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Adelanto Gateway Logistics Center Project

Aquatic Resources Delineation Report

City of Adelanto, San Bernardino County, California

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December 13, 2024

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1 - INTRODUCTION

At the request of Mileski Living Trust, FirstCarbon Solutions (FCS) completed a delineation of aquatic resources and proposes a jurisdictional determination for the approximate 487.20-acre Adelanto Gateway Logistics Center Project Site, referred to as the Study Area, as depicted on Exhibits 1 and 2. The purpose of this report is to support jurisdictional determinations by the United States Army Corps of Engineers (USACE) and the Regional Water Quality Control Board (RWQCB); to support California Department of Fish and Wildlife (CDFW) evaluation pursuant to Fish and Game Code Sections 1602, *et seq*. (Streambed Alteration Program); and to support the project applicant's planning and permitting efforts for a proposed development project.

Throughout this report, the term "drainage features" refers to all land features with water flow patterns and includes both potentially jurisdictional defined drainage courses along with non-jurisdictional drainage features such as swales. Additionally, potentially jurisdictional defined drainage courses will be referred to simply as drainages.

Features determined to be swales throughout the Study Area are low lying areas that do not have ordinary high water mark (OHWM) indicators. These swale features are considered non-jurisdictional due to the lack of water concentrations, scouring, a definable bed and bank, and/or other OHWM indicators. These swale features seem to appear in aerial imagery but were not present on the ground within the Study Area during the field survey.

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2 - ENVIRONMENTAL SETTING

2.1 - Location

The approximate 487.20-acre Study Area is located in the City of Adelanto (City), in San Bernardino County (County), California. The Study Area is centered around 34.568588° latitude and -117.387749° longitude. The location of the Study Area within the San Bernardino Region is shown on Exhibit 1, and the Study Area boundaries on a recent high-resolution aerial image are shown on Exhibit 2.

2.2 - Vegetation and Land Cover Types

The Study Area consists of undeveloped lands that showed signs of prior disturbances. Vegetation of the Study Area is dominantly non-native annual grassland with disturbed desert scrub. Vegetation in the Study Area include creosote bush (*Larrea tridentata*, Upland [UPL])), cheese bush (*Ambrosia Salsola*, UPL), white bur-sage (*Ambrosia dumosa*, UPL), western Joshua tree (*Yucca brevifolia*, UPL), desert Nevada ephedra (*Ephedra nevadensis*, UPL), and fourwing saltbush (*Atriplex canescens ssp. canescens*, UPL).

2.3 - Topography and Hydrogeomorphology

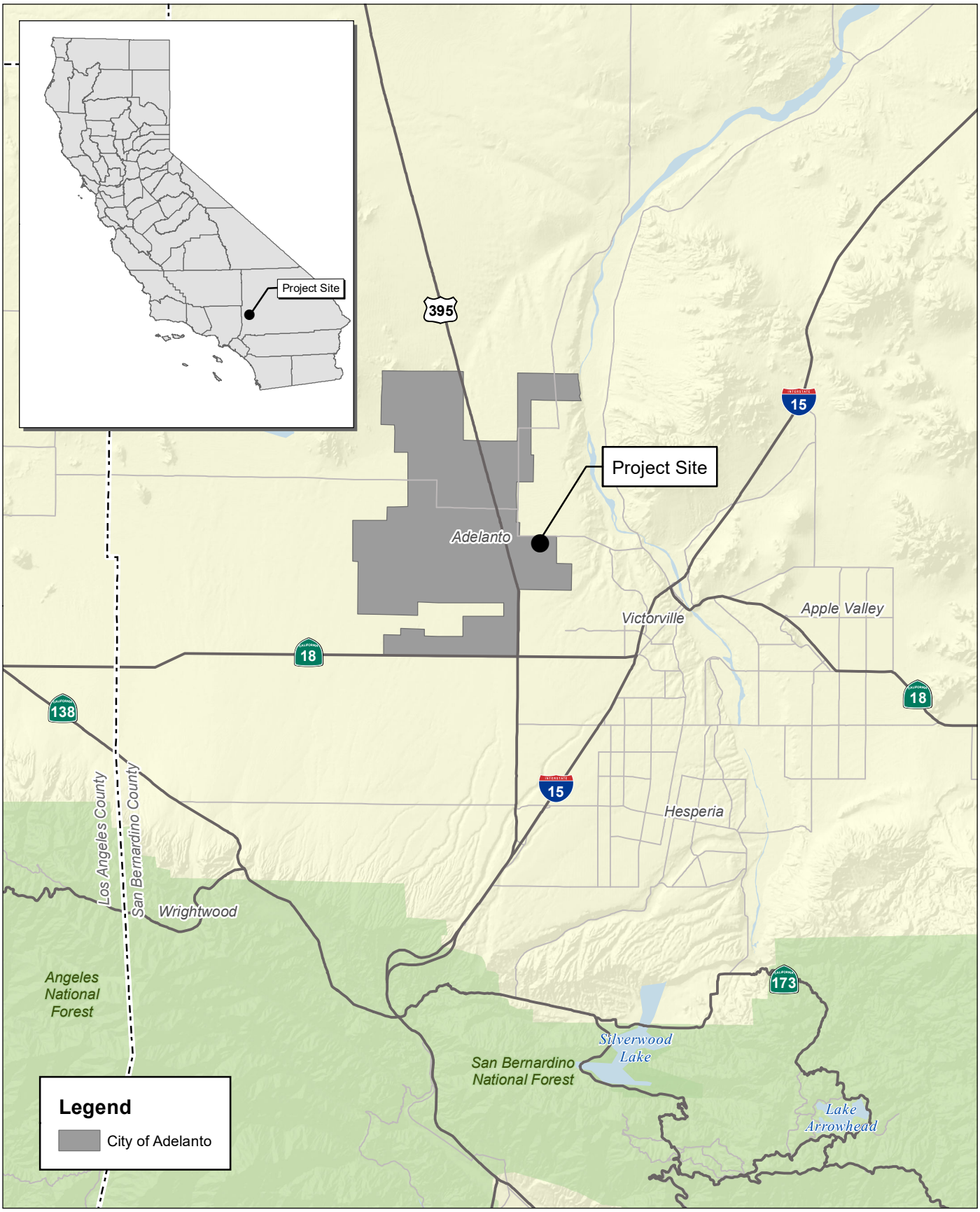
Elevation within the Study Area is generally flat and ranges from about 2,900 feet above mean sea level (AMSL) on the northern boundary to 2,927 feet AMSL along the southern boundary. Elevation on the eastern and western boundaries is approximately 2,910 feet AMSL. Several ephemeral drainages flow in a south to north direction through the Study Area and under Air Expressway/Air Base Road through a series of concrete culverts. The drainages collect overland sheet flow from the surrounding areas and only flow in direct response to precipitation.

2.4 - Soils

The Natural Resources Conservation Service (NRCS) has mapped the one soil type, Bryman Loamy Fine Sand, 0 to 2 Percent Slopes, as occurring in the Study Area (Exhibit 3). The soil type is not classified as hydric soils.[1]

[1] United States Department of Agriculture (USDA), Natural Resources Conservation Service. 2024. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed November 12, 2024.

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Source: Census 2000 Data, The California Spatial Information Library (CaSIL).

