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Soda Mountain Solar Project

Aquatic Resources Delineation
Volume 1

prepared for

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1 Introduction

Rincon Consultants, Inc. (Rincon) conducted an aquatic resources delineation for the Soda Mountain Solar Project (project), located on land managed by the Bureau of Land Management (BLM) within unincorporated San Bernardino County, California. The delineation was conducted to determine the location and extent of waters and wetlands within a defined Study Area, inclusive of the proposed project site, that are potentially subject to the jurisdiction of the United States Army Corps of Engineers (USACE), Lahontan Regional Water Quality Control Board (RWQCB), and California Department of Fish and Game (CDFW). For the purposes of this assessment, the Study Area includes a 3,418-acre area encompassing an approximately 2,670-acre proposed project site (inclusive of the four solar arrays, detention basins, substation pads, laydown yards and equipment storage areas, gen-tie corridor, access roads, and temporary work areas), and a 250-foot buffer. In addition, an existing approximately 3.79-mile access road was also included in this assessment, incorporating an additional 45.19-acre Access Road Study Area, which includes the existing access road and a 50-foot buffer.

Any proposed project impacts in areas identified as jurisdictional waters or wetlands may be subject to the permit requirements of the USACE under Section 404 of the Clean Water Act (CWA), RWQCB under Section 401 of the CWA and/or Porter-Cologne Water Quality Act, and CDFW pursuant to Section 1600 et. seq. of the California Fish and Game Code. However, the authority of the California Energy Commission (CEC), pursuant to Government Code amendments, enacted with the passage of Assembly Bill 205 in 2022, may supersede the CDFW's authority over a proposed project. Actual jurisdictional areas are determined by the state and federal authorities at the time that jurisdictional determinations or permits are requested.

This report was prepared in accordance to the USACE's Minimum Standards for Acceptance of Aquatic Resources Delineation Reports (USACE 2017).

1.1 Study Area Location

The Study Area is located approximately 10 miles southwest of the unincorporated town of Baker, in San Bernardino County, California (Figure 1, Appendix D). The Study Area is located between Baker and Barstow, and can be reached by traveling on Interstate 15 and exiting Rasor Road at the Rasor Road Services Shell Oil gas station (66150 Rasor Road, Baker, California 92309), and then following the unpaved portion of Rasor Road onto the project site.

The Study Area covers approximately 3,418 acres, plus an additional 45.19 acres for the Access Road Study Area, and is positioned on BLM public lands within the *San Bernardino, California* U.S. Geological Survey (USGS) 7.5-minute topographic quadrangle (Figure 2a and Figure 2b, Appendix D). The Public Land Survey System depicts the Study Area in Township 12N, Range 7E, Sections 1 and 11-14; Township 12N, Range 8E, Sections 6, 7 and 18; Township 13N, Range 8E, Sections 29-32, San Bernardino Meridian (Earth Point 2025). The Study Area is centered at approximately 35.148097˚, -116.183703˚ in the alluvial valley dividing the northern and southern portions of the Soda Mountains in the Mojave Desert and extends approximately 8.5 miles along the southeast side of Interstate 15 (Mojave Freeway).

The Study Area occurs on the following San Bernardino County Assessor's Parcel Numbers (APN): 0543-24-117-0000, 0543-24-119-0000, 0543-20-107-0000, 0543-25-101-0000, 0543-20-110-0000, 054320-109-0000, 0543-25-112-0000, and 0543-21-118-0000 (Figure 2b and Figure 3, Appendix D).

1.2 Project Description

The project includes construction, operation, maintenance, and eventual decommissioning of a 300-megawatt (MW) photovoltaic (PV) solar facility. The project would operate 24 hours per day year-round and would generate electricity during daylight hours when the sun is shining. The project would generate and deliver solar-generated power to the regional electrical grid through an interconnection with the existing Mead-Adelanto 500-kV transmission line operated by the Los Angeles Department of Water and Power. The approximate disturbance areas within the Study Area include the following project components, which will result in a total 2,098-acre Project Area illustrated in Figure 4 and Figure 5, Appendix D:

1. The solar plant site (i.e., all facilities that create a footprint in and around the field of solar panels, including the solar field consisting of solar power arrays identified as the East Array and South Arrays 1, 2, and 3), operation and maintenance (O&M) buildings and structures, stormwater infrastructure, and related infrastructure and improvements.
2. A substation and switchyard for interconnection to the existing transmission system, located within the gen-tie corridor.
3. Approximately 1-mile 500-kilovolt (kV) gen-tie line connecting project substation, switchyard, and 500-kV Mead-Adelanto line.
4. Approximately 300 MW/1,200 MW-hour of battery energy storage system (BESS) across 18 acres.

In addition, the project incorporates an existing 3.79-mile dirt access road on the north side of Interstate 15. This road is an existing road and no new grading resulting in permanent impacts is proposed as part of the project. Temporary impacts may be necessary for road improvements throughout the life of the project; however, no road improvements are currently proposed. For the purpose of this assessment, Rincon provided a total acreage of delineated aquatic resources within the Access Road Study Area, which includes the existing road prism and a 50-foot buffer.

Project associated Mitigation Measures will also be implemented, as necessary, throughout the life of the project. Specifically, with implementation of MM BIO-3, on-site grading and associated ground disturbance would be significantly reduced under the solar field. The reduction in on-site grading and associated ground disturbance would reduce the potential for the project to result in direct, indirect or cumulative impacts related to water quality standards, waste discharge requirements, surface and groundwater quality degradation and the alteration of onsite drainage patterns.

2 Methodology

A literature review and field surveys were conducted to identify, describe, and map potential jurisdictional features within the defined Study Areas. The literature review and field surveys were conducted in accordance with USACE, RWQCB, and CDFW procedures as outlined below and further discussed in Appendix A. Additional mapping of potentially jurisdictional features was completed using geographic information system (GIS) tools, further discussed below.

2.1 Literature Review

Prior to the field survey, Rincon reviewed aerial imagery (Google Earth Pro 2025) of the Study Areas, the *San Bernardino, California* USGS 7.5-minute topographic quadrangle (USGS 2025a), the Web Soil Survey (United States Department of Agriculture, Natural Resources Conservation Service [USDA, NRCS] 2025a), the National Hydric Soils List by State: California (USDA, NRCS 2025b), and the U.S. Climate Data for weather history (U.S. Climate Data 2025). Additionally, the National Wetlands Inventory (NWI; United States Fish and Wildlife Service [USFWS] 2025) and the National Hydrography Dataset (NHD; USGS 2025b) were reviewed. These resources were reviewed to better characterize the site and its surroundings from a hydrologic, geologic, and topographic perspective, and to determine if any soil units mapped in the Study Areas are classified as hydric.

The literature review also included the review of two previously prepared reports completed for the project by SWCA: *Aquatic Resources Delineation Report for the Soda Mountain Solar Project*, dated June 2024 (ARDR; SWCA 2024) and *Soda Mountain Solar Project Biological Resources Technical Report*, dated January 2025 (BRTR; SWCA 2025). These reports provided an evaluation of biological and aquatic resources within the same 3,418-acre Study Area for the proposed solar arrays and gen-tie corridor.

2.2 Field Surveys

Field surveys included a combination of the following:

- delineation surveys within Representative Sample Plots within the proposed locations of the four solar arrays (East Array, South Arrays 1, 2, and 3);
- delineation surveys within the gen-tie corridor;
- field verification transects within the Study Area; and
- field verification transects within the Access Road Study Area.

These field methods are further discussed below.

Field delineation surveys were completed by Artemis Environmental biologists between March 24 and March 28, 2025. The surveys were completed on-foot to evaluate the site for wetland and non-wetland jurisdictional features. Current federal and State policies, methods, and guidelines were used to identify and delineate potential jurisdictional features and are summarized in the Section 2.2.1 below and in detail in Appendix A. The field surveys consisted of delineating aquatic resources within 50 randomly located 100-meter by 100-meter square plots to capture representative data on aquatic resources within the four solar arrays (East Array, South Arrays 1, 2, and 3). A total of 123.55 acres

were surveyed in the combined 50 Representative Sample Plots. Field delineation surveys were also completed within the entire approximately 38.87-acre gen-tie corridor.

The extent of potential jurisdictional features, locations of culverts, and sample points were collected in the field using a Trimble Global Positioning System unit with sub-meter accuracy and were subsequently transferred to Rincon's Geographic Information System (GIS) software program (i.e., ArcGIS Pro) to further analyze aquatic features in the entire Study Area and produce figures provided in this document. Sample points were established within the survey areas that best represent the conditions of the jurisdictional features and not conducted in areas with an obvious prevalence of upland vegetation or in areas where the landform would not support wetland features. At each sample point, plant species were documented and the previously mapped vegetation communities identified in the SWCA BRTR (SWCA 2025) were field-checked for accuracy. Sample point locations are illustrated in the attached figures and completed datasheets are provided in Appendix C. Photographs of potential jurisdictional features and the surrounding areas were captured. Photographs are provided as Appendix B.

Following the completion of the initial delineation surveys, a combination of GIS software tools and the mapped aquatic resources documented in the Representative Sample Plots and the gen-tie corridor were used to extrapolate the field mapped data and digitally map the full extent of the remaining Study Areas. The GIS mapping is further discussed in Section 2.3 below. Following the GIS mapping of the full extent of the Study Areas and at the request of the CEC, a total of four linear transects were positioned in the proposed solar array locations, perpendicular to the general flow direction of the drainage features, and one transect was placed along the center of the Access Road Study Area. The transects were walked by delineators with our teaming partner Artemis Environmental between August 12 and August 15, 2025 to field verify the mapped drainage features and document the width of each intersecting drainage along the transect. Transect locations are illustrated in the attached figures. The delineators verified if the digitally mapped drainage features were present or absent. For features that were present, a GPS point was captured in the center of the feature to document the width measurements, including width of the ordinary high water mark (OHWM) and width of the top of bank. Drainage features that were digitally mapped and were not confirmed by field staff as defined jurisdictional features supporting an OHWM or top of bank, were noted and later removed from the digital imagery. GIS staff later used the width measurements along the transects and the Representative Sample Plots retained by the field staff to extrapolate the drainage widths along the entire length of the GIS-mapped drainage feature, further discussed below.

2.2.1 Delineation Survey Methods

Wetland Waters of the U.S.

Wetland waters of the U.S., within USACE jurisdiction, were determined when all three wetland parameters (hydrophytic vegetation, hydric soils, and hydrology) were present and if there was a continuous surface connection between the potential wetland and a navigable water body or relatively permanent tributary (Environmental Protection Agency [EPA] 2023). Potential wetland features were evaluated for the presence of wetland indicators, specifically, hydrophytic vegetation, hydric soils, and wetland hydrology, according to routine delineation procedure within the *Wetlands Delineation Manual* (USACE 1987) and *Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region* (USACE 2008a). The USACE Arid West 2022 Regional Wetland Plant List, which was the most current USACE plant list at the time of the field delineation, was used to determine the indicator status of the examined vegetation by the following indicator status

categories: Upland (UPL), Facultative Upland (FACU), Facultative (FAC), Facultative Wetland (FACW), and Obligate Wetland (OBL; Lichvar et al. 2020). At each sample point, if wetland characteristics were identified, a soil pit was to be dug approximately 12 to 18 inches below ground to further analyze soil conditions and determine if hydric soils were present and a USACE Wetland Datasheet was used to document site conditions. However, no wetland indicators were identified in the Study Area during the field surveys; therefore, no soil pits or wetland sample points were collected.

Non-Wetland Waters of the U.S.

The lateral limits of USACE jurisdiction for Non-wetland Waters of the U.S. were determined by the presence of physical characteristics indicative of the OHWM. The OHWM was identified in accordance with the applicable Code of Federal Regulations (CFR) sections (33 CFR 328.3 and 33 CFR 328.4) and Regulatory Guidance Letter 05-05 (USACE 2005), as well as in reference to various relevant technical publications, including, but not limited to, A *Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States* (USACE 2008b). In areas where drainage features were present, sample points were established to define an ordinary high water mark (OHWM) and Rapid OHWM Field Identification Datasheets (USACE 2025) were used to document indicators of an OHWM, if present. Completed datasheets are provided as Appendix B.

Additionally, Rincon evaluated sources of water, streamflow period, connections to Navigable Waters or Traditional Navigable Waters (TNWs), and other factors that affect whether waters qualify as non-wetland waters of the U.S. under current USACE regulations (33 CFR 328.3). The regulations were also reviewed in the determination of non-jurisdictional features (e.g., roadway ditches excavated in uplands). A more detailed regulatory definition of USACE jurisdiction is provided in Attachment A.

Wetland Waters of the State

Potential State wetland features were evaluated pursuant to the State Water Resources Control Board (SWRCB) *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, which went into effect May 28, 2020 (SWRCB 2021). These procedures acknowledge that wetland waters of the state should be delineated using the standard USACE wetland delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

Non-wetland Waters of the State

The lateral limits of non-wetland Waters of the State, as defined under the Porter-Cologne Water Quality Control Act, were determined by the presence of physical characteristics indicative of the OHWM, based on current interpretation of jurisdiction by the Lahontan RWQCB.

CDFW Streambed

The extent of potential streambeds, streambanks, and riparian habitat subject to CDFW jurisdiction under Section 1600 et seq. of the CFGC was delineated by reviewing the topography and morphology of potentially jurisdictional features to determine the top of bank for stream features, including low alluvial terraces of the active floodplain where applicable in larger washes, and the outer limit of associated riparian vegetation, where present.

2.3 Data Processing and GIS Analysis

Because each of the proposed solar arrays occupies a location on the landscape with soils, slope, and hydrology that may differ from the other arrays, Representative Sample Plots were positioned using a stratified random sampling design within each array using tools in ArcGIS. Sample Plots were 100m X 100m (2.471 acre). The number of Sample Plots placed within or adjacent to each solar array was proportional to the total area of the array so that the total area of all Sample Plots was approximately 8 percent of the total area of the array. The size of each solar array and the total number of Sample Plots within it is presented in Table 1. Note that the entire proposed gen-tie corridor was field delineated without the use of Sample Plots, and some of the Sample Plots were taken adjacent to the array in areas where defined drainages were present. No Sample Plots were placed within the Access Road Study Area. Location of Sample Plots are illustrated in Figure 8 (Appendix D).

Table 1 Summary of Field Delineation Survey Methodology within the Study Areas

Project Component[3]	Total Acres	Number of Sample Plots[1]	Total Sample Plot Acreage (survey area)	Percentage of Project Component Field Delineated
East Array	341.668	11	27.181	8%
Solar Array 1	205.583	5	17.297	8%
South Array 2	632.041	17	51.891	8%
South Array 3	326.641	7	27.181	8%
Gen-Tie Corridor	38.87	0	N/A[2]	100%

1: Sample Plots are 100x100 square meters (2.471 acres), note that some sample plots occurred partially within the array or adjacent.

2: No Sample Plots were taken in the gen-tie corridor, however the entire corridor (approximately 37.931 acres) were surveyed.

3: Sample Points were taken within or adjacent to the East Array, Solar Array 1, Solar Array 2, and Solar Array 3.

All potential jurisdictional waters features within each Sample Plot and throughout the gen-tie corridor were mapped in the field using submeter GPS units by walking the centerlines and/or boundaries of each feature.

Following post field GIS processing of the GPS data retained from the Sample Plots and transects, the remaining portions of the Study Areas that were not field delineated were digitally mapped using GIS software tools. This includes all areas outside the Representative Sample Plots, the 250-foot buffer around the gen-tie corridor, and the Access Road Study Area. Using a combination of aerial imagery, shade contours, and topographic imagery, Rincon GIS staff extrapolated the data by hand drawing (digitally) the continuation of the mapped delineated jurisdictional feature into the remaining portions of the Study Area. Specifically, following the field verification of these digitally mapped features along the transects, the drainage feature widths were used to digitally extend the delineation both upstream and downstream of the transects until each line terminates, intersects another feature, or branches into multiple drainage segments. Existing field-mapped drainage segments within the Representative Sample Plots were also manually extended and refined to merge with these line segments using recent aerial imagery and available data sources to achieve the best possible approximation of feature extents and continuity.

3 Existing Site Conditions

3.1 Climate, Topography, and Land Use

The Study Area is located within the Mojave Desert, characterized by hot summer temperatures and cool winters ranging from 108˚F in the summer months to 33˚F in the winter months, with an average of 3.72 inches of annual rainfall (U.S. Climate Data 2025).

The Study Area occurs within the desert flow surrounded by the Soda Mountains. The Study Area is located within an historical alluvial fan system originating from the cleavages of the Soda Mountains, located to the northwest of the Study Area. Several alluvial fans have deposited sediment along the desert valley floor, which is primarily flat, sloping from the northwest to the southeast across the fan system. The Soda Mountains immediately northwest of the Study Area extend to approximately 3,425 feet above sea level and meet the desert valley floor at the Study Area with elevations ranging between approximately 1,275 to 1,450 feet above mean sea level. The alluvial fan system continues to support small ephemeral drainages that convey stormwater from the Soda Mountains into the valley floor.

The Study Area consists of open space managed by BLM. Rasor Road provides access into the project site, which is a BLM ground transportation feature (Road AC8828). Although the project site is not within a designated Off-Highway Vehicle (OHV) Area, vehicle tracks and disturbance are prevalent across the Study Area in multiple areas, frequently coinciding with drainage areas.

3.2 Hydrology

The Study Area is located within the Soda Lake Hydrologic Subarea (628.82) of the greater Mojave Hydrological Unit (628.00) of the South Lahontan Hydrologic Basin and spans two watersheds: (HUC 180902082502) and (HUC 180902082504) of the greater Mojave Watershed (HUC 18090208). The Mojave Hydrological Unit (HU; 628.00). Surface water and the drainage within the Study Area flow southeast, terminating at Soda Dry Lake. Soda Dry Lake is a playa in the Mojave Desert that periodically holds water after rainfall and comprises salt and alkali deposits. Soda Dry Lake is not defined as, nor drains to, waters of the United States (WOUS) or Traditional Navigable Waters (TNW). A small portion of the southwestern corner of the Study Area is part of the Cronis watershed that ultimately drains to Cronise Valley and East Cronise Lake, also a dry lakebed that does not drain to a WOUS or TNWs. Please refer Figure 6 (Appendix D) for mapped regional watershed boundaries.

