

High Desert Corridor



Federal Jurisdictional Delineation

High Desert Corridor/Los Angeles and San Bernardino Counties

63-mile (101-kilometer) Connection Between

SR-14 and SR-18

District 7 & 8 LA & SB-New Highway

EA 2600U0/EFIS 0712000035

August 2015



Federal Jurisdictional Delineation

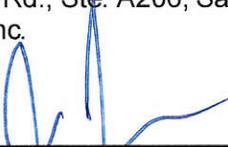
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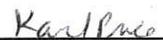
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Chapter 1. Introduction

The California Department of Transportation (Caltrans), in cooperation with the Los Angeles County Metropolitan Transportation Authority (Metro), proposes construction of the High Desert Corridor (HDC) as a new transportation facility in the High Desert region of Los Angeles and San Bernardino counties (Project) (Figure 1). The proposed 63-mile-long west-east facility would provide route continuity and relieve traffic congestion between State Route (SR) 14 in Los Angeles County and SR-18 and Interstate 15 (I-15) in San Bernardino County (Figure 2). The purpose of the proposed Project is to improve east-west mobility through the High Desert region of southern California by addressing present and future travel demand and mobility needs within the Antelope and Victor valleys. The HDC was identified in the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU), signed into law on August 10, 2005 and is officially designated as a high-priority corridor on the National Highway System.

This Jurisdictional Delineation Report provides a summary of the United States Army Corps of Engineers (USACE) jurisdictional waters that may occur within the project Biological Study Area (BSA). The BSA used in this report includes all of the proposed alternatives and variations including the Preferred Alternative for the HDC Project. All jurisdictional areas shown in exhibits in this report are for the purposes of USACE jurisdictional determination only and are subject to modification following agency verification.



Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\Location_Vicinity\HDC_Location_20150811.mxd (M.Guidry_Swager 8/12/2015)

Map Date: 8/12/2015

Base Source: Esri

Figure 2. Project Location

2012-061 High Desert Corridor

1.1. Project Description

The HDC Project would entail construction of a new multimodal link between SR-18 in San Bernardino County and SR-14 in Los Angeles County. It would connect some of the fastest growing residential, commercial, and industrial areas in southern California, including Palmdale, Lancaster, Adelanto, Victorville, Hesperia, and Apple Valley. As currently planned, the project would be implemented in three segments: the Antelope Valley segment, the High Desert segment, and the Victor Valley segment.

There were several alternatives and variations proposed and analyzed in the draft Environmental Impact Report/Environmental Impact Statement (EIR/EIS) (Caltrans 2014). The Preferred Alternative is described in this section. The remaining alternatives are discussed in Section 1.4. The BSA used in this report includes all of the proposed alternatives and variations including the Preferred Alternative.

The 10-mi (16-km) long Antelope Valley segment would start from a new freeway-to-freeway SR-14/HDC interchange and extend east parallel with and near Avenue P-8 to 100th Street East in Palmdale. The right-of-way (ROW) to be acquired for this segment would accommodate ultimate expansion to four lanes in each direction plus a high-speed passenger rail line.

The High Desert Segment would generally follow Avenue P-8 in Los Angeles County just south of El Mirage Road, then extends to Air Expressway Boulevard near I-15 and begin curving south before US 395. The right-of-way would accommodate up to four lanes of travel in each direction and would be protected. The segment between US 395 and 20th Street east has an option for a bike lane as well as a tollway element. The toll section would only be within the High Desert Segment of the Preferred Alternative, spanning from 100th Street East to US 395. The High Desert Segment would also support the HSR that will include station connector services between the cities of Victorville and Palmdale.

The 27-mi (43-km) long Victor Valley segment would generally follow the alignment of Air Expressway Boulevard, between Caughlin Road in Adelanto and Dale Evans Parkway east of I-15 in Apple Valley, and continuing southeasterly as an expressway to join SR-18 just east of Joshua Street. The freeway portion of this segment between Caughlin Road and I-15 would be six lanes wide, continuing to Dale Evans Parkway as a four- or six-lane freeway. ROW would be acquired to support a future freeway of four lanes in each direction plus a high-speed passenger rail line.

Recognizing the HDC as a multipurpose corridor with potential to connect to the expanding regional rail system, the Preferred Alternative would include a center-median HSR feeder service between Palmdale and Victorville. This feeder service would connect the XpressWest System (a planned HSR service from Victorville to Las Vegas) with Metrolink at the Palmdale Transportation Center and a planned future California HSR stop at Palmdale.

The Preferred Alternative would include Class I bicycle paths and/or Class III bicycle routes, extending approximately 39 mi (63 km) along the corridor from US 395 in Adelanto to the Palmdale Transportation Center in Palmdale.

Interrelated and interdependent projects include two proposed HSR projects: the California HSR and XpressWest. Metro, Caltrans, and San Bernardino Associated Governments (SANBAG) have agreed to study an HSR feeder service as part of the HDC that would potentially link these two major rail systems in Palmdale and Victorville, respectively, and would also connect with Metrolink in Palmdale. This would create the potential to connect the San Francisco, Central Valley, Los Angeles, Las Vegas, and San Diego regions through an HSR system.

1.1.1. Construction Sequence

Project construction would commence after acquisition by Caltrans of all ROW. The construction sequence would begin with site clearing of all improvements, which includes demolition of buildings and structures, followed by utility relocation, facility construction, and landscaping/finishing work. Construction would be in phases to minimize impacts to local residents and businesses. The timing of construction in certain areas, such as in the vicinity of active bird nests, would be scheduled in accordance with the seasonal restrictions established by the regulatory agencies, as described below under Avoidance and Minimization Measures.

Step 1: Mobilization and Staging. The first step in the construction process involves contractor preparation of the site for construction activities. This would occur after all required preconstruction surveys are conducted and permits are obtained.

Step 2: Site Clearing and Demolition. Under this step, the roadway/railway alignment would be cleared of conflicting structures and vegetation to prepare the site for construction. Asphalt and concrete from roadways, parking lots, and walkways would be removed and disposed.

Step 3: Utility Relocation. Utilities that would interfere with construction would be removed and relocated, or encased for continuing service, by the utility provider or their contractors. Utilities involved include electric and gas power, water and wastewater distribution, stormwater, cable, and other providers. Each utility would be restored or replaced in accordance with design plans and within proximity to its former location to allow access in conjunction with the new highway/railway facility. Not all utility relocations would occur at the beginning of the project; some could be done at a later stage of construction, as appropriate.

Step 4: Construct Guideway and Highway. Roadway/railway construction activities would involve site excavation, grading, fill, and pavement installation. Bridges, overcrossings, undercrossings, soundwalls, and retaining walls along the Preferred Alternative would be built in parallel with roadway/rail guideway construction. Construction of the Preferred Alternative would require a substantial amount of grading and excavation. The freeway/expressway/tollway component of the Preferred Alternative would require approximately 9 feet (ft.) [3 meters (m)] of fill above grade upon which to build the highway. The HSR component of the project would require approximately 15 ft. (5 m) of fill above grade. Given the amount of soil needed to construct the new infrastructure, the import of fill material from offsite locations would be required in addition to fill material produced during earth-moving activities within the ROW. While grading and fill operations are being conducted to establish the roadbed for both the highway and railroad, simultaneous construction of aerial structures, grade separations, highway realignments, and surface street modifications would occur.

The bridges spanning the Mojave River would be constructed as three separate spans, each approximately 260 ft. (79 m) long and 80 ft. (24 m) above the river: one for eastbound traffic, one for HSR tracks (both eastbound and westbound) and one for westbound traffic. Each roadway will be approximately 56 ft. (17 m) wide and 34 ft. (10 m) from the HSR in the middle, which will be approximately 49 ft. (15 m) wide. The bridge pylons and abutments will be built using techniques to avoid permanent or temporary impacts to the jurisdictional features of the river. Construction would be from the edges of the river outside of the jurisdictional limits working toward the middle. Should blasting be needed to remove a large boulder, protective restraints/devices will be installed to prevent rocks from falling into the river and/or crushing riparian vegetation.

There would be seven viaducts (elevated roadways) over the washes throughout the Preferred Alternative. The viaducts would be approximately 10 to 12 ft. (3 to 4 m) above ground surface and would vary in length. Overall, there are approximately 5.34 miles (8.59 km) of viaducts in the Preferred Alternative. The pylons supporting the viaducts are expected to be placed outside of jurisdictional limits. Fencing will be used to guide wildlife into and underneath the viaducts and along the ROW to prevent wildlife from trying to cross the highway.

Approximately 132 culverts will be installed in order to allow continued wildlife movement during the operation phase of the Preferred Alternative (Caltrans 2014). The culverts range in size from 7 ft. by 3ft (2 m by 1 m) to 12 ft. by 8 ft. (2 m by 4 m) and vary on whether or not they have soft bottoms. In addition to the culverts, a 90 foot wide overpass over the HSR along Quarry Road will be a part of the Preferred Alternative that will serve both as a wildlife crossing as well as a vehicular crossing.

Step 5: Install Tollway and Railroad Infrastructure. For tollway, the contractor would install the electronic toll collection system, violation enforcement system, variable message and other signage, barriers, lane striping, and enforcement areas. Traffic signals on surface streets at ramp termini would also be installed.

The railroad component will use electric infrastructure technology. This technology will require intricate electrical infrastructure characterized by electrification. The primary service from the local utility network would be via either overhead or underground transmission lines. Electrical substation sites would typically be finished with fencing and landscaping along their periphery.

Step 6: Manufacture and Commission Rolling Stock. Train technologies for the HSR build alternatives will use electric infrastructure technology. The California High-Speed Train (HST) Project is going forward using an electric multiple unit train (EMU) system. For XpressWest, an electric multiple unit train (DEMU) is being evaluated in addition to the EMU. The rolling stock would be manufactured at a remote factory and transported to the project site for assembly and commissioning. A computer-based automatic train control (ATC) system would be designed and installed to control the trains. The ATC system would provide for the Federal Railroad Administration (FRA)-mandated positive train control (PTC) safety requirements, including safe separation of trains, over-speed prevention, and work zone protection.

Step 7: Pre-revenue Testing. During the pre-revenue service period, the system (e.g., train control system, overhead contact system, communication system) would be

tested, accepted, and commissioned. Implementation of the testing, acceptance, and commissioning activities would be conducted on a mainline test track of several miles in length. This process would take several months.

Step 8: Landscaping and Finish Work. Work under this step would include installation of irrigation systems and plant materials, street lighting, lane striping, signage installation, closing of detours, removal of temporary structures, and site cleanup. Permanent best management practices (BMPs) would be installed and maintained until the Notice of Termination is issued in compliance with the General Construction Stormwater Permit.

Routine maintenance would occur as needed during operation of the Preferred Alternative. Typical post-construction maintenance activities would include routine highway drainage and culvert cleaning to prevent flooding, landscape vegetation trimming, fence repairs, and trash, debris, and roadkill removal.

1.2. Purpose of Project

The purpose of the proposed Project is to improve east-west mobility through the High Desert region of southern California by addressing present and future travel demand and mobility needs within the Antelope and Victor valleys. The proposed Project is intended to achieve the following objectives:

- Increase capacity of west-east transportation facilities to accommodate existing and future transportation demand;
- Improve travel safety and reliability within the High Desert region;
- Improve the regional goods movement network;
- Provide improved access and connectivity to regional transportation facilities, including airports and existing and future passenger rail systems, which include the proposed California high-speed rail (HSR) system and the proposed XpressWest HSR system; and
- Contribute to state greenhouse gas (GHG) reduction goals through the use of green energy features.

1.3. Need for Project

The specific needs to be addressed by the proposed Project include:

- Recent and future planned population growth within the High Desert region;
- Limited and unreliable west-east connectivity within the High Desert region;
- Regional demands for goods movement to support the growth of the regional economy; and
- Future demands for the use of green energy, including sustainability and green energy provisions in State law and policy.

1.4. Project Alternatives

The HDC is divided into three segments, including the Antelope Valley Segment (SR-14 to 100th Street East), the High Desert Segment (100th Street East to US 395), and the Victor Valley Segment (US 395 to SR-18). Recognizing it as a multipurpose corridor with potential to connect to the expanding regional rail system, the project may include a center-median HSR feeder service between Palmdale and Victorville. In addition, bicycle facility and green energy components would be incorporated into the design features of all alternatives of the corridor.

A No Build Alternative and four build alternatives are being considered.

1.4.1. Alternative 1 – No-Build Alternative

Under Alternative 1 (No-Build Alternative), no new transportation infrastructure would be built within the project area to connect Los Angeles and San Bernardino counties, aside from existing SR-138 safety corridor improvements in Los Angeles County and SR-18 corridor improvements in San Bernardino County.

1.4.2. Build Alternative 2 – Freeway/Expressway Alternative (Avenue P-8, I-15, and SR-18)

This alternative would construct a combination of a controlled-access freeway and at grade expressway for a total distance of 63 miles. The corridor from SR-14 to US 395 would be 500 ft. (152.4 m) wide and from US-395 to SR-18 would be 300 ft. (91.44 m) wide. The alignment generally follows Avenue P-8 in Los Angeles County and then runs slightly south of El Mirage Road in San Bernardino County. The alignment

then extends to Air Expressway Road near I-15 and curves slightly southeast to terminate at Bear Valley Road near Apple Valley.

Four physical alignment variations are being considered.

- Variation A: Near Palmdale, the freeway/expressway would dip slightly south of the main alignment, approximately between 15th Street East and Little Rock Wash.
- Variation B: East of the county line, the freeway/expressway would flare out slightly south of the main alignment between Oasis Road and Coughlin Road. Another option for Variation B is called Variation B1, which is shorter than Variation B and would run slightly south of the main alignment.
- Variation D: Near the community of Lake Los Angeles, the freeway/expressway would dip slightly south of the main alignment, just south of Avenue R, approximately between 180th Street East and 230th Street East.
- Variation E: Near Adelanto and Victorville, the freeway/expressway would dip south of the federal prison.

Bicycle facility and green energy components would be incorporated into the design features of this alternative. The anticipated project cost for this alternative in 2014 dollars is \$3.59 billion.