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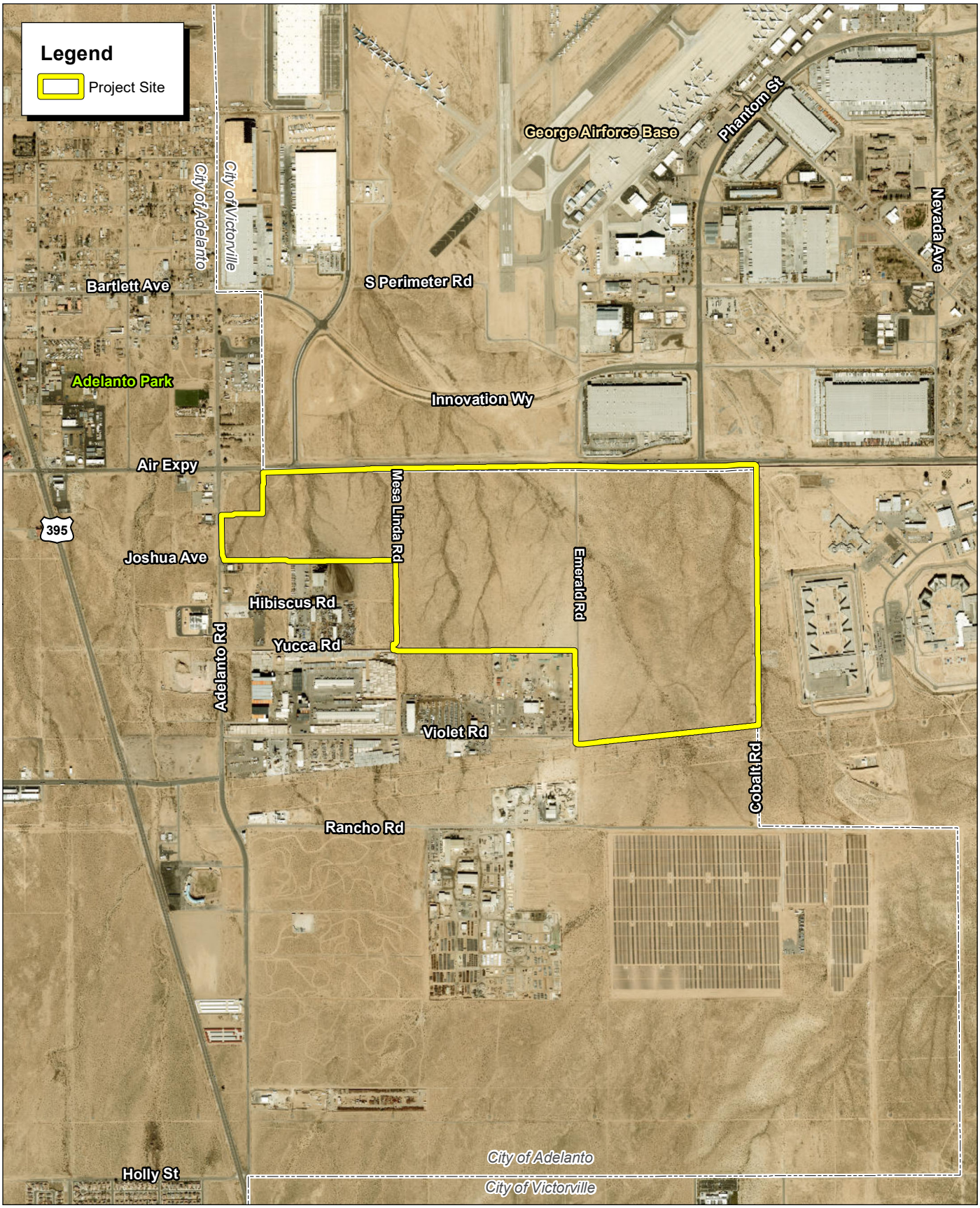
5 2.5 0 5
Miles

Exhibit 1
Regional Location Map

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Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc.

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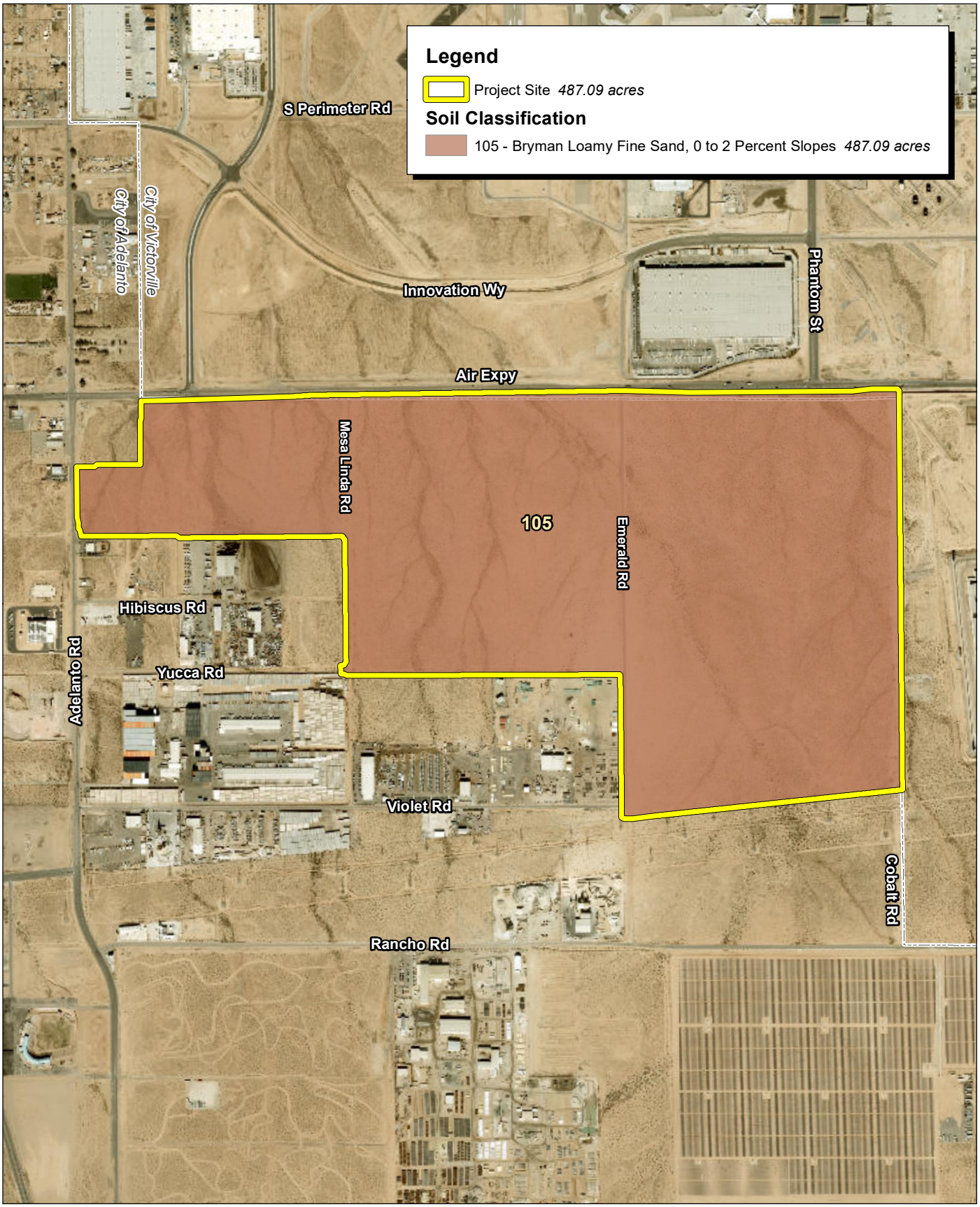
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Exhibit 2
Local Vicinity Map

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Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc. USDA Soils Data Mart, San Bernardino Mojave River Area.

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1,300 650 0 1,300
Feet

Exhibit 3
Soils Map

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3 - REGULATORY SETTING

3.1 - Federal

3.1.1 - Clean Water Act

Section 404

The agencies are in receipt of the U.S. Supreme Court's May 25, 2023, decision in the case of *Sackett v. Environmental Protection Agency*. In light of this decision, the agencies will interpret the phrase "waters of the United States" consistent with the Supreme Court's decision in the *Sackett* case. In *Sackett*, the Supreme Court adopted the Rapanos plurality's test for adjacent wetlands: only those wetlands with a continuous surface connection to other regulated waters, such that the two are indistinguishable.

The USACE administers Section 404 of the federal Clean Water Act (CWA), which regulates the discharge of dredge and fill material into waters of the United States. The term "waters of the United States" is defined in accordance with the USACE regulations at 33 Code of Federal Regulations Part 328.3(a) as:

1. Waters which are:
    a. 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;
    b. The territorial seas; or
    c. 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 paragraphs (a)(1) or (2) of this section that are relatively permanent, standing or continuously flowing bodies of water;
4. Wetlands adjacent to the following waters:
    a. Waters identified in paragraph (a)(1) of this section; or
    b. 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.

The following are not "waters of the United States":

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 the United States Environmental Protection Agency (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.

Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the CWA, the final authority regarding CWA jurisdiction remains with the EPA and/or USACE.

"Wetland" refers to 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. Wetlands generally include swamps, marshes, bogs, and seasonal wetlands. Wetlands are considered jurisdictional if they fall under one of the categories of waters of the United States defined above. The USACE jurisdiction typically extends up to the OHWM.

In general, a USACE permit must be obtained before placing fill in wetlands or other waters of the United States. The type of permit depends on the impacted acreage, the purpose of the proposed fill, and other factors.

Section 401

Section 401 of the CWA states that "any applicant for a federal permit for activities that involve a discharge to waters of the State, shall provide the federal permitting agency a certification from the State in which the discharge is proposed that states that the discharge will comply with the applicable provisions under the federal Clean Water Act." Therefore, before the USACE will issue a Section 404 permit, applicants must apply for and receive a Section 401 Water Quality Certification from the RWQCB.

3.2 - State

3.2.1 - California Porter-Cologne Water Quality Control Act

The RWQCB regulates actions that would involve "discharging waste, or proposing to discharge waste, within any region that could affect the quality of the waters of the State" (Water Code § 13260(a)), pursuant to provisions of the Porter-Cologne Water Quality Act. "Waters of the State" are defined as "any surface water or groundwater, including saline waters, within the boundaries of the State" (Water Code § 13050(e)).