The USFWS NWI identifies several Riverine (R4SBJ: Riverine, Intermittent, Streambed, Intermittently Flooded [USFWS 2025]) features distributed across the Study Area, originating from the alluvial fan system from northwest to southeast. These drainage features ultimately terminate east of the Study Area within the desert valley floor. The general locations of the features mapped by NWI appear to be correct, however, these drainage features are likely ephemeral, supporting water flow only during or immediately after rainfall, and may consist of paleo channels that no longer actively support water flows. Please refer to Figure 7 (Appendix D) for mapped NWI aquatic resources.

USGS NHD identifies the potential location and extent of watercourses and streams, drainage patterns, topographic models, and other hydrologic information, similarly mapped to NWI. Drainage features identified by NHD include additional drainage features across the Study Area from northwest to southeast, merging into a larger wash to the east of the Study Area that directs flow to the south,

out of the Study Area. These drainages are categorized by the NHD as having an ephemeral stream flow. The NHD also identifies stream flow to the northwest along Interstate 15, indicating that the Interstate is a barrier to much of the northern rainfall flows and directs water along the Interstate to the north. Refer to Figure 7 (Appendix D) for mapped NHD aquatic resources.

A series of culverts along the Interstate assist in transporting surface water flows under the Interstate and into the Study Area. As addressed in the 2024 ARDR (SWCA 2024), four large culverts were identified along Interstate 15 that provide water passage of upstream water from the north side of the highway to the south side, funneling water into a ditch feature. These culverts/ditches are summarized in Table 2 below, and illustrated in Figure 7 (Appendix D). Other highway water chutes/flumes also occur along Interstate 15 that direct water flows off the highway from the north to the south. The locations of the culverts and the chutes/flumes were used to assist in the evaluation of jurisdictional aquatic resources.

Table 2 Major Culverts along Interstate 15 (SWCA 2024)

Ditch/Culvert	Location (latitude, longitude)	Culvert Structure Width (feet)	Distance Between Culverts (miles)
Unnamed Ditch	35.142620°, -116.203046°	8.0	1.2
Marl Ditch	35.156067°, -116.190648°	17.5	0.7
Opah Ditch	35.164668°, -116.182698°	77.0	1.2
Turtle Ditch	35.179039°, -116.169775°	17.5	0.5

The Study Area occurs within a Federal Emergency Management Agency (FEMA) Flood Hazard Area Zone D, which represents areas with possible but undetermined flood hazards (FEMA 2024).

3.3 Soils

The USDA, NRCS Web Soil Survey depicts four soil map units within the Study Area, summarized in Table 3, and further discussed in the 2024 ARDR (SWCA 2024). In the review of the USDA, NRCS (2025), no mapped soil units were identified as hydric.

Table 3 Soil Map Units in the Study Area

Soil Unit Name	Hydric
Tecopa-Rock outcrop-Lithic Torriorthents (s1126) (well-drained; calcareous; loamy)	No
Rock outcrop (s1131) (somewhat excessively drained; calcareous; loamy)	No
Rositas-Carrizo (s1137) (somewhat excessively drained)	No
RillitoGunsight (s1140) (somewhat excessively drained; loamy)	No

3.4 Vegetation Communities and Land Cover Types

Vegetation communities in the project site (including the locations of the four proposed solar arrays and the gen-tie corridor) were previously analyzed in the 2025 BRTR (SWCA 2025). Five vegetation communities were identified within the project site as defined in *A Manual of California Vegetation Online* (CNPS 2023), and included the following: Rigid Spineflower – Hairy Desert Sunflower (*Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance), California Joint Fir – Longleaf Joint-fir Scrub (*Ephedra californica – Ephedra trifurca* Shrubland Alliance),

Cheesebush – Sweetbush Scrub (*Ambrosia salsola – Bebbia juncea* Shrubland Alliance), Creosote Bush Scrub (*Larrea tridentata* Shrubland Alliance), and Creosote Bush – White Bursage Scrub (*Larrea tridentata – Ambrosia salsola* Shrubland Alliance) which was the most dominant over the entire Study Area. Additionally, maintained dirt roads and other disturbed sites were mapped as Developed/Disturbed landcover type.

Of these vegetation communities, two sensitive associations were identified in the project site: *Chorizanthe rigida – Geraea canescens* Desert Pavement Association and *Ephedra californica – Ambrosia salsola* Association (CDFW 2025). No Special Vegetation Features identified in the Desert Renewable Energy Conservation Plan (DRECP) occur within the Study Area. Table 4 provides a summary of vegetation communities and land cover types within the project site, which are further discussed in the 2025 BRTR (SWCA 2024).

Table 4 Summary of Vegetation Communities and Land Cover Types (SWCA 2025)

Type	Global Rank[1]	State Rank[2]
Creosote Bush – White Bursage Scrub *Larrea tridentata – Ambrosia dumosa* Shrubland Alliance	G5	S5
Creosote Bush Scrub *Larrea tridentata* Shrubland Alliance	G5	S5
Rigid Spineflower – Hairy Desert Sunflower *Chorizanthe rigida – Geraea canescens* Desert Pavement Sparsely Vegetated Alliance, (*Chorizanthe rigida – Geraea canescens* Desert Pavement Association)	G4	S4 (Sensitive Association)
Cheesebush – Sweetbush Scrub *Ambrosia salsola – Bebbia juncea* Shrubland Alliance	G4	S4
California Joint Fir – Longleaf Joint-fir *Ephedra californica – Ephedra trifurca* Shrubland Alliance, (*Ephedra californica – Ambrosia salsola* Association)	G5	S4 (Sensitive Association)
Developed/Disturbed	N/A	N/A

Notes: Data included in this table references information from SWCA 2025.

[1] Global Rank (NatureServe 2024): G4 = Over 100 viable occurrences worldwide/statewide and/or more than 32,000 acres G5 = Demonstrably secure because of its worldwide/statewide abundance

[2] State Rank (NatureServe 2024): S4 = Over 100 viable occurrences worldwide/statewide and/or more than 32,000 acres S5 = Demonstrably secure because of its worldwide/statewide abundance

[3] Project site totals approximately 2,670 acres.

4 Jurisdictional Assessment

No areas potentially meeting federal or state wetland definitions occur within the Study Areas based on the literature and desktop review and field survey effort. Non-wetland water resources were determined to occur within the Study Areas that meet the current state definitions of waters of the State subject to RWQCB under the Porter-Cologne Act, and CDFW jurisdiction under Section 1600 et seq. of the CFGC. The non-wetland waters were not identified as waters of the U.S. under the most current federal definitions of waters of the U.S. Further discussion on wetland and non-wetland water resources identified in the Study Areas and the potential jurisdiction of the resources is provided below.

As illustrated in Figure 7 (Appendix D), there are numerous aquatic resources mapped in the NHD/NWI that correspond with the larger drainage features and few distinct tributaries. Similarly, the 2024 ARDR (SWCA 2024) identify primarily the larger drainage features and tributaries. However, the drainage features identified in the March 2025 field survey effort indicate that the Study Area consists of several additional small ephemeral drainage features, indicative of the alluvial landform encompassing the entire Study Area. The differences between the drainage features identified in the Representative Sample Plots captured during the March 2025 field surveys compared to the NHD/NWI mapped aquatic resources are a result of the changing flow patterns from year to year, sedimentation over time, variability in widths of stream complexes, developmental impacts from Interstate 15 and dirt roads occurring in the Study Area, and due to the GPS accuracy conducted as part of this assessment compared to the remote sensing techniques used to inform the NHD/NWI maps and the machine learning and assisted modeling completed by SWCA in 2024. Therefore, the NHD/NWI mapped aquatic resources were not used in the calculations that estimated jurisdictional limits within the Study Area. Alternatively, Rincon utilized a combination of field delineation surveys in Representative Sample Plots, high-resolution GIS mapping, and field verification transects, as discussed in the Methodology Section above, to determine the jurisdictional limits of aquatic resources within the Study Areas.

Table 5 summarizes the estimated acreages and linear feet of non-wetland waters of the State and streambed within the Study Areas, incorporating both the results of the field delineated data, extrapolated GIS data, and field verifications. Figure 9 through Figure 10, including all the map book pages provided in Appendix D, depict the location and extent of potential state jurisdictional aquatic resources within the Study Areas.

Table 5 Summary of Jurisdictional Aquatic Resources within the Study Areas

	RWQCB Jurisdiction		CDFW Jurisdiction	
	Non-wetland Waters of the State[1]		Streambed[2]	
	Acres	Linear Feet	Acres	Linear Feet
Study Area	213.55	1,799,965	366.24	1,799,965

Notes: No wetlands or non-wetland waters of the U.S. (USACE jurisdiction) were identified in the Study Areas.

[1] Calculated from Ordinary High Water Mark (OHWM). No wetland waters were identified in the Study Areas.

[2] Calculated from top of bank. No riparian habitat identified in Study Areas.

Please refer to Appendix A for further information on the regulatory framework and Section 2, above, discussing the survey methodologies, which were both used to evaluate wetland waters and non-wetland waters potentially subject to the purview of USACE, RWQCB, and CDFW.

4.1 Wetland Waters

4.1.1 Wetland Waters of the U.S.

No wetlands that meet the current USACE definition for wetland waters of the U.S. were determined to occur within the Study Area. No areas of inundation that supported the three defining characteristics of federal wetlands (hydric soils, hydrophytic vegetation, and wetland hydrology) were identified during previous field survey efforts in May 22–26, June 12–16, and September 6–8, 2023 as noted in SWCA Report (SWCA 2024). The literature and database review also indicates that the region in which the Study Area is situated is in a low-lying alluvial fan consisting of dry, gravelly soils with high levels of calcium carbonate (lime). These types of soils, in combination with high desert winds in the region, can create a natural cement-like material which increases the soil's impermeability, affecting soil structure, hydrology, vegetation patterns, and other processes, thus further supporting the lack of sustained wetland aquatic resources occurring in the Study Area.

No wetland waters of the U.S., under the purview of the USACE, were determined to occur within the Study Area.

4.1.2 Wetland Waters of the State

No wetland waters that meet the current RWQCB definition for wetland waters of the state were determined to occur within the Study Area. During the March 2025 field survey, no areas of inundation that supported continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both were observed; no anaerobic conditions in the upper substrate were observed; and no areas were dominated by hydrophytes were observed. These typical wetland characteristics were also not documented in the 2024 ARDR (SWCA 2024). Due to the arid conditions of the region and dry, gravelly alluvial soils encompassing the Study Area, the Study Area lacks sustained wetland conditions .

No wetland waters of the state, under the purview of the RWQCB, were determined to occur within the Study Area.

4.2 Non-Wetland Waters

4.2.1 Waters of the U.S.

Non-wetland water drainage features identified in the Study Area did not meet the most current definition of waters of the U.S. The drainages may have supported an OHWM, but were not determined to be TNWs, or provide permanent, standing or continuously flowing bodies of waters that drain to or from TNWs. The Study Area is located in the Mojave Watershed, which is a closed basin, and the drainage features occurring in the Study Area do not provide permanent, standing or continuously flowing bodies of waters to TNWs. The drainages provide ephemeral surface water flow temporarily before the water percolates into the groundwater, evaporates, or feeds into isolated dry lakes with no nexus to commerce; therefore, the drainage features in the Study Area are not considered TNWs or tributaries of TNWs.

Additionally, an Approved Jurisdictional Determination (AJD) reviewed by the USACE under *Rapanos Guidance* for the Soda Mountain Solar Project, File Number SPL-2010-01042-SLP, was issued on June 5, 2013, covering 411 acres of delineated features within a larger study area than the current revised project (USACE 2013). The AJD found that flows on-site extend both northeast and southeast into Soda Dry Lake. In the AJD, USACE used jurisdictional report information submitted by Panorama Environmental Inc., dated November 2009 and 2013. USACE found acreages of the drainage areas (active floodplain) were "accurately calculated using GIS data and polygons." The USACE concluded the drainages were isolated non-relatively permanent waters that are tributary to an isolated, intrastate dry lake, and not ultimately tributary to a TNW. USACE concluded all 411 acres of delineated features as non-jurisdictional.

No non-wetland waters of the U.S., under the purview of the USACE, were determined to occur within the Study Area.

4.2.2 Waters of the State

Non-wetland water drainage features identified in the Study Area did meet the most current definition of waters of the state. The drainage features in which supported an OHWM indicate the drainage feature supports surface water flows and were determined to be under the purview of the RWQCB. RWQCB jurisdictional limits were mapped in the Representative Sample Plots in the Study Area, and included the full extent of the drainage within the limits of the OHWM.

Please refer to Site Photographs provided as Appendix B for images of representative drainage features identified in the 2025 field survey effort as non-wetland waters of the state and appropriately defined and mapped as RWQCB jurisdiction.

4.2.3 Streambeds

The extent of streambeds and streambanks, subject to CDFW jurisdiction under Section 1600 et seq. of the CFGC, were determined by the top of bank for stream features, including low alluvial terraces of the active floodplain where applicable in larger washes. In the event the drainage feature illustrated evidence of a bed and bank during the field survey efforts, the drainage was described as a streambed and under the purview of the CDFW. The full extent of OHWM and top of bank of the non-wetland drainage features were mapped as CDFW jurisdiction.

Please refer to Site Photographs provided as Appendix B for images of representative drainage features identified in the 2025 field survey effort as non-wetland waters of the state and appropriately defined and mapped as CDFW jurisdiction.

4.3 Non-Jurisdictional Features

During the field survey effort in 2025, features identified within the Representative Sample Plots may have illustrated evidence of ponded water, such as surface soil cracks, or characteristics of previous surface water flows, such as a eroded soils, but were not determined to be wetland or non-wetland waters of the state because the feature lacked evidence of an OHWM, defined bed and bank, and other key wetland indicators (i.e., hydrophytic vegetation, hydric soils). These features included roadside ditches, erosional features, and swale features. Additionally, evidence of off road vehicular traffic was identified throughout the Study Area, concentrated within drainage features that lacked vegetation or rocky substrate, making identification of bed and bank and OHWM indicators difficult

to identify and properly map. Drainage features lacking identifiable jurisdictional indicators were identified as non-jurisdictional and not mapped in this report.

Please refer to Site Photographs provided as Appendix B for images of the drainage features identified in the 2025 field survey effort as non-jurisdictional features.

5 Impact Assessment

The following provides an assessment of estimated project impacts to jurisdictional aquatic resources as a result of proposed temporary and permanent project activities, based on the preliminary 30% Civil Design Plans, which total to a 2,098-acre project impact area, which includes the gen-tie corridor and northern access road. Proposed temporary and permanent impacts to aquatic features within the project area are summarized in Table 6 and illustrated in Figure 5 (Appendix D).

Table 6 Summary of Estimated Jurisdictional Aquatic Resource Impacts within the Project Site

	RWQCB Jurisdiction		CDFW Jurisdiction	
	Non-Wetland Waters of the State[1]		Non-Wetland Waters of the State[1]	
	Temporary (acres/linear feet)	Permanent (acres/linear feet)	Temporary (acres/linear feet)	Permanent (acres/linear feet)
Project Site Impacts (including gen-tie corridor)	122.22/1,137,672	14.32/121,339	195.71/1,259,011	23.09/121,339

Notes: No USACE Jurisdiction was determined present in the Project site. No wetland waters of the state were determined present in the Project site. Impacts presented in table do not include the existing northern access road as no road improvements are proposed at the time of this report.

[1] Based on field data and digital mapping the full extent of the OHWM for RWQCB jurisdiction and full extent of the streambed from top of bank for CDFW jurisdiction.

Along the gen-tie corridor, impacts will primarily result in temporary impacts; however, construction of a Substation/Switchyard will result in permanent impacts. Grading using heavy equipment would occur within portions of the arrays to prepare for construction, resulting in temporary impacts; however, inverters will be installed within the footprint of the arrays, resulting in permanent impacts. Grading of access roads within the project site and installation of water control berms, located throughout the project site will stay in place throughout the life of the project, will also result in permanent impacts. Temporary impacts will also occur as a result of grading of two temporary laydown yards used to store equipment and project-related materials.

Incorporated into the project design is the following Mitigation Measure (MM) for grading and construction activities:

> **MM BIO-3: Construction Impact Minimization.** The project shall implement an advanced technology terrain-following solar tracker system (such as the Nextracker NX Horizon-XTR-0.75 10-inch tracker system, Nevados All Terrain Tracker system, or other system resulting in a similar reduction) that reduces grading under the solar field, consisting of solar power arrays identified as East Array and South Arrays 1, 2 and 3. Quarterly construction monitoring reports shall be provided to the California Energy Commission during the construction period for the project. The quarterly construction monitoring reports shall quantify and document all remaining permanent and temporary grading acreage from project construction with the terrain-following tracker system. All temporary grading impact areas shall be revegetated onsite as described in the project-specific Temporary Disturbance Revegetation Plan (APM BIO-7 and MM-BIO-21). All permanent grading impact areas shall be mitigated at the required compensatory mitigation standards of the resource agencies (APM BIO-36, MM BIO-12, MM BIO-24).

With implementation of MM BIO-3, on-site grading and associated ground disturbance would be significantly reduced under the solar field. The reduction in on-site grading and associated ground disturbance would reduce the potential for the project to result in direct, indirect or cumulative impacts related to water quality standards, waste discharge requirements, surface and groundwater quality degradation and the alteration of onsite drainage patterns.

6 Discussion

The results of the aquatic resources delineation conclude that non-wetland, ephemeral aquatic features occur within the Study Area that may be subject to RWQCB and CDFW jurisdiction, further summarized below. Authorization from these agencies may be required for implementation of the proposed project if it will involve alteration of or impacts to potentially jurisdictional aquatic resources identified in the Study Area.

In summary, no wetland waters of the U.S. were identified in the Study Area. Non-wetland drainage features identified in the Study Area did not meet the most current definition of waters of the U.S. The drainages may have supported an OHWM, but were not determined to be TNWs, or provide permanent, standing or continuously flowing bodies of waters that drain to or from TNWs. Additionally, an AJD reviewed by the USACE under *Rapanos Guidance* for the Soda Mountain Solar Project, File Number SPL-2010-01042-SLP, was issued on June 5, 2013, covering 411 acres of delineated features within a larger study area than the current revised project. The AJD found that flows on-site extend both northeast and southeast into Soda Dry Lake. The USACE concluded the drainages were isolated non-relatively permanent waters that are tributary to an isolated, intrastate dry lake, and not ultimately tributary to a TNW. USACE concluded all 411 acres of delineated features as non-jurisdictional. Therefore, no wetland or non-wetland waters of the U.S., under the purview of the USACE, were determined to occur within the Study Area.