1.4.3. Build Alternative 3 – Freeway/Tollway Alternative (P-8, I-15, and SR-18)

This alternative would follow the same route as the Freeway/Expressway Alternative (with variations A, B, D, and E), but it would have sections that operate as a tollway. The segment where toll lanes are proposed, four in each direction, would begin from 100th Street East in Palmdale and end at US 395 in Victorville. The Central Segment would consist of a toll facility, and motorists who choose not to use this segment of the HDC would have the option to exit and use local west-east parallel roads adjacent to the HDC and reenter the freeway segments from either 90th Street East in Palmdale or US 395 in Adelanto. Each toll lane would be 12 ft. (3.66 m) wide.

Bicycle facility and green energy components would be incorporated into the design features of this alternative. The anticipated project cost for this alternative in 2014 dollars is \$3.61 billion.

A Public Private Partnership (PPP) option for funding this alternative would be utilized. A PPP is a joint venture with a level of public control and oversight for private infrastructure investment. PPPs are a creative way to fund highway projects such as this alternative through leases, not sales. Title would remain with the public authority, in this case Caltrans or another sponsor, whose responsibility shifts from building and managing transportation facilities to managing contracts with private partners. If this PPP option were chosen, the lessor (private partner) would pay a concession fee and usually keeps the revenue stream from the tolls in return. The lessor would be the party responsible for contracting to design, build, finance, operate, and maintain the toll lanes for the foreseeable future. Dating back to the 19th century, this form of private investment was used to build and operate toll bridges and roads and to finance railroads in the United States. Under this alternative, some design variations may be required to accommodate the needs of the PPP analysis.

The toll segment(s) would likely be an all Electronic Toll Collection (ETC) System. The operation would be completely electronic with no toll booths or traffic gates. Collection of tolls would occur at the speed of flowing traffic, which means that motorists never have to slow down; therefore, the traffic would remain free flowing. This would be accomplished by using either transponders (e.g., FasTrak), registered accounts linked to license plates (e.g., ExpressAccount), or billing to the registered vehicle owner (e.g., One-Time-Toll).

1.4.4. Build Alternative 4 – Freeway/Expressway Alternative with High-Speed Rail Feeder/Connector Service

This alternative would be the same route as the Freeway/Expressway Alternative, but it also includes an HSR Feeder Service between Palmdale and Victorville. Variations A, B, D, and E were considered, but Variation A was later determined to be not a viable variation for the alternatives with HSR due to some geometric constraint. Additional elements would include bikeways and green energy facilities as described under the Freeway/Expressway Alternative.

The HSR component of the HDC would operate as a new west to east passenger rail corridor from the existing Metrolink station in Palmdale (Antelope Valley) to Victorville (Victor Valley). This service could also conveniently allow rail passengers to continue on to Las Vegas without having to change trains at Victorville (a one-seat ride). It would fill a gap by providing a crucial missing interregional link between two major rail infrastructure investments currently in the planning stages for southern California, the California HSR and the XpressWest, formerly known as Desert Xpress.

1.4.4.1. HIGH SPEED RAIL FEEDER SERVICE TECHNOLOGY AND DESIGN REQUIREMENTS

The HSR Feeder Service would consist of steel wheels on track and would have a maximum operating speed of 180 miles per hour (mph). The HSR Feeder would be built within the HDC right-of-way (ROW). The area needed for this rail facility would be approximately 160 ft. (48.77 m) wide to accommodate the tracks and associated structures. The rail alignment would primarily run in the median of the HDC freeway. Certain areas would require additional ROW to allow the train to negotiate curves and reach the train station. A 52-foot buffer would be kept from the edge of the freeway to the railway travel path for safety and maintenance access.

1.4.4.2. FACILITY OPTIONS

Under this alternative, Caltrans proposes to connect the HDC with two rail passenger stations, one within Palmdale in Los Angeles County and the other within Victorville in San Bernardino County. These station locations were chosen for their accessibility and close proximity to populated areas.

Victorville Passenger Station

Although the Victorville Station is proposed as part of the HDC, it would not be constructed under the HDC Project. This station would be constructed in conjunction with the XpressWest HSR service between Las Vegas and Victorville as currently planned. The Victorville Station location would be co-located with Victorville Station 3 (VV3) referenced in the Desert Xpress Final Environmental Impact Report (EIR) and Record of Decision. This is the Agency Preferred Station option. It would be located immediately west of I-15, at Dale Evans Parkway.

Palmdale Passenger Station

The Palmdale Station would be located at or near the Palmdale Transportation Center (PTC) at Sierra Highway. Caltrans has conducted an alternative analysis of several rail alignment approaches as a part of the HDC effort for future integration with the California HSR station at Palmdale.

1.4.4.3. STATION CONNECTIONS

To connect to the Palmdale and Victorville rail stations, ROW would be required for the station connection approaches as the HSR Feeder/Connector alignment curves away from the HDC ROW and to provide overnight storage for the trains..

Palmdale Rail Connection

For the Palmdale rail connection, two rail connection approaches are proposed for connecting the HDC to the California HSR network, Options 1 and 7. Both options allow for eastbound and westbound tracks on the HDC to connect to the California HSR network northbound and southbound tracks by using a combination of aerial and cut-and-cover or tunneling structures.

Rail Option 1

Option 1 would shift the existing Palmdale Transportation Center south approximately 800 ft. (243.8 m) and would require a cut-and-cover box and mined tunnels configuration. This option would encroach into the Air Force Plant 42 parking lot associated with the Palmdale Airport. The alignment would also cross under commercial development at Rancho Vista Boulevard and 15th Street East. This option would diverge outside of the HDC median and would require only two rail tracks to cross under the HDC westbound lanes, reducing the ROW needed for the HDC.

Rail Option 7

Option 7 would require a mix of aerial structures and tunneling, and it would allow the Palmdale Transportation Center to remain at its current location. This option would encroach into a small residential area near 10th Street East and would require a four-track section within the HDC median, necessitating a larger ROW section for the HDC in this area.

As part of the design refinement, the California High-Speed Rail Authority has proposed the modification to the “wye” (track splits) connections associated with HDC Rail Options 1 and 7, and parking associated with each of the three proposed variations.

Variation A

This variation would place the HDC and Metrolink station platforms on the west side of SR-14 inside the Union Pacific Railroad (UPRR) ROW. The HDC platforms would be approximately 20 ft. (6.09 m) in width and 1,400 ft. (426.7 m) in length. The Metrolink platforms would be approximately 50 ft. (15.24 m) in width and 500 ft. (152.4 m) in length. The HDC platforms would extend from Transportation Drive to about 700 ft. (213.4 m) north of Avenue Q. Station area parking is proposed at the terminus of 6th Street (UPRR/Sierra Highway) and would provide 6,200 surface parking spaces. The existing Palmdale Transportation Center would be shifted approximately 800 ft. (243.8 m) south of its current location.

Variation B

This variation is the same as Variation A with the following exceptions: (1) HDC station platforms would extend from just north of Avenue Q and immediately north of Avenue Q3; and (2) this option would not affect the location of the existing Palmdale Transportation Center.

Variation C

This option would place the HDC and Metrolink station platforms on the west side of Clock Tower Plaza East and outside of the UPRR ROW. The HDC platforms would extend from East Avenue Q to East Avenue Q4. Station area parking is proposed at the terminus of 6th Street (UPRR/Sierra Highway) and would provide 6,200 parking spaces (via an above-grade structure). This option would not affect the location of the existing Palmdale Transportation Center.

Station location variations are the same for Rail Options 1 and 7, although the “wye” connections differ, as well as the corresponding details on location and tunnel/aerial configurations.

1.4.4.4. VICTORVILLE RAIL CONNECTION

Caltrans has evaluated several rail connection approaches for connecting the HDC HSR Feeder/ Connector track alignment to the XpressWest rail network at Victorville. Two alignment options were evaluated in the Draft EIR/EIS (Caltrans 2014). The proposed HDC rail tracks would connect to the southernmost limits of the XpressWest Victorville Station tracks. The Victorville XpressWest station, including the station footprint, would not be part of the HDC Project. Both options would allow eastbound and westbound travel by using a combination of culverts and bridges, as well as fill material.

Northern Alignment Option 1

Northern Alignment Option 1 would cross over the Mojave River and Quarry Road and gradually curve northeast until it crosses the Variation E Option at Walton Drive. This option diverges outside of the HDC median in a trench and requires only two rail tracks to pass under the HDC westbound travel lanes, HDC on-ramp, and Mojave Railroad, where the connector tracks would be constructed on fill material to connect to the southernmost limit of the XpressWest tracks. This option would encroach into three Bureau of Land Management (BLM) parcels. The alignment lies within an area currently identified as a mix of commercial, transportation, open space, and passive open space under the Desert Gateway Specific Plan for the City of Victorville.

Variation E Alignment Option

The HSR Variation E Alignment Option spurs off the HDC alignment at East El Evado Road in a northeasterly direction at approximately 0.5 mile south of the Northern Alignment Option 1 by traversing the Mojave River and crossing the Northern Alignment Option 1 at Walton Drive. This option diverges outside of the HDC median and would require only two rail tracks to cross under the HDC westbound and eastbound lanes, and it would be connected to the southernmost limit of the XpressWest tracks. This option would encroach into two BLM parcels and would affect about 10 single-family homes. Under the Desert Gateway Specific Plan, this alignment would lie within an area currently identified as a mix of commercial, transportation, open space, and passive open space.

1.4.4.5. TECHNOLOGY OPTIONS FOR TRAINS

Caltrans has hired the consultant to evaluate two possible technology options to power the trains for the HSR facility, including diesel-electric (maximum operating speed of 125 mph) and electric (maximum operating speed of 180 mph). Based on the results of the analysis, the favorable option being considered is the electric option because of its compatibility with the XpressWest rail system.

Regardless of the power source, both options would require the same amount of rail footprint, except the electric-powered option would require overhead guide wires and related support posts that would follow the rail tracks and would need electrical substations and transformers (each occupying a 4,000 to 5,000 square foot area at 10-mile intervals along the rail corridor).

1.4.4.6. ALIGNMENT

Placement of the rail alignment in the center of the HDC is more desirable than placement along or parallel to the freeway's shoulder. This is true in the urbanized areas because it would minimize any potential land use conflicts within developed areas. Placement of the tracks in the center of the HDC would help minimize impacts to residents and businesses because no additional ROW acquisition would be required. In addition, noise and visual impacts, as well as impacts to property access, would be minimized.

For non-urbanized areas, placing rail alignment in the center of the HDC would minimize environmental effects to sensitive resources. Those resources include, but are not limited to, threatened and endangered species (including habitat areas), cultural resource sites, hydrological features, and scenic vistas.

Anticipated project cost for this alternative in 2014 dollars is ranging from \$2.63 to 4.53 billion for the rail component options, and \$3.59 billion for the highway component.

1.4.5. Build Alternative 5 – Freeway/Tollway Alternative with High Speed Rail Feeder/Connector Service

This alternative would follow the same route as the Freeway/Tollway Alternative (including Variations A, D, B and E), but it also includes an HSR Feeder Service between Palmdale and Victorville. Similar to the Freeway/Tollway Alternative, the bicycle facility and green energy components would be incorporated into the design features of this alternative.

A PPP option for funding this alternative would be utilized. Anticipated project cost for this alternative in 2014 dollars is \$2.63 to 4.53 billion for the rail component options and \$3.61 billion for the highway component.

1.5. Location of the BSA

The BSA includes all of the proposed alternatives and variations for the HDC Project. Four physical alignment variations in the alignment were developed to avoid particular features. These variations are described below:

- **Build Alternative 2 – The Freeway/Expressway Alternative** (four physical variations) would generally follow Avenue P-8 in Los Angeles County and just south of El Mirage Road in San Bernardino County, then extend east to Air Expressway Road near the I-15, and finally curve south and end at Bear Valley Road.
 - **Variation A** – Near Palmdale, this segment is approximately 5 miles and is located within the City of Palmdale. The freeway/expressway would run slightly south of the main alignment, approximately between 15th Street East and Little Rock Wash. In this variation the alignment shifts varies from approximately 800 ft. (243.8 m) south at 15th Street to 2,190 ft. (667.5 m) south from the main alignment near 70th Street and follows a Caltrans easement on Los Angeles World Airport (LAWA) property. Right-of-Way required would be a 300 ft. (91.44 m) corridor for this portion.

- Variation B - East of the Los Angeles/San Bernardino county boundary, this segment of Freeway/Expressway would flare out slightly south of the main alignment between Oasis Road and Coughlin Road. Variation B1 would be at the same location, but it would flare out a little narrower and pass through Krey Field.
- Variation D – Near unincorporated community of Lake Los Angeles, the freeway/expressway would dip south of the main alignment, along Avenue R approximately between 190th Street East and 230th Street East. The alignment shift here reduces the amount of community impacts.
- Variation E - Near Adelanto and Victorville, this freeway/expressway segment would dip south of the main alignment and the Victorville Federal Correctional Facility, just south of Rancho Road. This variation includes a separation of the High Speed Rail from the highway at the crossing of the Mojave River.
- Build Alternative 3 – The Freeway/Tollway Alternative would follow the same alignment as the Freeway/Expressway Alternative (including Variations A, B, D, and E), but the section between 100th Street East and US 395 would be operated as a tollway. When conducting impact analysis, the Freeway/Expressway Alternative and Freeway/Tollway Alternative are combined for ease of understanding and will read Freeway/Expressway (Freeway/Tollway) Alternative because both alternatives have the same project footprint; one simply is designated as a tollway.
- Build Alternative 4 – The Freeway/Expressway Alternative with High-Speed Rail (HSR) Feeder/Connector Service would be the same as the Freeway/Expressway Alternative, but with a HSR Feeder/Connector Service between the cities of Palmdale and Victorville. This alternative includes two options regarding the Palmdale transportation center and are discussed below:
 - Option 1 – This option would shift the existing Palmdale Transportation Center south approximately 800 ft. (243.8 m) and would require a cut-and-cover box and mined tunnels configuration. This option would encroach into the Air Force Plant 42 parking lot associated with the Palmdale Airport. The alignment would also cross under commercial development at Rancho Vista Boulevard and 15th

Street East. This option would diverge outside of the HDC median and would require only two rail tracks to cross under the HDC westbound lanes, reducing the ROW needed for the HDC.