In 2019, the California State Water Resources Control Board (State Water Board) published the State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State (Procedures) to guide wetland waters of the State determinations and the permitting process.[2] The State Board Wetland Definition and Procedures define an area as wetland as follows: "An area is wetland if, under normal circumstances, (1) the area has continuous or recurrent saturation of the upper substrate caused by groundwater, or shallow surface water, or both; (2) the duration of such saturation is sufficient to cause anaerobic conditions in the upper substrate; and (3) the area's vegetation is dominated by hydrophytes or the area lacks vegetation."

The following wetlands are waters of the State:

1. Natural wetlands;
2. Wetlands created by modification of a surface water of the State; and
3. Artificial wetlands that meet any of the following criteria:
    a. Approved by an agency as compensatory mitigation for impacts to other waters of the State, except where the approving agency explicitly identifies the mitigation as being of limited duration;
    b. Specifically identified in a water quality control plan as a wetland or other water of the state;
    c. Resulted from historic human activity, is not subject to ongoing operation and maintenance, and has become a relatively permanent part of the natural landscape; or

[2] California State Water Resources Control Board (State Water Board). 2019. State Wetland Definition and Procedures for Discharges of Dredged or Fill Material to Waters of the State. October 20, 2023.

d. Greater than or equal to one acre in size, unless the artificial wetland was constructed, and is currently used and maintained, primarily for one or more of the following purposes (i.e., the following artificial wetlands are not waters of the State unless they also satisfy the criteria set forth in 2, 3a, or 3b):

   i. Industrial or municipal wastewater treatment or disposal,

   ii. Settling of sediment,

   iii. Detention, retention, infiltration, or treatment of stormwater runoff and other pollutants or runoff subject to regulation under a municipal, construction, or industrial stormwater permitting program,

   iv. Treatment of surface waters,

   v. Agricultural crop irrigation or stock watering,

   vi. Fire suppression,

   vii. Industrial processing or cooling,

   viii. Active surface mining—even if the site is managed for interim wetlands functions and values,

   ix. Log storage,

   x. Treatment, storage, or distribution of recycled water, or

   xi. Maximizing groundwater recharge (this does not include wetlands that have incidental groundwater recharge benefits), or

   xii. Fields flooded for rice growing.

3.2.2 - California Fish and Game Code

Sections 1600–1617 of the California Fish and Game Code require that a Notification of Lake or Streambed Alteration be submitted to the CDFW for “any activity that may substantially divert or obstruct the natural flow or substantially change the bed, channel, or bank of any river, stream, or lake.” CDFW defines a stream including creeks and rivers as “a body of water that flows at least periodically or intermittently through a bed or channel having banks and supports fish or other aquatic life.” CDFW's definition of “lake” includes “natural lakes or man-made reservoirs.” The CDFW reviews the proposed actions in the Notification and, if necessary, prepares a Lake or Streambed Agreement that includes measures to protect fish and wildlife resources.

4 - METHODS

FCS Senior Biologist Joseph Vu surveyed the Study Area on June 12 and 19, 2024, as described in the following section.

4.1 - Wetlands

The presence/absence of wetlands was determined based on the requirements of the Corps of Engineers Wetlands Delineation Manual and revised procedures in the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region.[3,4] These procedures include standards that define wetlands, including specific saturation and/or ponding regimes, and evaluate hydrophytic vegetation, hydric soils, and wetland hydrology. Wetland indicator status of vegetation follows the 2022 National Wetland Plant List for the Arid West Region.[5]

4.2 - Drainage Channels and Tributaries

Drainage channels were characterized through presence/absence of bed, bank, and OHWM; hydrology; and hydrological connectivity. The OHWM is determined and characterized using definitions and guidance of A Field Guide to the Identification of the OHWM in the Arid West Region of the Western United States.[6] A discussion of what constitutes a potentially jurisdictional "tributary" pursuant to *Sackett* and which features, such as ditches or ephemeral drainages, may be excluded from the definition of waters of the United States is provided in Section 5, below.

4.2.1 - Definitions of Hydrological Regimes

An ephemeral stream is defined as a watercourse that carries only surface runoff and flows during and immediately after periods of precipitation. An intermittent stream is defined as a watercourse that is temporally intermittent or seasonal and that flows during the wet season, continues to flow after the period of precipitation, and ceases surface flow during at least part of the dry season. A perennial stream is a watercourse that flows throughout the year. Riparian vegetation is defined as vegetation associated with a watercourse and relying on the higher level of water provided by the watercourse. Riparian vegetation can include trees, shrubs, and/or herbaceous plants.

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3 Environmental Laboratory. 1987. Corps of Engineers Wetlands Delineation Manual. Technical Report Y-87-1.

4 United States Army Corps of Engineers (USACE). 2008. Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0), ed. J.S. Wakeley, R.W. Lichvar, and C.V. Noble. ERDC/EL TR-08-28.

5 United States Army Corps of Engineers (USACE). 2022, The National Wetland Plant List–Arid West Version 3.

6 Lichvar, R.W., and S.M. McColley. 2008. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States.

Swales are topographical features that have no clearly defined channel bottom and banks and lack visible evidence of water flow but still may convey limited amounts sheet flow during precipitation events. Generally, swale widths were not measured since they lack measurable bed and banks.

4.3 - Additional Background Information Review

Additional relevant information about the Study Area was reviewed, including current and historical aerial imagery; the Watershed Assessment, Tracking and Environmental Results System (WATERS); the EPA's National Hydrography Data Set Plus (NHDPlus Version 2); the United States Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI);[7] and the NRCS Web Soil Survey and the Antecedent Precipitation Tool (APT).[8,9,10] The APT is an automation tool that the USACE developed to facilitate the comparison of antecedent or recent precipitation conditions for a given location to the range of normal precipitation conditions that occurred during the preceding 30 years in order to determine what constitutes a "typical year." In addition to providing a standardized methodology to evaluate normal precipitation conditions ("precipitation normalcy"), the APT can assess the presence of drought conditions and the approximate dates of the wet and dry seasons for a given location.

[7] United States Fish and Wildlife Service (USFWS). National Wetland Inventory. Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed November 12, 2024.

[8] United States Environmental Protection Agency (EPA). Watershed Assessment, Tracking and Environmental Results System (WATERS) Website: https://www.epa.gov/waterdata/waters-watershed-assessment-tracking-environmental-results-system. Accessed November 12, 2024.

[9] United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS). 2020. Web Soil Survey 3.3.2. Website: https://websoilsurvey.sc.egov.usda.gov/App/WebSoilSurvey.aspx. Accessed November 12, 2024.

[10] United States Army Corps of Engineers (USACE). 2024. Antecedent Precipitation Tool (APT) – v2.0. https://github.com/erdc/Antecedent-Precipitation-Tool/releases/tag/v2.0.0. Accessed November 12, 2024.

5 - RESULTS

The following section describes the results of both the background research and analysis and the results of the protocol-level delineation field work. Representative photographs of current site conditions are included in Appendix A.

5.1 - Climatic Conditions

Results of the USACE APT analysis (Appendix B) indicate that conditions during the delineation survey were normal for the 3-month period prior the delineation. The last rain event prior to the delineation occurred on May 5, 2024, with an accumulated precipitation volume of 0.18 inch for the month based on data of the nearest publicly available weather station located in Winchester, California.

5.2 - Aquatic Resources

Aquatic resources occurring within the Study Area boundary are described in more detail below.

5.2.1 - Drainage A

Drainage A in the Study Area is an ephemeral feature that flows in a south to north direction (Exhibit 4 and Exhibit 5). Ephemeral determination for Drainage A is provided in the Streambed Duration Assessment Method (SDAM) form, attached as Appendix C. The OHWM of Drainage A ranges from 2 to 3 feet in width, as evidenced by changes in soil characteristics (break in slope, scour, destruction of terrestrial vegetation, presence of bed and bank, and sediment sorting). The active channel of the Drainage A has a sandy to pebbly substrate and is generally unvegetated; upland vegetation along the margin and upper terraces consists primarily of desert species such as creosote bush (UPL), cheese bush (UPL), white bur-sage (UPL), desert Nevada ephedra (UPL), and fourwing saltbush (UPL). Flowing and/or standing water was absent during the field delineation. Drainage originates off-site to the south and flows north before dissipating on-site. Photos of Drainage A are depicted in Appendix A–Site Photographs, Photographs 22 through 25. A definition of ephemeral flow regimes is provided in Section 4.2.1.

5.2.2 - Non-jurisdictional Swales

After a review of historical aerial imagery (Appendix A, Photographs 37 and 38) and recent aerial imagery, it appears that several drainage features may be present in the Study Area. However, during the field delineation almost all of these areas identified on aerial photography were determined to be either non-jurisdictional swales or were more commonly areas where swales did not form.

