner of the project site, adjacent to the project's solar facilities and will consist of either lithium ion or flow batteries. Underground trenches with conduits would be used to connect the batteries to the control and monitoring systems, and inverters would be used to convert the PV-produced DC power to alternating current (AC) power. From the Seville 5 BESS, the project would connect to a new generation tie (gen-tie) line that extends southeast to the point of interconnection for Seville 5, at the existing Titan 1 Solar project switching station.

Due to the relatively flat-lying topography, site grading is expected to entail minor cuts and fills to provide access roads, site drainage, and building sites for structures. An estimated 90% of ground disturbance would consist of excavation and post installation, as well as trenching for underground utilities and drainage culverts performed using mechanical methods. The remaining 10% of ground disturbance would be caused by overland travel for improvements and maintenance of solar panel blocks with solar photovoltaic arrays and various inverter transformer stations.

All proposed treatment areas, including roads, trails, access roads, and staging areas, are located on previously disturbed soils. Ground disturbance is not anticipated to exceed a depth of 8 feet by vibratory pile hammer and is not anticipated to exceed 48 inches for utilities trenching for underground utilities and would be a result of heavy equipment use. The project lifespan is 20 to 25 years.

Buffer zones will be established around all biologically and culturally sensitive resources, as necessary. In addition, a 50-foot-wide buffer will be established around all streams and floodplains.

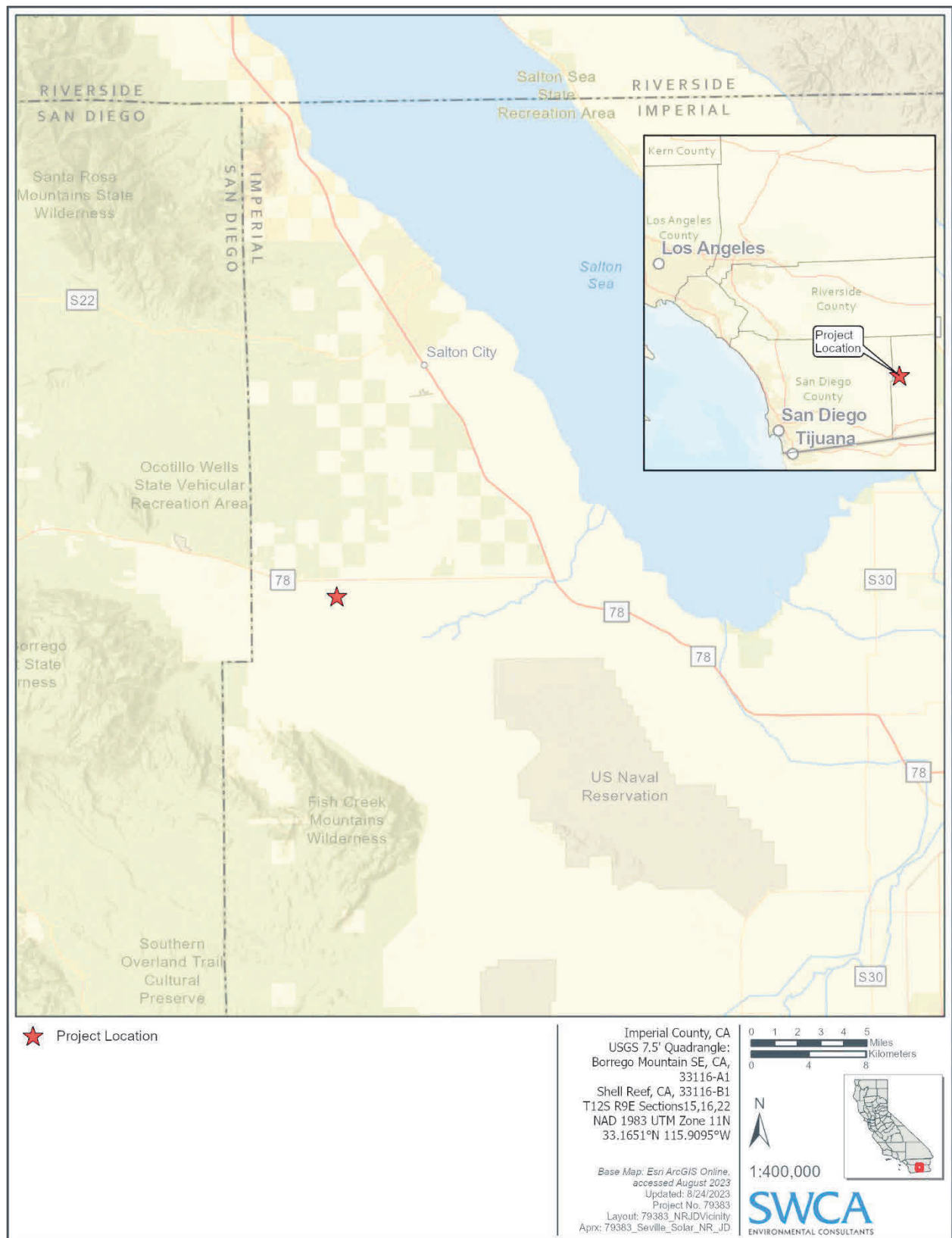


Figure 1. Regional map.

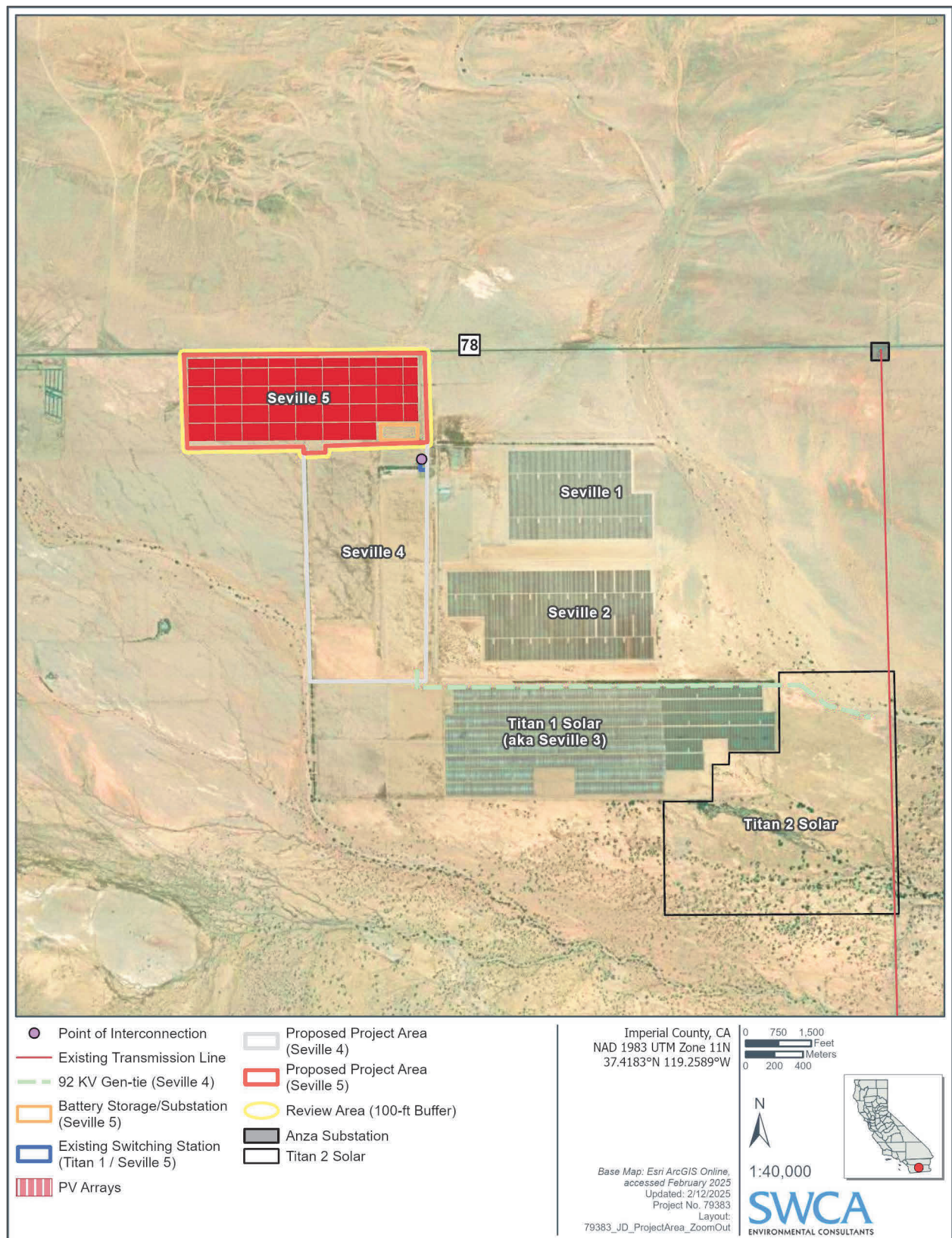


Figure 2. Project vicinity on aerial imagery.

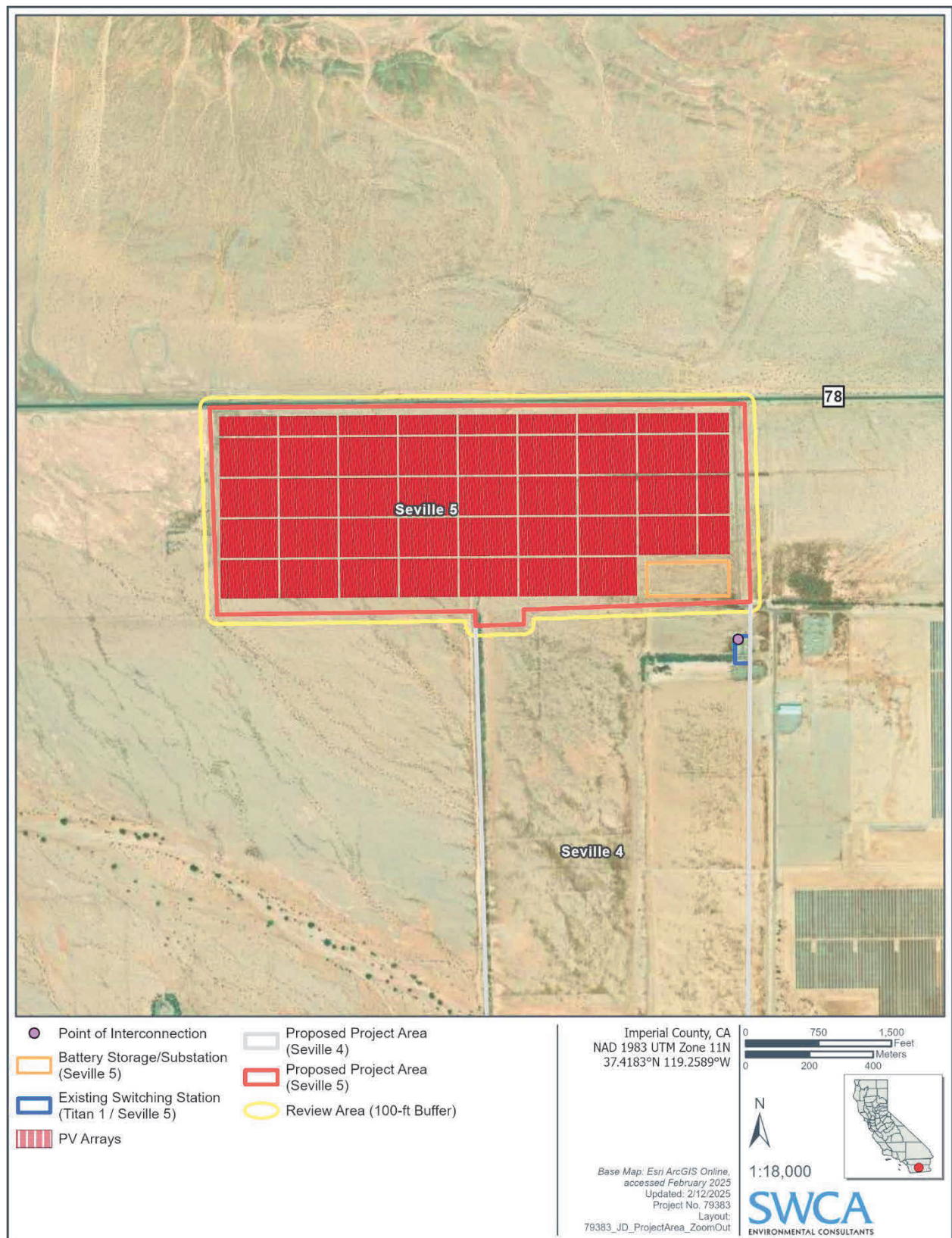


Figure 3. Project location on aerial imagery.