No wetland waters of the state were identified during the field effort within the Study Area. Non-wetland drainage features identified in the Study Area did meet the most current definition of waters of the state. The drainage features that exhibited an OHWM indicate they support surface water flows and were determined to be under the purview of the RWQCB. RWQCB jurisdictional limits identified in the Study Area include the full extent of the drainage within the limits of the OHWM. Impact acreage included the field delineated gen-tie corridor acreage, and the remainder of the Project site that was digitally delineated using information retained from the field delineation from the 50 Representative Sample Plots and field verification from the five linear transects, including the documented OHWM widths of the drainages along the transects. A total of approximately 213.55 acres (1,7,99,965 linear feet) of RWQCB jurisdiction was estimated to occur within the Study Area (includes the proposed project site and 250-foot foot buffer), including 1.02 acres (18,665 linear feet) in the Access Road Study Area (includes the existing road prism and a 50-foot buffer). Authorization from the RWQCB is anticipated if the aquatic resources cannot be avoided by the proposed project design. Specifically, a Waste Discharge Requirement would be required from the Lahontan RWQCB for impacts to waters of the state. In this assessment, Rincon determined that the project may result in an approximately 122.22 acres (1,137,672 linear feet) of temporary impacts and 14.32 acres (121,339 linear feet) of permanent impacts to RWQCB jurisdiction may occur within the project site.

The drainage features in the Study Area that exhibited evidence of a bed and bank, were described as a streambed subject to the purview of the CDFW under Section 1600 of the California Fish and Game Code. The top of bank of the non-wetland drainage feature was identified as the limit of CDFW jurisdiction. Impact acreage included the delineated gen-tie corridor acreage, and the remainder of the Project site that was digitally delineated using information retained from the field delineation from the 50 Representative Sample Plots and field verification from the five linear transects, including the documented top of bank widths of the drainages along the transects. A total of approximately 366.24 acres (1,799,965 linear feet) of potential CDFW jurisdiction was estimated to occur within the Study Area (includes the proposed project site and 250-foot foot buffer), including 1.87 acres (18,665

linear feet) in the Access Road Study Area (includes the existing road prism and a 50-foot buffer). Authorization from the CDFW (via the AB 205 Opt-in-pathway), specifically a CDFW Notification of Lake or Streambed Alteration Agreement, is anticipated if these aquatic resources cannot be avoided by the proposed project design. In this assessment, Rincon determined that project may result in an approximately 195.71 acres (1,259,011 linear feet) of temporary impacts and 23.09 acres (121,339 linear feet) of permanent impacts to CDFW jurisdiction may occur within the project site.

7 Limitations, Assumptions, and Use Reliance

This jurisdictional delineation has been performed in accordance with best jurisdictional investigation practices conducted at this time and in this geographic area. The jurisdictional investigation is limited by the scope of work performed. The jurisdictional survey is limited also by the environmental conditions present at the time of the survey. Our field studies were based on current industry practices, which change over time and may not be applicable in the future. No other guarantees or warranties, expressed or implied, are provided. The findings and opinions conveyed in this report are based on findings derived from site reconnaissance, jurisdictional delineation, and specified historical and literature sources. Although Rincon believes the data sources are reasonably reliable, Rincon cannot and does not guarantee the authenticity or reliability of the data sources it has used. Additionally, pursuant to our contract, the data sources reviewed included only those that are practically reviewable without the need for extraordinary research and analysis.

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Appendix A

Regulatory Framework

Regulatory Framework

The following is a brief summary of the regulatory context under which biological resources are managed at the federal, State, and local levels. A number of federal and State statutes provide a regulatory structure which guide the protection of jurisdictional features. Agencies with the responsibility for protection of jurisdictional features within the Project region include:

- United States Army Corps of Engineers (non-wetland waters and wetlands of the United States)
- Lahontan Regional Water Quality Control Board (waters of the State)
- California Department Fish and Wildlife (riparian areas, streambeds, and lakes)
- California Energy Commission

United States Army Corps of Engineers

The United States Army Corps of Engineers (USACE) is responsible for administering several federal programs related to ensuring the quality and navigability of the nation's waters.

Clean Water Act Section 404

Congress enacted the Clean Water Act (CWA) "to restore and maintain the chemical, physical, and biological integrity of the Nation's waters." The CWA establishes the basic structure for regulating discharges of pollutants into the waters of the United States and regulating quality standards for surface waters. The basis of the CWA was enacted in 1948 and was called the Federal Water Pollution Control Act, but the law was significantly reorganized and expanded in 1972. "Clean Water Act" became the law's common name with amendments in 1972.

Section 404 of the CWA establishes a program to regulate the discharge of dredged or fill material into waters of the United States, including wetlands. Section 404 of the CWA authorizes the Secretary of the Army, acting through the USACE, to issue permits regulating the discharge of dredged or fill materials into the "navigable waters at specified disposal sites." Section 404 requires that a permit be issued before dredged or fill material may be discharged into waters of the United States, unless the activity is exempt from regulation under Section 404 (e.g., certain farming and forestry activities).

Waters of the U.S.

The USACE and US Environmental Protection Agency (USEPA) have undertaken several efforts to modernize their regulations defining "waters of the United States" (e.g., the 2015 Clean Water Rule and 2020 Navigable Waters Protection Rule), but these efforts have been frustrated by legal challenges which have invalidated the updated regulations. As a result of the Supreme Court ruling in *Sackett v. Environmental Protection Agency*, EPA and USACE issued a final rule that amends the "Revised Definition of 'Waters of the United States'" to conform key aspects of the regulatory text to the U.S. Supreme Court's decision (88 Federal Register 61964–61969, September 8, 2023).

Under the "Revised Definition of 'Waters of the United States'; Conforming" rule, the term "waters of the United States" is defined as follows (33 CFR 328.3[a]):

(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 addition, the amended regulations include eight types of excluded waters (33 CFR 328.3[b]) which are not "waters of the United States" even where they otherwise meet the terms of paragraphs (a)(2) through (5) of this section:

(1) Waste treatment systems, including treatment ponds or lagoons, designed to meet the requirements of the Clean Water Act;

(2) Prior converted cropland designated by the Secretary of Agriculture. The exclusion would cease upon a change of use, which means that the area is no longer available for the production of agricultural commodities. Notwithstanding the determination of an area's status as prior converted cropland by any other Federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA;

(3) Ditches (including roadside ditches) excavated wholly in and draining only dry land and that do not carry a relatively permanent flow of water;

(4) Artificially irrigated areas that would revert to dry land if the irrigation ceased;

(5) Artificial lakes or ponds created by excavating or diking dry land to collect and retain water and which are used exclusively for such purposes as stock watering, irrigation, settling basins, or rice growing;

(6) Artificial reflecting or swimming pools or other small ornamental bodies of water created by excavating or diking dry land to retain water for primarily aesthetic reasons;

(7) Waterfilled depressions created in dry land incidental to construction activity and pits excavated in dry land for the purpose of obtaining fill, sand, or gravel unless and until the construction or excavation operation is abandoned and the resulting body of water meets the definition of waters of the United States; and

(8) Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow.

The lateral limits of USACE jurisdiction in non-tidal waters is defined by the "ordinary high-water mark" (OHWM) unless adjacent wetlands are present. The OHWM is a line on the shore or edge of a channel established by the fluctuations of water and indicated by physical characteristics such as a clear, natural line impressed upon the bank, shelving, changes in the character of soil, destruction of vegetation, or the presence of debris (33 CFR 328.3(e)). As such, waters are recognized in the field by the presence of a defined watercourse with appropriate physical and topographic features. If wetlands occur within, or adjacent to, waters of the United States, the lateral limits of USACE jurisdiction extend beyond the OHWM to the outer edge of the wetlands (33 CFR 328.4 (c)). The upstream limit of jurisdiction in the absence of adjacent wetlands is the point beyond which the OHWM is no longer perceptible (33 CFR 328.4; see also 51 FR 41217).

Wetlands

The USACE defines wetlands as “those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions” (33 CFR 328.3). Indicators of three wetland parameters (hydric soils, hydrophytic vegetation, and wetlands hydrology), as determined by site investigation, must be present at a site for USACE to classify the site as a wetland (Environmental Laboratory 1987). The following is a discussion of each of these parameters.

Hydrophytic Vegetation

Hydrophytic vegetation dominates areas where frequency and duration of inundation or soil saturation exerts a controlling influence on the plant species present. Plant species are assigned wetland indicator status according to the probability of their occurring in wetlands. More than fifty percent of the dominant plant species must have a wetland indicator status to meet the hydrophytic vegetation criterion. The USACE published the National Wetland Plant List (USACE 2018), which separates vascular plants into the following four basic categories based on plant species frequency of occurrence in wetlands:

- **Obligate Wetland (OBL).** Almost always occur in wetlands
- **Facultative Wetland (FACW).** Usually occur in wetlands, but occasionally found in non-wetlands
- **Facultative (FAC).** Occur in wetlands or non-wetlands
- **Facultative Upland (FACU).** Usually occur in non-wetlands, but may occur in wetlands
- **Obligate Upland (UPL).** Almost never occur in wetlands

The USACE considers OBL, FACW and FAC species to be indicators of wetlands. An area is considered to have hydrophytic vegetation when greater than 50 percent of the dominant species in each vegetative stratum (tree, shrub, and herb) fall within these categories. Any species not appearing on the United States Fish and Wildlife Service’s list is assumed to be an upland species, almost never occurring in wetlands. In addition, an area needs to contain at least 5% vegetative cover to be considered as a vegetated wetland.

Hydric Soils

Hydric soils are saturated or inundated for a sufficient duration during the growing season to develop anaerobic or reducing conditions that favor the growth and regeneration of hydrophytic vegetation. Field indicators of wetland soils include observations of ponding, inundation, saturation, dark (low

chroma) soil colors, bright mottles (concentrations of oxidized minerals such as iron), gleying (indicates reducing conditions by a blue-grey color), or accumulation of organic material. Additional supporting information includes documentation of soil as hydric or reference to wet conditions in the local soils survey, both of which must be verified in the field.

Wetland Hydrology

Wetland hydrology is inundation or soil saturation with a frequency and duration long enough to cause the development of hydric soils and plant communities dominated by hydrophytic vegetation. If direct observation of wetland hydrology is not possible (as in seasonal wetlands), or records of wetland hydrology are not available (such as stream gauges), assessment of wetland hydrology is frequently supported by field indicators, such as water marks, drift lines, sediment deposits, or drainage patterns in wetlands.

Limitations on Jurisdiction based on Sackett v. USEPA Supreme Court Decision

On May 25, 2023, the Supreme Court issued its decision on the petition from the Sacketts, a family in Idaho that was subject to a compliance order from the USEPA for backfilling their lot near Priest Lake, which the USEPA claimed contained federally regulated wetlands. The wetlands in question were adjacent to a ditch that fed a creek that ultimately drained into Priest Lake, a navigable water body. The USEPA asserted that the Sacketts had violated the law by filling the wetlands on their property without a permit. The Court's decision addressed controversy over whether, and under what conditions, the CWA reaches navigable waters' tributaries or adjacent wetlands. The Supreme Court's decision in Sackett provides definitive guidance to the agencies in determining the limits of their Clean Water Act authority. Major tenets of the decision have been incorporated into the agencies' current regulations through the September 2023 Conforming Rule.

The Court decided:

- "Adjacent wetlands" are WOTUS only if there is a continuous surface connection between the wetland and a navigable or relatively permanent water body, such that it is difficult to determine the boundary between the wetland and the water body. The opinion notes that "temporary interruptions to surface connection may sometimes occur because of phenomena like low tides or dry spells." The agencies addressed this element by defining the term "adjacent" to mean "having a continuous surface connection" in the Conforming Rule.
- The Significant Nexus Standard, introduced by the Court in prior decisions, is not mentioned in the Clean Water Act and should not be used. The Court determined that the standard applies ecological factors whose use in determining jurisdiction is not supported by the statute. The Conforming Rule removed significant nexus considerations from the definition.
- Although jurisdiction over tributaries was not addressed by the Court, the decision stated that "…the [Clean Water Act'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 Conforming Rule makes clear that only relatively permanent tributaries qualify as "waters of the United States."

State Water Resource Control Boards

The State Water Resources Control Board (SWRCB) and nine Regional Water Quality Control Boards (RWQCBs) have jurisdiction over "waters of the State," which are defined as any surface water or groundwater, including saline waters, within the boundaries of the state (California Water Code sec. 13050(e)). These agencies also have responsibilities for administering portions of the CWA.

Clean Water Act Section 401

Section 401 of the CWA requires an applicant requesting a federal license or permit for an activity that may result in any discharge into navigable waters (such as a Section 404 Permit) to provide state certification that the proposed activity will not violate state and federal water quality standards. In California, CWA Section 401 Water Quality Certification (Section 401 Certification) is issued by the RWQCBs and by the SWRCB for multi-region projects. The process begins when an applicant submits an application to the RWQCB and informs the USACE (or the applicable agency from which a license or permit was requested) that an application has been submitted. The USACE will then determine a "reasonable period of time" for the RWQCB to act on the application; this is typically 60 days for routine projects and longer for complex projects but may not exceed one year. When the period has elapsed, if the RWQCB has not either issued or denied the application for Section 401 Certification, the USACE may determine that Certification has been waived and issue the requested permit. If a Section 401 Certification is issued it may include binding conditions, imposed either through the Certification itself or through the requested federal license or permit.

Porter-Cologne Water Quality Control Act

The Porter-Cologne Water Quality Control Act (Porter-Cologne Act) is the principal law governing water quality regulation in California. It establishes a comprehensive program to protect water quality and the beneficial uses of water. The Porter-Cologne Act applies to surface waters, wetlands, and ground water and to both point and nonpoint sources of pollution. Pursuant to the Porter-Cologne Act (California Water Code section 13000 et seq.), the policy of the State is as follows:

- The quality of all the waters of the State shall be protected
- All activities and factors affecting the quality of water shall be regulated to attain the highest water quality within reason
- The State must be prepared to exercise its full power and jurisdiction to protect the quality of water in the State from degradation

The Porter-Cologne Act established nine RWQCBs (based on watershed boundaries) and the SWRCB, which are charged with implementing its provisions and which have primary responsibility for protecting water quality in California. The SWRCB provides program guidance and oversight, allocates funds, and reviews RWQCB decisions. In addition, the SWRCB allocates rights to the use of surface water. The RWQCBs have primary responsibility for individual permitting, inspection, and enforcement actions within each of nine hydrologic regions. The SWRCB and RWQCBs have numerous nonpoint source related responsibilities, including monitoring and assessment, planning, financial assistance, and management.

Section 13260 of the Porter-Cologne Act requires any person discharging or proposing to discharge waste that could affect the quality of waters of the State to file a Report of Waste Discharge with the appropriate RWQCB. The RWQCB may then authorize the discharge, subject to conditions, by issuing Waste Discharge Requirements (WDRs). While this requirement was historically applied primarily to outfalls and similar point source discharges, the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State*, effective May 2020, make it clear that the agency will apply the Porter-Cologne Act's requirements to discharges of dredge and fill material as well. The *Procedures* state that they are to be used in issuing CWA Section 401 Certifications and WDRs, and largely mirror the existing review requirements for CWA Section 404 Permits and Section 401 Certifications, incorporating most elements of the USEPA's *Section 404(b)(1) Guidelines*. Following issuance of the *Procedures*, the SWRCB produced a consolidated application form for dredge/fill discharges that can be used to obtain a CWA Section 401 Water Quality Certification, WDRs, or both.

Non-Wetland Waters of the State

The SWRCB and RWQCBs have not established regulations for field determinations of waters of the state except for wetlands currently. In many cases the RWQCBs interpret the limits of waters of the State to be bounded by the OHWM unless isolated conditions or ephemeral waters are present. However, in the absence of statewide guidance each RWQCB may interpret jurisdictional boundaries within their region and the SWRCB has encouraged applicants to confirm jurisdictional limits with their RWQCB before submitting applications. As determined by the RWQCB, waters of the State may include riparian areas or other locations outside the OHWM, leading to a larger jurisdictional area over a given water body compared to the USACE.

Wetland Waters of the State

Procedures for defining wetland waters of the State pursuant to the SWRCB's *State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State* went into effect May 28, 2020. The SWRCB defines an area as wetland if, under normal circumstances:

(i) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both;

(ii) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and

(iii) the area's vegetation is dominated by hydrophytes or the area lacks vegetation.

The SWRCB's *Implementation Guidance for the Wetland Definition and Procedures for Discharges of Dredge and Fill Material to Waters of the State* (2020), states that waters of the U.S. and waters of the State should be delineated using the standard USACE delineation procedures, taking into consideration that the methods shall be modified only to allow for the fact that a lack of vegetation does not preclude an area from meeting the definition of a wetland.

California Department of Fish and Wildlife

The California Department of Fish and Wildlife (CDFW) derives its authority from the Fish and Game Code of California and administers several State laws protecting fish and wildlife resources and the habitats upon which they depend.

Protection of Lakes and Streambeds

California Fish and Game Code section 1602 states that it is unlawful for any person to "substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake" without first notifying the California Department of Fish and Wildlife (CDFW) of that activity. Thereafter, if CDFW determines and informs the entity that the activity will not substantially adversely affect any existing fish or wildlife resources, the entity may commence the activity. If, however, CDFG determines that the activity may substantially adversely affect an existing fish or wildlife resource, the entity may be required to obtain from CDFW a Streambed Alteration Agreement (SAA), which will include reasonable measures necessary to protect the affected resource(s), before the entity may conduct the activity described in the notification. Upon receiving a complete Notification of Lake/Streambed Alteration, CDFW has 60 days to present the entity with a Draft SAA. Upon review of the Draft SAA by the applicant, any problematic terms are negotiated with CDFW and a final SAA is executed.