Features determined to be swales throughout the Study Area are low lying areas that do not have OHWM indicators. They may convey limited amounts sheet flow during precipitation events but the

flows are not enough to create any OHWM indicator typical of a jurisdictional feature. Swale widths were not measured since they lack a measurable bed and bank. These swale features are considered non-jurisdictional due to the lack of water concentrations, scouring, a definable bed and bank, and/or other OHWM indicators.

Appendix A includes photographs taken at various locations along each non-jurisdictional swale to document the lack of on the ground OHWM indicators typical of a jurisdictional feature (water concentrations, scouring, a definable bed and bank, break in slope, destruction of terrestrial vegetation, and sediment sorting). Exhibit 6 depicts the photograph locations within the Study Area. Upland indicators observed in the swale areas include small mammal burrows and woody/vegetation debris located beneath and adjacent to the source plants indicating a fluvially inactive area. Photos of the non-jurisdictional swales are depicted in Appendix A–Site Photographs.

5.3 - United States Fish and Wildlife Service National Wetland Inventory

The USFWS NWI did not depict any wetlands in the Study Area but several drainages were mapped.[11] Per the NWI, determinations are only made based on high altitude imagery, and according to the NWI Data Limitations information, “a margin of error is inherent in the use of imagery; thus, detailed on the ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.” Additionally, the USFWS clarifies that NWI mapping is not adequate to be used to establish regulatory boundaries or jurisdiction.

There was no evidence of hydric soils, hydrology indicators, or hydrophytic vegetation that would indicate a wetland within the Study Area, therefore a Wetland Determination Data Form was not completed. The absence of wetland indicators was not caused by abnormally dry conditions because the delineation was conducted during a period of normal aggregate rainfall, as demonstrated by the USACE APT analysis (see Section 5.1 and Appendix B).

5.4 - Proposed Jurisdictional Determination

5.4.1 - Proposed United States Army Corps of Engineers Jurisdiction

As of the preparation of this report, the final “Revised Definition of Waters of the United States” rule was published in the Federal Register on January 18, 2023, and became effective March 20, 2023. On May 25, 2023, the U.S. Supreme Court issued a decision in the case of *Sackett v. Environmental Protection Agency.* This decision determined that areas of federal jurisdiction under Section 404 of the CWA must have a “continuous surface connection” with navigable waters of the United States or

[11] United States Fish and Wildlife Service (USFWS). National Wetland Inventory (NWI). Website: https://www.fws.gov/wetlands/data/mapper.html. Accessed November 12, 2024.

relatively permanent tributaries to navigable waters. This report proposes preliminary conclusions regarding the jurisdictional status of non-wetland waters, based on the *Sackett* decision.

On August 29, 2023, the USACE and the EPA issued a release noting that a revised definition of waters of the United States would be issued in conformance with Sackett. On September 8, 2023, the USACE and EPA issued the final rule updating the definition of waters of the United States in conformance with *Sackett* in the Federal Register. The final rule is not currently operative in certain states and for certain parties due to litigation. California is excluded from this litigation and is currently operating under the guidance issued in the Federal Register on September 8, 2023.

5.4.2 - Features Proposed to be Exempt from United States Army Corps of Engineers Jurisdiction

Flows associated with Drainage A do not comprise relatively permanent, standing, or continuously flowing bodies of water and are not tributary to interstate waters or waters used in interstate commerce. Drainage A is an isolated feature that do not meet the definition of waters of the United States under 33 Code of Federal Regulations Part 328.3(a). Drainage A conveys surface water only in direct response to precipitation (e.g., rain) and as such rarely contain surface water. No surface water was present at the time of the site visits. As a result, Drainage A are not considered waters of the United States, as defined under paragraphs (a)(2) through (a)(5) of 33 Code of Federal Regulations Part 328.3, that would be subject to USACE jurisdiction pursuant to Section 404 of the CWA.

The numerous swales located in the Study Area would not be considered waters of the United States since they are exempt per Code of Federal Regulations Part 328.3(b)(8) *Swales and erosional features (e.g., gullies, small washes) characterized by low volume, infrequent, or short duration flow*.

5.4.3 - Proposed Regional Water Quality Control Board Jurisdiction

Since Drainage A is not subject to USACE jurisdiction pursuant to Section 404 of the CWA Drainage A is also not subject to RWQCB pursuant to Section 401 of the CWA. However, since Drainage A conveys surface flow with the potential to support beneficial uses, it may be considered to be waters of the State that would be regulated by the RWQCB pursuant to the Porter-Cologne Act and would require a Waste Discharge Requirement if there are any impacts to Drainage A.

RWQCB jurisdiction is shown in Exhibit 4. Dimensions of all RWQCB jurisdiction occurring within the Study Area boundary are presented in Table 1 and described in more detail below.

Table 1: Proposed Regional Water Quality Control Board Jurisdiction Within the Study Area

Type	Regional Board Non-Wetland Waters (acres)	Regional Board Jurisdictional Wetlands (acres)	Total Regional Board Jurisdiction (acres)	Length (linear feet)
Drainage A	0.04	0.00	0.04	773
Total	**0.04**	**0.00**	**0.04**	**773**

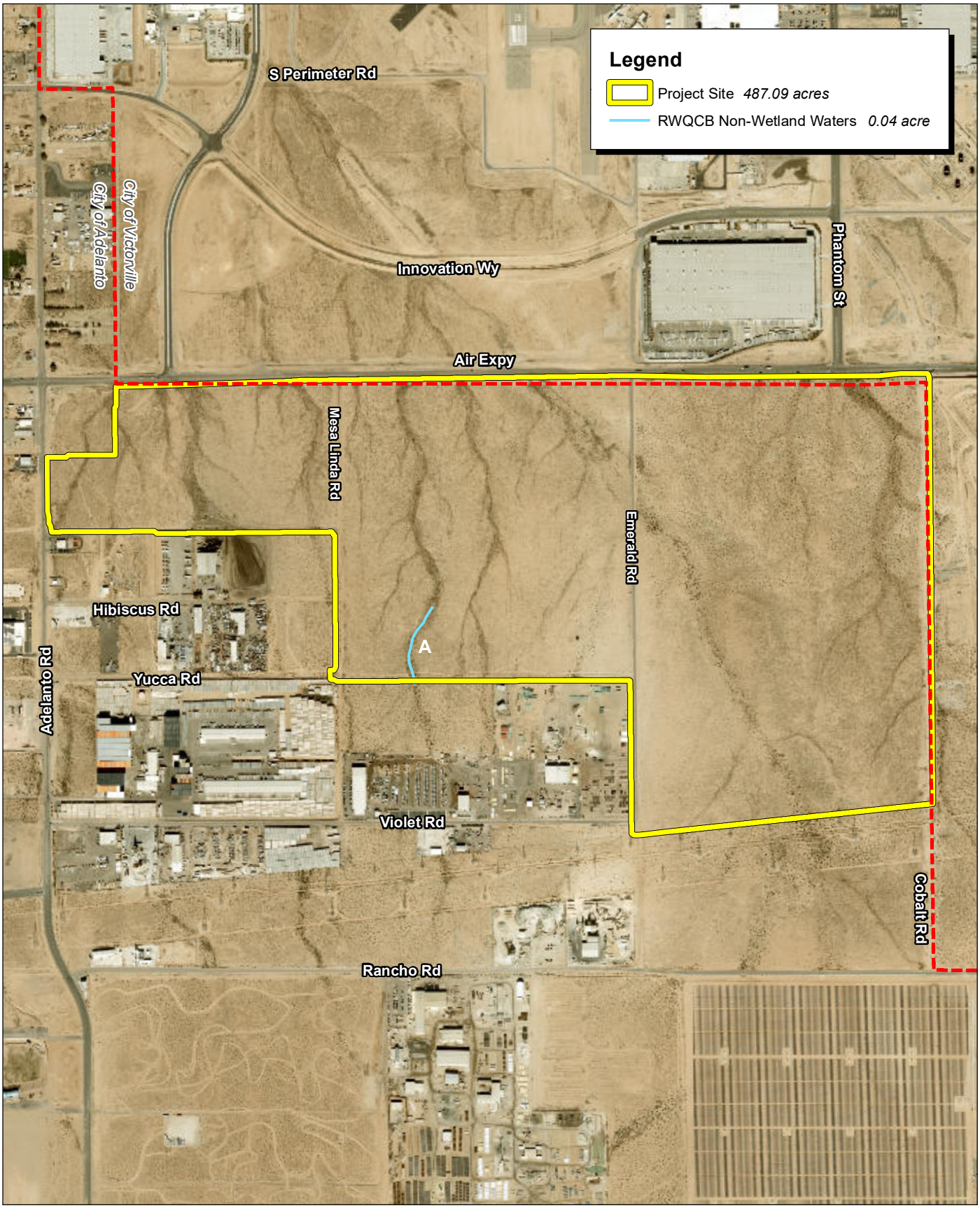
5.4.4 - California Department of Fish and Wildlife Streambed Alteration Program Considerations

Drainage A exhibited defined stream flow indictors as evidenced by changes in soil characteristics (break in slope, scour, destruction of terrestrial vegetation, presence of bed and bank, and sediment sorting). Because of the presence of drainage beds and banks, it is expected that the CDFW will assert regulatory oversight over potential impacts on Drainage A pursuant to California Fish and Game Code Section 1602, *et seq*. (Streambed Alteration Program).