- Option 7 – This option would require a mix of aerial structures and tunneling, and it would allow the Palmdale Transportation Center to remain at its current location. This option would encroach into a small residential area near 10th Street East and would require a four-track section within the HDC median, necessitating a larger ROW section for the HDC in this area.
- Build Alternative 5 – The Freeway/Tollway Alternative with HSR Feeder/Connector Service would be the same as the Freeway/Tollway Alternative, but would include an HSR Feeder/Connector Service (as described above) between the cities of Palmdale and Victorville. This alternative also includes Option 1 and Option 7 as discussed above.

The footprint for renewable green energy within this Project will occur in the BSA, however should it be installed as part of this Project, it would convert an area that would otherwise be a temporary impact into a permanent impact. Renewable green energy would include solar panel fields along a highway with a maximum 100ft width along a maximum 20 mile length between two points. This would result in a maximum permanent impact of 242 acres for the renewable green energy element of this Project.

The BSA includes the areas anticipated to be directly and indirectly affected by the proposed Project. It should be highlighted that alignments and variations have changed over time since initial studies. Areas not previously studied were addressed in additional surveys and included in this analysis and report. As such, the reader should note there can be several supporting technical reports for any one topic discussed in this document.

The BSA is contained within the township, range, and sections of the USGS 7.5-minute topographic quadrangle maps listed in Table 1.

Table 1: USGS Topographic Maps Covering BSA

USGS 7.5 Minute Quadrangle Name	Township	Range	Sections
Ritter Ridge	5 North	12 West	3, 4
	6 North	12 West	11, 14, 16, 15, 22, 23, 27, 34
Lancaster West	6 North	12 West	4, 9, 11
Lancaster East	6 North	12 West	11
Palmdale	6 North	11 West	20, 21, 22, 23, 24
		12 West	11, 13, 14, 19, 23, 24, 26
Littlerock	6 North	9 West	30
		10 West	19, 20, 21, 22, 25, 26, 27
		11 West	24
Lovejoy Buttes	6 North	8 West	29, 30, 31,32
		9 West	25, 26, 27, 28, 29, 30, 33, 34, 35,36
El Mirage	6 North	7 West	28, 29, 30, 32, 33
		8 West	25, 26, 27, 28, 29, 32, 33, 34, 35
Shadow Mountains SE	5 North	7 West	5
	6 North	6 West	28, 29, 30, 31, 32, 33, 34
		7 West	25, 26, 27, 28, 33, 34, 35, 36
Adelanto	5 North	5 West	2, 3
	6 North	5 West	26, 27, 28, 31, 32,33,34, 35
		6 West	34, 35, 36
Victorville	5 North	4 West	6
	5 North	5 West	1, 2
	6 North	4 West	13, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36
		5 West	25, 26, 35, 36
Apple Valley North	5 North	3 West	2,3,4, 10, 11, 12, 13, 24, 25
	6 North	3 West	33, 34
Apple Valley South	4 North	2 West	6
	5 North	2 West	31
		3 West	25, 36
Turtle Valley	6 North	3 West	6, 7
		4 West	12
	7 North	3 West	32
Fifteenmile Valley	4 North	2 West	6
	5 North	2 West	31

Chapter 2. U.S. Army Corps of Engineers Regulatory Background

2.1. Section 404 of the Clean Water Act

This report describes potential “Waters of the United States” (“Waters”) that may be regulated by the USACE under Section 404 of the Clean Water Act (CWA). Pursuant to the U.S. Environmental Protection Agency (EPA) and USACE regulations on the definition of waters of the United States (80 FR 124: 37054-37127, June 29, 2015), the agencies assert jurisdiction over the following waters: traditional navigable waters (TNW), interstate waters and the territorial seas and impoundments of, tributaries to, waters adjacent to, and other waters that have a significant nexus to these jurisdictional waters.

Tributaries are waters that are characterized by the presence of physical indicators of flow, bed and banks, and ordinary high water mark (OHWM) and that contribute flow directly or indirectly to a TNW, interstate water, or the territorial seas.

Adjacent waters are defined as waters (including wetlands) that are bordering, contiguous, or neighboring to jurisdictional waters. Adjacent waters may include waters separated from other waters of the United States by constructed dikes or barriers, natural river berms, beach dunes and the like. Waters that connect segments of, or are at the head of, a stream or river are considered to be adjacent to that stream or river and hence are jurisdictional waters. Neighboring is defined, for purposes of determining adjacency, as waters located in whole or in part:

1. Within 100 ft. (30.48 m) of a TNW, interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary;
2. In the 100-year floodplain and that are within 1,500 ft. (457.2 m) of the OHWM of a TNW, interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary;
3. Within 1,500 ft. (457.2 m) of the high tide line of a TNW, interstate water, or the territorial seas; and
4. Within 1,500 ft. (457.2 m) of the OHWM of the Great Lakes.

Any Waters, including wetlands, within the 100-year floodplain of TNW, interstate water, or the territorial seas and waters within 4,000 ft. (1,219 m) of the high tide line or the OHWM of a TNW, interstate water, the territorial seas, impoundments, or covered tributary are subject to case-specific significant nexus determinations. A water is considered to have a significant nexus to jurisdictional waters if the water either alone or in combination with other similarly situated waters in the region, significantly affects the chemical, physical, or biological integrity of a TNW, interstate water, or the territorial seas.

Some specific types of waters identified by EPA and USACE must be evaluated for a significant nexus to downstream jurisdictional waters. These specified types of waters are considered similarly situated because they function alike and are sufficiently close to function together in affecting downstream waters. Vernal pools in California are identified as a specific type of water that must be evaluated for significant nexus to jurisdictional waters to determine if the vernal pools are waters of the United States. The EPA and USACE exclude the following features from their jurisdiction: waste treatment ponds; artificial lakes, ponds, reflecting pools, swimming pools, or small ornamental waters created in dry land; water-filled depressions created in dry land incidental to mining or construction activity; erosional features, including gullies and rills; puddles; groundwater; stormwater control features; wastewater recycling structures constructed in dry land; detention and retention basins built for wastewater recycling; groundwater recharge basins; percolation ponds built for wastewater recycling; and water distributary structures built for wastewater recycling. The EPA and USACE also exclude prior converted cropland (as determined by EPA); artificially irrigated areas that would revert to dry land should application of water to that area cease; and artificial, constructed lakes and ponds created in dry land such as farm and stock watering ponds, irrigation ponds, settling basins, fields flooded for rice growing, log cleaning ponds, or cooling ponds. Certain types of ditches are excluded from jurisdiction: 1) ditches with ephemeral flow that are not a relocated or excavated tributary; 2) ditches with intermittent flow that are not a relocated or excavated tributary and do not drain wetlands; and 3) ditches that do not flow into a TNW, interstate water, or territorial seas (either directly or through another water).

2.1.1. Wetlands

Wetlands regulated under Section 404 include “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” (USACE 1986b). Wetlands can be

perennial or intermittent, and isolated or adjacent to other waters. To be determined a wetland, the following three criteria should be met:

- a majority (greater than 50 percent) of dominant vegetation species are wetland associated species;
- hydrologic conditions exist that result in periods of flooding, ponding, or saturation for at least 5 percent of the growing season; and,
- soils saturate, flood, or pond long enough during the growing season to develop anaerobic conditions in the upper part and should exhibit hydric soil characteristics indicative of permanent or periodic inundation.

Wetland vegetation is normally characterized by vegetation in which more than 50 percent of the cover of dominant plant species is composed of obligate wetland, facultative wetland, or facultative species that occur in wetlands

2.1.2. Non-wetland Waters

Non-wetland Waters regulated under Section 404 are non-tidal, perennial, and intermittent watercourses and tributaries to such watercourses (USACE 1986a). The limit of USACE jurisdiction for non-tidal watercourses (without adjacent wetlands) is defined in 33 CFR 328.4(c)(1) as the OHWM. The OHWM is defined as the “line on the shore established by the fluctuations of water and indicated by physical characteristics including clear, natural line impressed on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas” (USACE 1986c). The upstream limits of other Waters are defined as the point where the OHWM is no longer perceptible.

2.1.3. SWANCC and USACE Guidance Memorandums

Section 404 of the Clean Water Act may not apply to isolated, non-navigable waters (including vernal pools) pursuant to the January 9, 2001 Supreme Court decision in the case of *Solid Waste Agency of Northern Cook County versus U.S. Army Corps of Engineers (SWANCC)*. The SWANCC decision eliminated jurisdiction over isolated, intrastate, non-navigable Waters where the sole basis of jurisdiction is founded on the presence of migratory bird habitat. Another Supreme Court case, *Rapanos versus United States and Carabell versus United States Army Corps of Engineers*, resulted in a memorandum, dated June 5, 2007 (revised 2008), to address new jurisdictional guidelines. The guidance identifies those waters over which the agencies (USACE and

Environmental Protection Agency [EPA]) will assert jurisdiction categorically and on a case-by-case basis, based on a “significant nexus” between a Water and a Relatively Permanent Water (RPW). In summary of the guidance, the USACE will continue to assert jurisdiction over:

1. TNWs and their adjacent wetlands;
2. Non-navigable tributaries of TNWs that are RPWs (e.g., tributaries that typically flow year-round or have a continuous flow at least seasonally) and wetlands that directly abut such tributaries (e.g., not separated by uplands, berm, dike, or similar feature); and,
3. Non-RPWs if determined (on a fact-specific analysis) to have a significant nexus with a TNW, including nonnavigable tributaries that do not typically flow year round or have continuous flow at least seasonally, wetlands adjacent to such tributaries, and wetlands adjacent to but that do not directly abut a relatively permanent, nonnavigable tributary. Absent a significant nexus, jurisdiction is lacking.

Of particular note is that RPWs do not include ephemeral tributaries, which flow only in response to precipitation, and intermittent streams, which do not typically flow year round or have continuous flow at least seasonally (e.g., typically three months). Determination of a significant nexus involves a functional analysis, and consideration of both hydrological and ecological factors for each tributary.

2.2. Non-jurisdictional Features

Isolated non-navigable waters, which are not subject to USACE jurisdiction, may still be regulated by state and local agencies. California Department of Fish and Wildlife (CDFW) asserts jurisdiction over all rivers, streams, and lakes, as well as any associated riparian vegetation (CFGF Sections 1600-1616). The local Regional Water Quality Control Board (RWQCB) for a project area regulates wastewater discharge into all surface waters and to groundwater within the boundaries of the state (CWC 1943). Waters identified within the study area that are subject to CDFW and/or RWQCB jurisdiction are discussed under separate cover.

Chapter 3. Jurisdictional Methodology

3.1. Methodology Statement

Delineations of Jurisdictional Waters and Wetlands within the BSA were conducted in accordance with regulations set forth in 33 Code of Federal Regulations (CFR) Part 328 and the USACE guidance documents referenced below:

- USACE Wetlands Research Program Technical Report Y-87-1 (online edition), “Wetlands Delineation Manual” Environmental Laboratory (Wetland Manual; USACE 1987);
- USACE Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest (Arid Southwest Guidelines; USACE 2001a);
- USACE Minimum Standards for Acceptance of Preliminary Wetlands Delineations, November 30, 2001 (Minimum Standards; USACE 2001b);
- USACE Jurisdictional Determination Form Instructional Guidebook (JD Form Guidebook; USACE 2007);
- USACE and Environmental Protection Agency (EPA) Guidance on Clean Water Act Jurisdiction (USACE and EPA 2007); and
- USACE Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Version 2.0) (Arid West Supplement; USACE 2008);
- USACE Clean Water Rule: Definition of “Waters of the United States”. 80 FR 124: 37054-37127, June 29, 2015 (USACE 2015).

Data for all potentially regulated features mapped during previous surveys and any additional investigation needed to complete the BSA were compiled, analyzed under the new regulation (80 FR 124: 37054-37127; USACE 2015) and included in the results discussion and maps.

3.2. Previous Investigations

Existing data from previous investigations were compiled. Previous surveys included:

- *Jurisdictional Delineation for the Caltrans State Route 138 New Freeway Construction Project Area City of Palmdale Los Angeles County, California* (ECORP 2010);
- *High Desert Corridor Delineation of Jurisdictional Waters of the United States and Waters of the State of California San Bernardino County, California* (AMEC 2011);
- *Preliminary Jurisdictional Delineation Report for the Caltrans District 7 High Desert Corridor* (ICF 2012); and
- *Jurisdictional Delineation for the Updated High Desert Corridor Alternative Alignment Areas City of Palmdale to the Town of Apple Valley Los Angeles and San Bernardino Counties, California* (ECORP 2013).

3.3. Pre-Survey Investigation

After existing data from previous investigations were compiled, a pre-survey investigation (desktop delineation) was completed for areas where additional data was needed. The desktop delineation included a review of historical aerial photographs and historic topographic maps of the BSA. Historic aerial photographs and historic topographic maps available at historicaerials.com were examined to investigate historic flow patterns, stream locations, and land uses within the BSA. The desktop delineation also included a review of recent aerial photograph [200-scale, 1 inch = 200 ft. (60.96 m)] and applicable United States Geological Survey (USGS) 7.5-minute topographic quadrangle maps (Ritter Ridge, Palmdale, Littlerock, Lovejoy Buttes, El Mirage, Shadow Mountains SE, Adelanto, Victorville, Apple Valley North, Apple Valley South, Turtle Valley, and Fifteenmile Valley California) to identify potential drainage features within the BSA. Potential drainage features, within areas where additional data was needed in the BSA, were digitized using ESRI's Geographical Information System (GIS) ArcMap software. The National Wetland Inventory (NWI) was also reviewed to identify any documented wetlands within the BSA (USFWS 2015). The United States Department of Agriculture (USDA) Soil Survey Map was reviewed to determine soil series that occur within and adjacent to the BSA. The

preliminary hydrology and hydraulics report completed for the Project was also reviewed (Parsons 2014).

3.4. Field Investigation

Potential drainage features and wetlands identified in the pre-survey investigation were verified in the field using the unified federal method, as defined by USACE using methodology outlined in the Corps of Engineers Wetlands Delineation Manual (USACE 1987) and the Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Arid West Region (Arid West Region Supplement Version 2.0) (USACE 2008). The boundaries of potential Waters of the U.S. were delineated through a field determination, made in conjunction with aerial photograph interpretation. Tools used during the jurisdictional delineation fieldwork included a Trimble GeoXT Handheld global positioning system (GPS) unit, shovel, Munsell color chart, and digital camera.