4 METHODS

4.1 Existing Data Review

SWCA reviewed available regional, local, and site-specific natural resources information to assess site conditions, extracting pertinent data and analyze the data before conducting fieldwork. The following data sources were selected and reviewed:

- USGS quadrangle maps to review streams, topographic details, wet areas (wetlands), drainage patterns, and general land uses (USGS 2021).
- USGS National Hydrography Dataset (NHD) database to review previously documented aquatic resources (USGS 2023a).
- U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) maps to review the location and classification of mapped wetland resources (USFWS 2023a).
- Natural Resources Conservation Service (NRCS) Web Soil Survey to review soil properties (frequency, duration, and timing of inundation) and soil classifications (soil series and phases) (NRCS 2023).
- Google Earth Pro current and historic aerial imagery to review potential wet areas (wetlands), streams, stream connectivity, and other physical features potentially affecting hydrology and flow (Google Earth 2023).
- Calflora plant database to review recorded plants and any hydrophytic species found within or near the review area (California Native Plant Society 2023).
- Federal Emergency Management Agency (FEMA) Floodplain (FEMA 2020).

4.2 Field Survey

SWCA delineators conducted aquatic resources delineation fieldwork on April 3 through April 6, 2023, within the review area. OHWM indicators were evaluated and aquatic features mapped. Drainages were documented in photographs (Appendix A). USACE Arid West Ephemeral and Intermittent Streams OHWM Datasheets were completed to document the findings (Appendix B). Two OHWM datasheets were filled out to represent the range of drainage characteristics across the review area. All data were recorded using the Esri ArcGIS Field Maps collector application paired to a Juniper Systems Geode receiver with submeter location accuracy. Following the collection of field data, data were further evaluated and processed.

5 RESULTS

5.1 Existing Environment

The project is within the Colorado Desert, which is characterized by hot summer temperatures (average daily highs above 100 degrees Fahrenheit [°F], often reaching 120°F) with minimal drops in temperature at night compared to high elevation deserts. Winter daytime temperatures range from 60 to 70°F with rare occurrences of frost overnight. The Colorado Desert has two distinct rainy periods per year (winter and late summer) with low annual precipitation. The review area receives an average of 2.8 inches of annual precipitation per year as recorded over the last 20 years (National Oceanic and Atmospheric Administration 2023). Climate data from Ocotillo Wells, California (Network ID:

GHCND:USC00046386), located approximately 8.3 miles west-northwest of the project area at coordinates 33.1552°N, 116.1688°W, show a range in annual precipitation from a low of 0.05 inch in 2003 to a high of 6.73 inches in 2010 between 2003 to 2023.

The review area has been previously disturbed as evidenced by human-made earthen berms and signs of abandoned crop areas. Google Earth aerial imagery shows that the berms have been present since the earliest available image from December 1985. The southeastern portion of the review area is mapped as “farmland of local importance” in the California Important Farmland: 1984-2020 database (California Department of Conservation 2023). The western and northern portions of the review area is mapped as “other land.” The review area is largely mapped as barren land (rock/sand/clay) with minor components mapped as shrub/scrub in the USGS National Land Cover Database (USGS 2023b). The review area is moderately disturbed by previous land use and recreational off-highway vehicle use.

The project is located entirely within the Wolfe Well-San Felipe Creek Watershed (Hydrologic Unit Code [HUC] 181002030703), which encompasses an area of 21,837 acres (USGS 2023c). Flow within the watershed is generally conveyed in a southeasterly direction toward the Salton Sea. Hydrology within the review area has been historically disturbed following construction of SR 78, which parallels the northern boundary of the project area. Flow upslope of SR 78 is diverted and concentrated at specific locations along the highway.

No USFWS-designated Endangered Species Act Critical Habitat exists within the review area (USFWS 2023b).

5.1.1 Soils

Eight NRCS Web Soil Survey soil series are mapped within the review area (NRCS 2023): Carsitas gravelly sand, 0 to 5 percent slopes (103); Glenbar clay loam (105); Holtville silty clay (109); Indio-Vint complex (119); Rositas sand, 0 to 2 percent slopes (130); Rositas sand, 2 to 5 percent slopes (131); Rositas fine sand, 0 to 2 percent slopes (132); and Rositas silt loam, 0 to 2 percent slopes (137) (Figure 4; Table 1). Soils within the review area are considered xeric and none of them, including their minor components, are considered hydric.

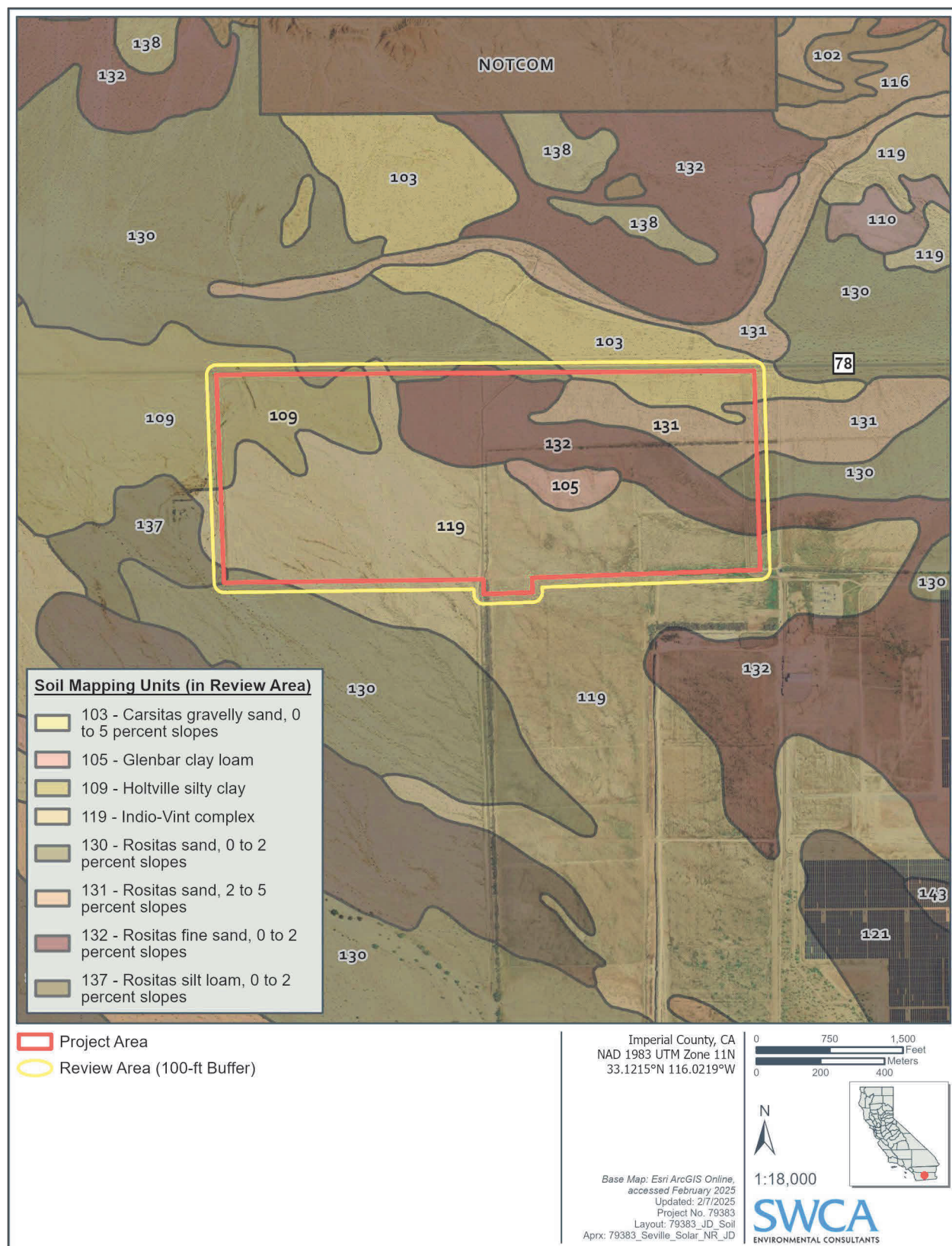


Figure 4. Soil mapping units within the review area.

Table 1. NRCS Web Soil Survey Map Units in the Review Area

Soil Map Symbol	Map Unit Name	Hydric
103	Carsitas gravelly sand, 0 to 5 percent slopes	No
105	Glenbar clay loam	No
109	Holtville silty clay	No
119	Indio-Vint complex	No
130	Rositas sand, 0 to 2 percent slopes	No
131	Rositas sand, 2 to 5 percent slopes	No
132	Rositas fine sand, 0 to 2 percent slopes	No
137	Rositas silt loam, 0 to 2 percent slopes	No

Source: NRCS (2023)

Soils characterized as Carsitas gravelly sand, 0 to 5 percent slopes, consist of 85% Carsitas and similar soils and 15% minor components. The minor components consist of 5% Rositas, 5% Niland, 3% Superstition, and 2% Antho. Parent material for this soil series consists of alluvium derived from granite and is typically found on basin floors. The top soil horizon (0 to 10 inches below the soil surface) consists of a gravelly sand texture. This soil series is excessively drained and is not considered hydric in its entirety.

Glenbar clay loam soils consist of 85% Glenbar and similar soils and 15% minor components. Minor components consist of 5% unnamed soils, 3% Indio, 3% Imperial, 2% Niland, and 2% Meloland. Parent material for this soil series consists of alluvium derived from mixed sources and is typically found on basin floors. The top soil horizon (0 to 13 inches below the soil surface) consists of a clay loam texture. This soil series is well drained and is not considered hydric in its entirety.

Holtville silty clay soils consist of 85% Holtville and similar soils and 15% minor components. Minor components consist of 5% Glenbar, 5% Imperial, 3% Indio, and 2% Vint. Parent material for this soil series consists of alluvium derived from mixed sources and is typically found on basin floors. The top soil horizon (0 to 17 inches below the soil surface) consists of a silty clay texture. This soil series is well drained and is not considered hydric in its entirety.

Indio-Vint complex soils consist of 35% Indio and similar soils, 30% Vint and similar soils, and 35% minor components. Minor components consist of 12% Meloland, 12% Holtville, and 22% Rositas. Parent material for Indio soils consists of alluvium derived from mixed and/or eolian deposits derived from mixed sources, and parent material for Vint soils consists of alluvium and/or eolian deposits derived from mixed sources. Both Indio and Vint soils are found on basin floors. The top soil horizon for Indio (0 to 12 inches below the soil surface) consists of a loam texture, and the top soil horizon for Vint (0 to 10 inches below the soil surface) consists of a loamy fine sand texture. This soil series is well drained and is not considered hydric in its entirety.

Soils characterized as Rositas sand, 0 to 2 percent slopes, consist of 85% Rositas and similar soils and 15% minor components. Minor components consist of 4% Rositas, 4% Carsitas, 4% Vint, and 3% Niland. Parent material for this soil series consists of alluvium derived from mixed sources and is typically found on basin floors. The top soil horizon (0 to 27 inches below the soil surface) consists of a sand texture. This soil series is somewhat excessively drained and is not considered hydric in its entirety.

Soils characterized as Rositas sand, 2 to 5 percent slopes, consist of 90% Rositas and similar soils and 10% minor components. Minor components consist of 5% Carsitas and 5% Niland. Parent material for this soil series consists of alluvium derived from mixed sources and are typically found on alluvial fans.

The top soil horizon (0 to 27 inches below the soil surface) consists of a sand texture. This soil series is somewhat excessively drained and is not considered hydric in its entirety.

Soils characterized as Rositas fine sand, 0 to 2 percent slopes, consist of 85% Rositas and similar soils and 15% minor components. Minor components consist of 4% Vint, 4% Niland, 4% Rositas, 1% Superstition, 1% Holtville, and 1% Antho. Parent material for this soil series consists of alluvium derived from mixed and/or aeolian deposits derived from mixed sources and is typically found on basin floors. The top soil horizon (0 to 9 inches below the soil surface) consists of a fine texture. This soil series is somewhat excessively drained and is not considered hydric in its entirety.