CDFW jurisdiction is shown in Exhibit 5. Dimensions of all CDFW jurisdiction occurring within the Study Area boundary are presented in Table 2 and described in more detail below.

Table 2: Proposed California Department of Fish and Wildlife Jurisdiction Within the Study Area

Type	CDFW Non-Riparian Stream (acres)	CDFW Riparian Habitat (acres)	Total CDFW Jurisdiction (acres)	Length (linear feet)
Drainage A	0.04	0.00	0.04	773
Total	**0.04**	**0.00**	**0.04**	**773**



Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc. San Bernardino Mojave River Area.

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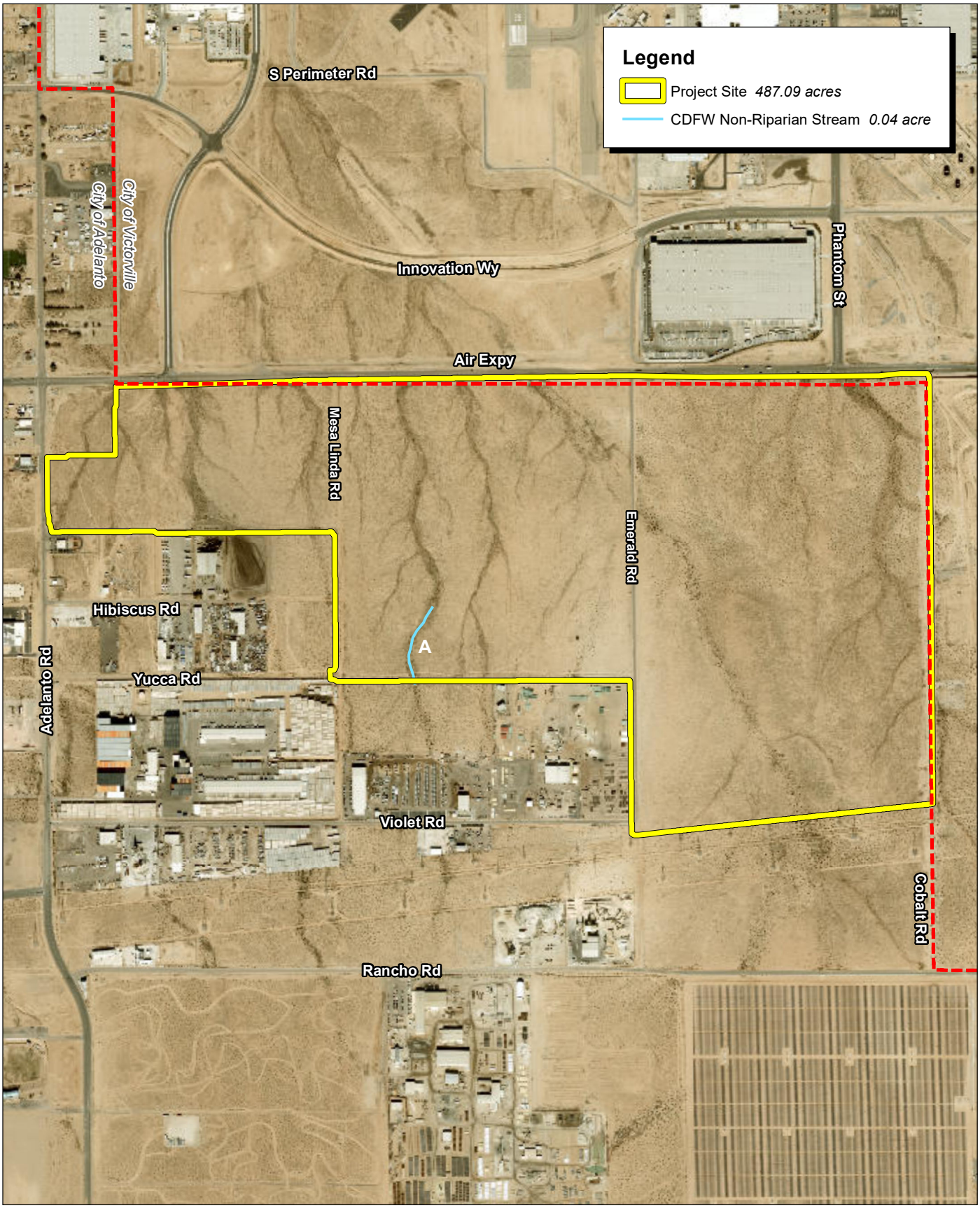
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Feet

Exhibit 4
RWQCB Jurisdictional Map

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Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc. San Bernardino Mojave River Area.

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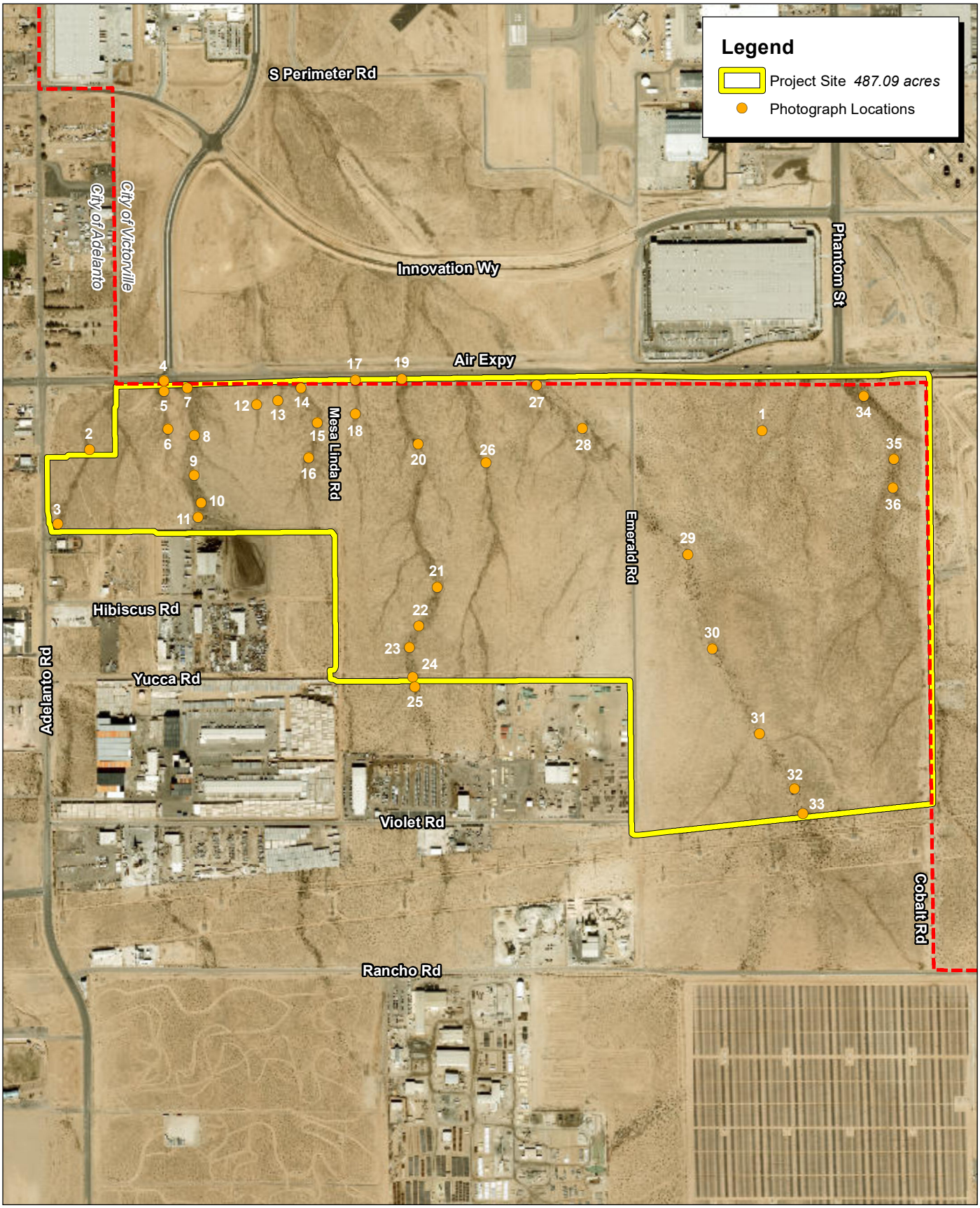
1,200 600 0 1,200
Feet

Exhibit 5
CDFW Jurisdictional Map

60520001 • 11/2024 | 5_CDFW.mxd

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ADELANTO GATEWAY LOGISTICS CENTER
AQUATIC RESOURCES DELINEATION REPORT

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Source: ESRI Aerial Imagery. BLUE Engineering & Consulting, Inc. San Bernardino Mojave River Area.