The field surveys were conducted by walking the extent of potential Waters of the U.S. and Waters of the State. For areas suspected of being a wetland, paired sample points were taken. The total area of the potential waters within the project area was recorded in the field using a post-processing capable GPS unit with sub-meter accuracy (Trimble GeoXT). All potentially jurisdictional features within the BSA and immediate vicinity were systematically inspected to record existing conditions and to determine the jurisdictional limits of waters and wetlands within the BSA. Although many of the drainages were fenced off, access was sufficient to gather pertinent data regarding existing conditions. The apparent flow regimes and corresponding hydrogeomorphic features were subsequently identified using historic aerials and topographic maps, and available upstream and downstream data.

Measurements were entered into ESRI's GIS ArcMap software to identify the location and dimensions of potential jurisdictional areas. The ArcMap application was then used to compute federal jurisdictional acreages located within the BSA. Acreage computations were verified using a 200-scale aerial photograph and field data.

Where potential wetlands were identified, paired sample points were collected. One sample point was collected within the potential wetland area, while the other was located within the nearby upland area. Results of the sampling are included on Wetland Determination Data Forms in Appendix C.

Jurisdictional delineators based their field interpretation of the boundaries of jurisdictional areas on guidelines contained within the references cited above. Waters of the U.S. that may be regulated by USACE under Section 404 of the Clean Water Act include traditionally navigable waters, other Waters of the U.S., and wetlands. Wetlands are a subset of Waters of the U.S. that meet specific vegetative, soil, and hydrologic criteria.

Chapter 4. Environmental Setting

4.1. Land Uses

The BSA is largely rural and undeveloped with larger cities flanking the endpoints of the proposed Project corridor (Palmdale, Victorville, and Apple Valley). Existing land uses throughout the BSA consist of a mix of uses from agricultural to industrial to residential to resource conservation areas.

4.2. Topography

The proposed Project would occur in the southern California northeastern portion of the Mojave Desert region in the Antelope and Victor valleys. The Antelope Valley portion of the project area ranges in altitude from 2,450 to 3,200 ft. (746.8 to 975.4 m) with the surrounding mountain rising up to 4,000 ft. (1,219 m), while the Victor Valley portion of the project area ranges in altitude from 2,660 ft. (810.8 m) at the Mojave River crossing to 3,200 ft. (975.4 m) near the limestone mines in the hills near Bell Mountain and Catholic Hill east of I-15. The buttes are the most distinctive topographic feature in the Antelope Valley project area. Alpine Butte is the largest, located near Lake Los Angeles, and has an elevation of 1,200 ft. (365.8 m). The topography varies from flat with occasional drainages and sand dunes on the Antelope Valley floor to steep foothill mountain areas [3,600 ft. (1,097 m)] to the south. The San Andreas Fault traverses the project limits parallel and just north of the San Gabriel Mountains and south of Pearblossom Highway. The San Gabriel Mountains lie south of the HDC and the Sierra Pelona Mountains to the southwest. Bedrock hills and an unnamed alluvial valley between I-15 and Bell Mountain and Apple Valley are located at the eastern end of the project area in Victor Valley. A dry lake is located southeast of Apple Valley. Runoff generally crosses the BSA in a northerly direction.

4.3. Hydrology

The BSA is within an arid region, and therefore there is little natural perennial surface water. As a result of the variability of rainfall, surface hydrology is dominated by ephemeral washes, flowing only during storm events and remaining dry for most of the year. The hydrologic regime for the area follows the general Mediterranean climate, with cool, wet winters and warm, dry summers, but is also occasionally influenced by summer monsoons. The average annual rainfall for the three main communities within the Project ranges from 5.54 in, in El Mirage, to 7.46 in, in Palmdale, with Victorville in the middle with 6.19 in. Most of the rain falls between

the months of December and March. The BSA traverses the Antelope-Fremont Valleys and Mojave River Watersheds (Figure 3).

The western portion of the BSA is located in the Antelope-Fremont Valleys Watershed (HUC #18090206). This watershed encompasses approximately 1,220 square miles within Los Angeles County and 143 square miles in San Bernardino County. The most prominent washes include, from west to east, Little Rock Wash, Big Rock Wash, Grandview Canyon Creek, Graham Canyon Creek, and Mescal Creek. All of the drainages within the BSA in the Antelope Valley-Fremont Valleys HUC watershed are considered isolated and flow toward Rosamond Dry Lake, Buckhorn Dry Lake, and Rogers Dry Lake on Edwards Air Force Base. Except during the largest rainfall events of a season, surface water flows quickly percolate into streambeds and recharge the groundwater basin. Surface water flows that reach the dry lakes are generally lost to evaporation.

The eastern portion of the BSA is located in the Mojave River Watershed (HUC #18090208). The most prominent drainages include, from west to east, Sheep Creek, Fremont Washes, Turner Wash, Ossom Wash, the Mojave River, and Bell Mountain Wash. The Mojave River, the largest stream within the BSA, originates in the San Bernardino Mountains and flows northward through the high desert and provides muted hydrologic influence to Silver Lakes (two manmade navigable lakes in the unincorporated community of Helendale) before eventually terminating within playas to the east of Baker in the central Mojave Desert. Portions of the river within the BSA are perennial due to local geology through the area known as “the narrows”. The Mojave River is considered to be a TNW by USACE. Fremont Wash is an ephemeral tributary to the Mojave River. All ephemeral washes identified in the BSA would be considered non-relatively permanent waterways (non-RPWs) by the USACE, typically flowing only in response to storm events.



Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\Hydro\HUC\HUC_12_20150811.mxd (MAG/DS); Swager, 8/12/2015

Map Date: 8/12/2015
Photo Source: NAIP 2014

Figure 3. HUC 12 Watersheds

4.4. Soils

Within the BSA, much of the desert floor is composed of alluvial deposits—the material laid down by rivers. These alluvial deposits are made up of faulted bedrock and shape the groundwater flow, leading to the creation of numerous dry lakes. Soils mapped within the BSA consist primarily of coarse-textured soils developed from these alluvial deposits (figures are included in Appendix A). These soil series were reviewed against the USDA Natural Resources Conservation Service (NRCS) National Hydric Soils List (USDA 2014). The presence of hydric soils was field verified. Hydric soils present within the BSA are listed in the soils table included in Appendix A.

4.5. Vegetation

Undeveloped areas within the BSA support several different vegetation communities with varying levels of disturbance. The dominant communities in the area include Mojave desert scrub, Joshua tree woodland, creosote bush scrub, and rubber rabbitbrush scrub which integrate frequently with several other vegetation communities. Ephemeral tributaries and washes bisect these communities and are typically unvegetated. The Mojave River is vegetated with desert riparian woodland that includes the following species: Fremont cottonwood (*Populus fremontii*), red willow (*Salix laevigata*), narrow-leaved willow (*Salix exigua*), western sycamore (*Platanus racemosa*), and mulefat (*Baccharis salicifolia*). Areas where there is prolonged inundation typically support herbaceous species including cattail (*Typha latifolia*) and chairmaker's bulrush (*Scirpus americanus*).

4.6. Coastal Zone Evaluation

The project site is not within the coastal zone as defined by the California Coastal Act; therefore, a Coastal Zone Management Act consistency determination is not required.

4.7. Critical Habitat

Critical habitat (CH) for southwestern willow flycatcher (*Empidonax traillii extimus*) (SWFL) occurs within the BSA. Critical Habitat for the SWFL was designated by the USFWS in October 2005 (USFWS 2005) and revised in January 2013 (USFWS 2013). The Preferred Alternative crosses the Mojave River within the Basin and Mojave Management Unit of designated Critical Habitat for SWFL. This Critical Habitat unit comprises a 22.2-mile (35.7 km) section of the Mojave River, a 6.9-mile (11.1 m) section of the West Fork Mojave River, a 12.2-mile (19.6 km) portion of Holcomb Creek, and a 12.5-mile (20.1 km) section of Deep Creek in San Bernardino

County (USFWS 2013). Not all of these sections of waterways are known to be occupied by SWFLs but were designated as Critical Habitat for the purposes of species recovery. These four segments were identified for SWFL conservation because they have the potential to provide protection against habitat loss, provide areas for population growth with the potential for colonization, habitat for metapopulation stability, and protection of genetic connectivity (USFWS 2013).

In 2010 and early 2011, potentially suitable habitat was observed within the Mojave River. Because suitable habitat was observed, focused protocol presence/absence surveys were conducted in 2012, 2013, 2014, and 2015. These surveys were all conducted for the HDC project, but the specific survey areas changed from year to year. The majority of the habitat, however, was surveyed consistently all four years (ECORP 2015). A Biological Assessment (ECORP 2015) has been prepared for formal consultation with the USFWS in accordance with Section 7 of the Endangered Species Act to document potential project effects on threatened and endangered species and CH.

4.8. Historic Properties

An assessment of historic properties is required by USACE in administering the Section 404 permitting program. Pursuant to the National Historic Preservation Act (NHPA), the presence of significant cultural resources must be determined prior to submittal of the Section 404 permit application.

A Historic Properties Survey Report (HPSR) has been completed to document the presence of historic properties and any potential effects on the properties due to implementation of the proposed Project. Based on the results of the HPSR, any cultural resources eligible for listing on the National Register of Historic Places present in the project area will be disclosed in the Section 404 permit application. Project compliance with the NHPA, as applicable, will be completed prior to applying for a Section 404 permit from USACE (Caltrans 2014).

4.9. Environmental Documentation

California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) documents have been prepared for the Project (Caltrans 2014). A joint Draft Environmental Impact Report (EIR) and Environmental Impact Statement (EIS) was prepared for the Project and was available for public review in September 2014. The Final EIR/EIS is currently being prepared by Caltrans.

Chapter 5. Summary of Findings

Project maps showing the locations of the jurisdictional features identified within the BSA are presented in Appendix B. A summary table that contains approximate size of waters potentially regulated by the USACE within the BSA is included in Appendix C. Arid West Region wetland determination and OHWM data forms completed during field inspections are in Appendix D. A photo reference map for all photos taken that characterize the features observed in the study area are in Appendix E. A CD with photographs, jurisdictional resource maps, GIS data, and Excel tables of summary data is included as part of this report in Appendix F. Descriptions and preliminary jurisdictional status determinations for all wetland and non-wetland water features are summarized below. Formal verification by the regulating agencies is recommended for jurisdictional boundaries of regulated features that will be affected by the project.

5.1. Antelope-Fremont Valleys Watershed

The USACE has indicated that the isolated washes and other hydrologic features, due to the lack of connectivity to interstate waters, within the Antelope-Fremont Valleys Watershed are not considered navigable waters of the U.S. as defined in the CWA and therefore not within their jurisdiction to regulate under Section 404 of the CWA (USACE 2013).

5.2. Mojave River Watershed

USACE maintains jurisdiction over wetland and non-wetland Waters within the majority of this watershed. The Mojave River is the dominant feature within this area and is considered a TNW and thus a significant nexus exists with its tributaries within the watershed even though they are non-relatively permanent waters (RPWs). In contrast to the Antelope-Fremont Valley Watershed, it is likely that the USACE would consider all non-RPWs with an OHWM and physical surface channel connectivity to the Mojave River to have a significant nexus with a TNW, and would therefore be determined to be under USACE jurisdiction.

There are two closed basin sub-watersheds within the Mojave River Watershed, Apple Pond-Apple Valley Dry Lake (HUC 180902080304) and El Mirage Lake (HUC 180902080404). These hydrologic units are considered 100 percent “non-contributing”, meaning that all surface flow is internal and no overland flow leaves the unit through the outlet point. Drainage features observed in these sub-watersheds were

considered non-jurisdictional. The sections below summarize the character of each of the other hydrologic units and features that were observed within each HUC-12 unit.

5.2.1. Black Mountain-Frontal El Mirage Lake (HUC 180902080402)

The soils in this unit are well-drained and typically coarse, sandy texture with inclusions of areas with a loamy substratum in some locations. Topography is relatively flat with 0 to 2 percent slopes. Unvegetated, natural drainage features with OHWM indicators were in the portion of the BSA that is in this hydrologic unit. These features drain to El Mirage Lake which is a closed basin and does not have a surface connection to or significant nexus with an RPW or TNW. No features were mapped as being potentially jurisdictional in this portion of the BSA.

5.2.2. Sheep Creek (HUC 180902080401)

The soils in this unit are well-drained and typically coarse sand and loamy sand textures with inclusions of areas with a thin sandy loam surface. Topography is relatively flat with 0 to 2 percent and 2 to 5 percent slopes, with no incised channels. Unvegetated, natural drainage features with OHWM indicators were in the portion of the BSA that is in this hydrologic unit. These features drain to El Mirage Lake which is a closed basin and does not have a surface connection to or significant nexus with an RPW or TNW. No features were mapped as being potentially jurisdictional in this portion of the BSA.

5.2.3. Unnamed Sub-watershed #1 (HUC 180902080501)

The soils in this unit were somewhat variable but dominated by well-drained and typically coarse sand and loamy sand textures. There were four (4) features identified within the portion of the BSA within this subwatershed. Three features have well defined bed and bank that are traceable to the outlet points of the hydrologic unit. One other feature (Feature 636) has weakly persistent, defined bed and bank and OHWM indicators in the BSA that do not persist through the unit to the outlet point. All features are natural and un-vegetated. All four features have been mapped as potentially jurisdictional; pending formal determination.

5.2.4. Horse Canyon-Fremont Wash (HUC 180902080504)

There are two (2) features within this sub-watershed. One feature has been mapped as jurisdictional because it had a well-defined bed and bank and OHWM indicators that persisted to the outlet point of the hydrologic unit. This feature bisects soils dominated by sands, and is unvegetated. Feature 617 has been mapped as non-jurisdictional because it had a weakly defined bed and bank in a portion of the BSA

but the feature was not traceable through the full extent of the BSA or downstream to the outlet of the hydrologic unit. This feature occurs in an area dominated by a sandy soil surface overlaying thick sandy clay horizons, in soils formed on terraces or older fan surfaces.