Soils characterized as Rositas silt loam, 0 to 2 percent slopes, consist of 90% Rositas and similar soils and 10% minor components. Minor components consist of 5% Vint, 3% Meloland, and 2% Rositas. Parent material for this soil series consists of alluvium derived from mixed and/or aeolian deposits derived from mixed sources and is typically found on basin floors. The top soil horizon (0 to 12 inches below the soil surface) consists of a silt loam texture. This soil series is somewhat excessively drained and is not considered hydric in its entirety.

5.1.2 Vegetation

Five vegetation communities (from the *Manual of California Vegetation* online database) and land cover types were identified in the review area: disturbed fourwing saltbush scrub (*Atriplex canescens* Shrubland Alliance), creosote bush scrub (*Larrea tridentata* Shrubland Alliance) [including disturbed creosote bush scrub], tamarisk thickets (*Tamarix* spp. Shrubland Semi-Natural Alliance), disturbed – fallow agriculture, and developed (CNPS 2023) (Figure 5). Vegetation within southeastern portion of the review area is largely degraded, due, in part, to past agricultural activities, consisting of a furrowed landscape largely devoid of vegetation. Human-made berms dominated by nonnative tamarisk (*Tamarix* sp.) surround this portion of the review area. Natural habitat consisting of creosote bush scrub occurs largely in the northern and western portions of the review area. No sensitive vegetation communities were identified within the review area.

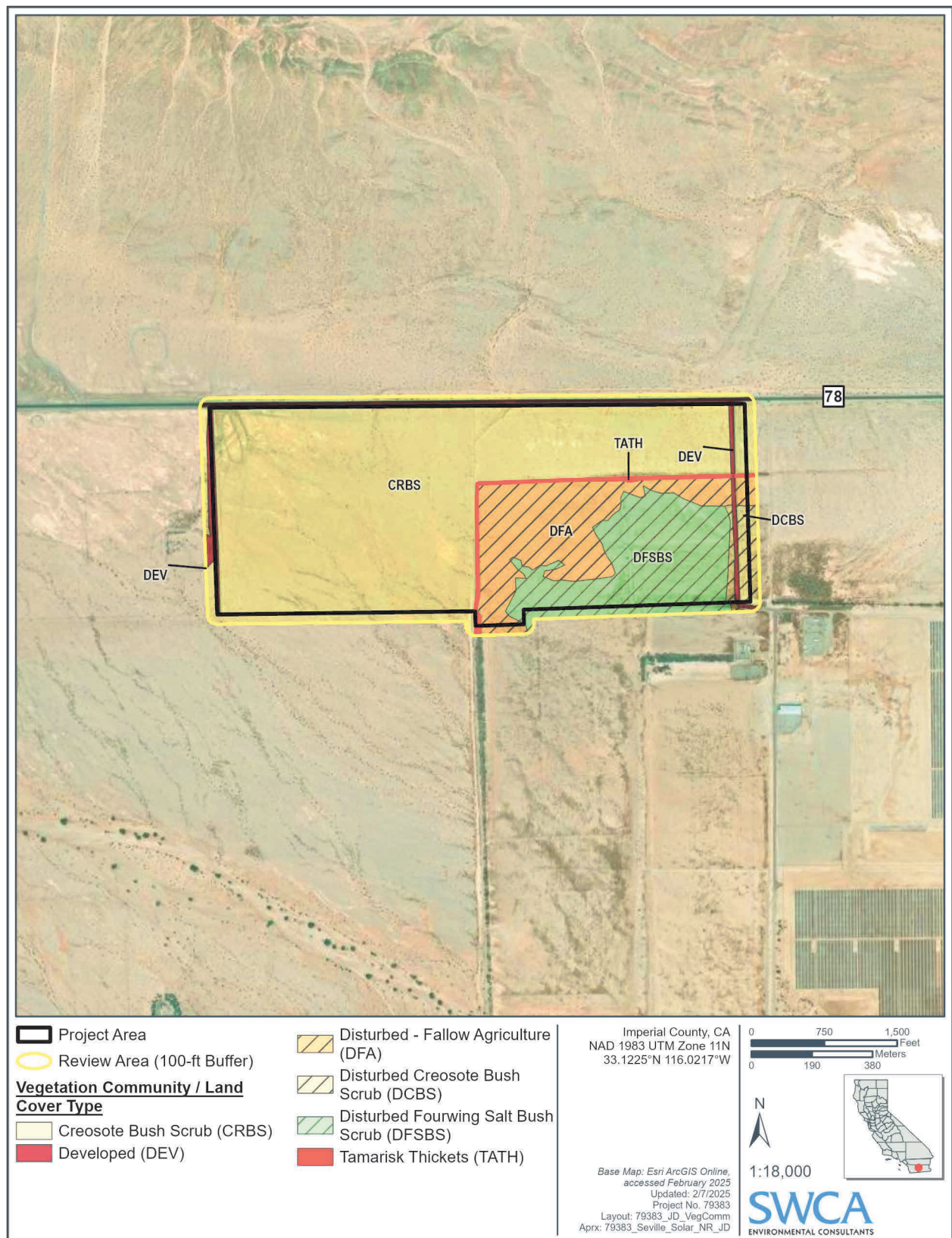


Figure 5. Vegetation communities and land cover types within the review area.

5.1.3 Hydrology

The review area is partially within FEMA's special flood hazard areas, 1% annual chance of flood hazard (Figure 6) (FEMA 2023). The FEMA special flood hazard area is associated with San Felipe Creek. San Felipe Creek, a tributary to the Salton Sea, conveys flow generally in a southeasterly direction in the immediate project vicinity. San Felipe Creek intersects the northwestern portion of the review area. Flow is conveyed towards a berm that transects the review area in a north-south direction. Flow is then redirected south along the berm and around the project. San Felipe Creek conveys flow to the Salton Sea, a Traditional Navigable Waters (USACE 2001).

Mapped NWI and NHD features within and adjacent to the review area are tributaries to San Felipe Creek. The NHD dataset reflects unaltered hydrology and shows San Felipe Creek south of the review area (Figure 7) (USGS 2023a). The NWI dataset reflects the current hydrology of San Felipe Creek (Figure 8). No NWI mapped resources occur with the review area; however, San Felipe Creek is mapped south of the review area (USFWS 2023a). San Felipe Creek is mapped as a stream/river in the NHD and as an intermittent riverine feature in the NWI.

Aeolian processes play a role on the surface of the review area. Dune development at the base of plants and along the human-made berms was observed throughout the review area. These aeolian processes may obscure the hydrology indicators on the bed of the channels.

All features within the review area were assumed to have a non-relatively permanent hydrologic regime due to geographic position, known rainfall conditions within the arid desert, and lack of point source inputs. No perennial flow or wetlands were expected, and none were observed. Most other features appear to form within the review area from surface flow and likely only receive hydrologic input following rain events.

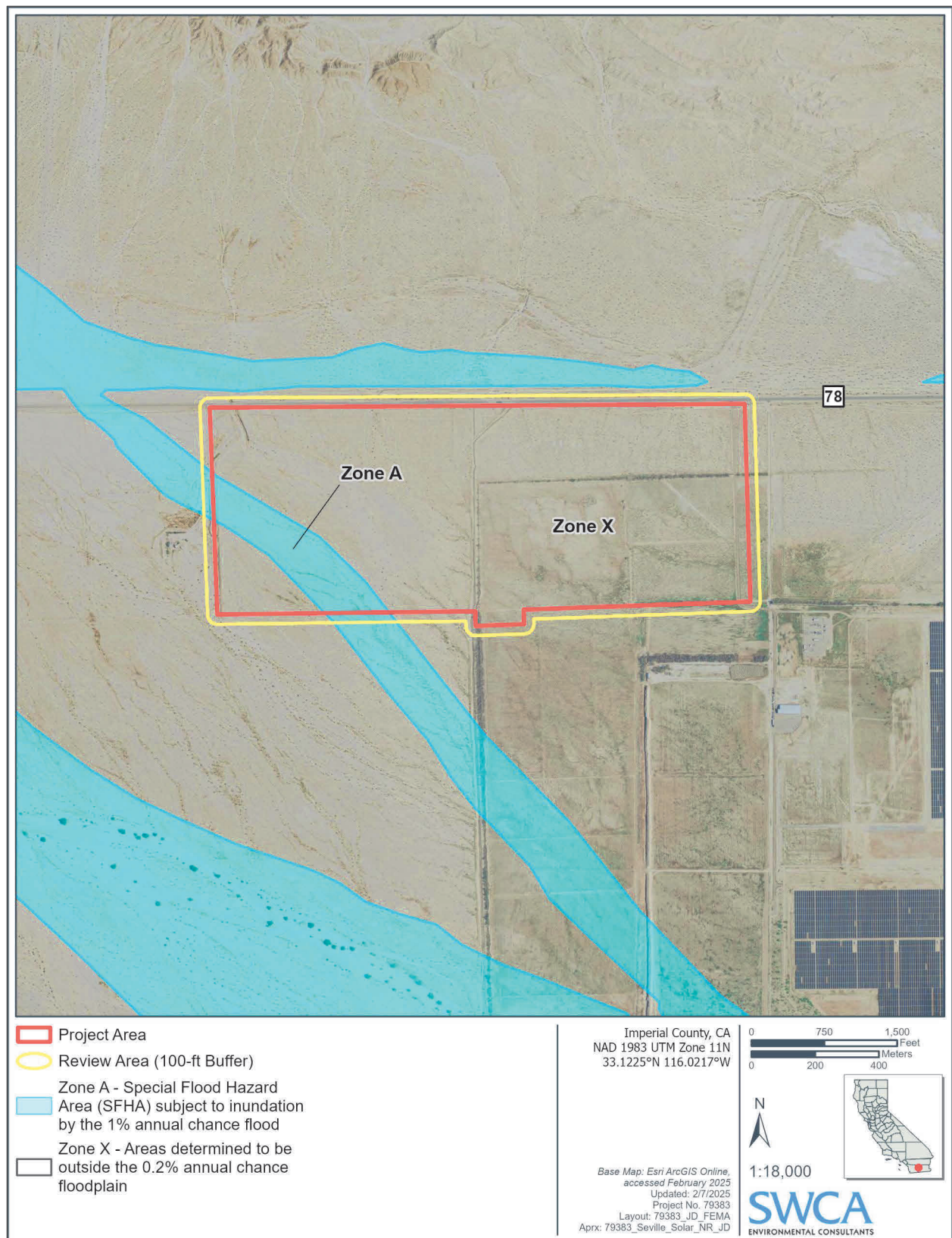


Figure 6. FEMA special flood hazard areas.

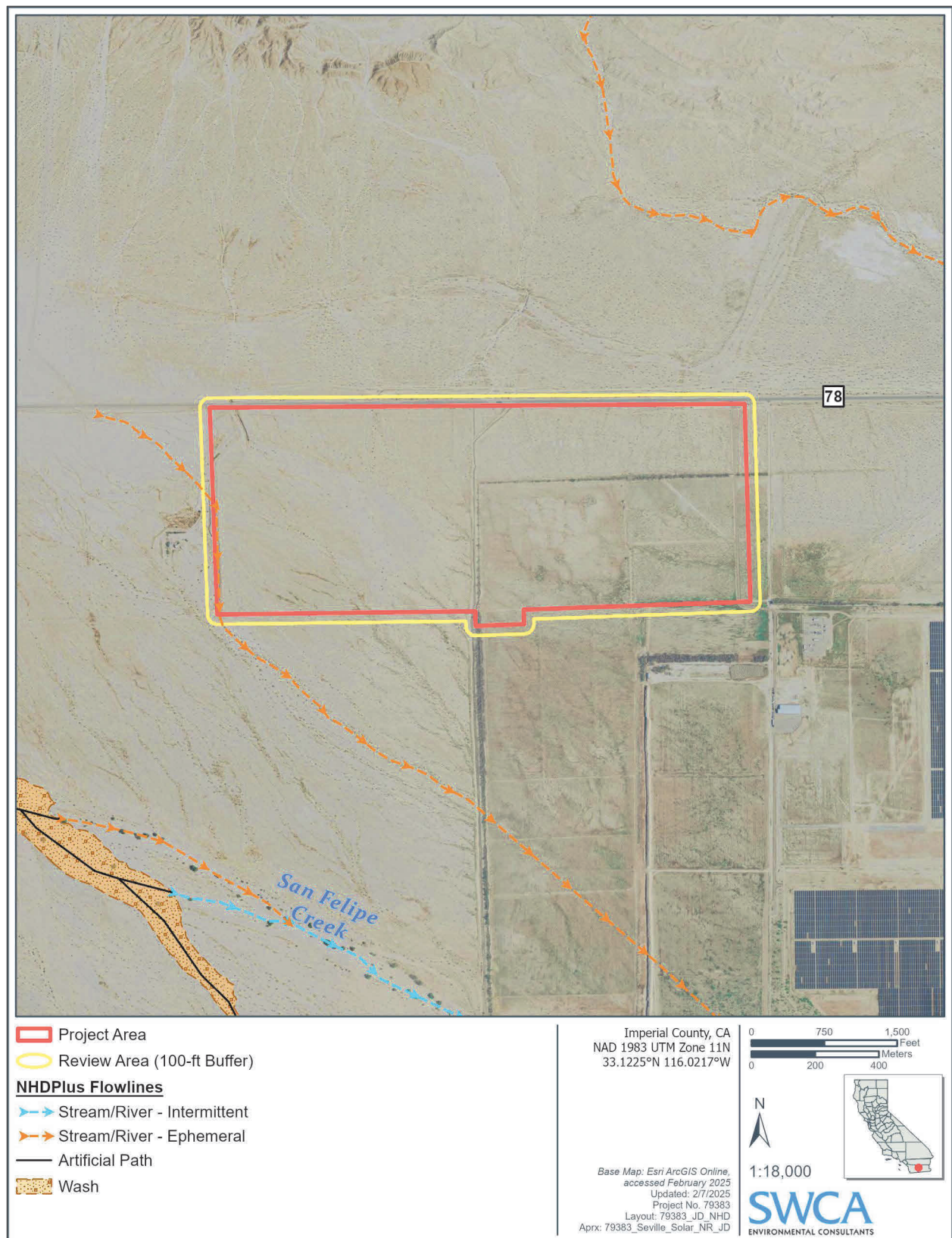


Figure 7. NHD features within the review area.