FCS
An ADEC Innovation

1,200 600 0 1,200
Feet

Exhibit 6
Photograph Location Map

60520001 • 11/2024 | 6_photo_locations.mxd

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AQUATIC RESOURCES DELINEATION REPORT

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6 - CONCLUSION

The Study Area contains one ephemeral drainage, Drainage A, and includes approximately 0.04 acres and 773 linear feet of potential waters of the State, regulated by the RWQCB under Section 13260 of the California Water Code and regulated pursuant to CDFW's Streambed Alteration Program. Several non-jurisdictional swales are located in the Study Area, all of which lacked water concentrations, scouring, a definable bed and bank, break in slope, destruction of terrestrial vegetation, sediment sorting, and/or other OHWM indicators, and they would not meet the CDFW definition of a river, stream, or lake. As such, these swales are not considered under the jurisdiction of RWQCB and CDFW.

The Study Area does not contain potential water of the United States regulated by the USACE under Section 404 of the CWA.

The findings and conclusions presented in this report, including the location and extent of waters subject to regulatory jurisdiction, represent the professional opinion of FCS. These findings and conclusions should be considered preliminary until confirmed by the USACE, RWQCB, and CDFW.

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APPENDIX A:

Site Photographs

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Photograph 1: Representative photograph of upland areas. Note the patchy forbs in the foreground which is typical throughout the Study Area and not indicative of water flows.



Photograph 2: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 3: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 4: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 5: Representative photograph of a concrete culvert running under Air Port Expressway. Note there were no drainage or OHWM indicators leading to the culvert.



Photograph 6: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 7: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 8: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 9: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 10: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 11: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 12: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 13: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 14: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 15: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 16: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 17: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 18: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 19: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 20: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 21: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 22: Representative photograph of downstream portion of Drainage A. Note the change in vegetation and break in bank slope.



Photograph 23: Representative photograph of downstream portion of Drainage A. Note the change in vegetation and break in bank slope.



Photograph 24: Representative photograph of upstream portion of Drainage A. Note the change in vegetation, scouring, and break in bank slope.



Photograph 25: Representative photograph of upstream portion of Drainage A. Note the change in vegetation, scouring, and break in bank slope.



Photograph 26: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 27: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 28: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 29: Representative photograph of potential drainage area observed on aerial photography. Note the small mammal burrow which is indicative of uplands and an inactive fluvial area.



Photograph 30: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 31: Representative photograph of potential drainage area observed on aerial photography. Note the small mammal burrow which is indicative of uplands and an inactive fluvial area.



Photograph 32: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 33: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



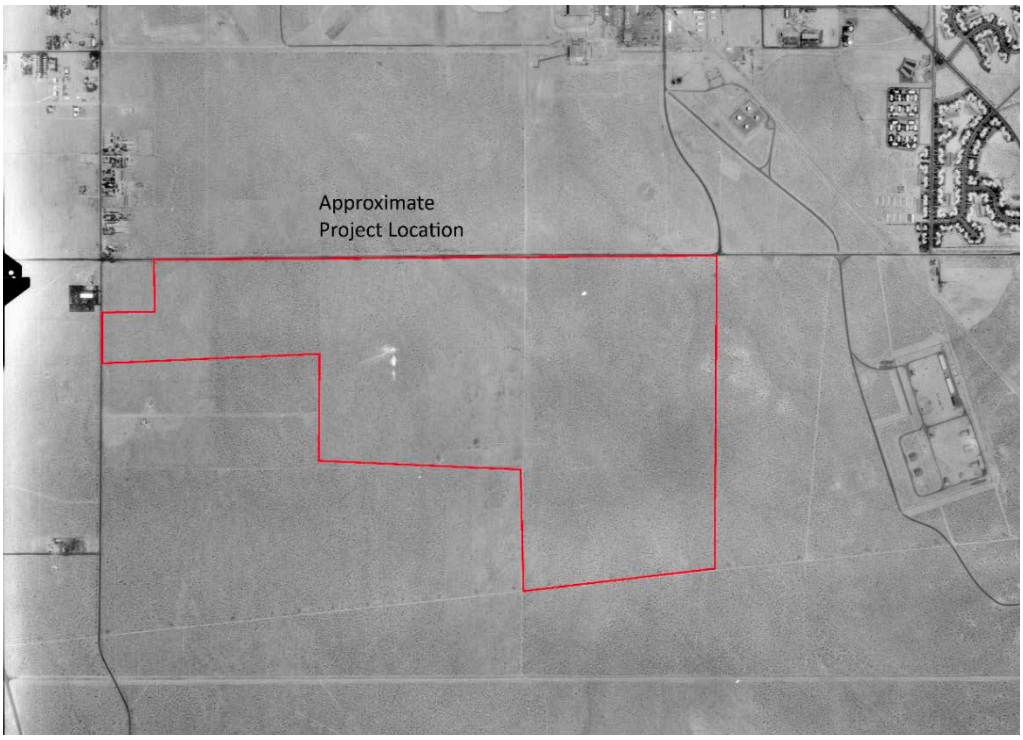
Photograph 34: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground. The areas with lower vegetation appeared to be vehicle access paths at one point in time.



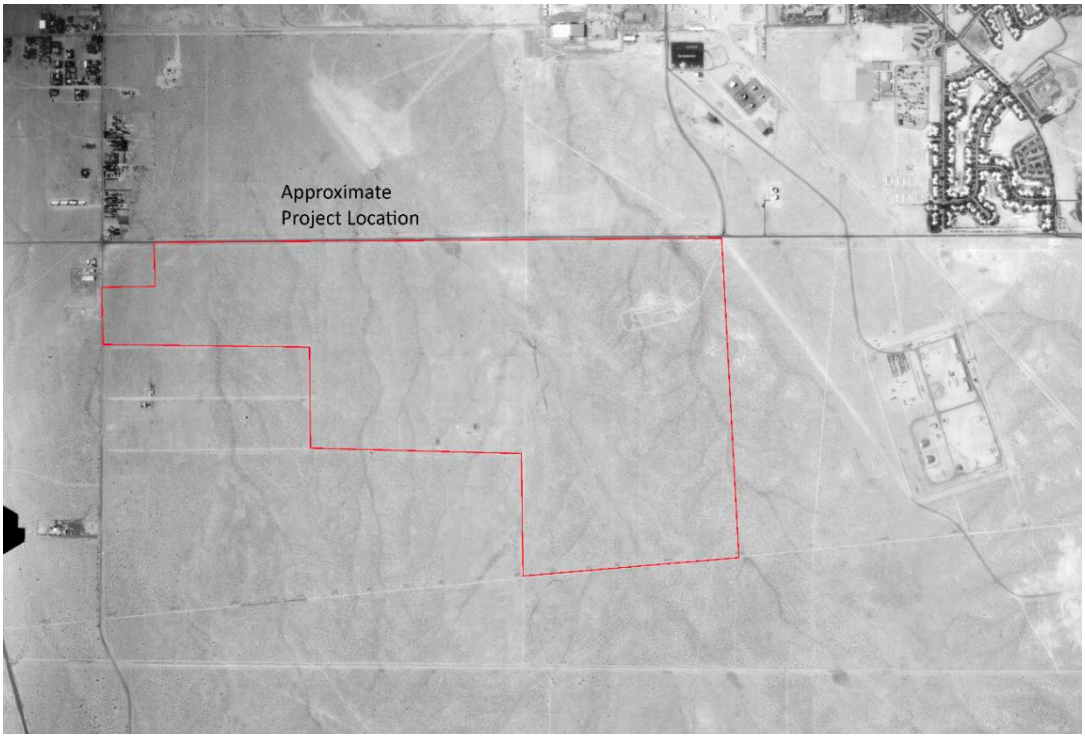
Photograph 35: Representative photograph of potential drainage area observed on aerial photography. Note the small mammal burrow which is indicative of uplands and an inactive fluvial area.



Photograph 36: Representative photograph of potential drainage area observed on aerial photography. Note there were no drainage or OHWM indicators observed on the ground.



Photograph 37: Historic imagery from June 1959 depicting the approximate location of the Study Area.



Photograph 38: Historic imagery from May 1968 depicting the approximate location of the Study Area. Note that the imagery appears to contain what looks like water features but were not observed on the ground.