5.2.5. Unnamed Sub-watershed #2 (HUC 180902080502)

Seven (7) features were mapped within the portion of the BSA in this watershed. All features had defined bed and banks and OHWM indicators. These features occur on sandy loam soils developed on fan remnants, alluvial fans, or terraces, and on sandy soils developed from alluvial fans, fan aprons, fan skirts, inset fans or river terraces. Topography is relatively flat with 0 to 2 percent and 2 to 5 percent slopes with weakly incised channels. Features 613 and 615 were mapped as non-jurisdictional because indicators did not persist downslope, within the BSA. The other features were mapped as jurisdictional because OHWM indicators persisted though the BSA, but connection to an outlet point of this hydrologic unit is not traceable beyond developed areas downstream. A formal determination is recommended.

5.2.6. Manzanita Wash (HUC 180902080503)

Thirteen (13) potentially jurisdictional features were mapped within this hydrologic unit. Of those, one was determined to be non-jurisdictional because OWWM indicators did not persist downstream beyond the BSA (Feature 587). The other mapped features had more strongly formed channels that could be traceable downstream beyond the BSA and appear to have a connection to the outlet point of the unit. Topography is relatively flat with 0 to 2 percent and 2 to 5 percent slopes with defined channels. The soils are dominantly loamy sands overlaying thick sandy clay horizons, and are formed on terraces or older fan surfaces.

5.2.7. Shadow Hills-Fremont Wash (HUC 180902080601)

There were no potentially jurisdictional features mapped in the portion of the BSA that occur within this hydrologic unit.

5.2.8. Burkhardt Lake-Mojave River (HUC 180902080706)

There are three named drainage features in this hydrologic unit: Turner Wash, Ossum Wash, and Mojave River. There are also three “adjacent waters” features within the unit and these features are commonly referred to in historic topographic maps as Turner Springs (Feature 501 and Feature 505) and Burkhardt Lake (Feature 443). Turner Wash drains to the north and has a surface connection with the Mojave River. Flow depth ranges from 2 to 3 ft. (0.61 to 0.91 m). Ossum Wash the flow depth

ranges from 4 to 7 ft. (1.22 to 2.13 m) and crosses the alignment east of Turner Wash before it drains to the Mojave River. The other three named features are described in subsections below in more detail.

There other ephemeral channels mapped in the BSA that occur within this hydrologic unit are assumed to be connected directly or through tributaries to the named features and ultimately contribute to Mojave River.

5.2.8.1. TURNER SPRINGS

The two mapped features between Turner Wash and Ossum Wash are potential “adjacent water” features that may be regulated by USACE. These features do not have a direct surface connection to the adjacent washes or to the Mojave River to the north, but a subsurface connection could exist. According to the Soil Survey the features are formed at the boundary of an alluvial fan apron/toeslope surface and an alluvial fan/backslope. Historic topographic maps dating back to 1957 label three springs and a ponded area at these locations. Distinct vegetation is visible in these areas in historic aerials dating back to 1952, before Ossum Wash formed to the east. Ossum Wash formed between 1968 and 1994, after areas upslope within the watershed were developed. Feature 501 is higher in elevation than Ossum Wash [approximately 15 ft. (4.57 m) higher], is separated from Ossum Wash by a dirt road, and is just beyond 100 ft. (30.48 m) from the western boundary of Ossum Wash. This feature currently supports a black willow, a cluster of cottonwoods, and wetland indicator species in the understory such as Mexican rush (*Juncus mexicanus*). Many bushes of grape vine are present immediately upslope from the feature. There were no indicators of water flow into or from this feature, and the soils were dry down to 15 inches during a recent survey (August 11, 2015), redoximorphic features were not observed in the profile, and there was no surface expression of water. Feature 505 is a pond area that showed signs of ponding during a recent survey (August 11, 2015); signs included soil cracking, change in soil color, change in vegetation. Vegetation around the border of the feature was similar to the surrounding upland community with the exception of a tamarisk on the western edge. Both features are NOT within 100 ft. (30.48 m) of a traditional navigable water, interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary and they are NOT in the 100-year floodplain and that are within 1,500 ft. (457.2 m) of the ordinary high water mark (OHWM) of a traditional navigable water, interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary. A formal determination is recommended.

5.2.8.2. BURKHARDT LAKE

This area is adjacent to the Mojave River, on the west side just north of an access road (E Street) off of National Trails Highway. The Soil Survey designated this area with a “water” map unit and historic topographic maps from 1956 through 1974 depict the area as Burkhardt Lake. This feature is not depicted on historic topographic maps from 1982, 1985, and 1993.

This area is consistent with the Arid West Delineation Manual’s description of Difficult Wetland Situations in Arid West, specifically in Chapter 5, section c. Riparian Areas (page 82 of the manual; ERDC/EL TR-06-16). Vegetation in this area is dominated by red willow and cottonwood, and the subcanopy cover consists of upland shrubs and a thick thatch of senesced, xeric species which is more indicative of the current non-wetland conditions. The riparian habitat within this area contains a remnant stand of trees that germinated and established under wetter conditions than currently exist at the site. The riparian habitat within this feature supports great horned owl (*Bubo virginianus*), barn owl (*Tyto alba*), American kestrel (*Falco sparverius*), and red-shouldered hawk (*Buteo lineatus*); these species were observed during ECORP’s site visit. The mature stand of trees are likely able to exploit groundwater that is too deep to support wetlands. There was no evidence that the feature has had recent inundation. This feature is NOT within 100 ft. (30.48 m) of a TNW [Mojave River boundary is approximately 300 ft. (91.44 m) to the west], interstate water, the territorial seas, an impoundment of a jurisdictional water, or a tributary. This feature is in the 100-year floodplain and that are within 1,500 ft. (457.2 m) of the OHWM of a TNW, the territorial seas, an impoundment of a jurisdictional water, or a tributary. A formal determination is recommended.

5.2.8.3. MOJAVE RIVER

The Mojave River is, for the most part, an intermittent river that conveys runoff northerly from the eastern San Bernardino Mountains into the Mojave Desert in San Bernardino County, California. The Mojave River is the largest drainage system in the Mojave Desert. A small section of the river, referred to as the “Narrows,” is a perennial stream where groundwater daylights in the narrow valley. Mojave River flow depth ranges from 17 to 20 ft. (5.18 to 6.09 m), and historically has been considered a TNW by USACE.

The Mojave River contains wetlands and riverine types of aquatic features within the active floodplain. Wetland, riverine, and upland sample points were taken in various locations of this feature. Observations of habitat type were consistent with NWI data

in most circumstances. Below the narrows, the Mojave River cross section contains a low-flow channel, which was flowing during the 2013 and 2014 surveys, an active floodplain, and a low terrace. The wetlands sample point was taken within the low terrace portion at three locations. These points met the three criteria for wetlands required by the U.S. Army Corps of Engineers for vegetation, soils, and hydrology. The following description summarizes characteristics observed at one of the sample locations, but similar characteristics observed at other sample locations within Mojave River.

Vegetation

The vegetative cover consisted of 100 percent species that are obligate, facultative wetland or facultative (OBL, FACW, and FAC) with species including narrow-leaved willow and chairmaker's bulrush. Vegetative cover within the low terrace, where the sample points were taken, was approximately 70 percent total cover of southern willow scrub consisting of mostly shrub species with a sparse herbaceous understory. The vegetation type within both the low-flow channel and the active floodplain would be considered freshwater marsh with an estimated total vegetation cover of 70 percent that consisted mostly of herbaceous early successional species. Open water was also present within the low-flow channel with a water depth ranging from 10 to 24 inches and a width of 12 to 14 ft. (3.66 to 4.27 m). Cattail and several submerged wetland plant species were recorded within the low-flow channel. OHWM limits were well defined by bank topography between the active floodplain and low terrace areas. The upper terrace, where wetland characteristics were not present, is a mix of Fremont cottonwood and willow (*Salix* spp.) habitat. The demarcation line between the low and upper terraces was largely defined as the point at which chairmaker's bulrush stands were present in association with a weak bank where terrace topography rose slightly.

Soil

Soil indicators included sandy redox features (S5) and a depleted matrix (F3). Soils consisted of a mixture of coarse silt and very fine sand. A soil pit was dug to 16 inches in depth, with layers identified from 0 to 5 inches and from 5 to 16 inches. The first layer contained redox features and was considered to be a sandy loam texture. The lower layer was sandy and contained a somewhat weak depleted matrix. Both the upper and lower layers exhibited relatively low chroma (three and two, respectively). Soil mapping for the Mojave River in this area consists of Riverwash, which is considered to be a hydric soil type. Within the upper terrace the soils contained no indicators of wetland characteristics.

Hydrology

Hydrologic indicators were positive, exhibiting oxidized rhizospheres along living roots (C3), riverine sediment deposits (B2), riverine drift deposits (B3), and drainage patterns (B10). Signs of regular water flow were abundant in both the low terrace and active floodplain areas. Some of the upper terrace also exhibited some indicators, such as drift deposits, which were not recently deposited. These were most likely a result of flooding in December 2010.

5.2.9. Bell Mountain Wash (HUC 180902080705)

Bell Mountain Wash is a natural channel that collects runoff primarily in the area north and west of Bell Mountain. All of the other mapped features in this unit are ephemeral tributaries to Bell Mountain Wash. These tributaries are generally narrow and have poorly defined banks, but OHWM indicators (sand deposition, scoured banks, and changes in vegetation) were observed and features were mapped and labeled as jurisdictional. The drainages flow south and southeast and are generally small and braided on the gentle slopes and become more incised and wider as slope increases. The drainage features are mostly unvegetated.

5.2.10. Isabelle Spring (HUC 180902080302)

Surface and subsurface water in this area flows to the Apple Pond-Apple Valley Dry Lake (HUC 180902080304), which is a closed basin. No features were mapped as being potentially jurisdictional in this portion of the BSA.

5.2.11. Deadman Hills (HUC 180902080303)

Surface and subsurface flows in this area drain to the Apple Pond-Apple Valley Dry Lake (HUC 180902080304), which is a closed basin. No features were mapped as being potentially jurisdictional in this portion of the BSA.

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United States. June 5.

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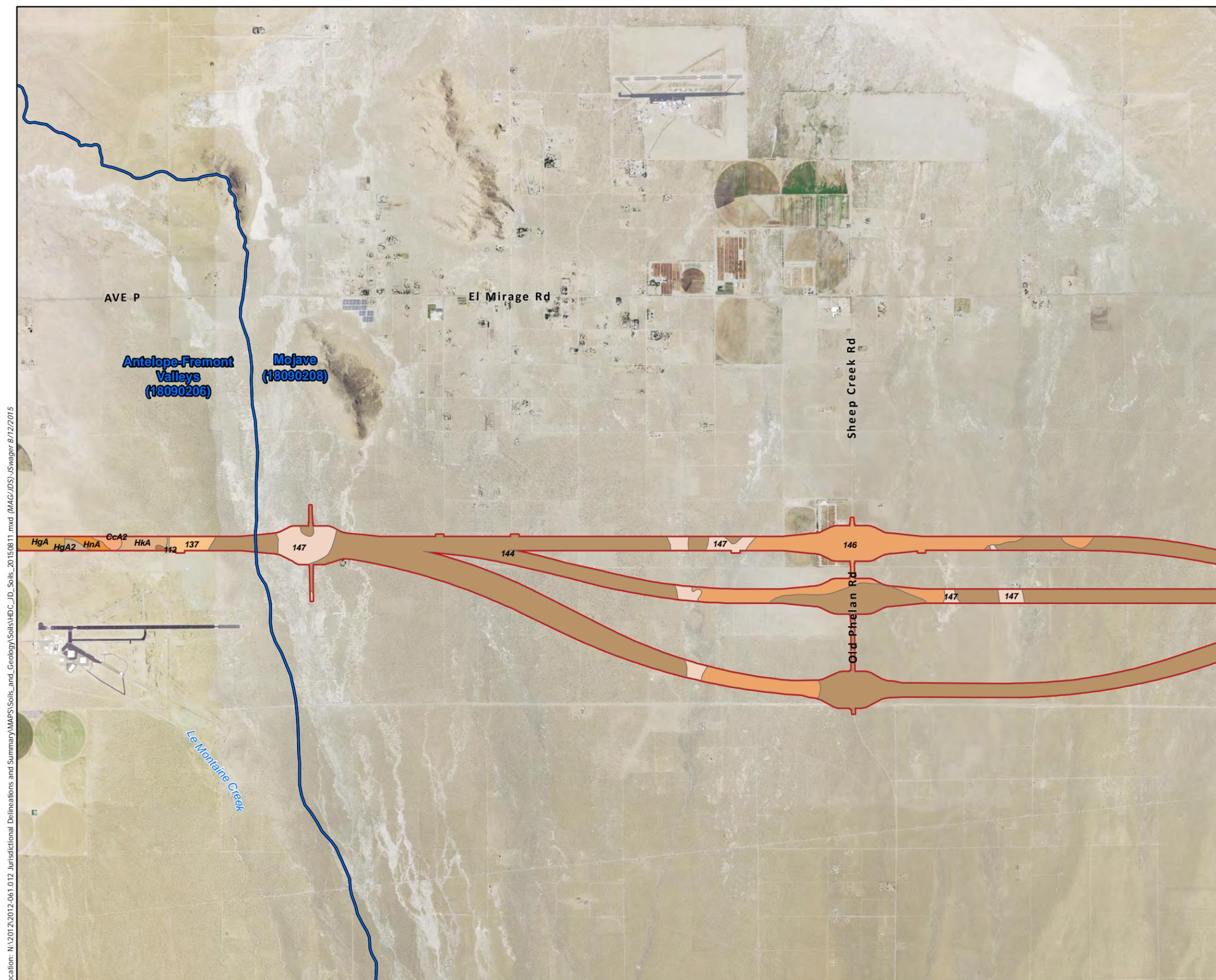
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**Appendix A: Natural Resource Conservation Service
Soil Types**