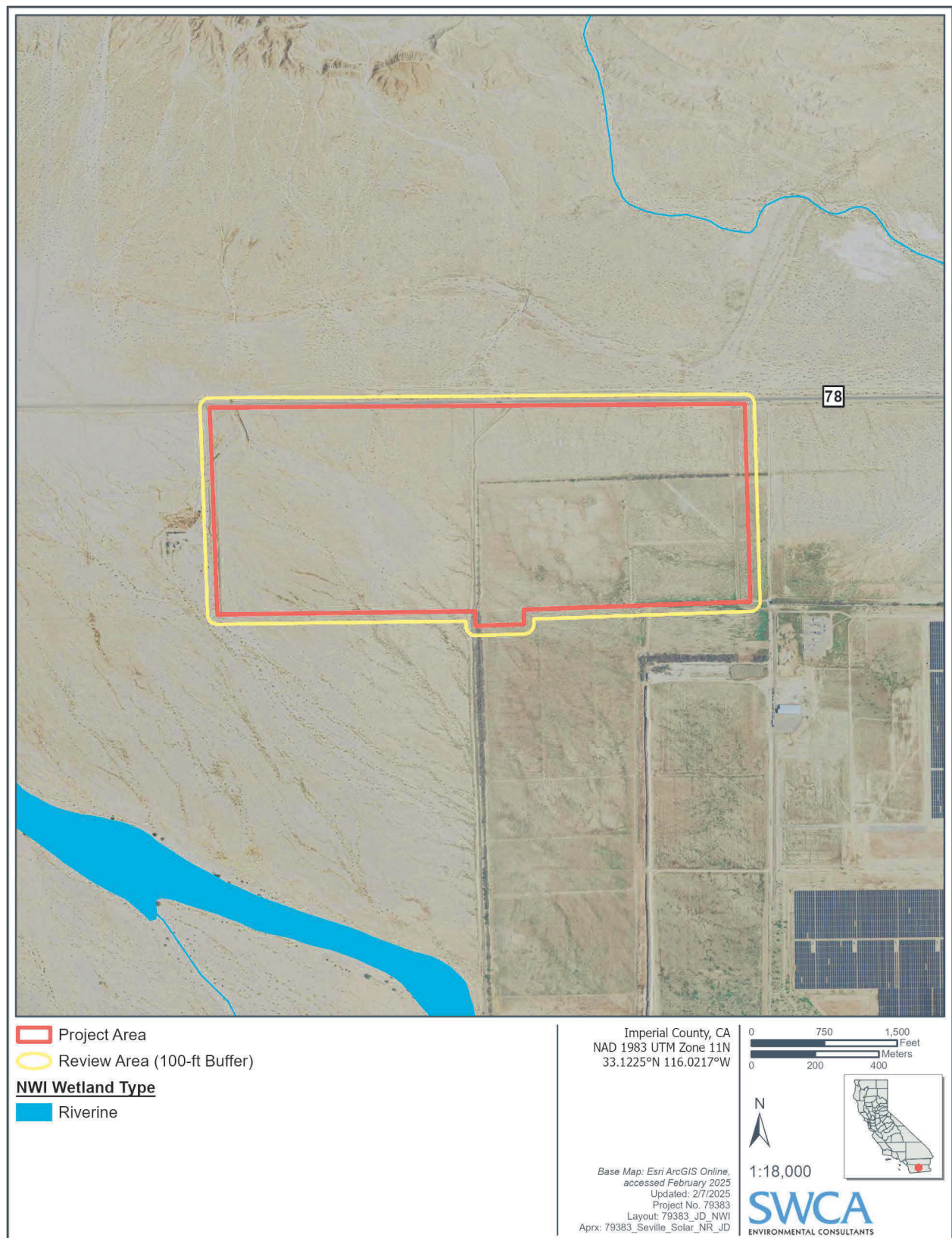


Figure 8. National Wetlands Inventory features within the review area.

5.2 Field Data Collected

No wetland determination sampling plots were examined due to the lack of potential wetland conditions (an absence of hydrophytic vegetation and primary indicators of surface hydrology). While tamarisk is a recognized hydrophytic species within the *Tamarix* genus, the species is invasive, considered problematic, and can occur in non-wetland conditions. The tamarisk on-site was restricted to the elevated human-made berms which lacked any surface hydrology indicators or the presence of other hydrophytic species. Tamarisk was therefore assumed to lack an association to wetland conditions within the review area. Given the existing site conditions, state and federal wetlands were presumed to be absent within the review area. Additionally, two OHWM datasheets were recorded within the review area, S01 and S02, to represent the range of drainage characteristics observed within the review area.

5.2.1 Aquatic Resources Inventory

Seventeen non-wetland aquatic resource features (F01, F02, F03, F04, F05, F06, F07, F08, F09, F10, F11, F12, F13, F14, F15, F16, and F17) were recorded in the review area (Figures 9, 10, and 11a–11c; Table 2). No wetlands were identified. Features consist of a network of poorly defined braided and single-thread channels, and most features consist of a series of discontinuous OHWM segments.

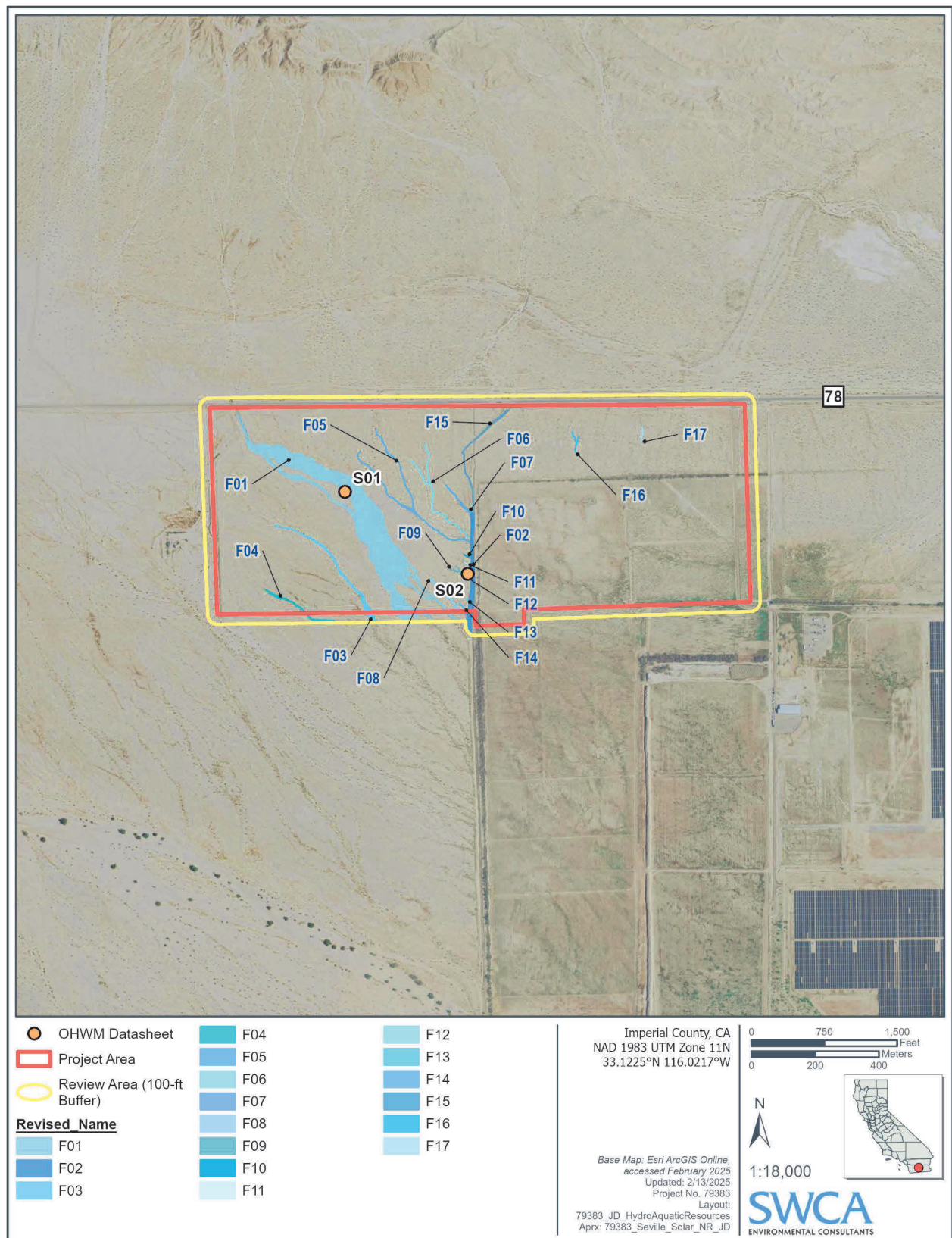


Figure 9. Mapped feature labels (overview).