The CDFW has not defined the term “stream” for the purposes of implementing its regulatory program under Section 1602, and the agency has not promulgated regulations directing how jurisdictional streambeds may be identified, or how their limits should be delineated. However, four relevant sources of information offer insight as to the appropriate limits of CDFW jurisdiction as discussed below.

- **The plain language of Section 1602 of CFGC** establishes the following general concepts:
  - References “river,” “stream,” and “lake”
  - References “natural flow”
  - References “bed,” “bank,” and “channel”
- **Applicable court decisions**, in particular *Rutherford v. State of California* (188 Cal App. 3d 1276 (1987), which interpreted Section 1602’s use of “stream” to be as defined in common law. The Court indicated that a “stream” is commonly understood to:
  - Have a source and a terminus
  - Have banks and a channel
  - Convey flow at least periodically, but need not flow continuously and may at times appear outwardly dry
  - Represent the depression between the banks worn by the regular and usual flow of the water
  - Include the area between the opposing banks measured from the foot of the banks from the top of the water at its ordinary stage, including intervening sand bars
  - Include the land that is covered by the water in its ordinary low stage
  - Include lands below the OHWM
- **CDFW regulations** defining “stream” for other purposes, including sport fishing (14 CCR 1.72) and streambed alterations associated with cannabis production (14 CCR 722(c)(21)), which indicate that a stream:
  - Flows at least periodically or intermittently
  - Flows through a bed or channel having banks
  - Supports fish or aquatic life
  - Can be dry for a period of time

- Includes watercourses where surface or subsurface flow supports or has supported riparian vegetation

- **Guidance documents**, *including A Field Guide to Lake and Streambed Alteration Agreements* (CDFG 1994) and *Methods to Describe and Delineate Episodic Stream Processes on Arid Landscapes for Permitting Utility-Scale Solar Power Plants* (Brady and Vyverberg 2013), which suggest the following:
  - A stream may flow perennially or episodically
  - A stream is defined by the course in which water currently flows, or has flowed during the historic hydrologic course regime (approximately the last 200 years)
  - Width of a stream course can reasonably be identified by physical or biological indicators
  - A stream may have one or more channels (single thread vs. compound form)
  - Features such as braided channels, low-flow channels, active channels, banks associated with secondary channels, floodplains, islands, and stream-associated vegetation, are interconnected parts of the watercourse
  - Canals, aqueducts, irrigation ditches, and other means of water conveyance can be considered streams if they support aquatic life, riparian vegetation, or stream-dependent terrestrial wildlife
  - Biologic components of a stream may include aquatic and riparian vegetation, all aquatic wildlife including fish, amphibians, reptiles, invertebrates, and terrestrial species which derive benefits from the stream system
  - The lateral extent of a stream can be measured in different ways depending on the particular situation and the type of fish or wildlife resource at risk

The tenets listed above, among others, are applied to establish the boundaries of streambeds in various environments. Importance of each factor may be weighted based on site-specific considerations and the applicability of the indicators to the streambed at hand.

California Energy Commission

The California Energy Commission (CEC) has been authorized under Assembly Bill 205 (Chapter 61, 2022) to establish a new certification program for eligible non-fossil-fueled power plants and related facilities to optionally seek certification from the CEC, using emergency rulemaking authority provided by AB 205. Per the Notice of Approval of Emergency Regulatory Action for Opt-in Regulations Section 1877, Opt-In applications are required to include all the information specified by California Code of Regulations (CCR) Title 20 Division 2 Section 1704(a) Appendix B that is relevant to the project.

Appendix B

Site Photographs

Representative Images of Non-Wetland Waters of the State (RWQCB/CDFW Jurisdiction) Photographed in Representative Sample Plots within the Study Area between March 24 – 28, 2025

Photo Point E-4-1 (East Array). Northwestern facing representative photograph facing downstream of a small drainage exhibiting indicators of an OHWM (see Figure 10 Page 12).

Photo Point E-6-3 (East Array). Southeast facing representative photograph of an upstream portion of a drainage exhibiting indicators of an OHWM (see Figure 10 Page 15).

Photo Point E-11-3 (East Array). East facing representative photograph illustrating indicators of an OHWM, corresponding to the EK-003 Datasheet (see Figure 10 Page 26).

Photo Point E-7-3 (East Array). West facing representative photograph illustrating an OHWM and no riparian vegetation, corresponding to the ATG-004 Datasheet (see Figure 10 Page 16).

Photo Point E-9-2 (East Array). East facing representative photograph illustrating an upstream portion of a drainage exhibiting an OHWM and no riparian vegetation, corresponding to the EK-004 Datasheet (see Figure 10 Page 18).

Photo Point E-5-3 (East Array). Northeast facing representative photograph illustrating indicators of an OHWM, corresponding to the KG-003 Datasheet (see Figure 10 Page 15).

Photo Point S1-3-2 (South Array 1). East facing representative photograph illustrating an upstream portion of a drainage exhibiting an OHWM and no riparian vegetation, corresponding to the ATG-003 Datasheet (see Figure 10 Page 25).

Photo Point S1-5-2 (South Array 1). Southwest facing representative photograph illustrating indicators of an OHWM, corresponding to the KG-001 Datasheet (see Figure 10 Page 30).

Photo Point S2-14-1 (South Array 2). West facing representative photograph of an upstream drainage feature exhibiting indicators of an OHWM (see Figure 10 Page 42).

Photo Point S2-5-2 (South Array 2). East facing representative photograph of a downstream drainage feature exhibiting indicators of an OHWM, corresponding to the EK-001 Datasheet (see Figure 10 Page 39).

Photo Point S2-6-2 (South Array 2). West facing representative photograph of a drainage feature exhibiting indicators of an OHWM, corresponding to the ATG-002 Datasheet (see Figure 10 Page 37).

Photo Point S2-8-1 (South Array 2). East facing representative photograph of an downstream drainage feature exhibiting indicators of an OHWM, corresponding to the EK-001 Datasheet (see Figure 10 Page 37).

Photo Point S3-2-1 (South Array 3). Northeast facing representative photograph of drainages in the Study Area exhibiting weak indicators of a bed and bank and change in substrate (see Figure 10 page 46).

Photo Point S3-7-1 (South Array 3). East facing representative photograph of drainages in the Study Area exhibiting weak indicators of a bed and bank and change in substrate (see Figure 10 Page 51).

Photo Point S3-8-1 (South Array 3). Northeast facing representative photograph of drainages in the Study Area exhibiting weak indicators of a bed and bank and change in substrate (see Figure 10).

Photo Point S3-11-1 (South Array 3). West facing representative photograph of drainages in the Study Area exhibiting weak indicators of a bed and bank and change in substrate (see Figure 10).

Photo Point T-1 (Gen-Tie Corridor). Northeast facing representative photograph illustrating a floodplain control ditch paralleling Interstate 15, facing downstream (see Figure 10 Page 19).

Photo Point T-11 (Gen-Tie Corridor). East facing representative photograph illustrating braided drainages, facing downstream (see Figure 10 Page 21).

Photo Point T12 (Gen-Tie Corridor). East facing representative photograph illustrating indicators of an OHWM in a drainage feature, corresponding to ATG-005 Datasheet (see Figure 10 Page 21).

Photo Point T-5 (Gen-Tie Corridor). West facing view of drainage where indicators have been disturbed by vehicular activities (see Figure 10 Page 20).

Representative Images of Non-Jurisdictional Features Photographed in Representative Sample Plots within the Study Area Photographed between March 24 – 28, 2025

Photo Point S2-13-2 (South Array 2). East facing view of a representative area exhibiting indicators of sheet flow and swales with no obvious indicators of an OHWM (see Figure 10 Page 37).

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Appendix C

Completed Datasheets

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

The Public reporting burden for this collection of information, 0710-0024, is estimated to average 30 minutes per response, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding the burden estimate or burden reduction suggestions to the Department of Defense, Washington Headquarters Services, at whs.mc-alex.esd.mbx.dd-dod-information-collections@mail.mil. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number.

Project ID #: Soda Mountain Solar	Site Name: ATG001	Date and Time: 3/25/25 11:24am
Location (lat/long): 35.147816, -116.190936	Investigator(s): Antonette Gutierrez	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Undisturbed single channel with natural, gentle slopes of upland sand and small rock.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [ ] **Shelving**
  - [ ] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [X] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [ ] **Changes in particle-sized distribution**
  - [ ] *transition from* _____ to _____
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** _____ **to** _____
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [X] **Other vegetation observations**
  Unvegetated

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Larrea tridentata-Ambrosia dumosa dominate on the channel banks. Both shrubs are uniformly dispersed throughout the landscape.

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Obvious break in slope with defined bed and bank in various locations throughout the channel. Secondary channels flow into the main channel. Slight shelving on the steeper bank. Obvious change in soil from upland to the channel bottom.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
S2-8-1	Multi-thread unvegetated streambed (junction) upstream.
S2-8-2	Unvegetated streambed downstream.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: KG002	Date and Time: 3/26/25 1:30pm
Location (lat/long): 35.170851, -116.169424	Investigator(s): Kyle Gunther	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Open desert in a regional drought. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Bajada contains Larrea tridentata -Ambrosia dumosa Shrubland with numerous small braided ephemeral drainages that flow across a paved road (Arrowhead Trail) and converge downstream of the road into a larger, more defined wash. Litter present.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* silt/sand *to* sand/gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** 0 **to** Lartri-Ambdum
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Flat, sandy-silty floodplain present (unvegetated), then transitions to an obvious bank at the OHWM that is vegetated and has sandy-gravel soils.

Additional observations or notes

Road has likely created this convergence point from the upstream braided channels on the bajada.

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-6-2	Downstream
E-6-3	Upstream
E-6-4	OHWM and TOB

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: KG003	Date and Time: 3/26/25 2:50pm
Location (lat/long): 35.170590, -116.172039	Investigator(s): Kyle Gunther	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Open desert in a regional drought. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Flat sandy floodplain (unvegetated). Obvious banks (~1 foot tall) made up of sandy gravel and some cobble. Upland vegetation consists of Larrea tridentata -Ambrosia dumosa Shrubland. Litter present.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* sand to gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** 0 **to** Lartri-Ambdum
- [X] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [X] **Sediment deposited on vegetation or structures**
- [X] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Flat, unvegetated floodplain below OHWM (sandy). Break in slope at OHWM. Transition from sloped to flat at TOB and change in sediment to gravel, and vegetated.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-5-1	Downstream
E-5-2	Upstream
E-5-3	OHWM and TOB

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

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Expires: 2027-09-30

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Project ID #: Soda Mountain Solar	Site Name: ATG003	Date and Time: 3/26/25 8:35am
Location (lat/long): 35.160971, -116.175045	Investigator(s): Antonette Gutierrez	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Desert bajada. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Shallow large channels with shallow sand tributaries in flat desertscape disturbed by offroad activity.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.

OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.

Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [ ] **Shelving**
  - [ ] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* gravel to sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** _____ **to** _____
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [X] **Other vegetation observations**
  Unvegetated system

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Larrea tridentata-Ambrosia dumosa distributed evenly throughout the descertscape.

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Slight break in slope and changes in soil character evident. Multiple channels with sandy substrate in the channel and gravel in the upland islands.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
S1-3-1	Upstream
S1-3-2	Downstream
S1-3-3	OHWM

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: ATG004	Date and Time: 3/26/25 12:45pm
Location (lat/long): 35.170713, -116.162028	Investigator(s): Antonette Gutierrez	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Undisturbed single unvegetated streambed near base of mountains. Natural headwater flows from mountains to the east.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [X] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* cobble to sand/gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** _____ **to** _____
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [X] **Other vegetation observations**
  Unvegetated system

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Larrea tridentata-Ambrosia dumosa on top of bank.

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Obvious bed and bank, change in soil character, shelving, scour and changes in particle size distribution.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-7-1	Upstream
E-7-2	Downstream
E-7-3	OHWM-scour and cut in bank.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

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Project ID #: Soda Mountain Solar	Site Name: ATG005	Date and Time: 3/27/25 9:00am
Location (lat/long): 35.170545, -116.187415	Investigator(s): Antonette Gutierrez	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Desert bajada. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Disturbed by offroad vehicles. Major road intersects overall wash.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [X] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [X] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [X] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [X] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* cobble to sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** _____ **to** _____
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [X] **Vegetation matted down and/or bent**
- [X] **Other vegetation observations**
  Unvegetated

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Larrea tridentata, Ambrosia dumosa, and Ambrosia salsola on the banks and on the islands within the channels.

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Obvious bed and bank for the channels. Change in soil type from upland to streambed. Scouring, shelving, and pools throughout the system.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
T-10	Upstream main channels
T-11	Downstream braided channels
T-12	OHWM shelving and break in slope, change in soil, and sediment distribution.

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

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Project ID #: Soda Mountain Solar	Site Name: EK001	Date and Time: 3/25/25 1300
Location (lat/long): 35.149214, -116.175823	Investigator(s): EK	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Alluvial fan in open desert. Conditions dry and apparently lacking significant winter rainfall this year

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Some limited OHV disturbance in the area, but not at the immediate location of this transect

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [ ] **Shelving**
  - [ ] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [X] *vegetation transition (go to veg. indicators)*
  - [X] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [X] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* gravel to Sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** s **to** none
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [X] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

There is a clear break in slope at the OHWM and an abrupt change in particle size distribution from gravel and cobble above the OHWM to sand below the OHWM

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
S2-5-1	Upstream from sample point
S2-5-2	Downstream from sample point
S2-5-3	OHWM at sample point

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

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Project ID #: Soda Mountain Solar	Site Name: EK002	Date and Time: 3/25/25 1530
Location (lat/long): 35.158846, -116.172770	Investigator(s): EK	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Alluvial fan in open desert. Sample point located within a moderately sized ephemeral stream. There was apparently very little rain here in the 2024/2025 winter season

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Low levels of OHV disturbance in the wash channels

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [X] *vegetation transition (go to veg. indicators)*
  - [X] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* gravel to sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** L **to** Cheese bush
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [X] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

There is a clear and obvious break in slope and bed & banks. The bank is about 1.5 ft tall on river left and steep. On river right the slope is more gentle and about 3 ft. tall. There is a change in particle size distribution from cobble and gravel to sand at the OHWM.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
Other-8	Upstream from sample point
Other-9	Downstream from sample point
Other-10	OHWM on river left at sample point

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
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Project ID #: Soda Mountain Solar	Site Name: EK003	Date and Time: 3/26/25 0910
Location (lat/long): 35.162635, -116.165457	Investigator(s): EK	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Alluvial fan in open desert. There was apparently very little rainfall at this site in the 2024/2025 winter season

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

This site is minimally disturbed upper alluvial fan. There are a few OHV tire tracks nearby but not at the sample point.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* gravel to sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** S **to** Unvegetated
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

This is a small unvegetated stream channel in the upper portion of an alluvial fan. The channel is about 1 ft. wide between OHWMs at the sample point. There is a distinct break in slope at the OHWM and a clear change in particle size distribution from coarse and fine gravel to sand at the OHWM.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-11-2	Upstream from sample point
E-11-3	Downstream from sample point
E-11-4	OHWM at sample point

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: EK004	Date and Time: 3/26/25 1330
Location (lat/long): 35.165347, -116.168754	Investigator(s): EK	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Mid slope on an alluvial fan in open desert. Apparently very little rainfall during the 2024/2025 winter season

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Minimally disturbed open desert with occasional tire tracks and trash.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [ ] **Shelving**
  - [ ] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [ ] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* gravel to sand
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [ ] **Change in vegetation type from** S **to** unvegetatedb
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Small alluvial channel in the middle of a bajada. The channel is about 1 ft wide between OHWM with a cut bank about 4" deep on one side and a gradual slope on the other. There is a distinct change in particle size distribution from gravel and cobble above the OHWM to sand at and below the OHWM

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-9-1	Downstream from sample point
E-9-2	Upstream from sample point
E-9-3	OHWM at sample point

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: KG001	Date and Time: 3/26/25 9:51am
Location (lat/long): 35.156993, -116.185206	Investigator(s): Kyle Gunther	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Open desert in a regional drought. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Interstate 15 has obstructed natural flow from mountains. Upstream flow is now funneled to culverts or under bridges. Litter also present in drainage. Cobble banks to sandy floodplain. Upland vegetation = Larrea tridentata -Ambrosia dumosa Shrubland. Floodplain contains sparse amounts of Ambrosia dumosa.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* cobble to sand/gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** 0 **to** Lartri-Ambdum
- [X] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [X] **Other vegetation observations**
  Old dry annuals scattered in floodplain

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Change in soil texture and particle size, presence of bed and bank, change in vegetation type and cover.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
S1-5-2	Upstream view
S1-5-3	Downstream view
S1-5-4	OHWM and TOB view

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: KG002	Date and Time: 3/26/25 1:30pm
Location (lat/long): 35.170851, -116.169424	Investigator(s): Kyle Gunther	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Open desert in a regional drought. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Bajada contains Larrea tridentata -Ambrosia dumosa Shrubland with numerous small braided ephemeral drainages that flow across a paved road (Arrowhead Trail) and converge downstream of the road into a larger, more defined wash. Litter present.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [X] **Channel bar**
  - [X] *shelving (berms) on bar*
  - [X] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [ ] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [ ] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* silt/sand *to* sand/gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** 0 **to** Lartri-Ambdum
- [ ] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [ ] **Sediment deposited on vegetation or structures**
- [ ] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Flat, sandy-silty floodplain present (unvegetated), then transitions to an obvious bank at the OHWM that is vegetated and has sandy-gravel soils.

Additional observations or notes

Road has likely created this convergence point from the upstream braided channels on the bajada.

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-6-2	Downstream
E-6-3	Upstream
E-6-4	OHWM and TOB

U.S. Army Corps of Engineers (USACE)

RAPID ORDINARY HIGH WATER MARK (OHWM) FIELD IDENTIFICATION DATA SHEET

The proponent agency is Headquarters USACE CECW-COR.

Form Approved -
OMB No. 0710-0024
Expires: 2027-09-30

The Agency Disclosure Notice (ADN)

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Project ID #: Soda Mountain Solar	Site Name: KG003	Date and Time: 3/26/25 2:50pm
Location (lat/long): 35.170590, -116.172039	Investigator(s): Kyle Gunther	

Step 1 Site overview from remote and online resources.
Check boxes for online resources used to evaluate site:

- [ ] gage data
- [ ] LiDAR
- [ ] geologic maps
- [ ] climatic data
- [X] satellite imagery
- [ ] land use maps
- [X] aerial photos
- [X] topographic maps
- [ ] Other: _____

Describe land use and flow conditions from online resources.
Were there any recent extreme events (floods or drought)?
Open desert in a regional drought. Conditions dry and apparently lacking significant winter rainfall this year.