Figure 4.
Natural Resources
Conservation Service Soil Types
Sheet: 1 of 4

-  Overall Study Limits
- NRCS Soil Types**
- Series ID - Series Name*
-  112 - CAJON SAND, 0 TO 2 PERCENT SLOPES
 -  137 - KIMBERLINA LOAMY FINE SAND, COOL, 0 TO 2 PERCENT SLOPES
 -  144 - MANET COARSE SAND, 2 TO 5 PERCENT SLOPES
 -  146 - MANET LOAMY SAND, LOAMY SUBSTRATUM, 0 TO 2 PERCENT SLOPES
 -  147 - MANET FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
 -  CAA - CAJON LOAMY SAND, 0 TO 2 PERCENT SLOPES
 -  CCA2 - CAJON LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HUMMOCKY
 -  HGA - HESPERIA LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES
 -  HGA2 - HESPERIA LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES, HUMMOCKY
 -  HKA - HESPERIA FINE SANDY LOAM, 0 TO 2 PERCENT SLOPES
 -  HNA - HESPERIA LOAM, 0 TO 2 PERCENT SLOPES

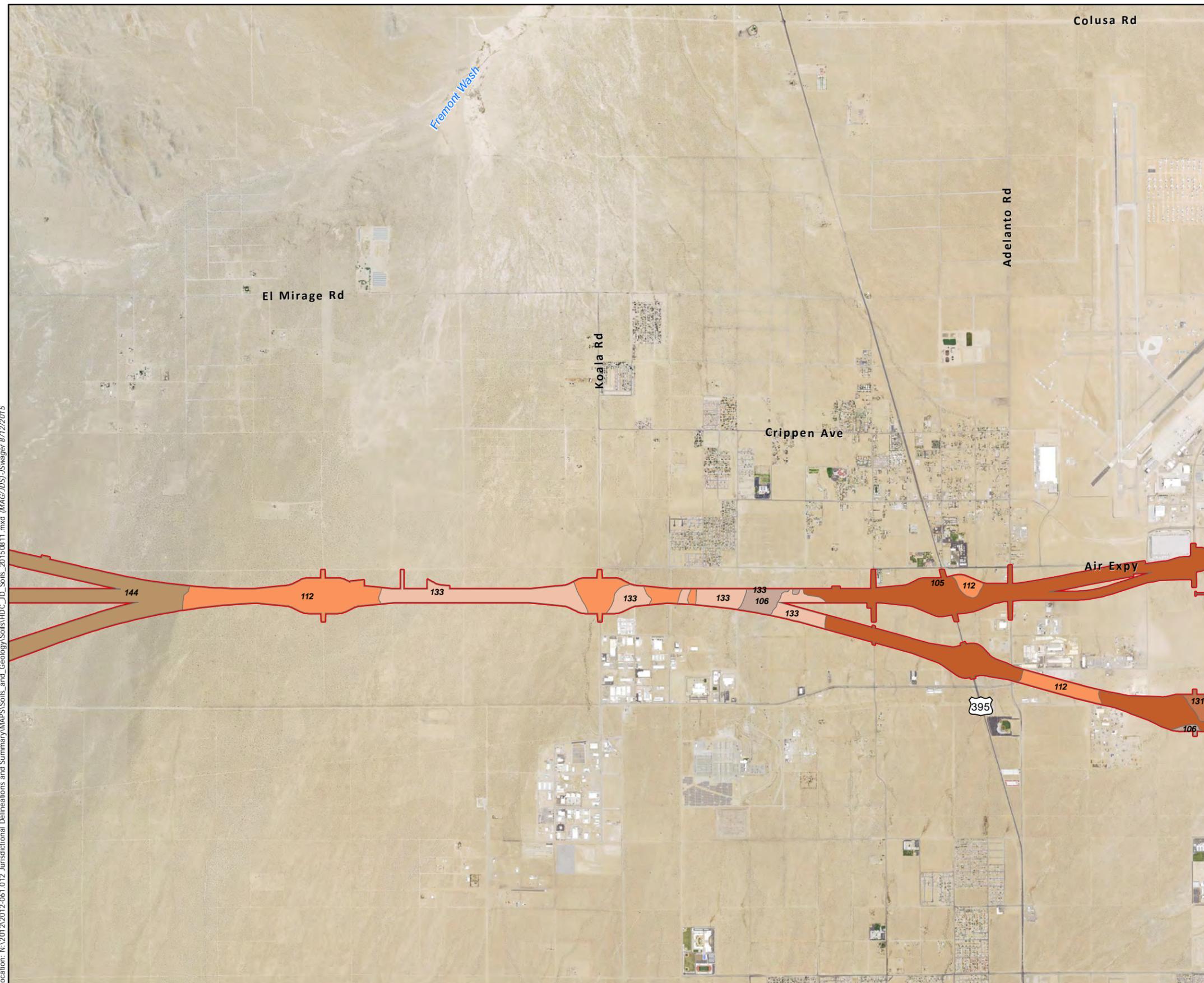


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Figure 4.
Natural Resources
Conservation Service Soil Types
Sheet: 2 of 4

-  Overall Study Limits
- NRCS Soil Types**
- Series ID - Series Name*
-  105 - BRYMAN LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES
 -  106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES
 -  112 - CAJON SAND, 0 TO 2 PERCENT SLOPES
 -  131 - HELENDALE LOAMY SAND, 0 TO 2 PERCENT SLOPES
 -  133 - HELENDALE-BRYMAN LOAMY SANDS, 2 TO 5 PERCENT SLOPES*
 -  144 - MANET COARSE SAND, 2 TO 5 PERCENT SLOPES



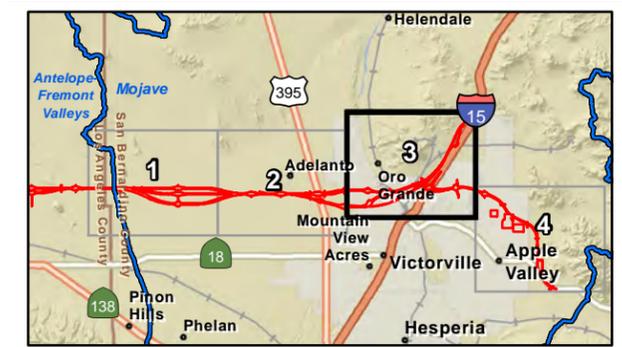
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Figure 4.
Natural Resources
Conservation Service Soil Types
Sheet: 3 of 4



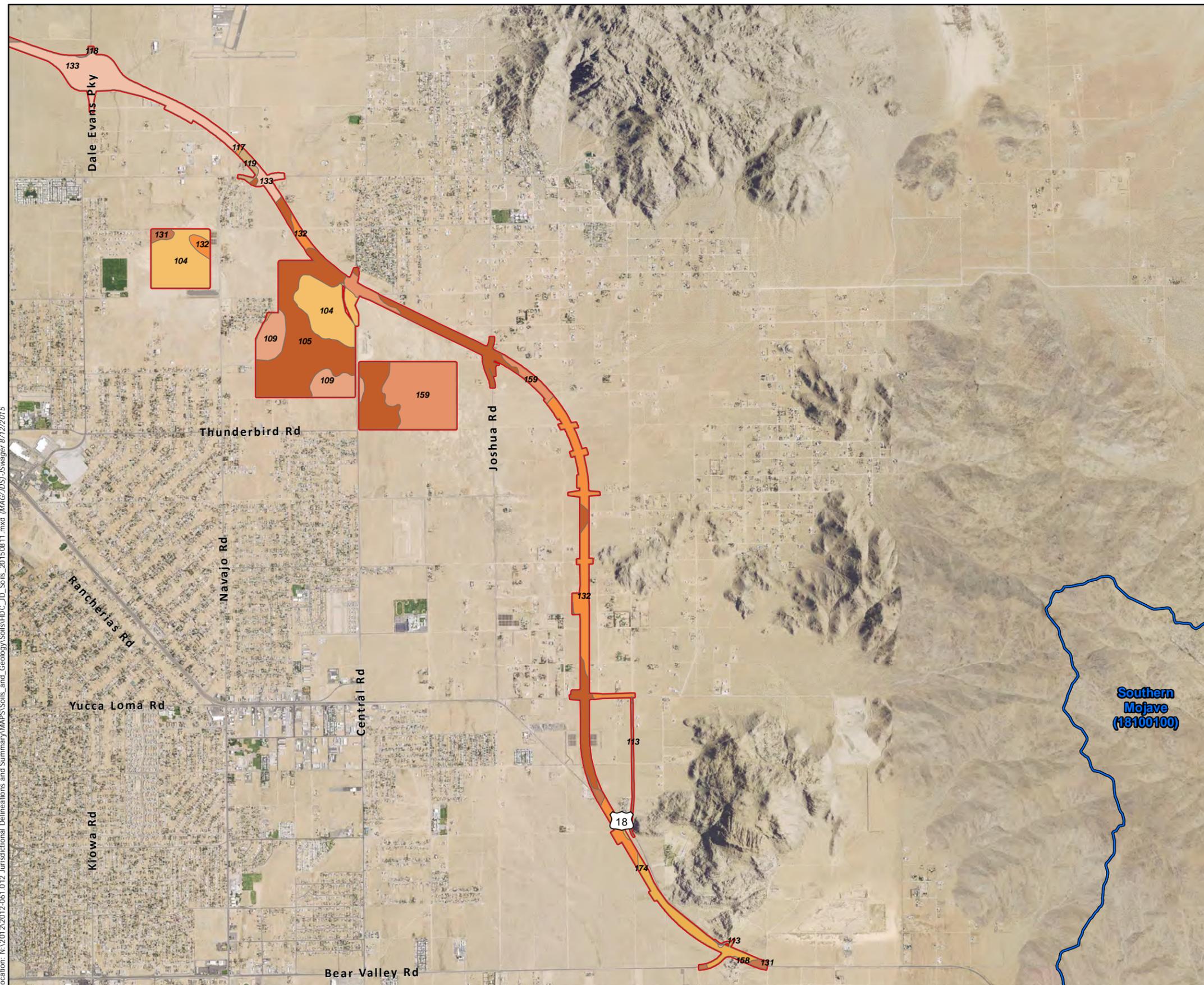
- Overall Study Limits**
- NRCS Soil Types**
- Series ID - Series Name**
- 105 - BRYMAN LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES
 - 106 - BRYMAN LOAMY FINE SAND, 2 TO 5 PERCENT SLOPES
 - 107 - BRYMAN LOAMY FINE SAND, 5 TO 9 PERCENT SLOPES
 - 108 - BRYMAN LOAMY FINE SAND, 9 TO 15 PERCENT SLOPES
 - 113 - CAJON SAND, 2 TO 9 PERCENT SLOPES
 - 114 - CAJON SAND, 9 TO 15 PERCENT SLOPES
 - 115 - CAJON GRAVELLY SAND, 2 TO 15 PERCENT SLOPES
 - 118 - CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*
 - 130 - HAPLARGIDS-CALCIORTHIDS COMPLEX, 15 TO 50 PERC. SLOPES
 - 131 - HELENDALE LOAMY SAND, 0 TO 2 PERCENT SLOPES
 - 132 - HELENDALE LOAMY SAND, 2 TO 5 PERCENT SLOPES
 - 133 - HELENDALE-BRYMAN LOAMY SANDS, 2 TO 5 PERCENT SLOPES*
 - 137 - KIMBERLINA LOAMY FINE SAND, COOL, 0 TO 2 PERCENT SLOPES
 - 138 - KIMBERLINA LOAMY FINE SAND, COOL, 2 TO 5 PERCENT SLOPES
 - 140 - LAVIC LOAMY FINE SAND
 - 149 - MIRAGE-JOSHUA COMPLEX, 2 TO 5 PERCENT SLOPES*
 - 150 - MOHAVE VARIANT LOAMY SAND, 0 TO 2 PERCENT SLOPES
 - 151 - NEBONA-CUDDEBACK COMPLEX, 2 TO 9 PERCENT SLOPES*
 - 155 - PITS
 - 157 - RIVERWASH
 - 158 - ROCK OUTCROP-LITHIC TORRIORTHENTS COMPLEX, 15 TO 50 PERCENT SLOPES*
 - 162 - SPARKHULE-ROCK OUTCROP COMPLEX, 15 TO 50 PERCENT SLOPES*
 - 165 - TRIGGER-SPARKHULE-ROCK OUTCROP ASSOCIATION, STEEP*
 - 169 - VICTORVILLE SANDY LOAM
 - 171 - VILLA LOAMY SAND
 - 177 - YERMO-KIMBERLINA, COOL, ASSOCIATION, SLOPING*
 - 178 - WATER



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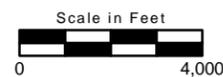
Figure 4.
Natural Resources
Conservation Service Soil Types
Sheet: 4 of 4



- Overall Study Limits**
- NRCS Soil Types**
- Series ID - Series Name**
- 104 - BOUSIC CLAY
 - 105 - BRYMAN LOAMY FINE SAND, 0 TO 2 PERCENT SLOPES
 - 109 - BRYMAN SANDY CLAY LOAM, 0 TO 2 PERCENT SLOPES
 - 113 - CAJON SAND, 2 TO 9 PERCENT SLOPES
 - 117 - CAJON LOAMY SAND, LOAMY SUBSTRATUM, 0 TO 2 PERCENT SLOPES
 - 118 - CAJON-ARIZO COMPLEX, 2 TO 15 PERCENT SLOPES*
 - 119 - CAJON-WASCO, COOL COMPLEX, 2 TO 9 PERCENT SLOPES*
 - 131 - HELENDALE LOAMY SAND, 0 TO 2 PERCENT SLOPES
 - 132 - HELENDALE LOAMY SAND, 2 TO 5 PERCENT SLOPES
 - 133 - HELENDALE-BRYMAN LOAMY SANDS, 2 TO 5 PERCENT SLOPES*
 - 158 - ROCK OUTCROP-LITHIC TORRIORTHENTS COMPLEX, 15 TO 50 PERCENT SLOPES*
 - 159 - ROSAMOND LOAM, SALINE-ALKALI
 - 174 - WASCO SANDY LOAM, COOL, 2 TO 5 PERCENT SLOPES



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Summary of USDA / NRCS Soil Descriptions Table