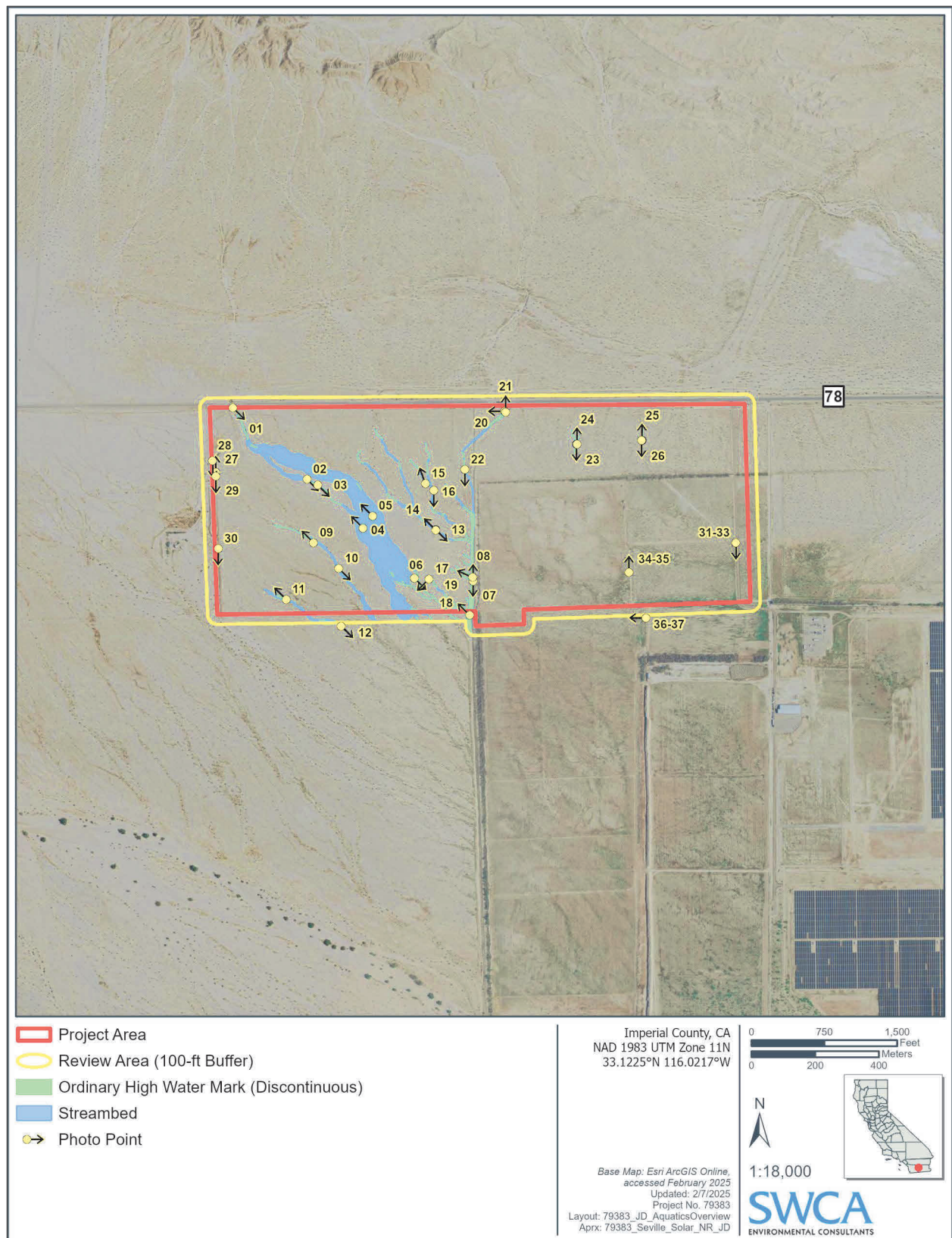


Figure 10. Overview of mapped jurisdictional resources within the review area.

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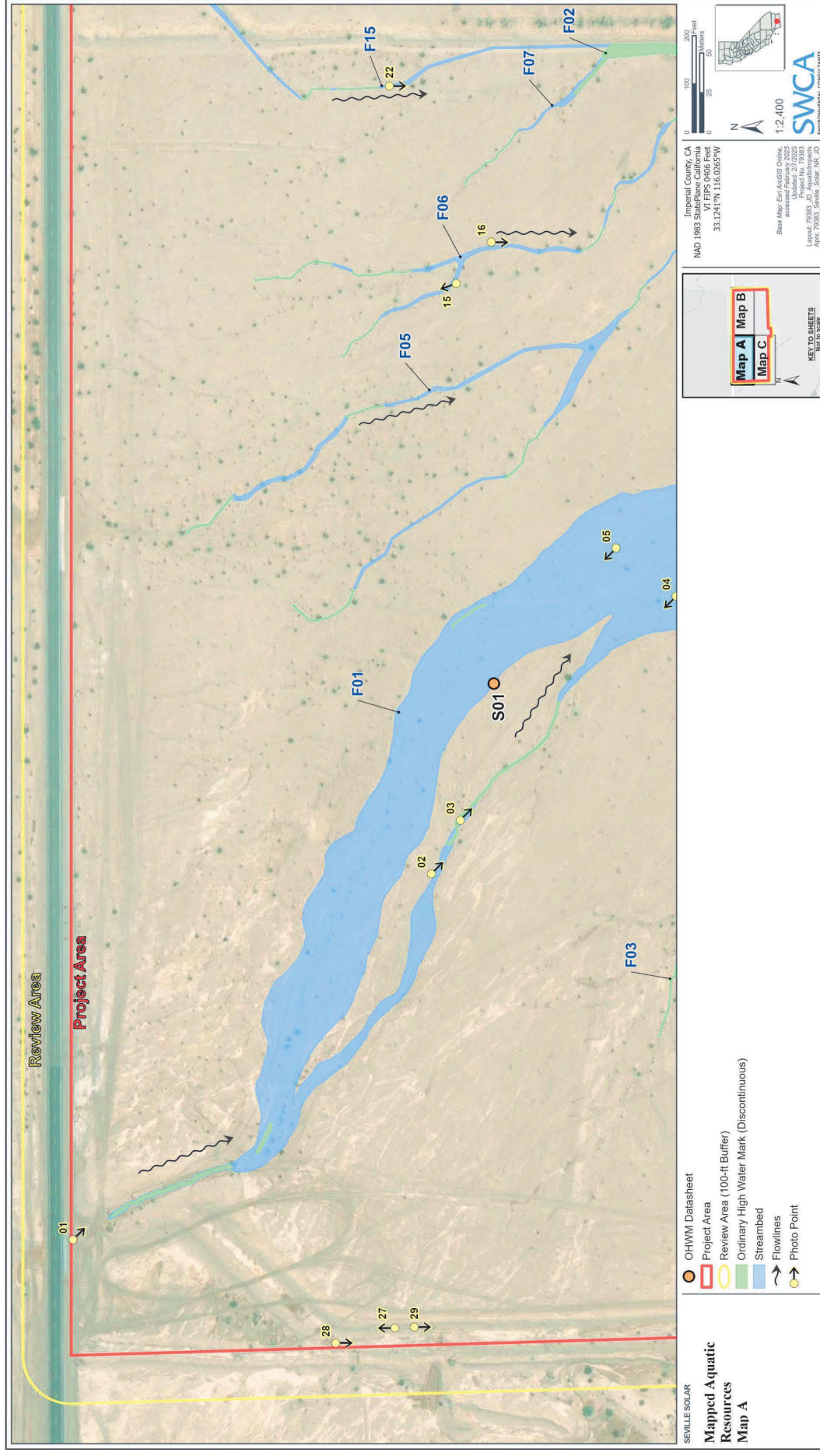


Figure 11a. Mapped jurisdictional resources within the review area (subset 1 of 3).

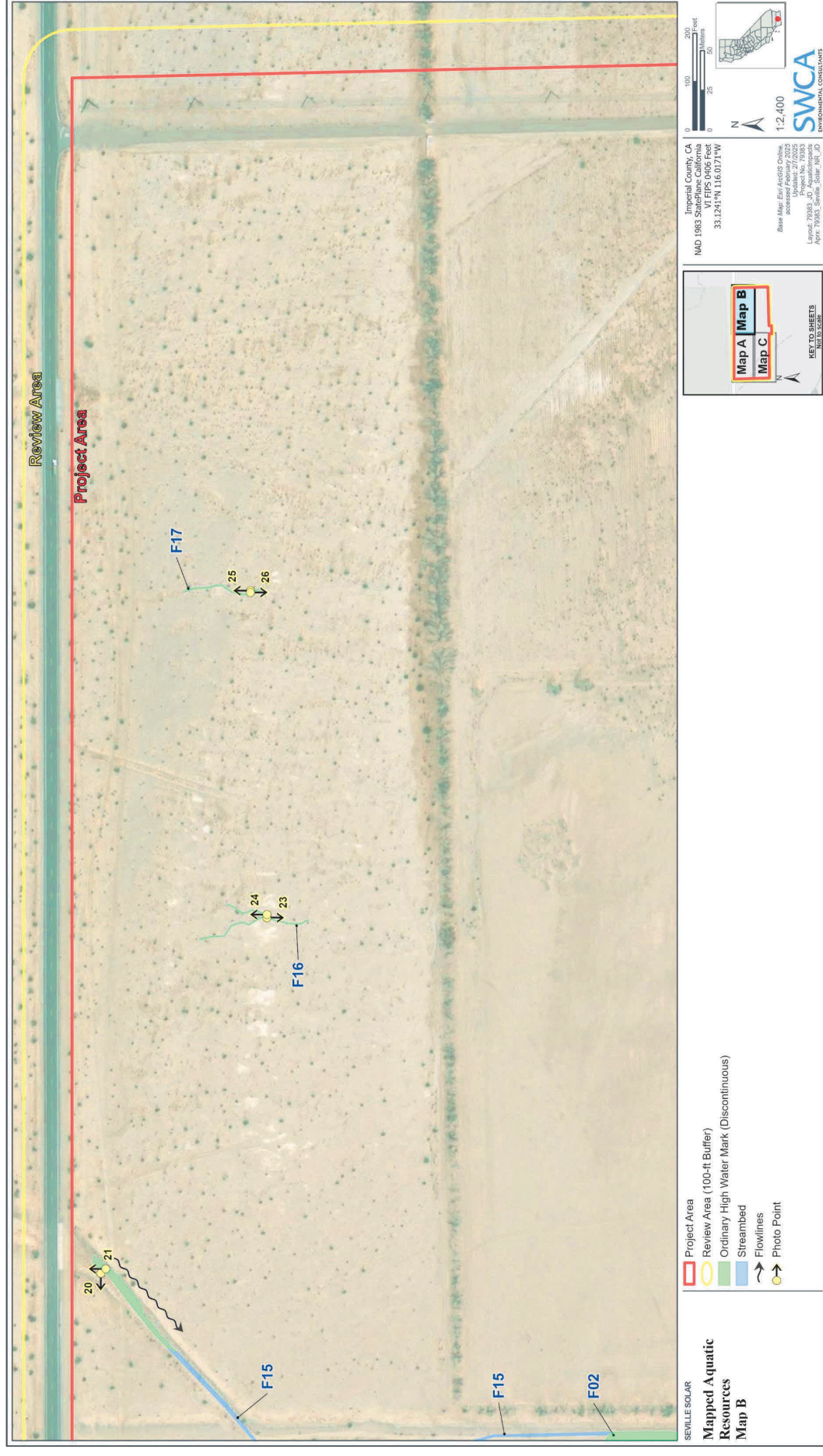


Figure 11b. Mapped jurisdictional resources within the review area (subset 2 of 3).

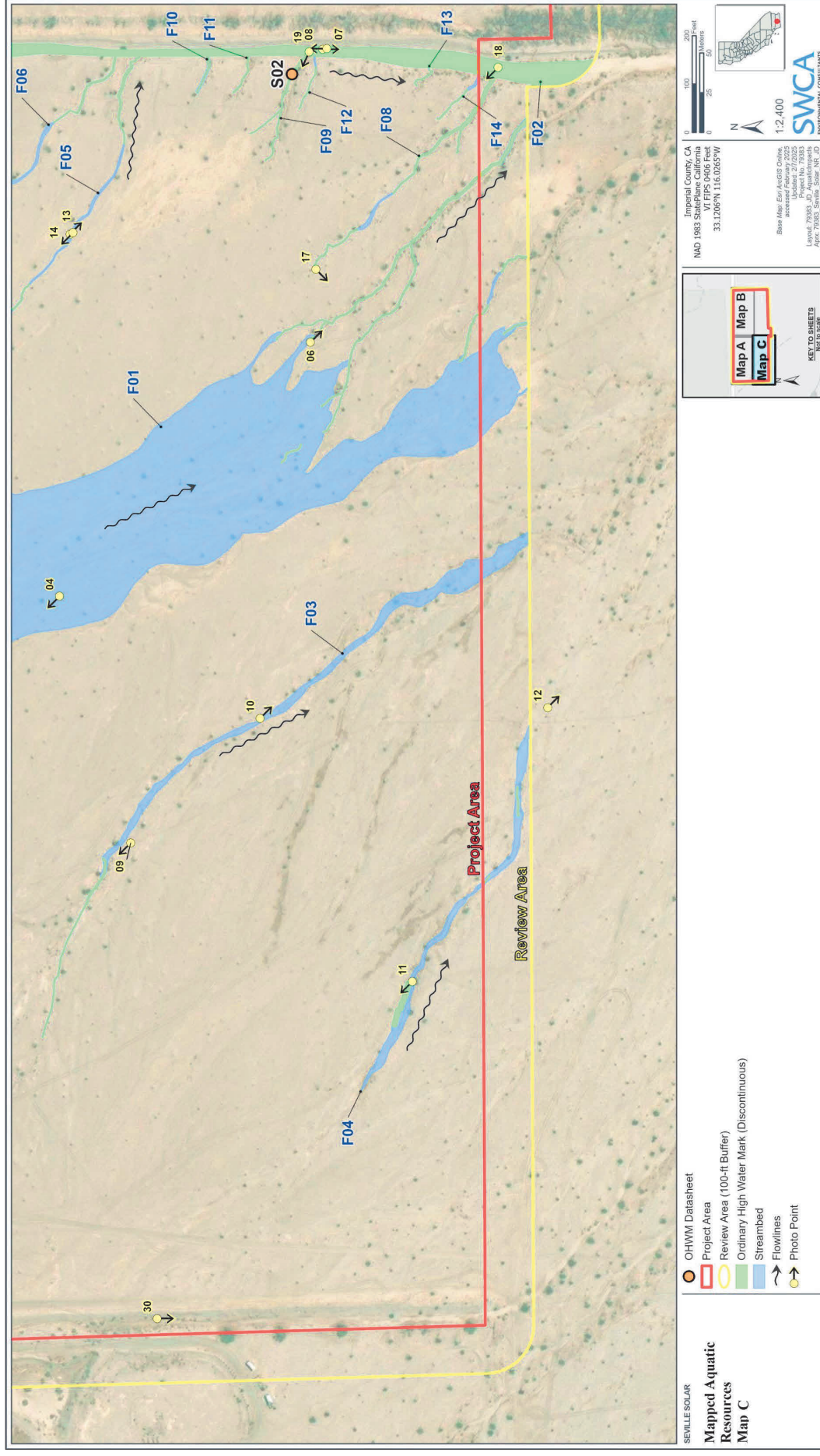


Figure 11c. Mapped jurisdictional resources within the review area (subset 3 of 3).