Step 2 Site conditions during field assessment. First look for changes in channel shape, depositional and erosional features, and changes in vegetation and sediment type, size, density, and distribution. Make note of natural or human-made disturbances that would affect flow and channel form, such as bridges, riprap, landslides, rockfalls, etc.

Flat sandy floodplain (unvegetated). Obvious banks (~1 foot tall) made up of sandy gravel and some cobble. Upland vegetation consists of Larrea tridentata -Ambrosia dumosa Shrubland. Litter present.

Step 3 Mark the boxes next to the indicators used to help identify the location of the OHWM.
OHWM is at a transition point, therefore some indicators used to identify the location of the OHWM may be just below or above the OHWM. Make a slash in boxes next to indicators that are helpful in identifying the OHWM. After the initial assessment, those indicators identified at the OHWM elevation should be changed from slashes to x's. Note, it is not necessary to mark indicators that are present but do not help inform identification of the OHWM.
Go to page 2 to describe overall rationale for location of OHWM, write any additional observations, and attach a photo log.

Geomorphic indicators

- [X] **Break in slope**
  - [X] *on the bank*
  - [ ] *undercut bank*
  - [ ] *valley bottom*
  - [ ] Other: _____
- [X] **Shelving**
  - [X] *shelf at top of bank*
  - [ ] *natural levee*
  - [ ] *human-made berms or levees*
  - [ ] *other berms:* _____
- [ ] **Secondary channels**
- [ ] **Channel bar**
  - [ ] *shelving (berms) on bar*
  - [ ] *unvegetated*
  - [ ] *vegetation transition (go to veg. indicators)*
  - [ ] *sediment transition (go to sed. indicators)*
  - [ ] *upper limit of deposition on bar*
- [X] **Instream bedforms and other bedload transport evidence**
  - [ ] *deposition bedload indicators (e.g., imbricated clasts, gravel sheets, etc.)*
  - [ ] *bedforms (e.g., pools, riffles, steps, etc.)*
  - [ ] *Weathered clasts or bedrock*
  - [X] *erosional bedload indicators (e.g., obstacle marks, scour, smoothing, etc.)*

Sediment indicators

- [ ] **Soil development**
- [X] **Changes in character of soil**
- [ ] **Mudcracks**
- [X] **Changes in particle-sized distribution**
  - [X] *transition from* sand to gravel
  - [ ] *upper limit of sand-sized particles*
  - [ ] *silt deposits*

Vegetation indicators (*Consider the vegetation transition looking from the middle of the channel, up the banks, and into the floodplain*)

- [X] **Change in vegetation type from** 0 **to** Lartri-Ambdum
- [X] **Change in density of vegetation**
- [ ] **Exposed roots below intact soil layer**
- [ ] **Vegetation matted down and/or bent**
- [ ] **Other vegetation observations**

Other physical indicators

- [X] **Sediment deposited on vegetation or structures**
- [X] **Wracking/presence of organic litter**
- [ ] **Presence of large wood**
- [ ] **Leaf litter disturbed or washed away**
- [ ] **Water staining**

Other observed indicators? Describe:

Project ID #: Soda Mountain Solar

Step 4 Was additional information used to support identification of the OHWM? ☐ Yes ☒ No

If yes, describe and attach information to data sheet:

Step 5 Is an OHWM present at this site? ☒ Yes ☐ No

Describe rationale for location of OHWM or lack thereof by describing any observed indicators (at, above, and/or below the OHWM location).

Flat, unvegetated floodplain below OHWM (sandy). Break in slope at OHWM. Transition from sloped to flat at TOB and change in sediment to gravel, and vegetated.

Additional observations or notes

Attach an imagery log of the site.

Imagery log attached? ☒ Yes ☐ No If no, explain why not: _____

List photographs, or other imagery/sketches, and include descriptions in the table below.

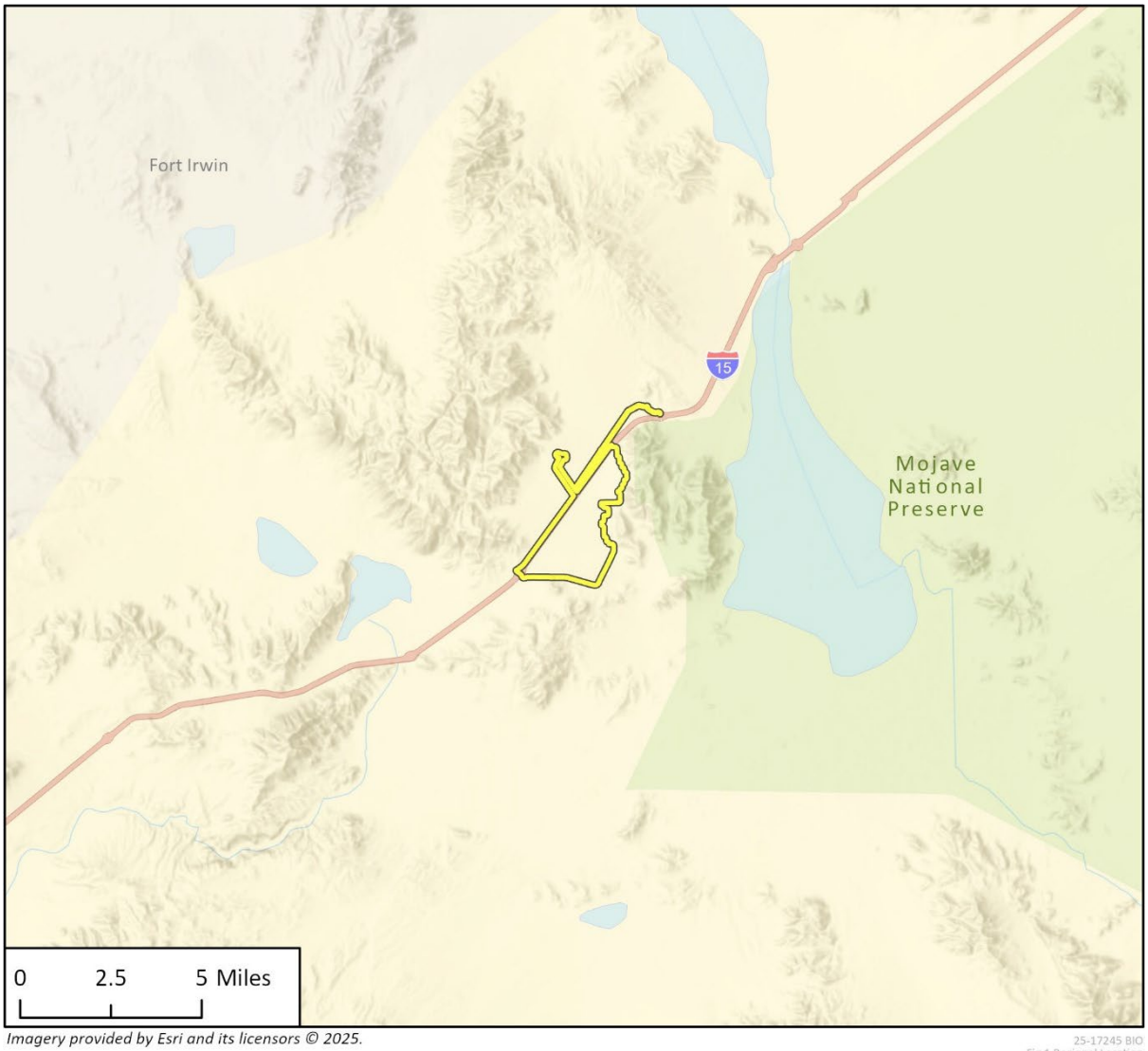
Number photographs in the order that they are taken. Attach imagery and include annotations of features.

Imagery Number	Imagery description
E-5-1	Downstream
E-5-2	Upstream
E-5-3	OHWM and TOB

Appendix D

Figures

Figure 1 Regional Location



Imagery provided by Esri and its licensors © 2025.

25-17245 BIO
Fig 1 Regional Location

Study Area

N

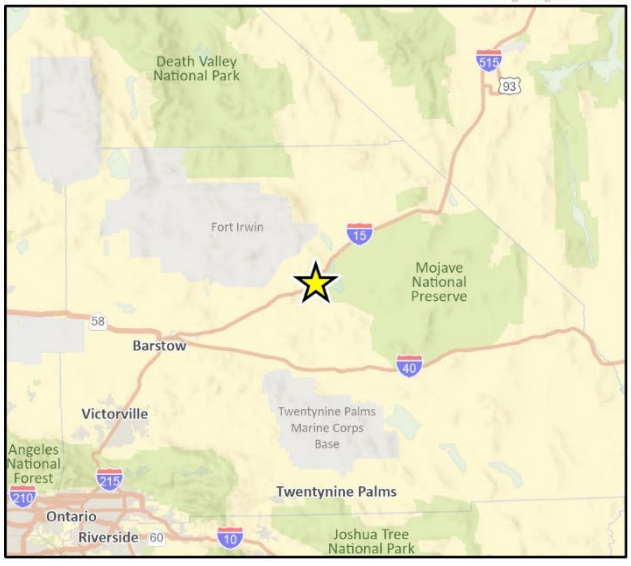


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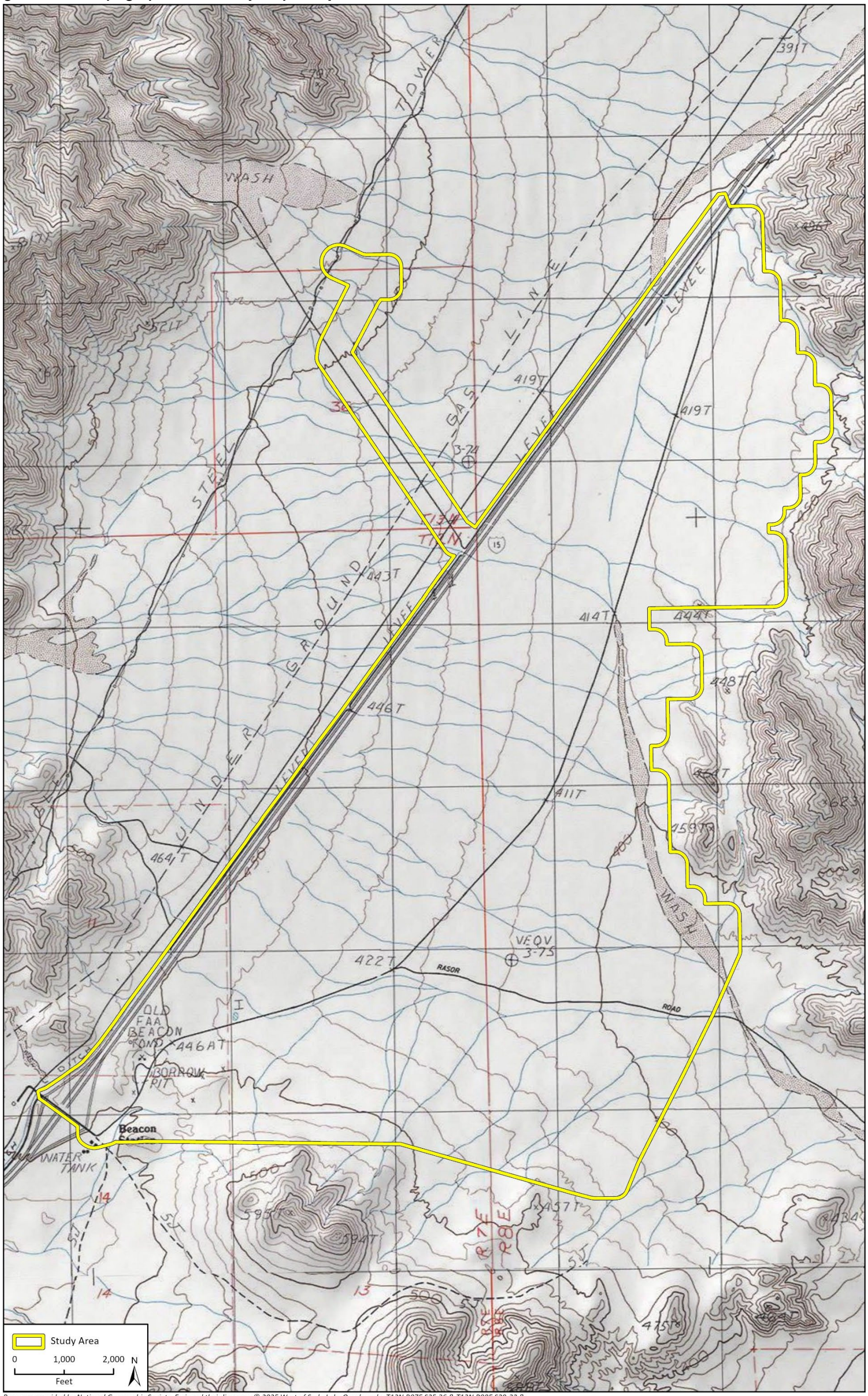
Figure 2a Topographic Location (Study Area)



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25-17245 JD
Fig X Topo_11x17_Portrait

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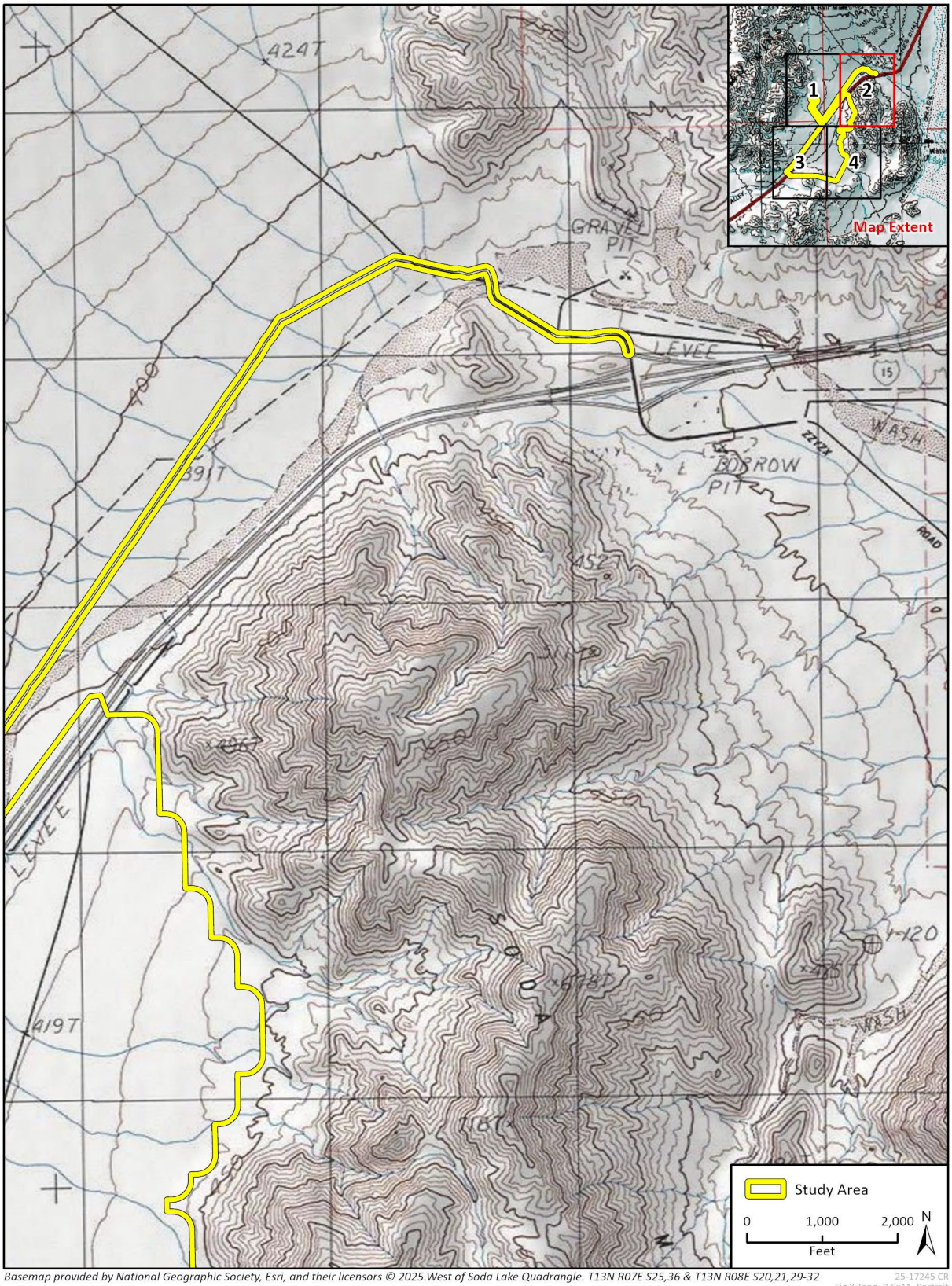
Figure 2b Topographic Location (Access Road Study Area)