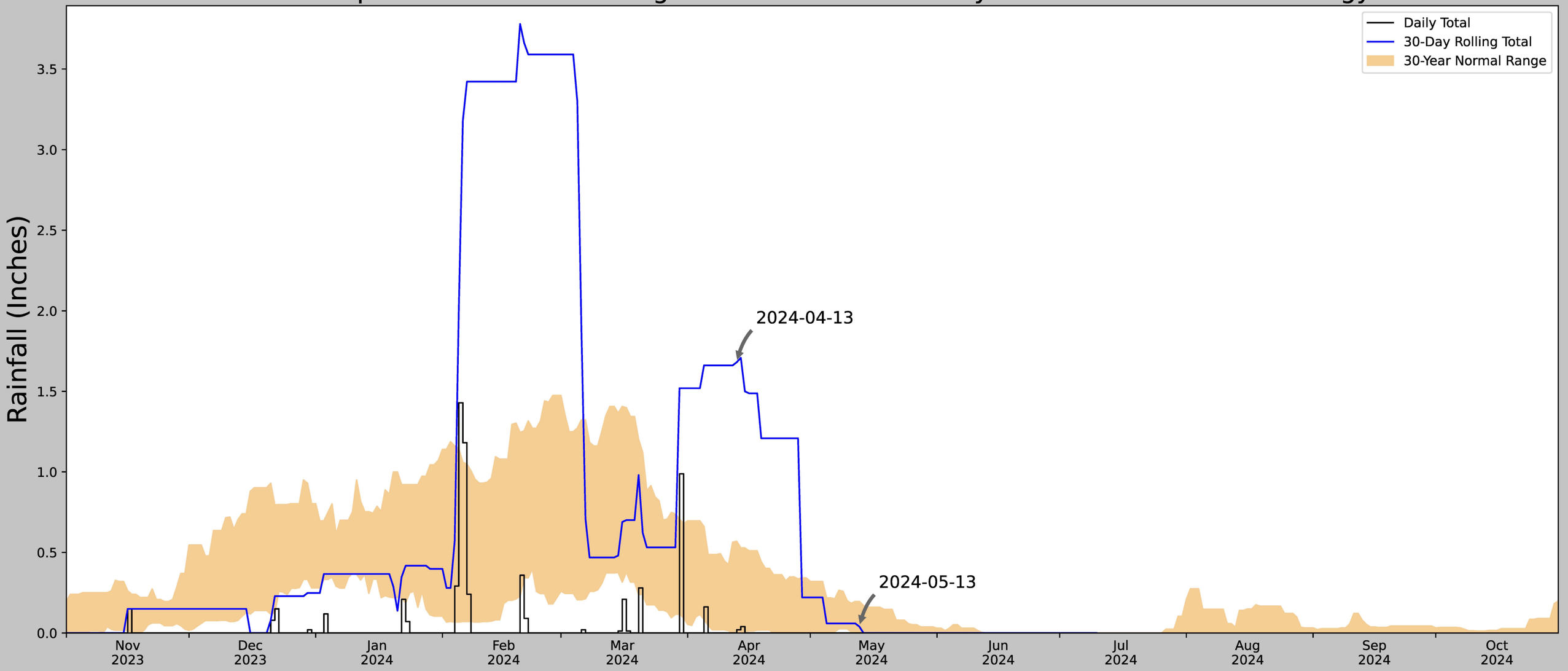
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APPENDIX B:

Antecedent Precipitation Tool Analysis

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Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.568588, -117.387749
Observation Date	2024-06-12
Elevation (ft)	2911.36
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-12	0.0	0.003543	0.0	Normal	2	3	6
2024-05-13	0.008268	0.195276	0.03937	Normal	2	2	4
2024-04-13	0.0	0.569291	1.681102	Wet	3	1	3
Result							Normal Conditions - 13

US Army Corps of Engineers

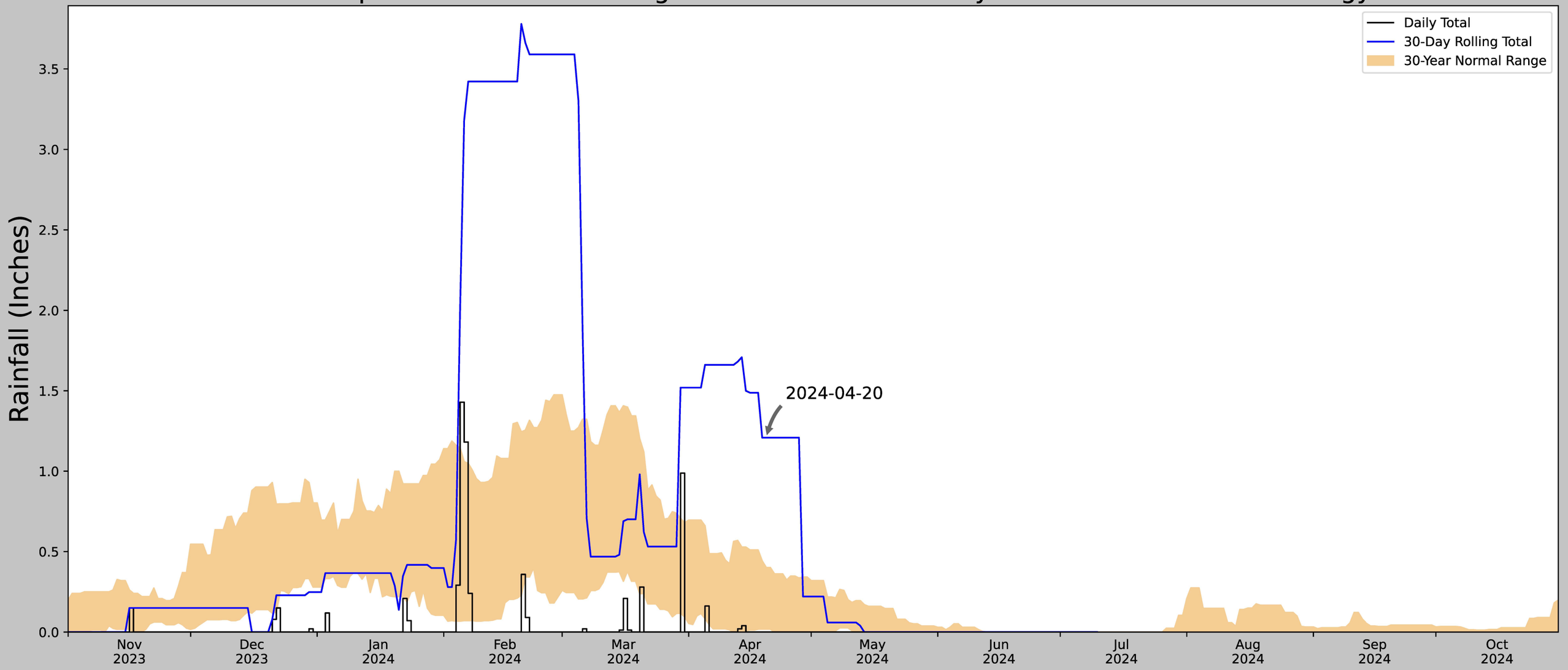
ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	6.05	31.439	2.913	11055	78
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	9	0
APPLE VALLEY 3.9 SE	34.4913, -117.1636	2949.147	7.808	69.226	4.054	1	0
APPLE VALLEY 4.1 ENE	34.5588, -117.1516	3119.095	8.292	239.174	5.715	0	12
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0

Antecedent Precipitation vs Normal Range based on NOAA's Daily Global Historical Climatology Network



Coordinates	34.568588, -117.387749
Observation Date	2024-06-19
Elevation (ft)	2911.36
Drought Index (PDSI)	Mild wetness
WebWIMP H_2O Balance	Dry Season

30 Days Ending	30^{th} %ile (in)	70^{th} %ile (in)	Observed (in)	Wetness Condition	Condition Value	Month Weight	Product
2024-06-19	0.0	0.0	0.0	Normal	2	3	6
2024-05-20	0.0	0.146457	0.0	Normal	2	2	4
2024-04-20	0.017323	0.400787	1.208661	Wet	3	1	3
Result							Normal Conditions - 13

US Army Corps of Engineers

ERDC

Figures and tables made by the Antecedent Precipitation Tool Version 2.0

Developed by: U.S. Army Corps of Engineers and U.S. Army Engineer Research and Development Center