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Table 2. Aquatic Resources within the Review Area

Aquatic Resource Feature	Feature Type	Description of Aquatic Resource	Discrete OHWM Segments within Broader Drainage	OHWM Representative Width (linear feet)	Acreage within Review Area
F01	Non-wetland Drainage	Compound channel consisting of a broad floodplain with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow from north of SR 78. Conveys flow in southeasterly direction to F02.	8	4.5	11.3
F02	Non-wetland Drainage	Single linear channel with distinct OHWM due to an artificial berm redirecting flow in a southerly direction outside of the review area. The channel also functions as a road. Almost all features within the review area convey flow to F02.	1	20	3.06
F03	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northwestern limits of the project. Flow is conveyed in a southeasterly direction, eventually draining into San Felipe located south of the review area.	1	4	0.45
F04	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northwestern limits of the project. Flow is conveyed in a southeasterly direction eventually draining into San Felipe Creek located south of the review area.	3	3	0.23
F05	Non-wetland Drainage	Series of coalescing narrow channels with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project. Flow is conveyed in a southeasterly direction draining into F02 within the review area.	6	3	0.31
F06	Non-wetland Drainage	Series of coalescing narrow channels with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project. Flow is conveyed in a southeasterly direction to F02 within the review area.	6	2.5	0.13
F07	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern limits of the project. Flow is conveyed in a southeasterly direction to F02 within the review area.	2	3	0.04
F08	Non-wetland Drainage	Series of coalescing narrow channels with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project. Flow is conveyed in a southeasterly direction to F02 within the review area.	2	5	0.06
F09	Non-wetland Drainage	Series of coalescing narrow channels with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project. Flow is conveyed in a southeasterly direction to F02 within the review area.	1	3	0.02

Aquatic Resource Feature	Feature Type	Description of Aquatic Resource	Discrete OHWM Segments within Broader Drainage	OHWM Representative Width (linear feet)	Acreage within Review Area
F10	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northwestern limits of the project. Flow is conveyed in a southeasterly direction to F02 within the review area.	1	2	0.01
F11	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project east of F01. Flow is conveyed in a southeasterly direction to F02 within the review area.	1	2.5	0.01
F12	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project east of F01. Flow is conveyed in a southeasterly direction to F02 within the review area.	1	2	0.004
F13	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project east of F01. Flow is conveyed in a southeasterly direction to F02 within the review area.	1	3	0.004
F14	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow in the northern portion of the project east of F01. Flow is conveyed in a southeasterly direction continuing outside of the review to F02.	1	2.5	0.01
F15	Non-wetland Drainage	Narrow channel with discontinuous and poorly defined OHWM segments. Source is accumulated sheet flow north of SR 78. Channel may be redirected by berms to flow in a southwestern direction before conveying in a southerly direction to F02 within the northern portion of the review area.	3	4.5	0.16
F16	Non-wetland Drainage	A discontinuous, narrow channel with poorly defined OHWM segments. Source is accumulated sheet flow south of SR 78 in the northeastern limits of the project. Channel dissipates into sheet flow with no hydrological connectivity to other features.	1	2	0.01
F17	Non-wetland Drainage	A discontinuous, narrow channel with poorly defined OHWM segments. Source is accumulated sheet flow south of SR 78 in the northeastern limits of the project. Channel dissipates into sheet flow with no hydrological connectivity to other features.	1	3	0.01

F01 is an unnamed drainage that conveys flow in a southeasterly direction within the review area. Flow is channelized from various unnamed drainages north of SR 78. Flow is then conveyed across the highway and into the northwest corner of the project as F01. F01 has a discontinuous OHWM. The OHWM is well defined in the northwesternmost portion of the review area where the feature is narrow. Shortly after entering the review area, flow is broadened, and the feature becomes shallower. Shortly after the broadening of the feature, the OHWM is obscured and can only be seen intermittently throughout the

feature within the review area. The drainage limits were assessed via the limits of the active floodplain, which was characterized by shallow topographic changes, surface soil cracking, sediment sorting, and ripples. Vegetation within F01 was also sparser than the surrounding uplands.

F02 is the amalgam of most of the hydrologic flow within the review area. Flow is generally conveyed in a southeasterly direction; however, that flow is interrupted by a human-made berm that parallels an access road in a north-south direction. The access road receives flow from most features within the review area. The flow is concentrated enough where the access road has developed a well-defined OHWM. The access road functions as a primary conveyor of flow within the review area. F02 conveys flow to San Felipe Creek located south of the review area.

F03 and F04 are unnamed features that originate from concentrated surface runoff in the northwestern portion of the review area. Both features exhibit discontinuous OHWMs and convey flow in a southeasterly direction. F03 and F04 converge outside of the review area and both are tributaries to San Felipe Creek.

F05, F06, and F07 are unnamed features that appear to originate from concentrated road runoff from SR 78. These features consist of multiple discontinuous OHWM segments. They convey flow in a southeasterly direction to F02.

F08, F09, F10, F11, F12, F13, and F14 are short drainages that originate from concentrated surface runoff. F08 consists of multiple discontinuous OHWMs. F09 through F14 consist of a single OHWM that extends the length of the features. F08 through F14 convey flow in a southeasterly direction to F02.

F15 is an unnamed drainage feature with multiple discontinuous OHWM segments. It receives flow from drainage features north of SR 78. Flow south of the highway is redirected in a southwesterly direction by a human-made berm. After the berm, F15 resumes an unobstructed conveyance of flow in a southerly direction to F02.

F16 and F17 are short-lived unnamed drainage features with a continuous OHWM. They are in the northeastern portion of the review area and result from concentrated surface flow. Both features convey flow in a southerly direction and dissipate after approximately 180 feet. The features are discontinuous. While channelized flow would not connect these features with F02, surface runoff would be conveyed south towards a human-made berm and would then be redirected westward to F02 given the site's topography, which has a slight downslope gradient in a westerly direction towards F02.

6 POTENTIAL JURISDICTIONAL AQUATIC RESOURCES

Aquatic resources and data collected in the field were evaluated to determine the extent of potentially regulated aquatic resources within the review area (Table 3). While a formal Stream Duration Assessment Method (SDAM) analysis to assess stream duration was not conducted, incidental data collected during the survey suggest the absence of RPWs. The features assessed in the review area generally lack strong continuous indicators of active hydrology, including a poorly developed and discontinuous bed and bank. They lack hydrophytic vegetation. The potential lack of RPWs suggests the absence of USACE-regulated resources in the review area.

Aquatic resources within the review area did not include any wetland waters of the United States (wetland WOUS)/wetland waters of the State (wetland WOS). Additionally, non-wetland WOUS are assumed to be absent as well due to the absence of RPWs within the review area. The review area, however, does support non-wetland WOS, and CDFW jurisdictional resources (streambed).

Table 3. Potentially Jurisdictional Aquatic Resources

Aquatic Resource Feature	Description (non-wetland, wetland, riparian habitat)	USACE Non-wetland WOUS (acres / linear feet)	RWQCB Non-wetland WOS (acres / linear feet)	CDFW Jurisdiction (acres / linear feet)
F01	Non-wetland	0 / 0	0.19 / 3,304	11.3 / 3,304
F02	Non-wetland	0 / 0	0.71 / 1,248	0.70 / 1,248
F03	Non-wetland	0 / 0	0.02 / 395	0.45 / 1,523
F04	Non-wetland	0 / 0	0.03 / 202	0.23 / 865
F05	Non-wetland	0 / 0	0.05 / 881	0.31 / 1,692
F06	Non-wetland	0 / 0	0.03 / 759	0.13 / 1,266
F07	Non-wetland	0 / 0	0.02 / 258	0.04 / 404
F08	Non-wetland	0 / 0	0.05 / 446	0.06 / 558
F09	Non-wetland	0 / 0	0.02 / 245	0.02 / 245
F10	Non-wetland	0 / 0	0.004 / 82	0.01 / 82
F11	Non-wetland	0 / 0	0.01 / 87	0.01 / 87
F12	Non-wetland	0 / 0	0.004 / 97	0.004 / 119
F13	Non-wetland	0 / 0	0.003 / 57	0.004 / 61
F14	Non-wetland	0 / 0	0.01 / 90	0.01 / 133
F15	Non-wetland	0 / 0	0.07 / 387	0.16 / 1,312
F16	Non-wetland	0 / 0	0.01 / 250	0.01 / 250
F17	Non-wetland	0 / 0	0.01 / 164	0.01 / 164
Total	–	0 / 0	1.24 / 8,952	13.48 / 13,313

6.1 Wetland Waters of the United States

No wetland WOUS were identified within the review area.

6.2 Non-Wetland Waters of the United States

Despite the surface hydrologic connection to the Salton Sea, a Traditional Navigable Waters, the lack of RPWs indicators, as determined by on-site incidental observations, suggests the absence of non-wetland WOUS. WOUS are presumed to be absent in the review area.

6.3 Wetland Waters of the State

No wetland WOS were identified within the review area.

6.4 Non-Wetland Waters of the State

All features exhibiting an OHWM were assessed as non-wetland WOS. The review area supports approximately 1.24 acres (8,952 linear feet) of non-wetland WOS.

6.5 California Department of Fish and Wildlife Jurisdiction

CDFW jurisdiction includes all non-wetland WOS described above. Additionally, CDFW jurisdiction includes areas adjacent to the OHWM which an active floodplain lacking OHWM development but providing connectivity between discontinuous OHWM segments. The review area supports approximately 13.48 acres (13,313 linear feet) of CDFW jurisdictional resources.

7 POTENTIAL IMPACTS TO AQUATIC RESOURCES

Types of impacts to potentially jurisdictional resources will depend on final project design and will vary by activity type and method. Temporary impacts (i.e., those resulting in a temporary loss of function) may include removal of vegetation associated with construction preparation or grading for temporary access. Permanent impacts (i.e., those constituting a permanent loss of functions) may include installation of solar array support footings, installation of permanent access roads, and grading where natural flow patterns cannot be restored to pre-project conditions following project completion.

Total potential impacts to aquatic resources are estimated to be approximately 0.972 acres (8,431 linear feet) to RWQCB non-wetland WOS, as well as approximately 12.779 acres (12,390 linear feet) to CDFW Jurisdictional Resources (Figures 12a–12c; Table 4). Of the total anticipated impacts to RWQCB non-wetland waters 0.644 acre (5,492 linear feet) are anticipated to be temporary impacts, and 0.328 acre (2,939 linear feet) are anticipated to be permanent impacts. Of the total anticipated impacts to CDFW jurisdictional resources 7.924 acres (7,897 linear feet) are anticipated to be temporary impacts, and 4.855 acres (4,493 linear feet) are anticipated to be permanent impacts. Permanent impacts will result from the solar array footings and installation of access roads. Once finalized, the project design will need to be reassessed to calculate temporary and permanent impacts to aquatic resources.