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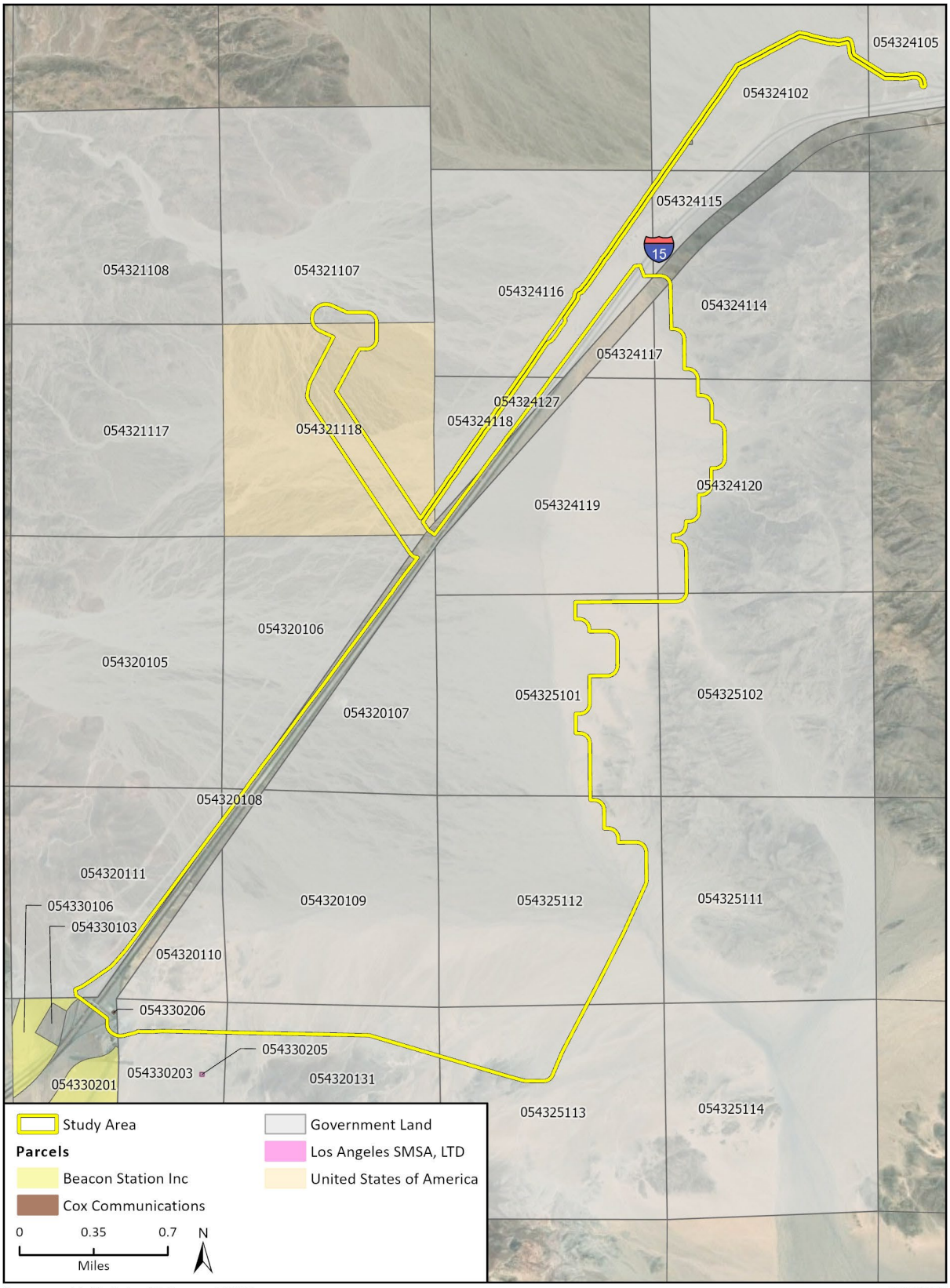
25-17245 CR
Fig X Topo_8.5x11_Portrait

Figure 3 Study Area Location



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Parcel data provided by San Bernardino County, 2025.

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Fig X Project Location

Figure 4 Project Components

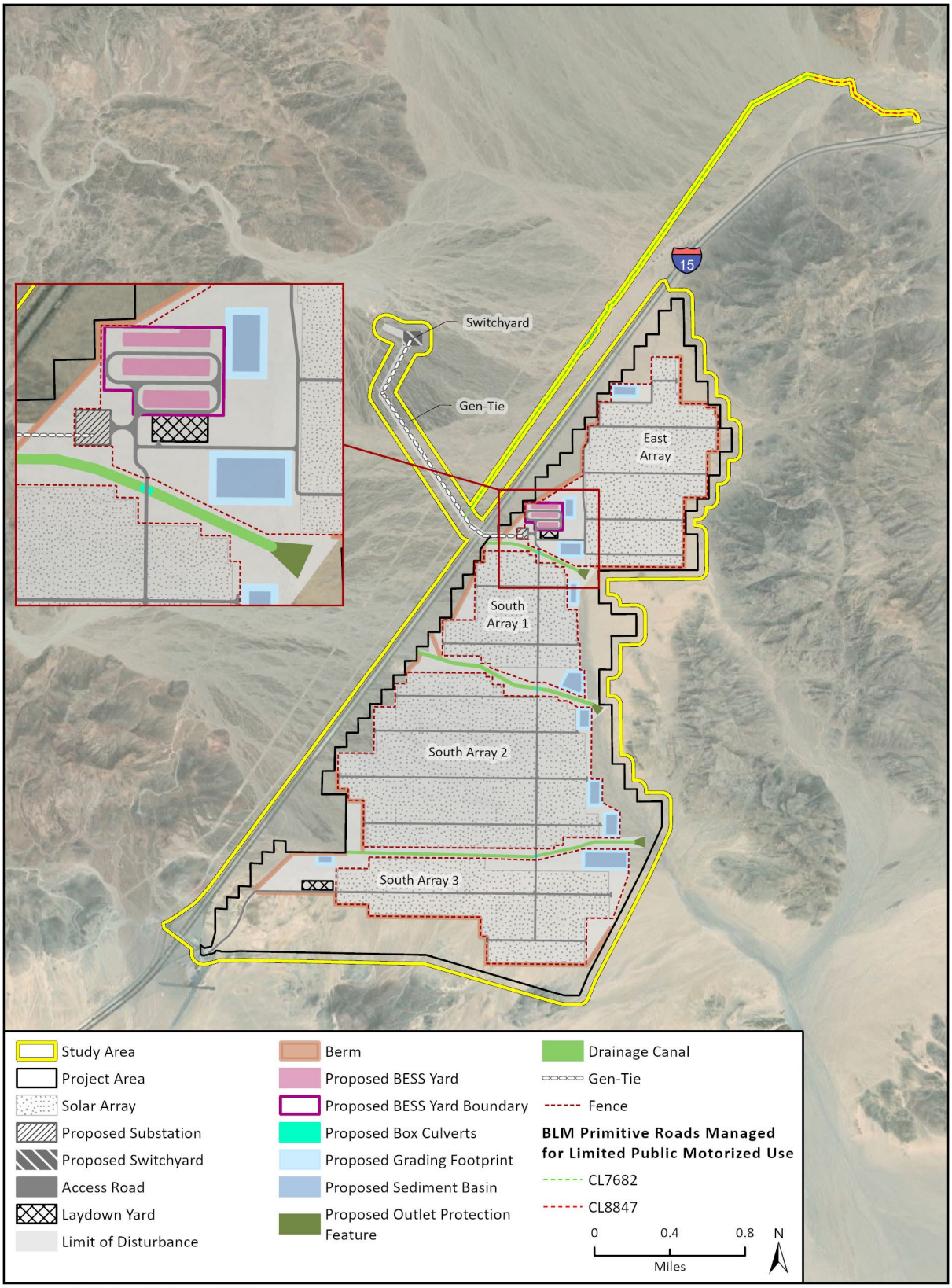

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Fig X Project Components

Figure 5 Proposed Temporary and Permanent Impact Areas

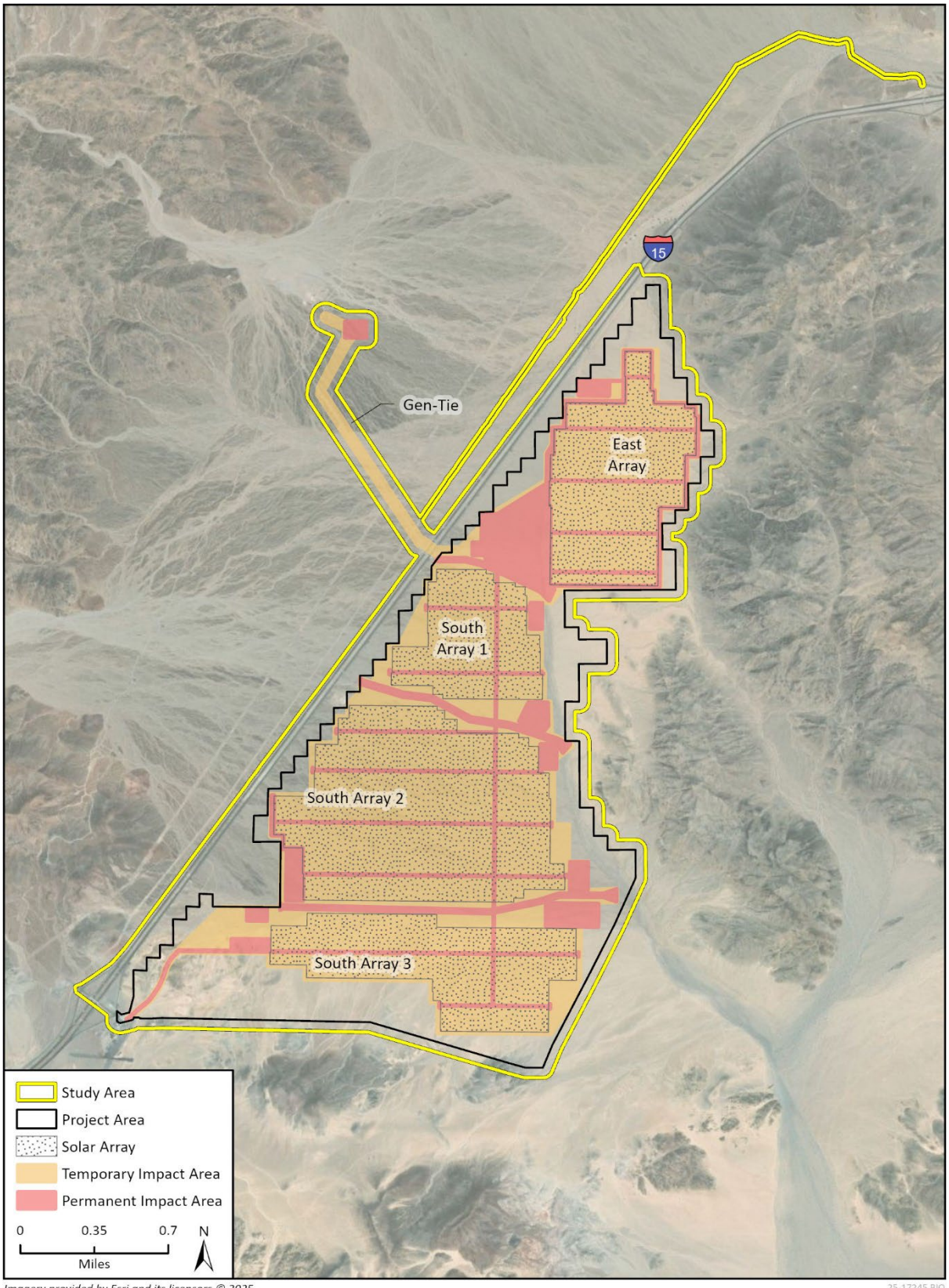

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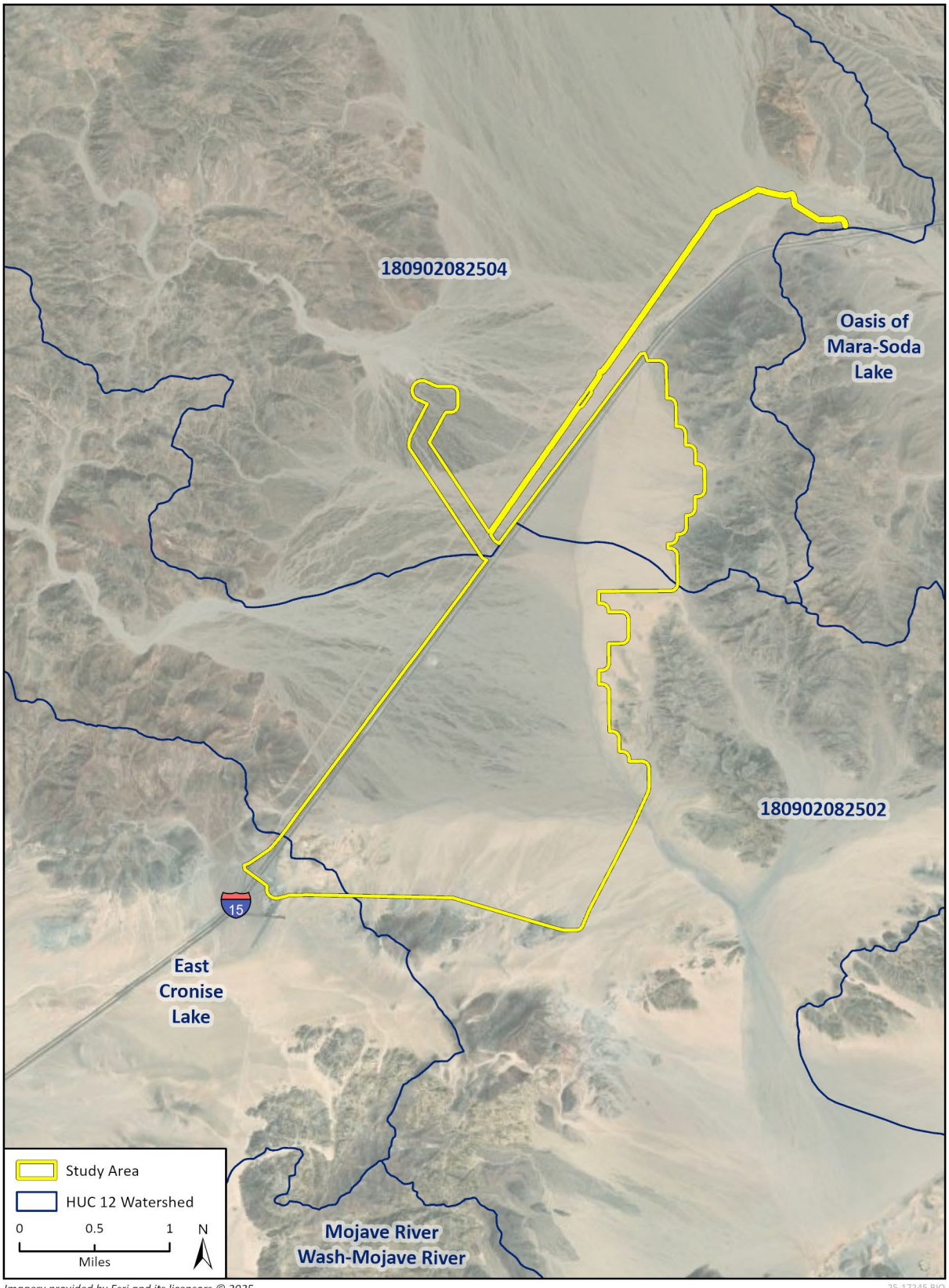
Fig X Impact Area_8.5x11

Figure 6 Regional Watersheds



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Additional data provided by USGS, 2024.

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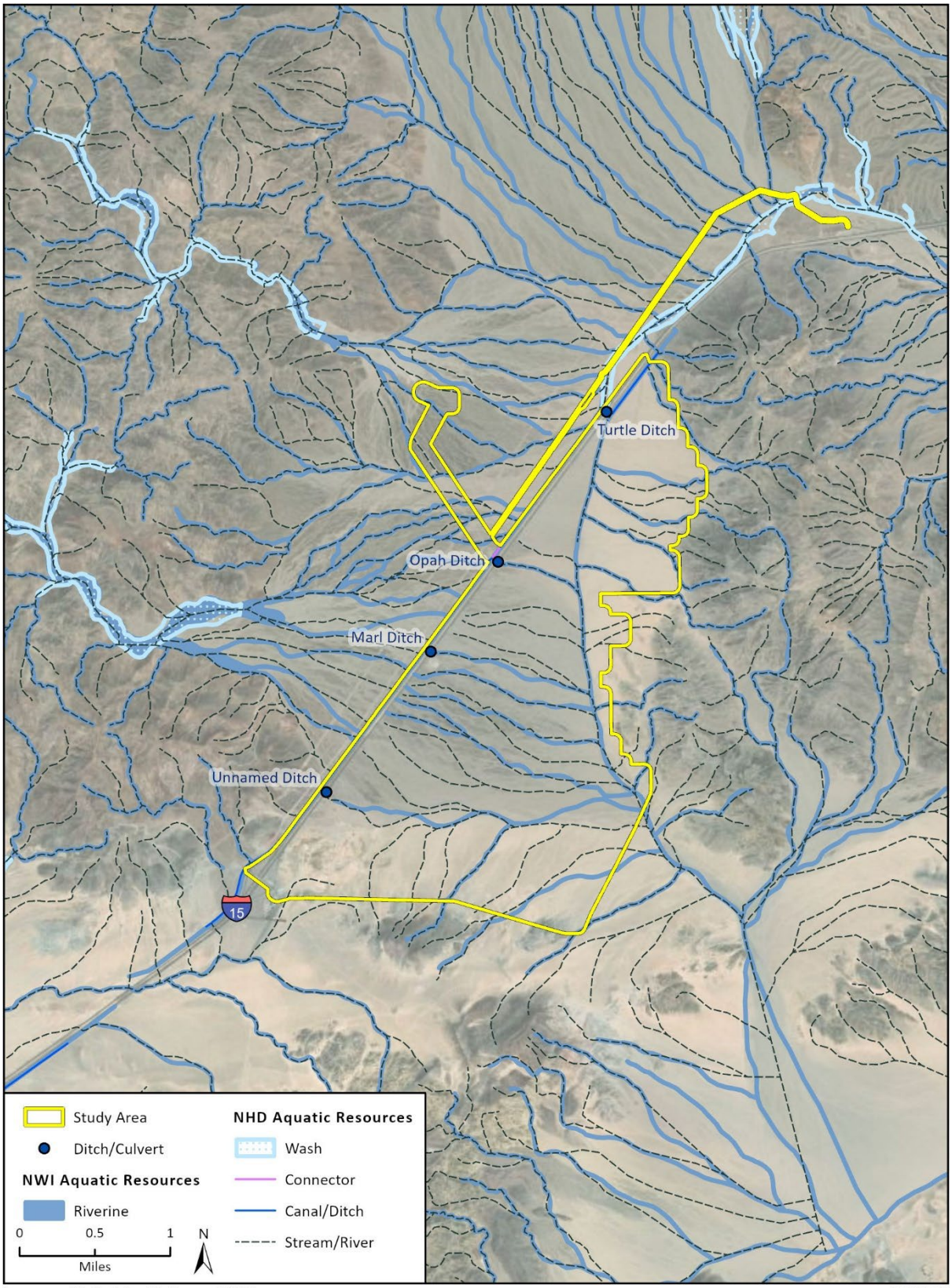
Fig X Watershed

Figure 7 Mapped Aquatic Resources (USFWS 2025, USGS 2025)



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Additional data provided by USFWS, 2025 and USGS, 2024.