Weather Station Name	Coordinates	Elevation (ft)	Distance (mi)	Elevation Δ	Weighted Δ	Days Normal	Days Antecedent
VICTORVILLE	34.5292, -117.2928	2879.921	6.05	31.439	2.913	11055	71
APPLE VALLEY 2.6 SSW	34.4957, -117.2353	2880.906	4.009	0.985	1.808	96	0
APPLE VALLEY 1.9 N	34.556, -117.2111	2935.039	5.005	55.118	2.528	1	0
APPLE VALLEY 2.6 SE	34.5043, -117.1808	2940.945	6.604	61.024	3.375	9	0
APPLE VALLEY 3.9 SE	34.4913, -117.1636	2949.147	7.808	69.226	4.054	1	0
APPLE VALLEY 4.1 ENE	34.5588, -117.1516	3119.095	8.292	239.174	5.715	0	19
EL MIRAGE	34.5892, -117.6303	2950.131	19.647	70.21	10.221	188	0
LYTLE CREEK RS	34.2383, -117.4708	2729.987	22.517	149.934	13.509	2	0

APPENDIX C:

Streambed Duration Assessment Method Forms

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Arid West Streamflow Duration Assessment Method

General site information

Project name or number:
Adelanto Gateway Logistics Center Project

Site code or identifier:

Assessor(s):
Joseph Vu

Waterway name:
Drainage A

Visit date:
June 12 and 19, 2024

Current weather conditions (check one):
□ Storm/heavy rain
□ Steady rain
□ Intermittent rain
□ Snowing
□ Cloudy (___ % cover)
▣ Clear/sunny

Notes on current or recent weather conditions (e.g., precipitation in prior week):
Last precipitation event was May 5, 2024

Coordinates at downstream end (decimal degrees):
Lat (N): 34.566316°
Long (E): -117.389062°
Datum: NAD1983

Surrounding land-use within 100 m (check one or two):
▣ Urban/industrial/residential
□ Agricultural (farmland, crops, vineyards, pasture)
□ Developed open-space (e.g., golf course)
□ Forested
□ Other natural
▣ Other: Undeveloped lands and industrial development surround the site.

Describe reach boundaries:
The reach boundary of Drainage A occurs within the southern border of the Project site. The reach extends north for approximately 193 meters before exiting the site. The drainage is unvegetated mostly or includes only upland species. No hydrophytes (FACW or OBL) were observed in the assessment area.

Mean bankfull channel width (m): 0.5
(Indicator 1)

_____ _____ _____

Reach length (m):
40x width
min 40 m
max 200 m
40 meter

Site photographs:
Enter photo ID or check if completed.
Top down: _____ Mid down: _____
Mid up: _____ Bottom up: _____

Disturbed or difficult conditions (check all that apply):
□ Recent flood or debris flow
□ Stream modifications (e.g., channelization)
□ Diversions
□ Discharges
□ Drought
□ Vegetation removal/limitations
□ Other (explain in notes)
▣ None

Notes on disturbances or difficult site conditions:

Observed hydrology:
0 % of reach with surface flow
0 % of reach with sub-surface or surface flow
0 # of isolated pools

Comments on observed hydrology:
No standing or flowing water were observed on any of the field delineation visits.

Site sketch:



1. Mean bankfull channel width (m) (nearest 0.1 m, copy from first page of field form)

0.5

Notes about mean bankfull channel width:

Drainage widths at the downstream portions were 1ft at the bottom of reach, 2ft at 15 meter, and 2ft at 30 meter.

2. Aquatic macroinvertebrates: Abundance of perennial indicator taxa

Collect aquatic macroinvertebrates from at least 6 locations in the assessment reach, searching all suitable habitats on the streambed (including dry habitats, if present). Determine total abundance of individuals in perennial indicator families listed below, such that no one family counts for more than 11 individuals in the total.

Ephemeroptera	Plecoptera	Trichoptera	Coleoptera
Ephemerellidae (spiny crawler mayflies)	Chloroperlidae (green stoneflies)	Brachycentridae (humpless casemakers)	Elmidae (riffle beetles)
Heptageniidae (flathead mayflies)	Perlidae (common stoneflies)	Glossosomatidae (saddle casemakers)	
Leptohyphyidae (little stout crawler mayflies)		Hydropsychidae (common netspinners)	
Leptophlebiidae (prong-gilled mayflies)		Rhyacophilidae (free-living caddisflies)	

Mark the appropriate box for the number of perennial indicator individuals observed.

☐ No perennial indicator taxa detected
☐ 1 to 4 perennial indicator individuals
☐ 5 to 9 perennial indicator individuals
☐ 10 to 19 perennial indicator individuals
☐ 20 or more perennial indicator individuals

Check if applicable: ☒ No aquatic macroinvertebrates in assessment area

Notes on perennial indicator taxa:

No aquatic macroinvertebrates observed

3. Slope

Using a clinometer or other device, record the slope as a percent, up to the nearest half-percent.

2%

Notes about slope: The project site gently slows down as the drainage goes north.

4. Number of hydrophytic plant species

Record up to 6 hydrophytic plant species (FACW or OBL in the appropriate regional wetland plant list, depending on location) within the assessment area: **within the channel or up to one half-channel width outside the channel**. Explain in notes if species has an odd distribution (e.g., one individual or small patch, long-lived species solely represented by seedlings, or long-lived species solely represented by specimens in decline), or if there is uncertainty about the identification. Enter photo ID or check if photos are taken.

0 Number of hydrophytic plant species identified from the assessment reach without odd distribution. Enter zero if none were found.

Check if applicable: ☐ No vegetation in assessment area

Species	Odd distribution?	Notes	Photo ID

Notes on hydrophytic vegetation:

No hydrophytic vegetation observed.

5. Prevalence of rooted upland plants in the streambed

3 **(0-3)**

Half-scores (0.5, 1.5, and 2.5) are allowed.

Evaluate the prevalence of rooted upland plants (i.e., plants rated as FAC, FACU, UPL, NI, or not listed in the regionally appropriate National Wetland Plant List) in the streambed.

0 (Poor) Rooted upland plants are *prevalent* within the streambed/thalweg.
1 (Weak) Rooted upland plants are *consistently dispersed* throughout the streambed/thalweg.
2 (Moderate) There are *a few* rooted upland plants present within the streambed/thalweg.
3 (Strong) Rooted upland plants are *absent* from the streambed/thalweg.

Upland Species	Notes	Photo ID
creosote bush		
cheese bush		
white bur-sage		

Notes on rooted upland plants:

Drainage is unvegetated but creosote bush (UPL), cheese bush (UPL), white bur-sage (UPL), and fourwing saltbush (UPL) are located within the assessment area.

6. Algal cover

Mark the appropriate box for the percent of the streambed covered by live or dead algae on the streambed.

- ☒ Not detected
- ☐ ≤2% cover
- ☐ 2 to 10% cover
- ☐ 10 to 40% cover
- ☐ >40% cover
- ☐ Check here if algae *exclusively* appears to have been deposited from an upstream source, and *no* local growth is evident.

Notes on algal cover on the streambed:

No algal cover detected.

7. Differences in vegetation

0 **(0-3)** *Half-scores (0.5, 1.5, 2.5) are allowed.*	Compare the composition and density of plants growing on the banks and riparian areas to plants in the adjacent uplands. For this indicator, an upland species is not defined by its wetland indicator status, but rather by its location relative to the channel. 0 (Poor) No compositional or density differences in vegetation are present between the banks and the adjacent uplands. 1 (Weak) Vegetation growing along the reach may occur in greater densities or grow more vigorously than vegetation in the adjacent uplands, but there are no dramatic compositional differences between the two. 2 (Moderate) A distinct riparian corridor exists along part of the reach. Riparian vegetation is interspersed with upland vegetation along the length of the reach. 3 (Strong) Dramatic compositional differences in vegetation are present between the banks and the adjacent uplands. A distinct riparian vegetation corridor exists along the entire reach. Riparian, aquatic, or wetland species dominate the length of the reach.

Notes on differences in vegetation:

The vegetation along the reach is non-hydrophytic and similar to the surrounding uplands.

8. Riffle-pool sequence

0 ___ **(0-3)** *Half-scores (0.5, 1.5, 2.5) are allowed.*	Evaluate the prevalence of riffles, pools, and other microhabitats in the streambed. 0 (Poor) No riffle-pool sequences observed. 1 (Weak) Mostly has areas of pools or riffles. 2 (Moderate) Represented by a less frequent number of riffles and pools. Distinguishing the transition between riffles and pools is difficult to observe. 3 (Strong) Demonstrated by a frequent number of structural transitions (e.g., riffles followed by pools) along the entire reach. There is an obvious transition between riffles and pools.
Notes about riffle-pool sequence: No riffle pools observed.	

Photo log

Indicate if any other photographs taken during the assessment:

Photo ID	Description
1	Photo of reach showing bed of the channel and surrounding upland vegetation.
2	Photo of reach showing bed of the channel and surrounding upland vegetation.

Additional notes about the assessment:

Model classification:

- ☒ Ephemeral
- ☐ At least intermittent
- ☐ Intermittent
- ☐ Less than perennial
- ☐ Perennial
- ☐ Needs more information



Photograph 1



Photograph 2

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