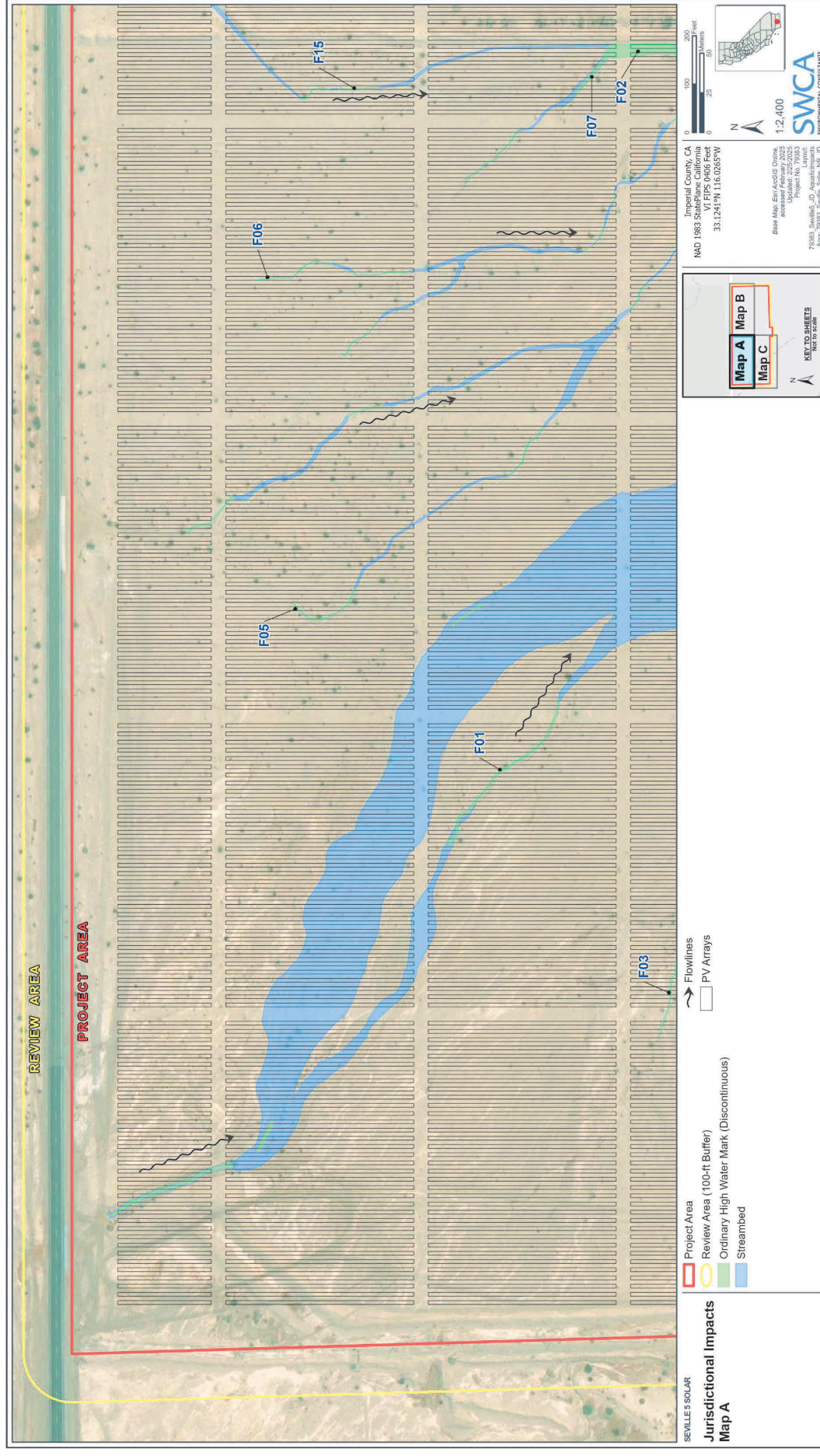


Figure 12a. Impacts to jurisdictional resources (subset 1 of 3).

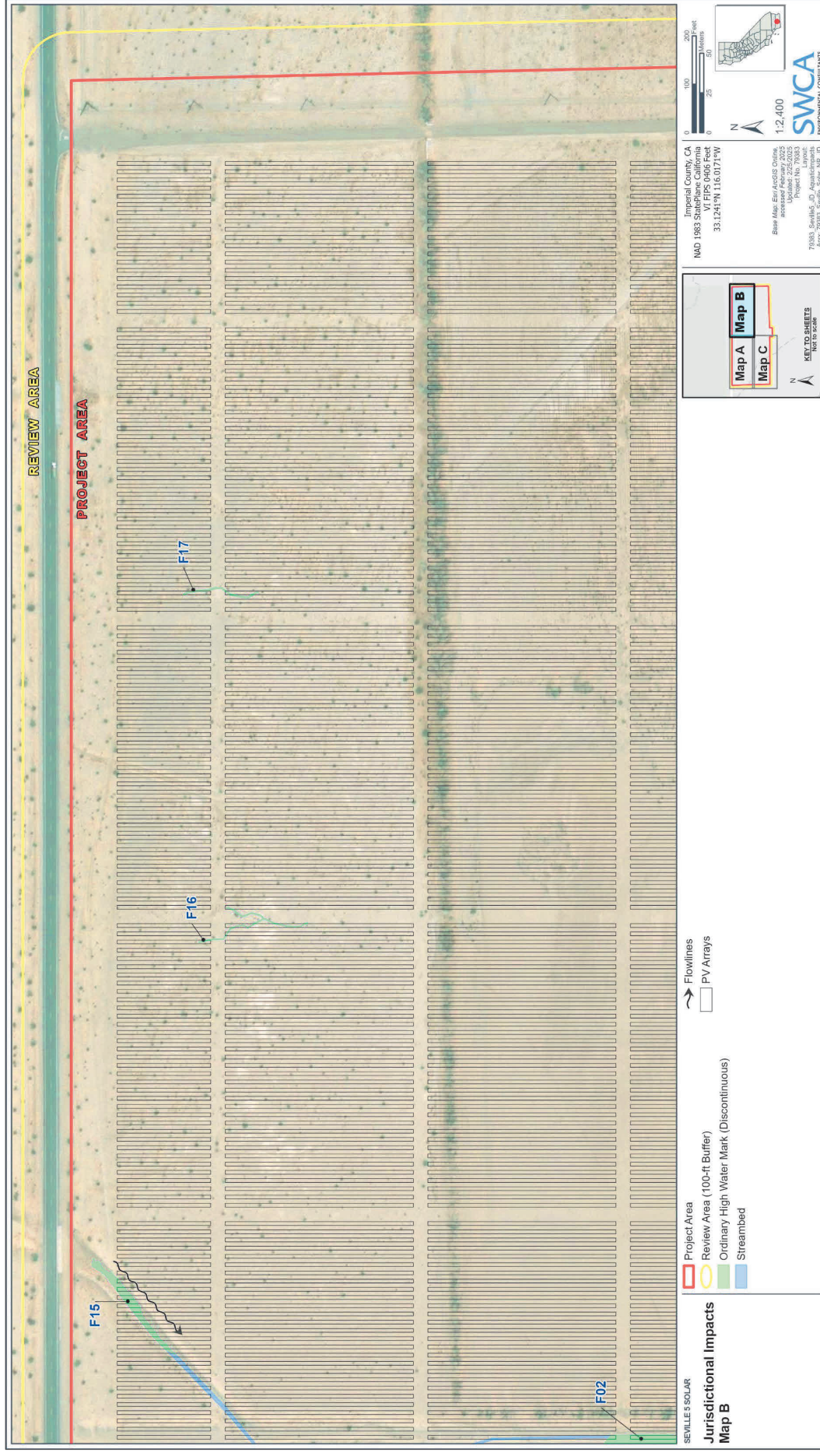


Figure 12b. Impacts to jurisdictional resources (subset 2 of 3).

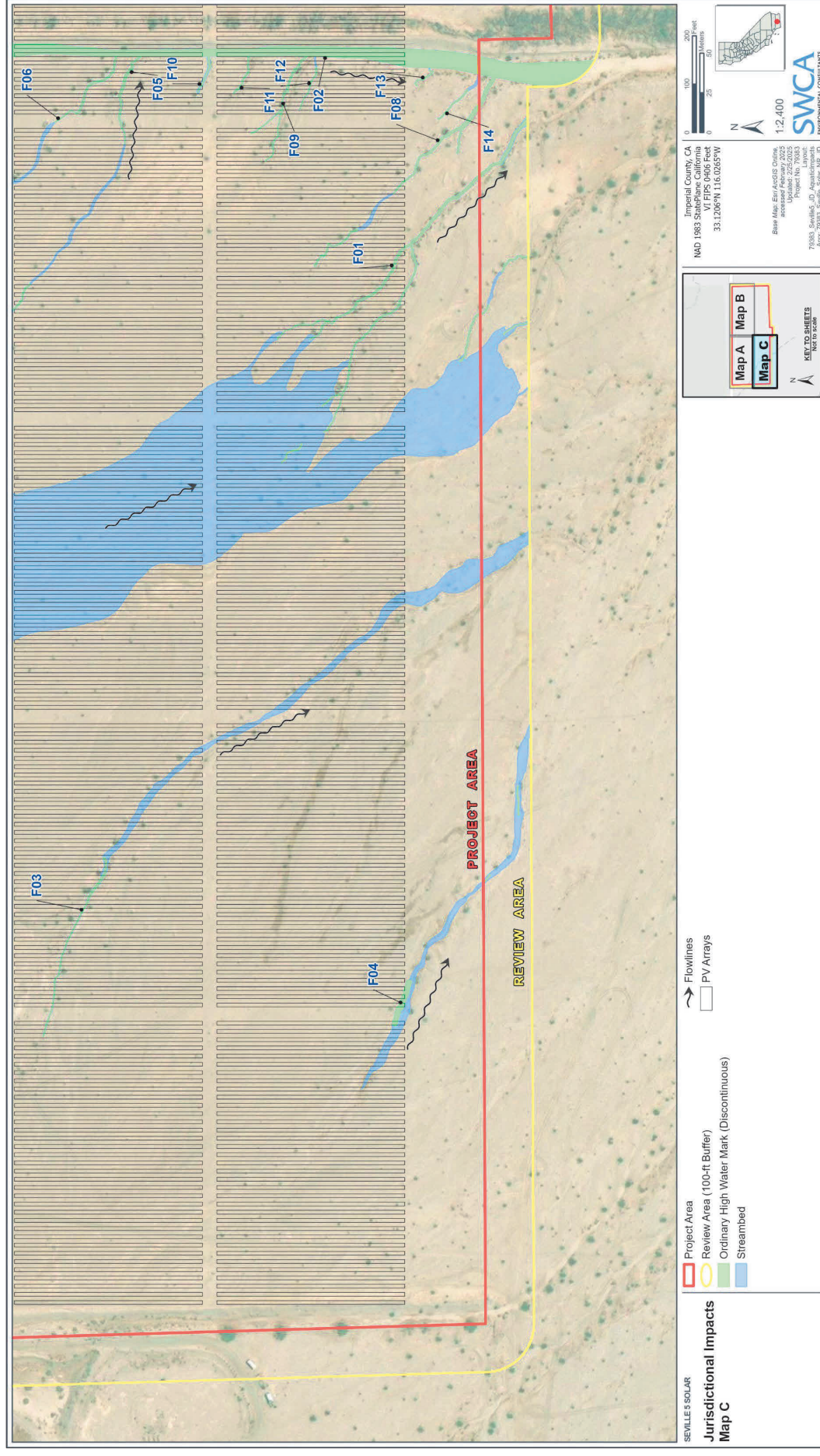


Figure 12c. Impacts to jurisdictional resources (subset 3 of 3).