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Fig X Aquatic Resources

Figure 8 Project Components and Field Delineation Results (Overview)

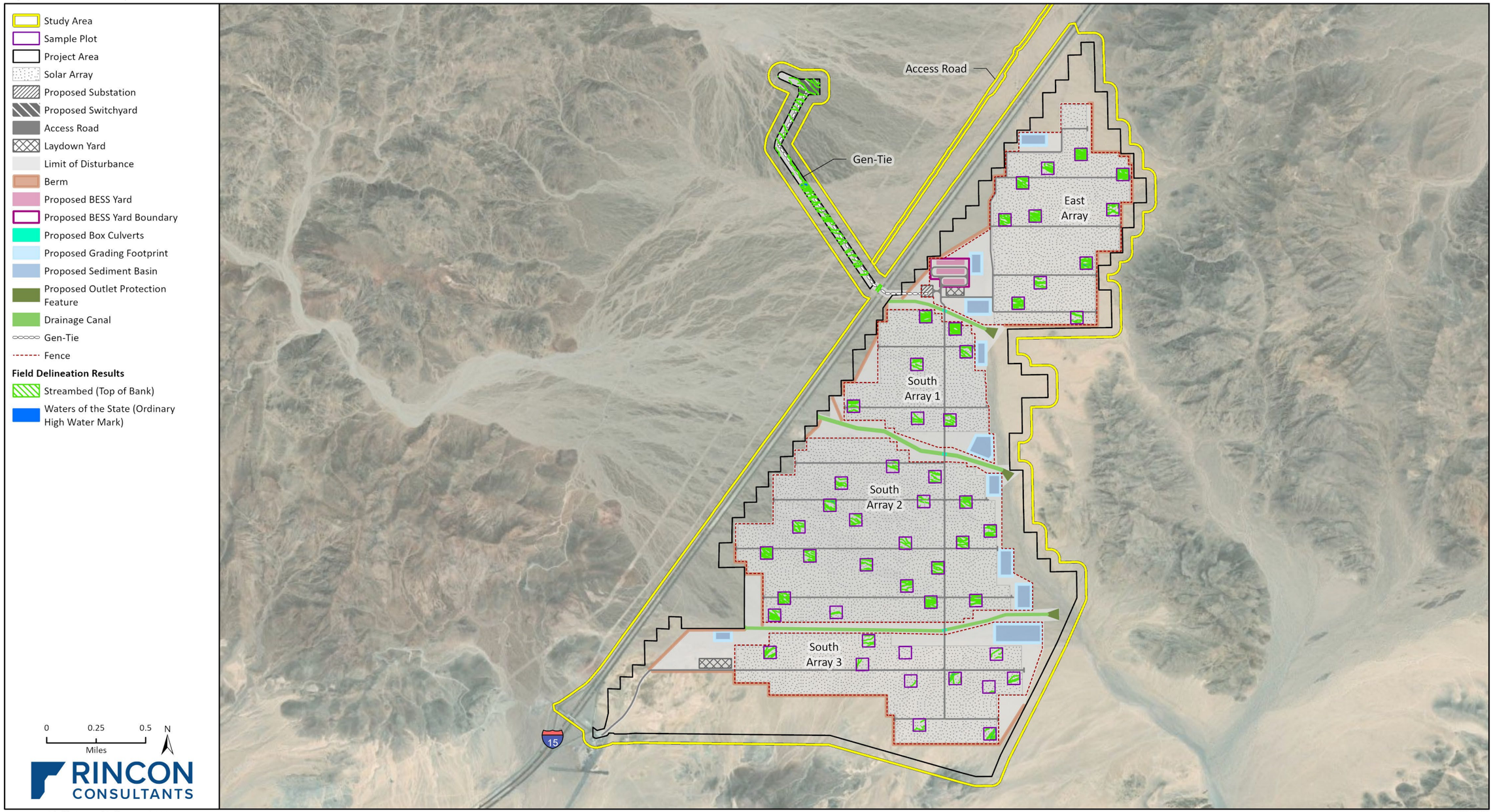

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Fig X Field Delineation Results

Figure 9 Potential Jurisdictional Aquatic Resources within the Study Area (Overview)

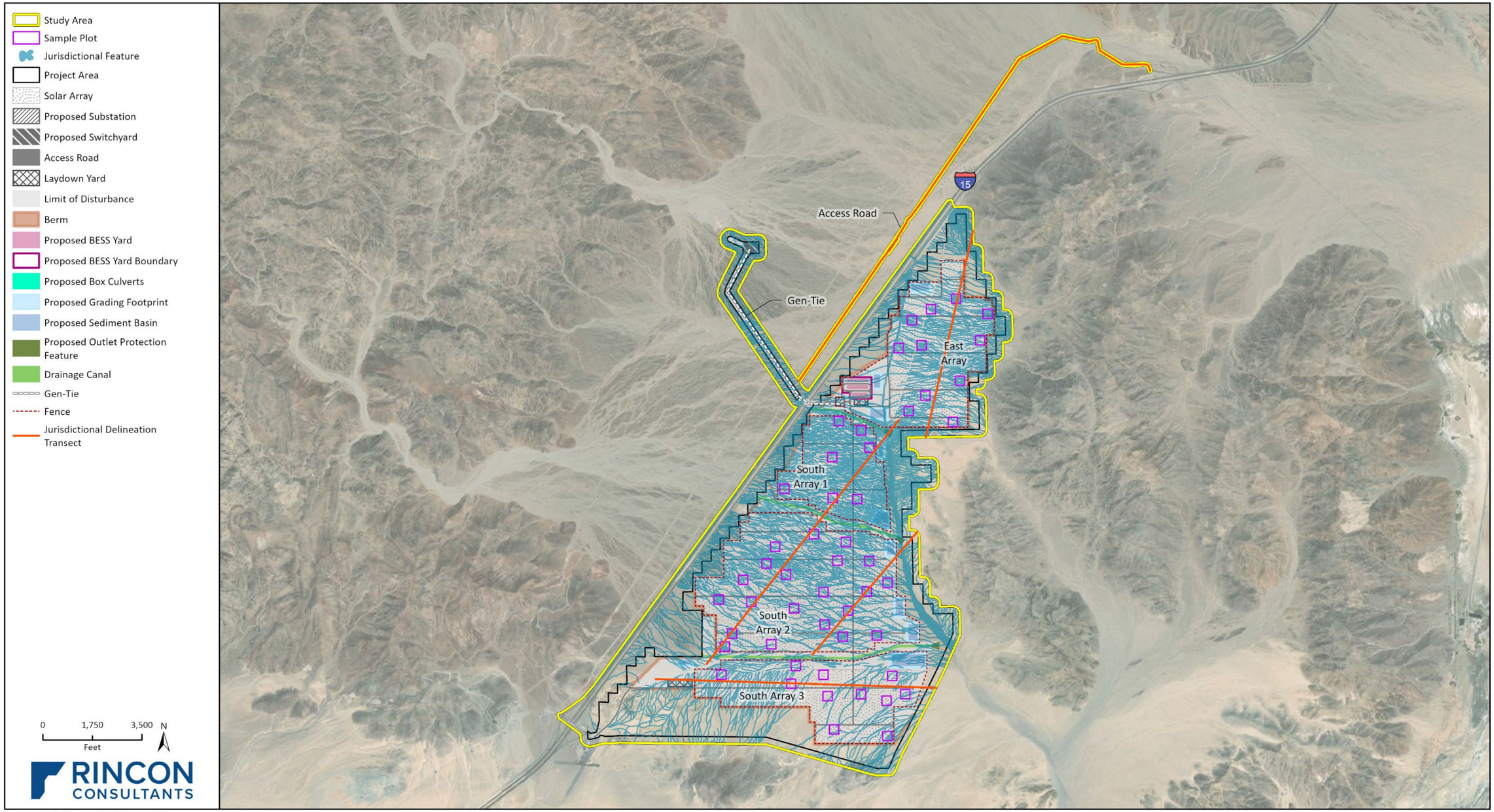

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Fig X Jurisdictional Delineation Overview

Figure 10a Potential Jurisdictional Aquatic Resources within the Study Area (Map Book)

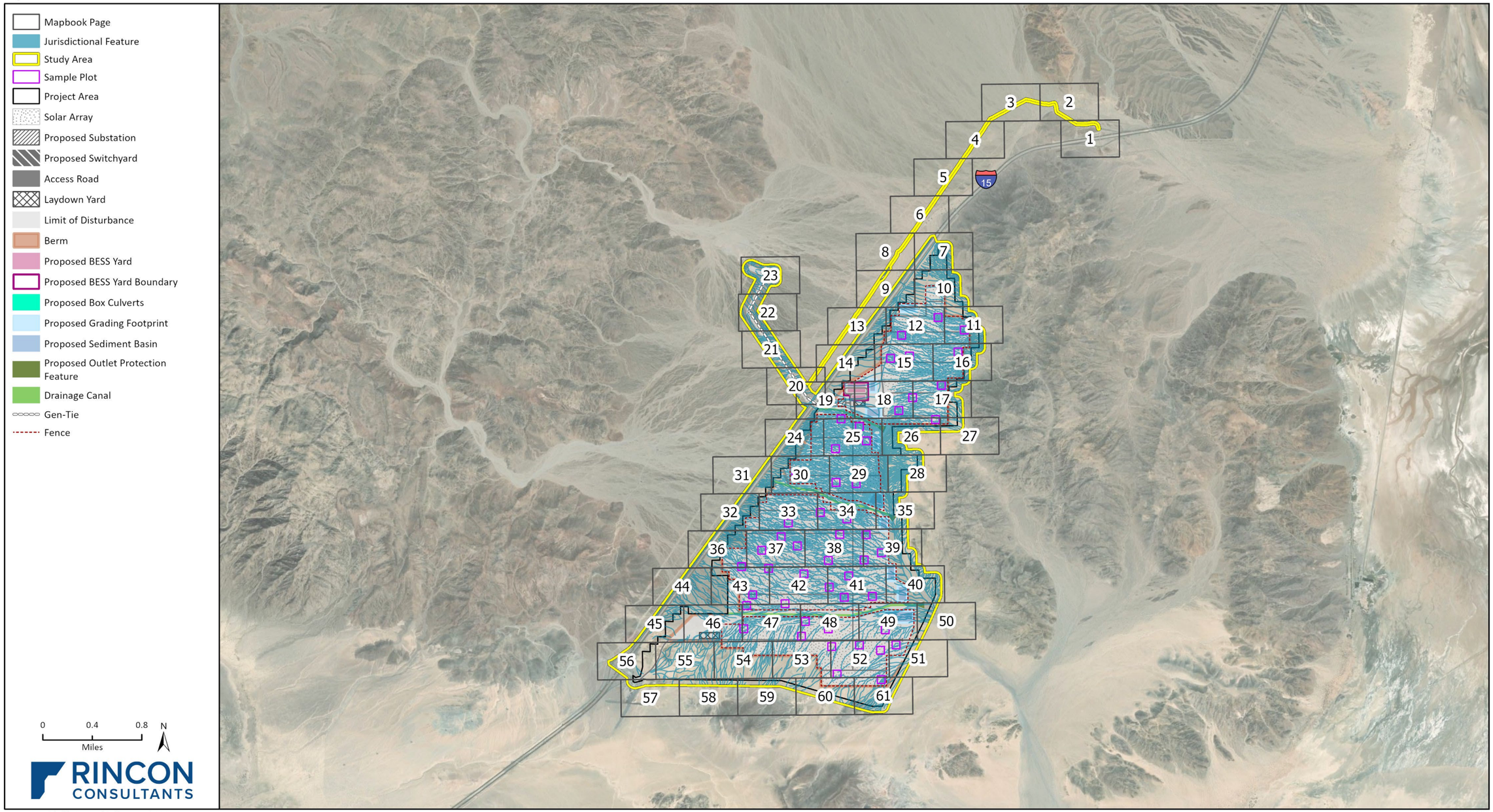

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Fig X Jurisdictional Delineation Overview

Figure 10b Potential Jurisdictional Aquatic Resources within the Study Area (Page 1)

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Fig X Jurisdictional Delineation

Figure 10c Potential Jurisdictional Aquatic Resources within the Study Area (Page 2)

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Fig X Jurisdictional Delineation

Figure 10d Potential Jurisdictional Aquatic Resources within the Study Area (Page 3)

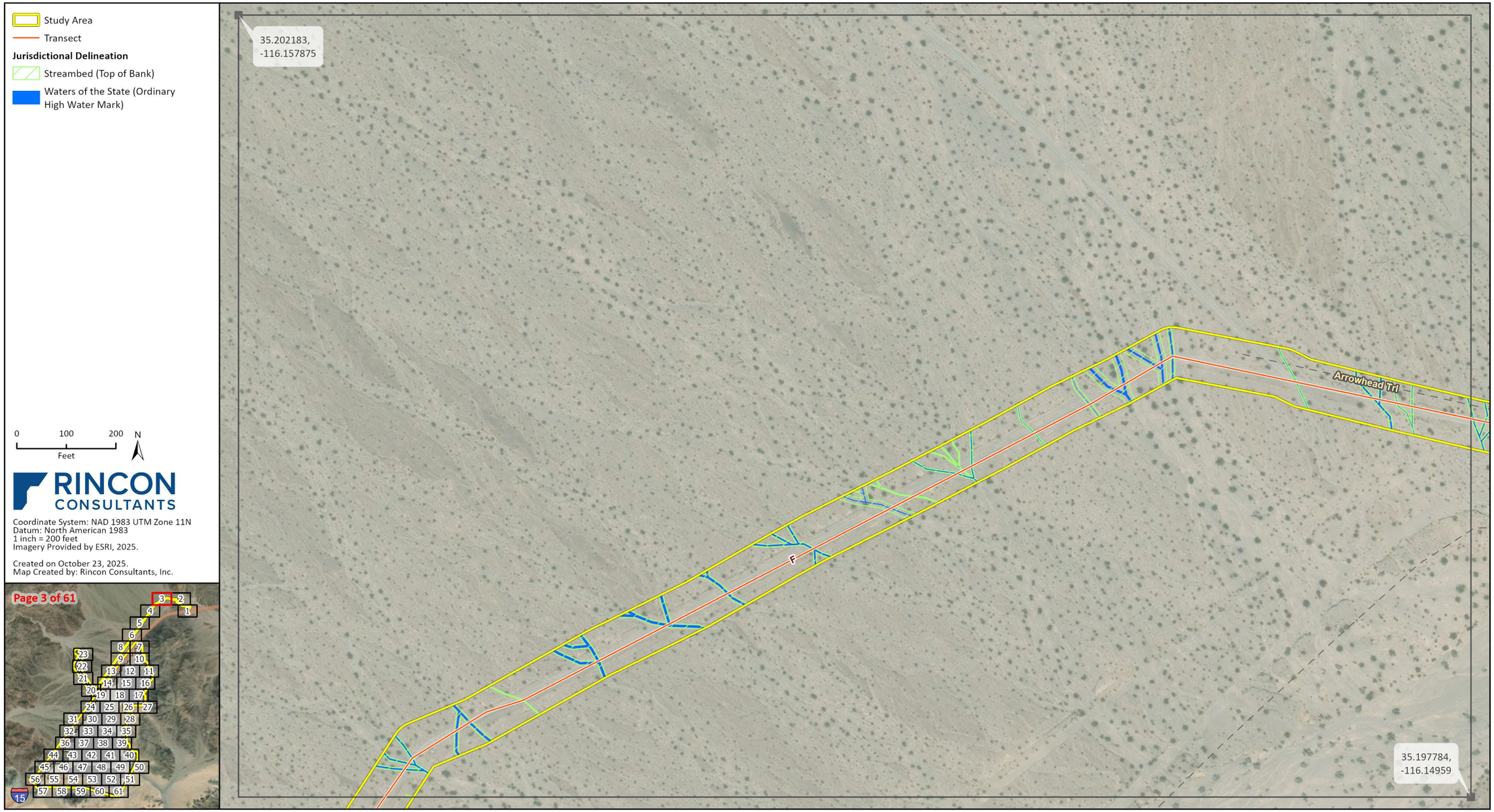

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Fig X Jurisdictional Delineation

Figure 10e Potential Jurisdictional Aquatic Resources within the Study Area (Page 4)

Figure 10f Potential Jurisdictional Aquatic Resources within the Study Area (Page 5)

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Fig X Jurisdictional Delineation

Figure 10g Potential Jurisdictional Aquatic Resources within the Study Area (Page 6)

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Fig X Jurisdictional Delineation

Figure 10h Potential Jurisdictional Aquatic Resources within the Study Area (Page 7)