Code	Soil Series	Mapping Unit	NRCS Hydric/ Landform	Water Drainage	Material	Permeability
104	Bousic clay	fine	Yes	Well drained	Soils that formed in fine textured alluvium derived mainly from granitic rock sources	Slow
105	Bryman loamy fine sand, 0 to 2 percent slopes	fine-loamy	No	Well drained	Soils that formed in alluvium from dominantly granitic sources	Moderately slow
106	Bryman loamy fine sand, 2 to 5 percent slopes	fine-loamy	No	Well drained		
107	Bryman loamy fine sand, 5 to 9 percent slopes	fine-loamy	No	Well drained		
108	Bryman loamy fine sand, 9 to 15 percent slopes	fine-loamy	No	Well drained		
109	Bryman sandy clay loam, 0 to 2 percent slopes	fine-loamy	Yes	Well drained		
112	Cajon sand, 0 to 2 percent slopes	not used	Yes	Somewhat excessively drained	Soils that form in sandy alluvium from dominantly granitic rocks	Rapid
113	Cajon sand, 2 to 9 percent slopes	not used	No	Somewhat excessively drained		
114	Cajon sand, 9 to 15 percent slopes	not used	No	Somewhat excessively drained		
115	Cajon gravelly sand, 2 to 15 percent slopes	not used	No	Somewhat excessively drained		
117	Cajon loamy sand, loamy substratum, 0 to 2 percent slopes	not used	Yes	Somewhat excessively drained		
118	Cajon-arizo complex, 2 to 15 percent slopes*	not used	No	Somewhat excessively drained	Soils with both Arizo series and Cajon series present	Rapid to very rapid
119	Cajon-wasco, cool complex, 2 to 9 percent slopes*	not used	Yes	Somewhat excessively drained	Soils formed in alluvium derived dominantly from granitic material	Moderately rapid to rapid

Code	Soil Series	Mapping Unit	NRCS Hydric/ Landform	Water Drainage	Material	Permeability
130	Haplargids-calciorthids complex, 15 to 50 percent slopes	not used	Not hydric	N/A	Soils with a discontinuous argillic horizon (formed from clay illuviation) within 30 inches of the soil surface	Moderate or moderately slow
131	Helendale loamy sand, 0 to 2 percent slopes	coarse-loamy	No	Well drained	Soils that form in alluvium from granitoid rocks	Moderately rapid
132	Helendale loamy sand, 2 to 5 percent slopes	coarse-loamy	No	Well drained		
133	Helendale-bryman loamy sands, 2 to 5 percent slopes*	coarse-loamy	No	Well drained		
137	Kimberlina loamy fine sand, cool, 0 to 2 percent slopes	coarse-loamy	No	Well drained	Soils on flood plains and recent alluvial fans derived dominantly from igneous and/or sedimentary rock sources	Moderate to moderately rapid (moderately slow if saline-sodic phase and/or for soils with sandy clay loam substratum)
138	Kimberlina loamy fine sand, cool, 2 to 5 percent slopes	coarse-loamy	No	Well drained		
140	Lavic loamy fine sand	coarse-loamy	Yes	Moderately well drained	Soils that form in mixed alluvium dominantly from granitic sources	Moderate
144	Manet coarse sand, 2 to 5 percent slopes	sandy	No	Well drained	Soils that form in alluvium derived mainly from micaceous dark colored minerals	Moderately rapid
146	Manet loamy sand, loamy substratum, 0 to 2 percent slopes	sandy	Yes	Well drained		
147	Manet fine sandy loam, 0 to 2 percent slopes	sandy	No	Well drained		
149	Mirage-joshua complex, 2 to 5 percent slopes*	fine-loamy	No	Well drained	Soils that form in mixed alluvium, dominantly from granitic sources and volcanic rock (Joshua series). Soils occur on old terraces with well-developed erosion pavement and have slopes of 2 to 5 (Mirage series)	Moderately slow
150	Mohave variant loamy sand, 0 to 2 percent slopes	fine-loamy	No	Well drained	Soils formed in mixed alluvium.	Moderately slow

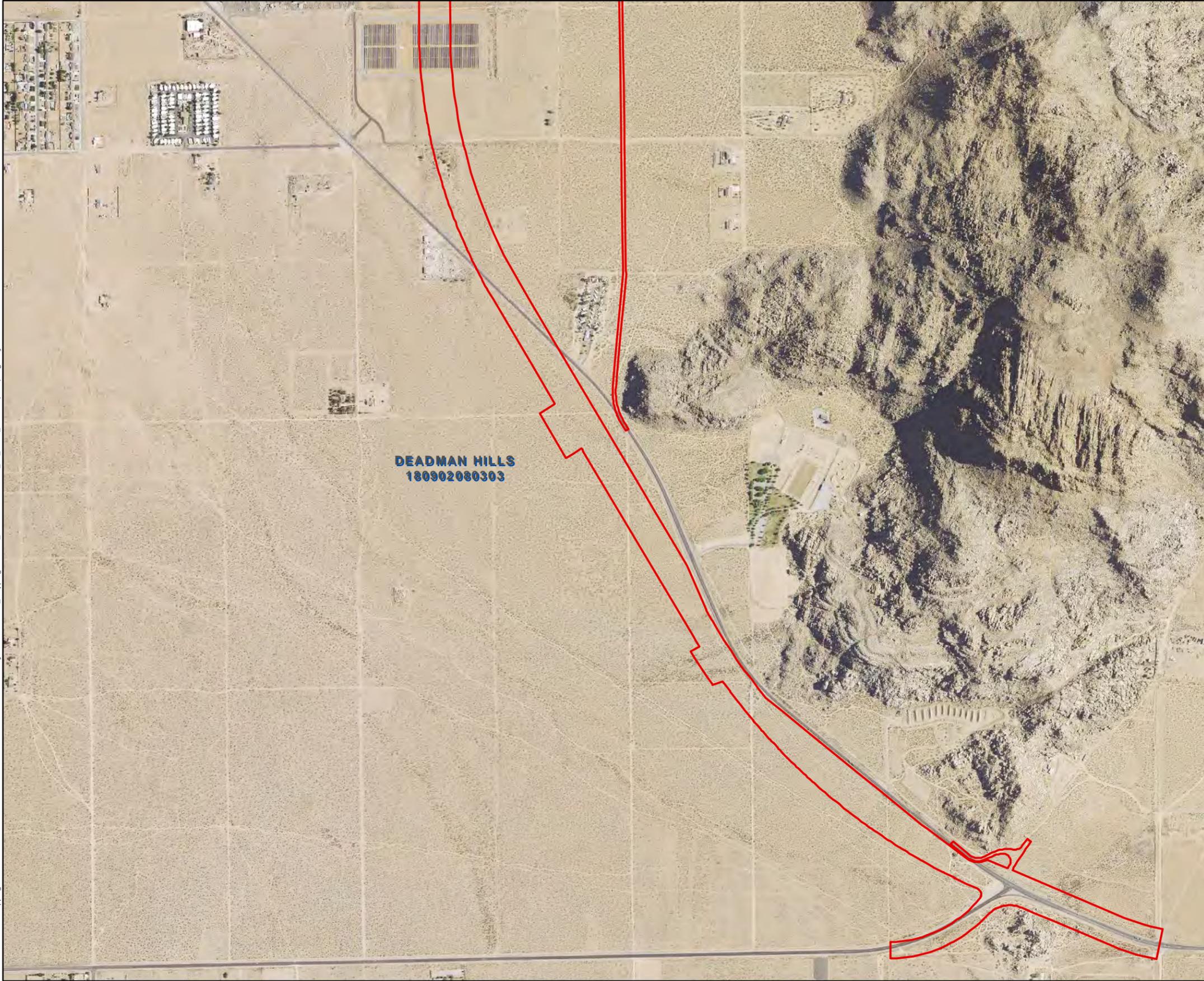
Code	Soil Series	Mapping Unit	NRCS Hydric/ Landform	Water Drainage	Material	Permeability
151	Nebona-cuddeback complex, 2 to 9 percent slopes*	loamy	Partially hydric - if within playa landform	Well drained	The Nebona-Cuddeback series consists of shallow (Nebona series) or moderately deep (Cuddeback series), well drained soils that form in mixed alluvium.	Moderately slow to moderately rapid
155	Pits	N/A	Yes	N/A	This unit consists mostly of sand or sand and gravel.	Rapid or very rapid
157	Riverwash	N/A	Yes	N/A		
158	Rock outcrop-lithic torriorthents complex, 15 to 50 percent slopes*	N/A	No	N/A	Rock outcrops and areas with poorly developed soils	Very rapid to rapid
159	Rosamond loam, saline-alkali	fine-loamy	Yes	Well drained	Formed in alluvium derived dominantly from granitic material	Moderately slow
162	Sparkhule-rock outcrop complex, 15 to 50 percent slopes*	loamy	No	Well drained	Formed in material weathered from hard volcanic rock	Moderately slow
165	Trigger-sparkhule-rock outcrop association, steep*	loamy	No	Well drained	Formed in material weathered from hard sedimentary or metasedimentary rock	Moderately rapid
169	Victorville sandy loam	coarse-loamy	Partially hydric – if within flood plains	Moderately well drained	Soils that form in mixed alluvium, dominantly from granitic sources	Moderately slow
171	Villa loamy sand	sandy	Partially hydric – if within remnant landforms	Moderately well drained	Soils that form in alluvium derived mainly from granitic rocks	Moderately rapid
174	Wasco sandy loam, cool, 2 to 5 percent slopes	coarse-loamy	No	Well drained	Soils formed in mixed alluvium derived mainly from igneous and/or sedimentary rock sources	Moderately rapid
177	Yermo-kimberlina, cool, association, sloping*	loamy-skeletal	Yes	Somewhat excessively drained	Formed in gravelly and cobbly alluvium derived from mixed sources	Moderately rapid
178	Water	N/A	N/A	N/A	N/A	N/A
AcA	Adelanto coarse sandy loam, 2 to 5 percent slopes	coarse-loamy	No	Well drained	Soils formed in granitic parent material on alluvial fans and plains	Moderate to moderately rapid
AsB	Arizo gravelly loamy sand, 0 to 5 percent slopes	sandy-skeletal	Yes	Excessively drained	Soils that formed in neutral to strongly alkaline, with effervescent in some or all	Rapid to very rapid

Code	Soil Series	Mapping Unit	NRCS Hydric/ Landform	Water Drainage	Material	Permeability
					parts, with thin calcium carbonate coatings on undersides of rock fragments in some pedons	
AtA	Arizo loamy fine sand, 0 to 2 percent slopes	sandy-skeletal	Yes	Excessively drained	Formed in alluvium derived from granitic material	Rapid
CaA	Cajon loamy sand, 0 to 2 percent slopes	not used	Yes	Excessively drained	Formed in alluvium derived from granitic material Formed in alluvium derived from granitic material	N/A
CaC	Cajon loamy sand, 2 to 9 percent slopes	not used	No	Excessively drained		N/A
CbA	Cajon loamy sand, loamy substratum, 0 to 2 percent slopes	not used	Yes	Excessively drained		N/A
CcA2	Cajon loamy fine sand, 0 to 2 percent slopes, hummocky	not used	No	Excessively drained		N/A
DuD	Dune land	N/A	No	Excessively drained	Wind deposited sand	Very rapid
GsA	Greenfield sandy loam, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained	Soils that form in moderately coarse and coarse textured alluvium derived from granitic and mixed rock sources	Moderately rapid
GsC	Greenfield sandy loam, 2 to 9 percent slopes	coarse-loamy	No	Well drained	Formed from alluvium derived from granite	N/A
HbA	Hanford coarse sandy loam, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained	Formed from alluvium derived from granite	N/A
HdC	Hanford gravelly sandy loam, 2 to 9 percent slopes	coarse-loamy	No	Well drained		N/A
HgA	Hesperia loamy fine sand, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained	Soils that form in alluvium derived primarily from granite and related rocks	Moderately rapid
HgA2	Hesperia loamy fine sand, 0 to 2 percent slopes, hummocky	coarse-loamy	Yes	Well drained		
HkA	Hesperia fine sandy loam, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained		
HmA	Hesperia fine sandy loam, loamy substratum, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained		
HnA	Hesperia loam, 0 to 2 percent slopes	coarse-loamy	Yes	Well drained		

Code	Soil Series	Mapping Unit	NRCS Hydric/ Landform	Water Drainage	Material	Permeability
M-W	Miscellaneous water	N/A	N/A	N/A	N/A	N/A
RcB	Ramona coarse sandy loam, 2 to 5 percent slopes	fine-loamy	No	Well drained	Ramona soils have brown, slightly and medium acid, sandy loam and fine sandy loam A horizons, reddish brown and yellowish red, slightly acid, sandy clay loam B2t horizons, and strong brown, neutral, fine sandy loam C horizons	N/A
RcC	Ramona coarse sandy loam, 5 to 9 percent slopes	fine-loamy	No	Well drained		N/A
RcD	Ramona coarse sandy loam, 9 to 15 percent slopes	fine-loamy	Yes	Well drained		N/A
Rg	Riverwash	N/A	Res	Excessively drained	Typically active wash areas with little-developed soils, however hydric soils can develop within Riverwash areas	Rapid or very rapid
Rm	Rosamond loamy fine sand	fine-loamy	Yes	Well drained	Soils that form in material weathered mainly from granitic alluvium	Moderate to moderately slow permeability Moderate to moderately slow
Ro	Rosamond fine sandy loam	fine-loamy	Yes	Well drained		
Rp	Rosamond loam	fine-loamy	Yes	Well drained		
Rr	Rosamond loam, saline-alkali	fine-loamy	Yes	Well drained		
RzF	Rough broken land	N/A	Yes	N/A	N/A	N/A
Sv	Sunrise sandy loam	fine-loamy	Yes	Moderately well drained	Formed from alluvium derived from granite	Moderately slow
Sw	Sunrise sandy loam, shallow	fine-loamy	Yes	Moderately well drained		
VbA	Vernalis loam, 0 to 2 percent slopes	fine-loamy	Yes	Well drained	Formed from alluvium derived from granite	Moderate to moderately slow permeability
VbB	Vernalis loam, 2 to 5 percent slopes	fine-loamy	No	Well drained		
VsE2	Vista coarse sandy loam, 15 to 30 percent slopes, eroded	coarse-loamy	No	Well drained	Formed from residuum weathered from granite	Moderately rapid