Table 4. Potential Impacts to Jurisdictional Aquatic Resources

Aquatic Resource Feature	Description (non-wetland, wetland, riparian habitat)	RWQCB Wetland WOS (acres / linear feet) Temporary and Permanent	RWQCB Non-wetland WOS (acres / linear feet) Temporary		RWQCB Non-wetland WOS (acres / linear feet) Permanent		CDFW Streambed (acres / linear feet) Temporary		CDFW Streambed (acres / linear feet) Permanent	
			Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet	Acres	Linear Feet
F01	Non-wetland	0 / 0	0.109	2122	0.053	1029	6.756	1933	4.256	1218
F02	Non-wetland	0 / 0	0.332	680	0.167	343	0.331	681	0.166	342
F03	Non-wetland	0 / 0	0.011	220	0.008	171	0.267	1017	0.100	382
F04	Non-wetland	0 / 0	0.018	96	0.005	25	0.110	408	0.025	94
F05	Non-wetland	0 / 0	0.030	527	0.020	354	0.182	987	0.130	705
F06	Non-wetland	0 / 0	0.018	402	0.016	357	0.079	756	0.053	510
F07	Non-wetland	0 / 0	0.010	146	0.008	112	0.024	222	0.020	182
F08	Non-wetland	0 / 0	0.030	336	0.005	52	0.035	392	0.010	108
F09	Non-wetland	0 / 0	0.010	148	0.007	97	0.010	148	0.007	97
F10	Non-wetland	0 / 0	0.004	75	0.000	7	0.007	73	0.001	9
F11	Non-wetland	0 / 0	0.003	50	0.002	37	0.003	50	0.002	37
F12	Non-wetland	0 / 0	0.002	53	0.002	44	0.003	66	0.002	53
F13	Non-wetland	0 / 0	0.003	57	0	0	0.004	61	0	0
F14	Non-wetland	0 / 0	0.005	90	0	0	0.009	133	0	0
F15	Non-wetland	0 / 0	0.046	244	0.027	143	0.090	723	0.074	589
F16	Non-wetland	0 / 0	0.007	139	0.006	111	0.007	139	0.006	111
F17	Non-wetland	0 / 0	0.006	107	0.003	57	0.006	107	0.003	57
Total	–	0 / 0	0.644	5492	0.328	2939	7.924	7897	4.855	4493

8 SUMMARY AND RECOMMENDATIONS

The findings and conclusions presented in this report, including the location and extent of areas potentially subject to regulatory jurisdiction, represent the professional opinion of SWCA. These findings and conclusions should be considered preliminary and are at the final discretion of the applicable resource agencies.

Proposed project impacts, such as grading, staging, and structure installation, affecting jurisdictional resources would require agency notification prior to regulated activities. Anticipated permits include a Waste Discharge Requirements form from the Colorado Desert RWQCB, as well as a Streambed Alteration Agreement from the CDFW. Prior to impacts to regulated aquatic resources, the applicant would need to submit a Notice of Intent for Waste Discharge Requirements to the Colorado Desert RWQCB under the Porter-Cologne Water Quality Control Act, and a Lake and Streambed Alteration notification under Section 1600 of the California Fish and Game Code. For unavoidable impacts to jurisdictional resources, compensatory mitigation would be an expected requirement from the regulating agencies. For unavoidable impacts to jurisdictional resources, compensatory mitigation would be an expected requirement from the regulating agencies.

Although USACE-regulated resources are not anticipated to occur on-site, a formal assessment of stream duration is recommended to determine the presence/absence of RPWs. USACE-regulated resources are anticipated to be absent. However, submittal of an Approved Jurisdictional Determination (AJD) to the USACE Los Angeles District is recommended to confirm the presence/absence of regulated USACE resources in the project area.

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APPENDIX A

Photographs



Photograph 1. F01 from SR 78; view facing southeast (downstream).



Photograph 2. F01 consisting of active floodplain indicators; view facing southeast (downstream).



Photograph 3. Example of low-flow channel in F01; view facing southeast (downstream).



Photograph 4. Active floodplain of F01 showing sheet flow; view facing northwest (upstream).



Photograph 5. View of poorly developed low-flow channels in F01; view facing northwest (upstream).



Photograph 6. F01 channelizes into distinct drainages; view facing southeast (downstream).



Photograph 7. F02, showing access road which functions as a primary conveyor of flow; view facing south (downstream).



Photograph 8. View of F02 facing north (upstream).



Photograph 9. F03; view facing northwest (upstream).



Photograph 10. F03; view facing southeast (downstream).



Photograph 11. F04; view facing northwest (upstream).



Photograph 12. F04; view facing southeast (downstream).



Photograph 13. F05; view facing southeast (downstream).



Photograph 14. F05; view facing northwest (upstream).



Photograph 15. F06; view facing north-northwest (upstream).



Photograph 16. F06; view facing south (downstream).



Photograph 17. F08; view facing southeast (downstream).



Photograph 18. F08; view facing northwest (upstream).



Photograph 19. F09; view facing west-northwest (upstream).



Photograph 20. F15 near SR 78; view facing west (downstream).



Photograph 21. F15; view facing northeast (upstream).



Photograph 22. F15; view facing south (downstream).



Photograph 23. F16; view facing south (downstream).



Photograph 24. F16; view facing north (upstream).



Photograph 25. F17; view facing north (upstream).



Photograph 26. F17; view facing south (downstream).



Photograph 27. Northwestern portion of review area overview; view facing north. No aquatic resources observed.



Photograph 28. Northwestern portion of review area overview; view facing south. No aquatic resources observed.



Photograph 29. Northwestern portion of review area overview; view facing south. No aquatic resources observed.



Photograph 30. Northwestern portion of review area overview; view facing south. No aquatic resources observed.



Photograph 31. Northeastern portion of review area overview; view facing north. No aquatic resources observed.



Photograph 32. Northeastern portion of review area overview; view facing south. No aquatic resources observed.



Photograph 33. Northeastern portion of review area overview; view facing west. No aquatic resources observed.



Photograph 34. Northeastern portion of review area overview; view facing north. No aquatic resources observed.



Photograph 35. Northeastern portion of review area overview; view facing south. No aquatic resources observed.



Photograph 36. Northeastern portion of review area overview; view facing east. No aquatic resources observed.

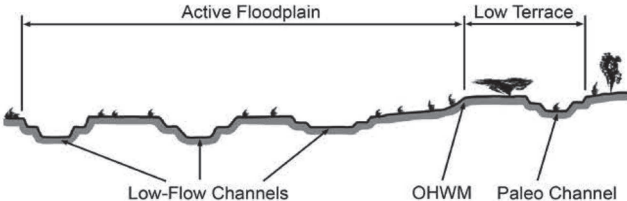


Photograph 37. Northeastern portion of review area overview; view facing west. No aquatic resources observed.

APPENDIX B

Datasheets (Wetland Forms and OHWM Datasheets)

Arid West Ephemeral and Intermittent Streams OTHM Datasheet

Project: Seville Solar Project Number: 79383 Stream: Unnamed Drainage Investigator(s): Luis Aguilar/Parker Richard:	Date: 4/5/2023 Town: Ocotillo Wells Photo begin file#: Time: 1000 State: CA Photo end file#:
Y ☐ / N ☒ Do normal circumstances exist on the site? Y ☐ / N ☒ Is the site significantly disturbed?	Location Details: East of Ocotillo Wells, south of Hwy 78 Projection: Datum: WGS84 Coordinates: 33.123218°, -116.026234°
Potential anthropogenic influences on the channel system: Hwy 78 intersects flow. Flow downslope of Hwy 78 is partially channelized. Flow abuts a human made berm and is consequently redirected south towards San Felipe Creek.	
Brief site description: The site is largely undisturbed in the immediate feature vicinity, but flow is altered up and downslope of project. Area is sparsely vegetated.	
Checklist of resources (if available): ☒ Aerial photography Dates: ☒ Topographic maps ☐ Geologic maps ☐ Vegetation maps ☒ Soils maps ☐ Rainfall/precipitation maps ☐ Existing delineation(s) for site ☒ Global positioning system (GPS) ☐ Other studies ☐ Stream gage data Gage number: Period of record: ☐ History of recent effective discharges ☐ Results of flood frequency analysis ☐ Most recent shift-adjusted rating ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event	
Hydrogeomorphic Floodplain Units 	
Procedure for identifying and characterizing the floodplain units to assist in identifying the OTHM: - Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. - Select a representative cross section across the channel. Draw the cross section and label the floodplain units. - Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. - Record the floodplain unit and GPS position. - Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. - Identify any indicators present at the location. - Repeat for other points in different hydrogeomorphic floodplain units across the cross section. - Identify the OTHM and record the indicators. Record the OTHM position via: ☐ Mapping on aerial photograph ☒ GPS ☐ Other:	

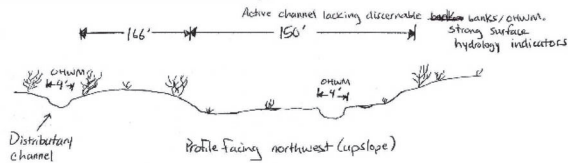
Project ID: 79383

Cross section ID: S01

Date: 4/5/2023

Time: 1000

Cross section drawing:



OHWM

GPS point: 33.123004°, -116.026748°

Indicators:

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

Comments:

Unvegetated with well established banks. Narrow OHWM compared to broader presence of hydrology indicators.

Floodplain unit:

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

GPS point: 33.123218°, -116.026234°

Characteristics of the floodplain unit:

Average sediment texture: Coarse Silt

Total veg cover: 4 % Tree: _____ % Shrub: 3 % Herb: 1 %

Community successional stage:

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

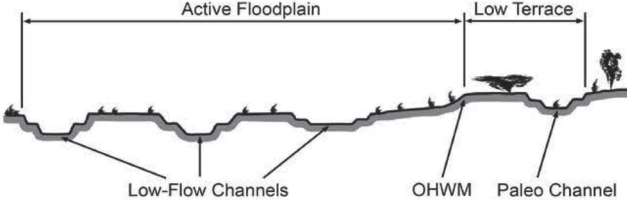
Indicators:

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

Comments:

Lacks defined banks. Extents floodplain determined by presence of surface hydrology indicators.

Arid West Ephemeral and Intermittent Streams OHW M Datasheet

Project: Seville Solar Project Number: 79383 Stream: Unnamed Drainage Investigator(s): Luis Aguilar/Parker Richard:		Date: 4/5/2023 Town: Ocotillo Wells Photo begin file#: Time: 1030 State: CA Photo end file#:	
Y ☐ / N ☒ Do normal circumstances exist on the site? Y ☐ / N ☒ Is the site significantly disturbed?		Location Details: East of Ocotillo Wells, south of Hwy 78 Projection: Datum: WGS84 Coordinates: 33.120854°, -116.022126°	
Potential anthropogenic influences on the channel system: Flow abuts a human made berm and is consequently redirected south towards San Felipe Creek.			
Brief site description: The site is largely undisturbed in the immediate feature vicinity, but flow is altered up and downslope of project. Area is sparsely vegetated.			
Checklist of resources (if available): ☒ Aerial photography Dates: ☒ Topographic maps ☐ Geologic maps ☐ Vegetation maps ☒ Soils maps ☐ Rainfall/precipitation maps ☐ Existing delineation(s) for site ☒ Global positioning system (GPS) ☐ Other studies ☐ Stream gage data Gage number: Period of record: ☐ History of recent effective discharges ☐ Results of flood frequency analysis ☐ Most recent shift-adjusted rating ☐ Gage heights for 2-, 5-, 10-, and 25-year events and the most recent event exceeding a 5-year event			
Hydrogeomorphic Floodplain Units 			
Procedure for identifying and characterizing the floodplain units to assist in identifying the OHWM: 1. Walk the channel and floodplain within the study area to get an impression of the geomorphology and vegetation present at the site. 2. Select a representative cross section across the channel. Draw the cross section and label the floodplain units. 3. Determine a point on the cross section that is characteristic of one of the hydrogeomorphic floodplain units. a) Record the floodplain unit and GPS position. b) Describe the sediment texture (using the Wentworth class size) and the vegetation characteristics of the floodplain unit. c) Identify any indicators present at the location. 4. Repeat for other points in different hydrogeomorphic floodplain units across the cross section. 5. Identify the OHWM and record the indicators. Record the OHWM position via: ☐ Mapping on aerial photograph ☐ Digitized on computer ☒ GPS ☐ Other:			

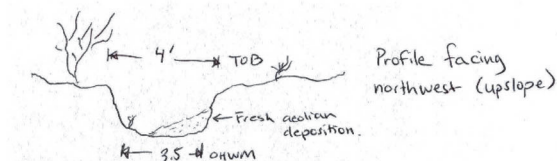
Project ID: 79383

Cross section ID: S02

Date: 4/5/2023

Time: 1030

Cross section drawing:



OHWM

GPS point: 33.120854°, -116.022126°

Indicators:

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

Comments:

Insized largely unvegetated drainage. Aeolian depositional sand within the drainage.

Floodplain unit:

☐ Low-Flow Channel

☒ Active Floodplain

☐ Low Terrace

GPS point: 33.120852°, -116.022128°

Characteristics of the floodplain unit:

Average sediment texture: Medium Sand

Total veg cover: 4 % Tree: 0 % Shrub: 3 % Herb: 1 %

Community successional stage:

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

Indicators:

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

Comments:

Indicators partially obscured by aeolian sand deposition.