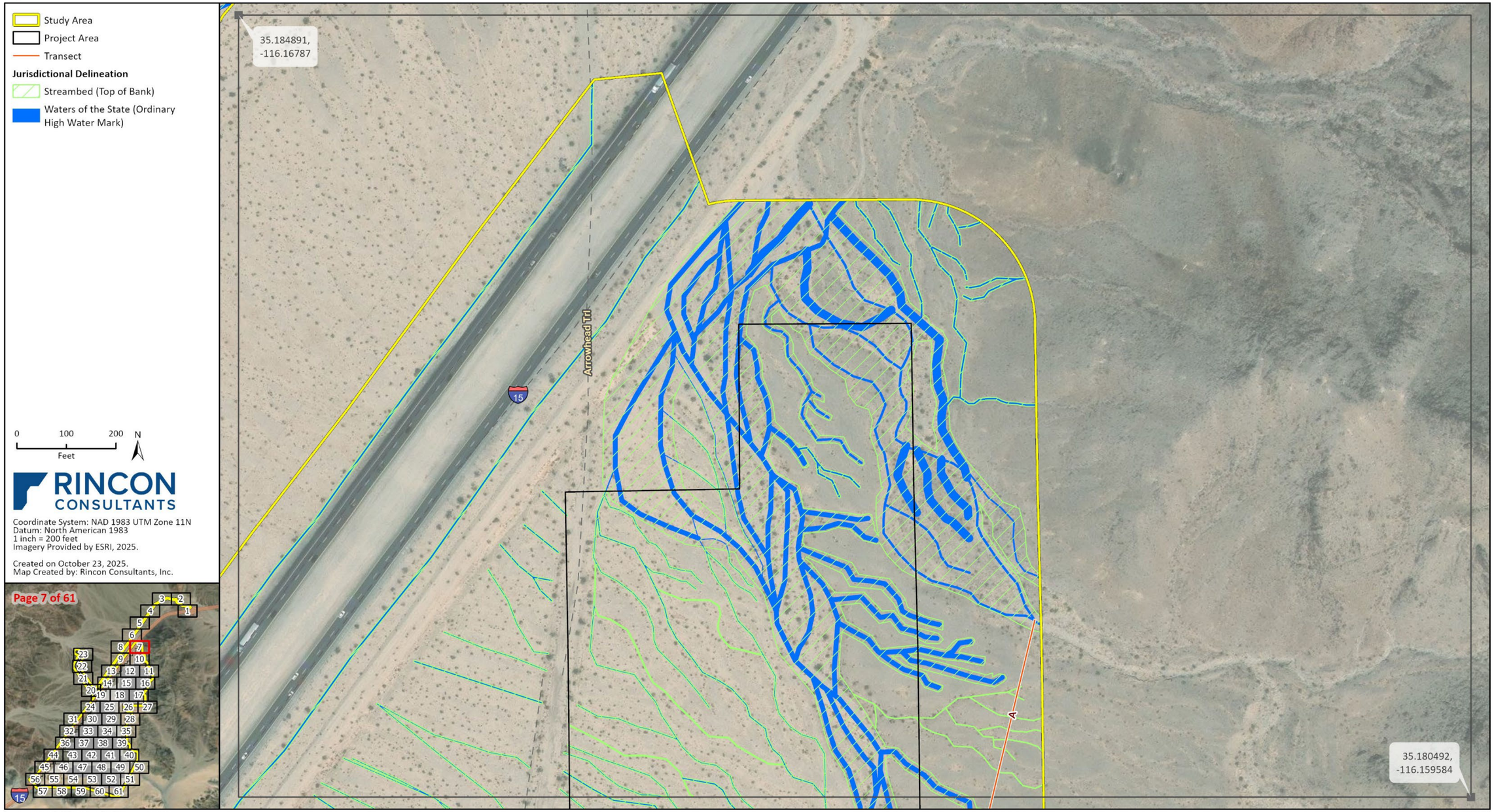

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Figure 10i Potential Jurisdictional Aquatic Resources within the Study Area (Page 8)

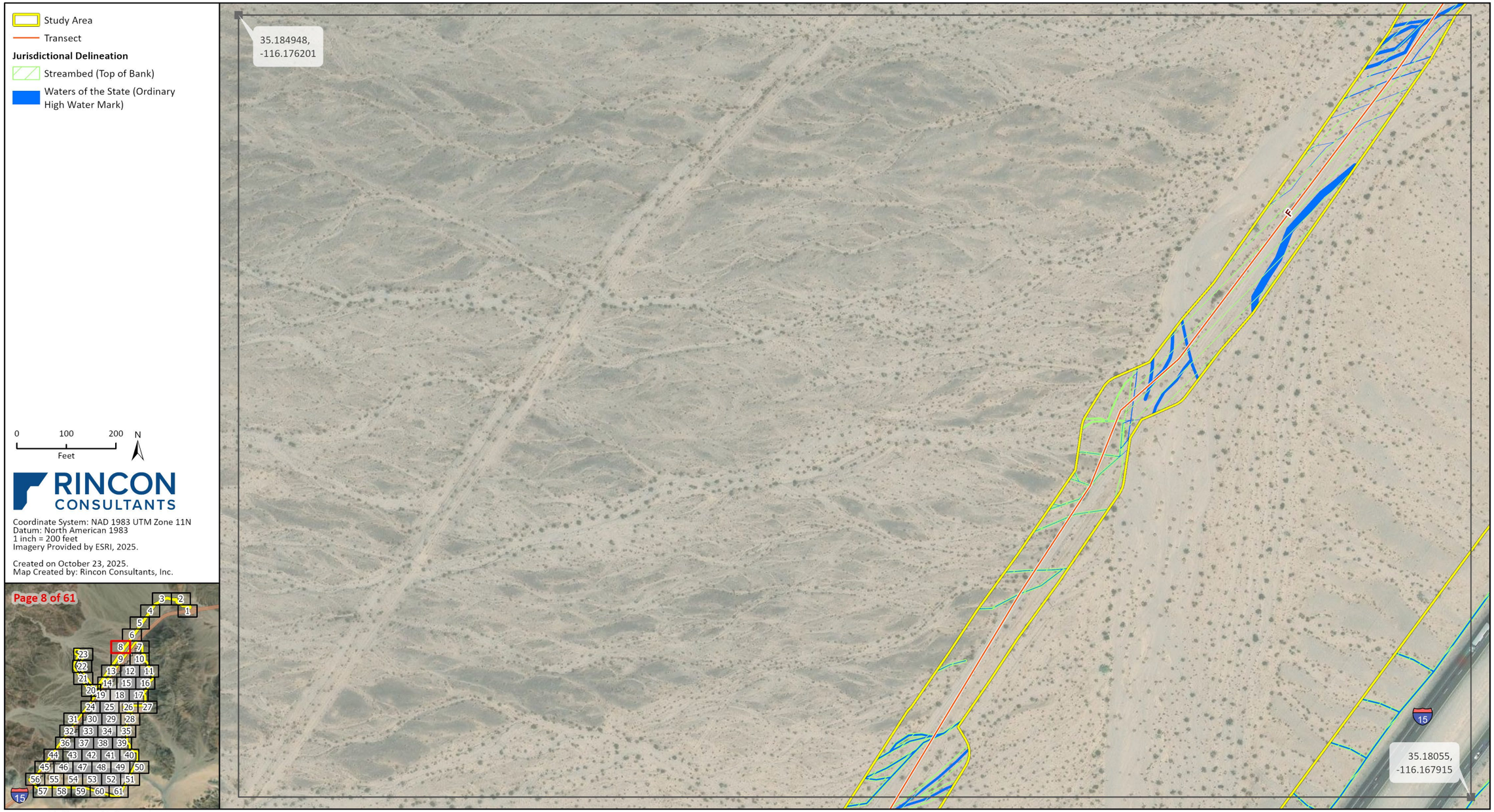

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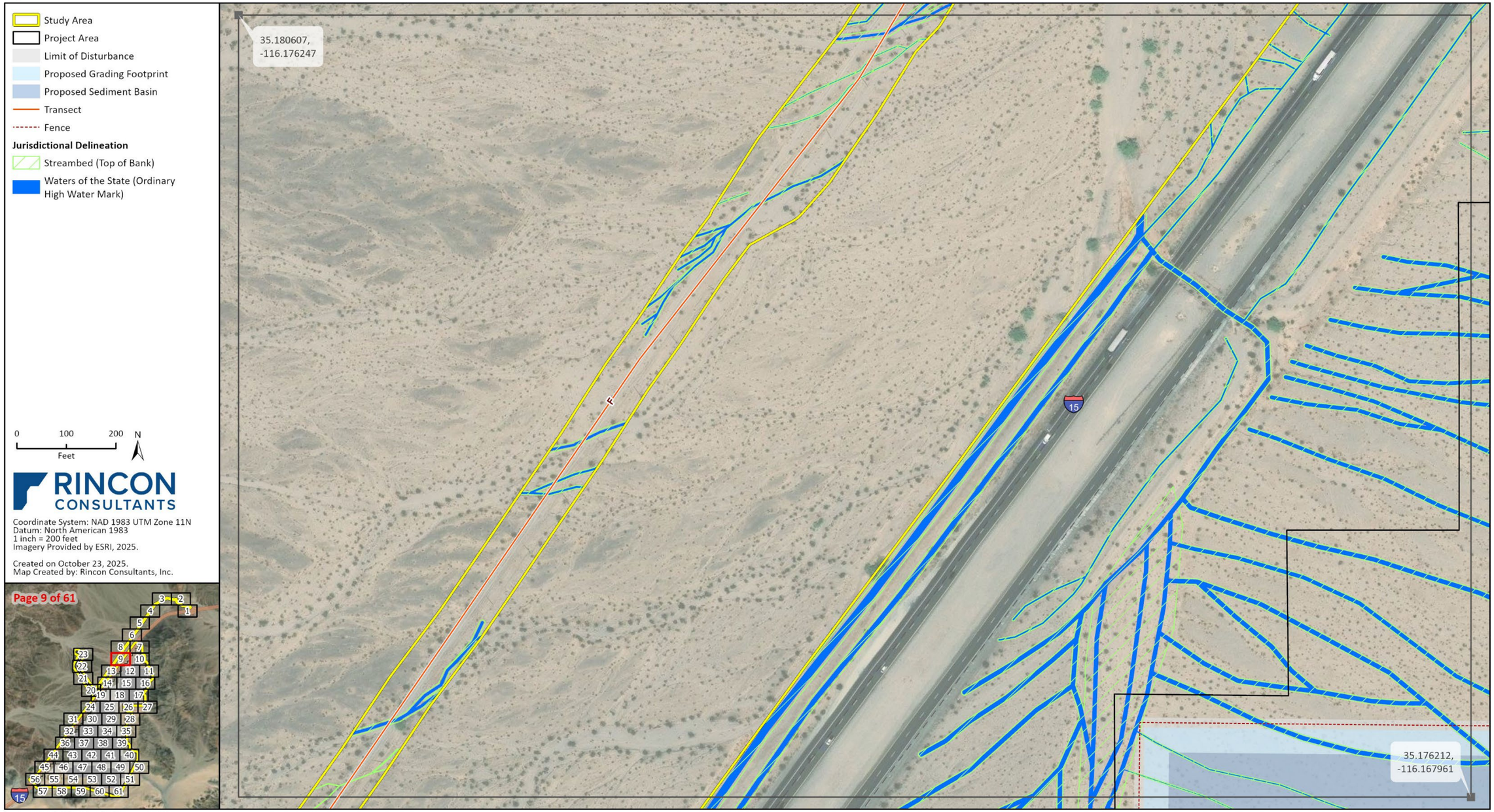
Fig X Jurisdictional Delineation

Figure 10j Potential Jurisdictional Aquatic Resources within the Study Area (Page 9)



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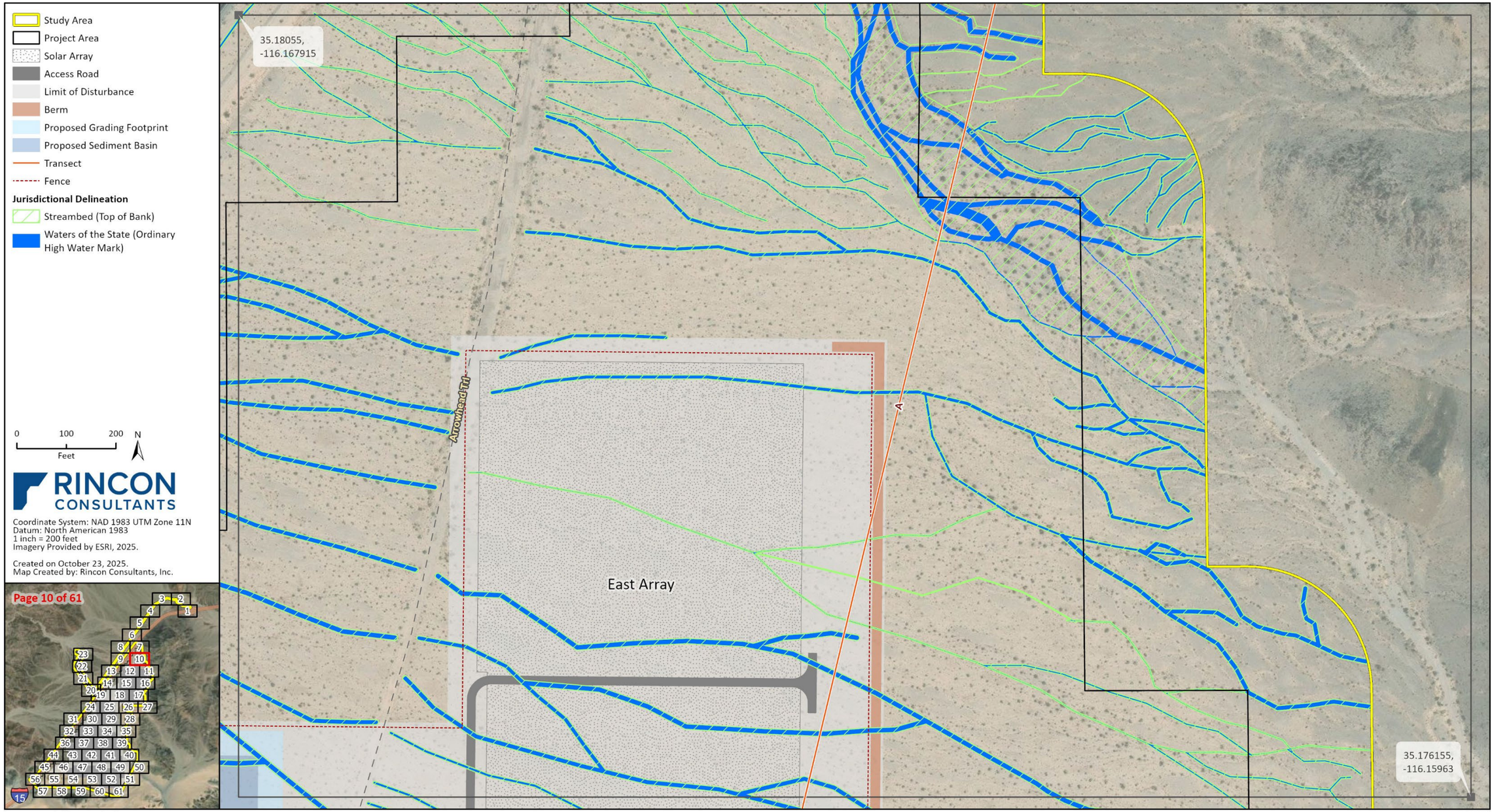
Additional data provided by USGS, 2023.

Figure 10k Potential Jurisdictional Aquatic Resources within the Study Area (Page 10)



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25-17245 JD
Fig X Jurisdictional Delineation

Figure 10l Potential Jurisdictional Aquatic Resources within the Study Area (Page 11)

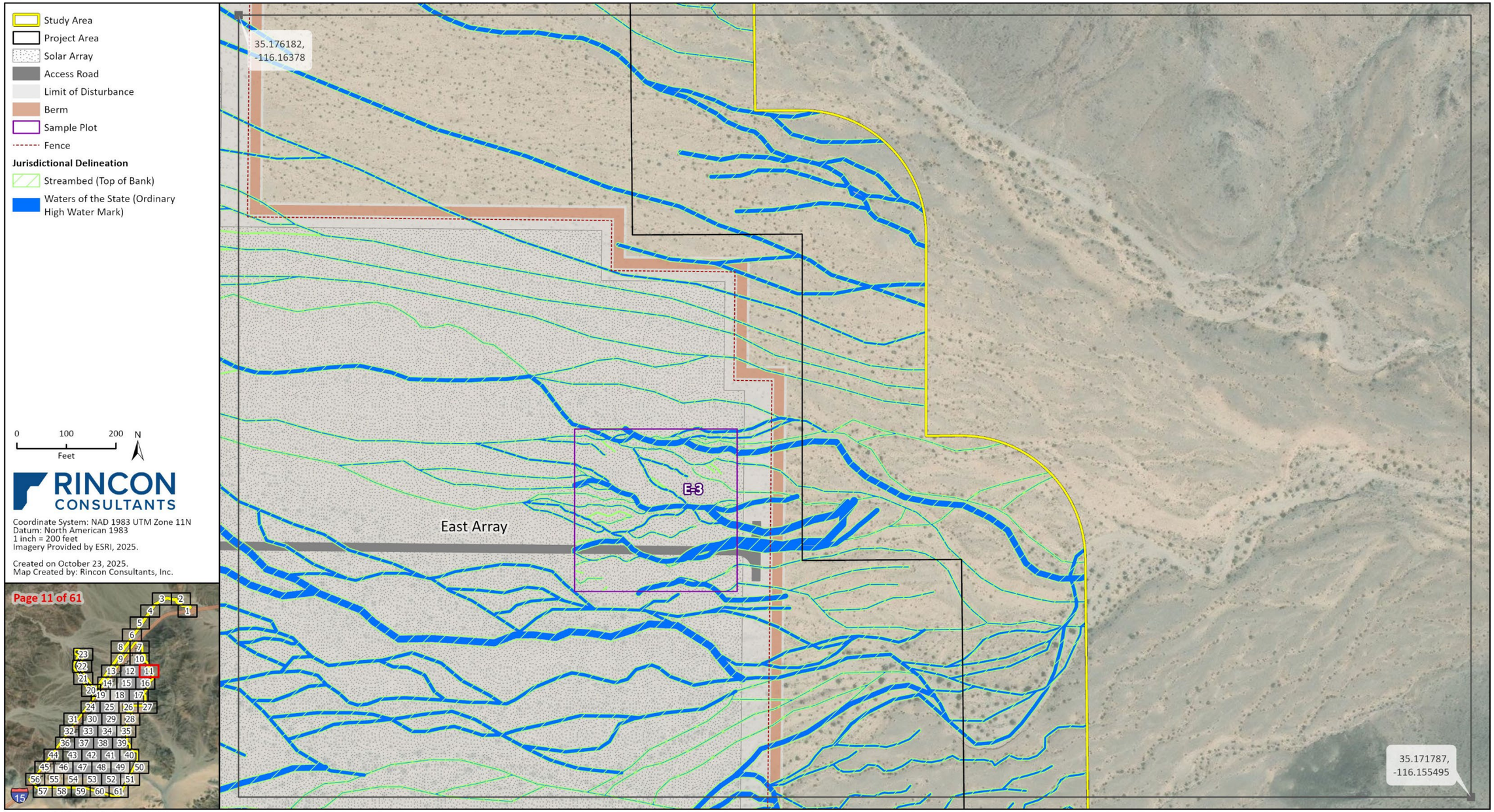

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Fig X Jurisdictional Delineation