**Appendix B: USACE Jurisdictional Features Mapped
within the BSA**

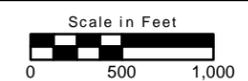
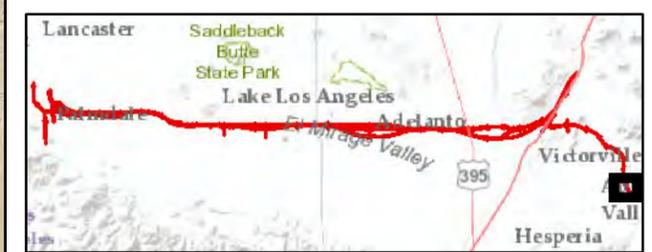
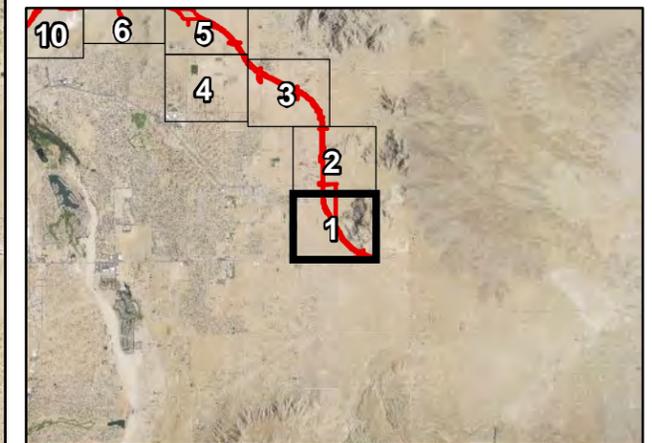
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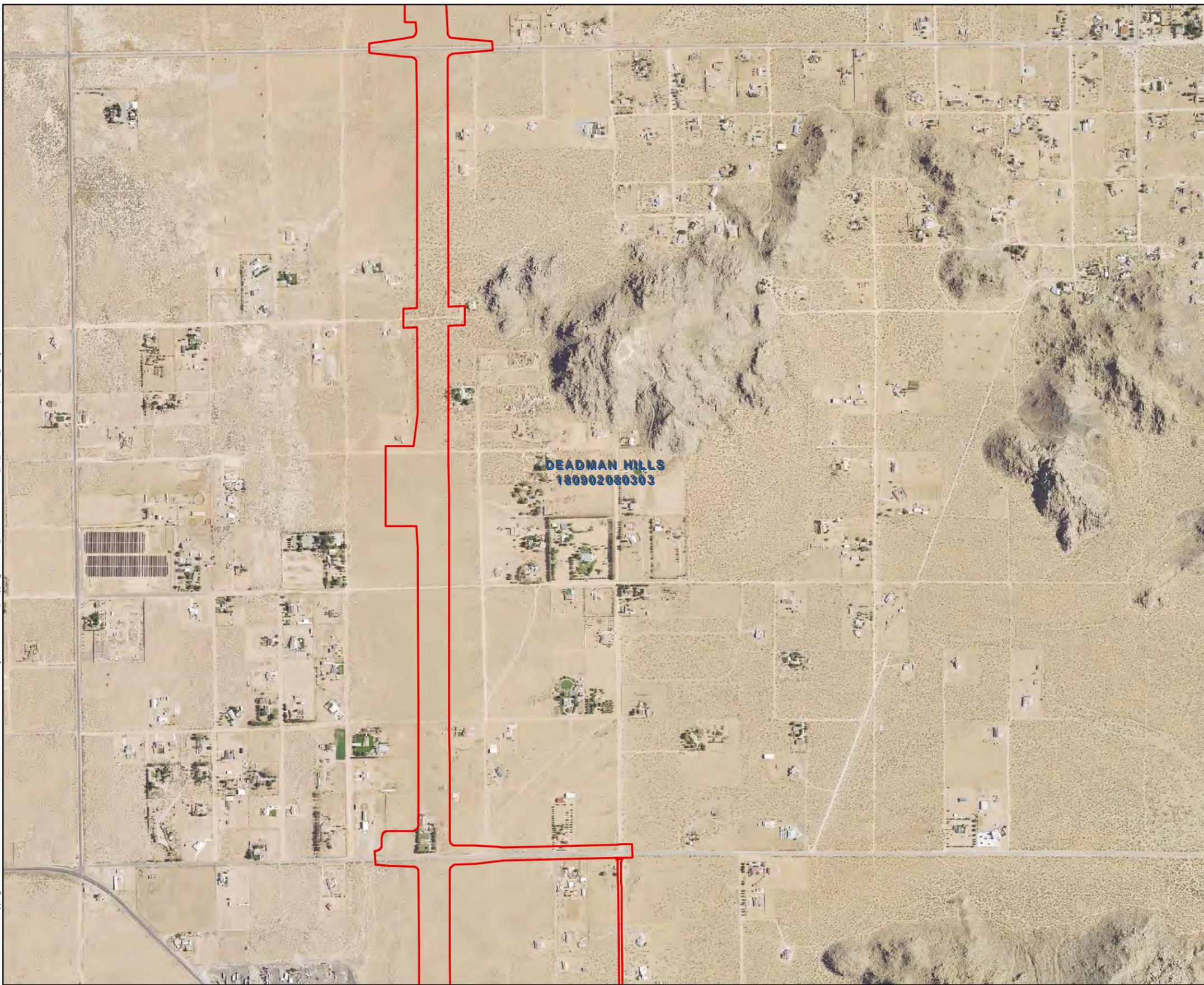
Summary Jurisdictional Delineation Map Sheet: 1 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
 -  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC



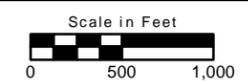
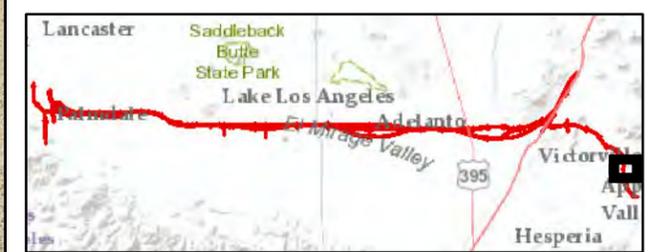
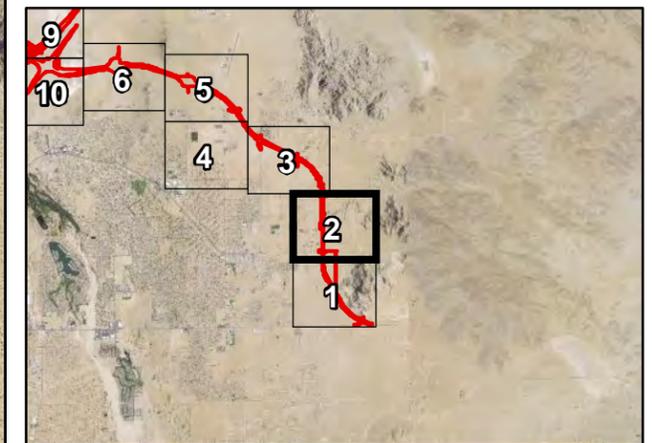
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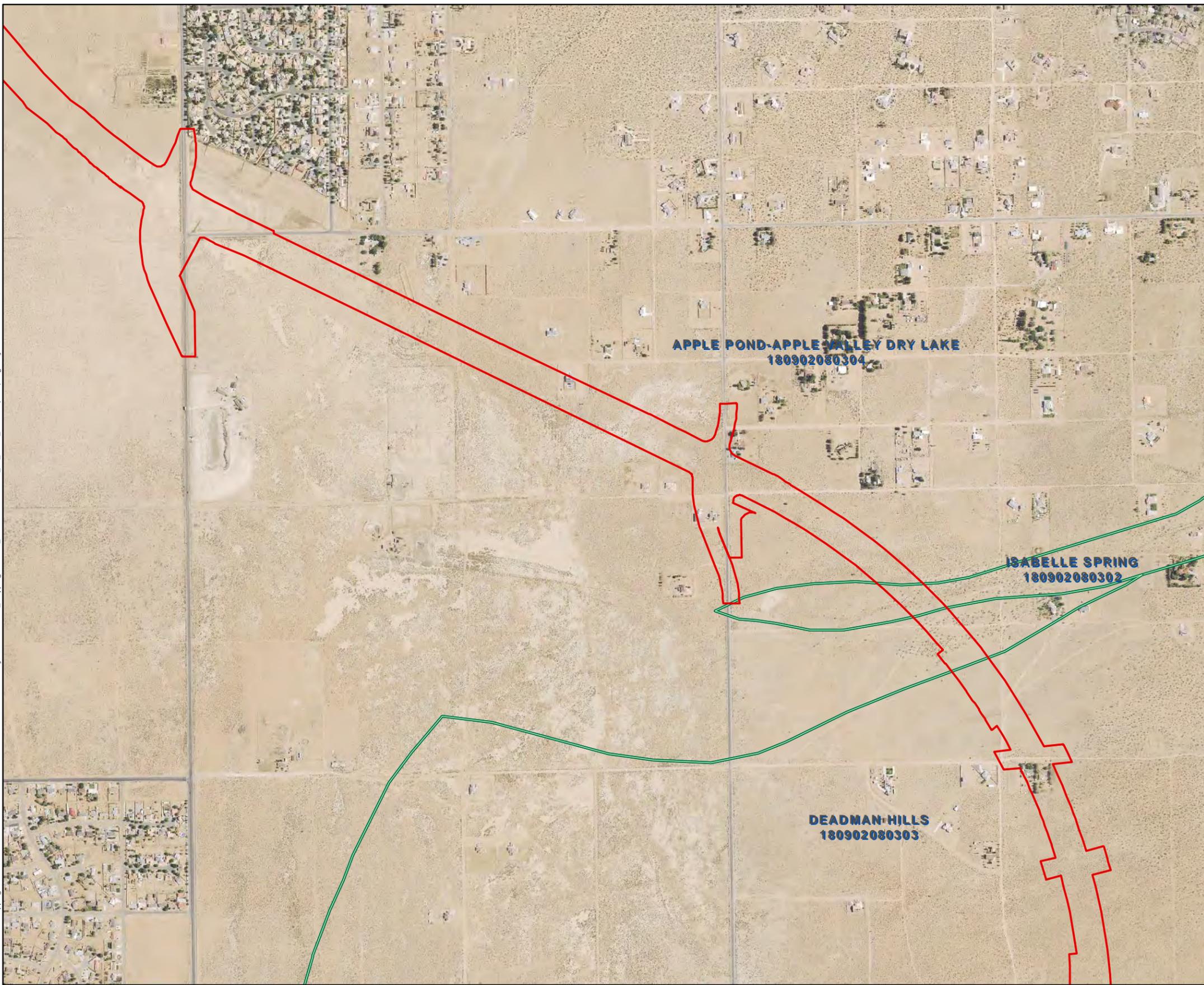
Summary Jurisdictional Delineation Map Sheet: 2 of 17

-  Biological Study Area
 -  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US
-  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters
-  Non-Jurisdictional

Source: ECORP, ICF, AMEC



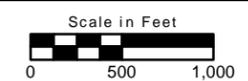
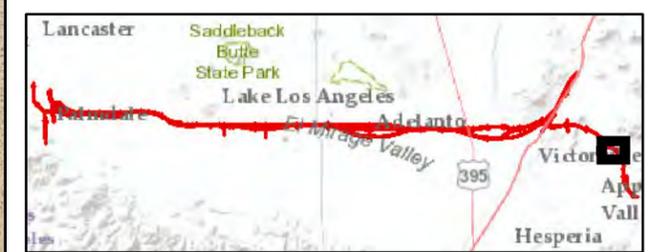
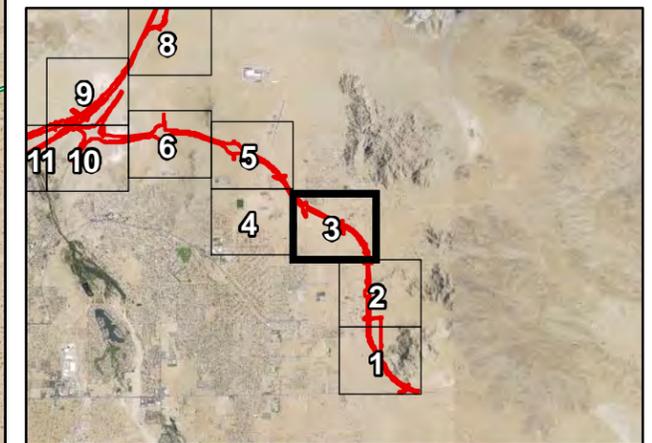
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Summary Jurisdictional Delineation Map Sheet: 3 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
 -  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC



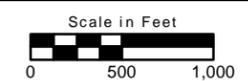
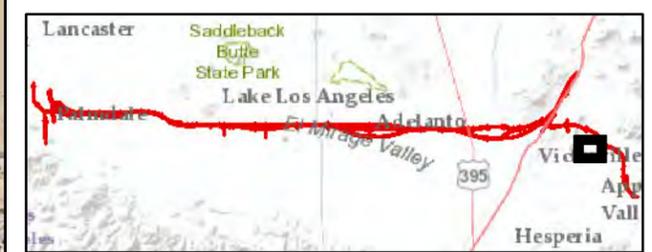
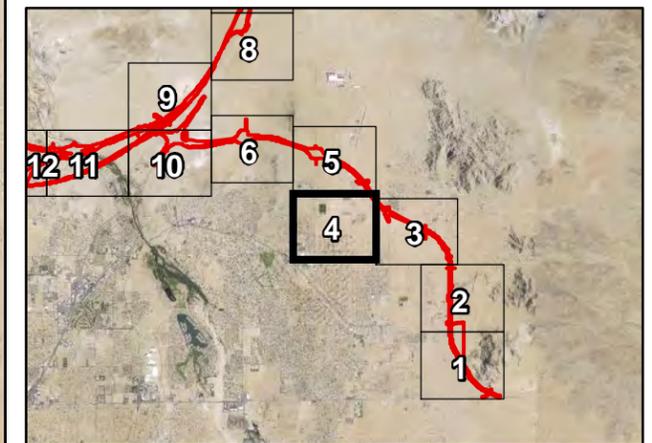
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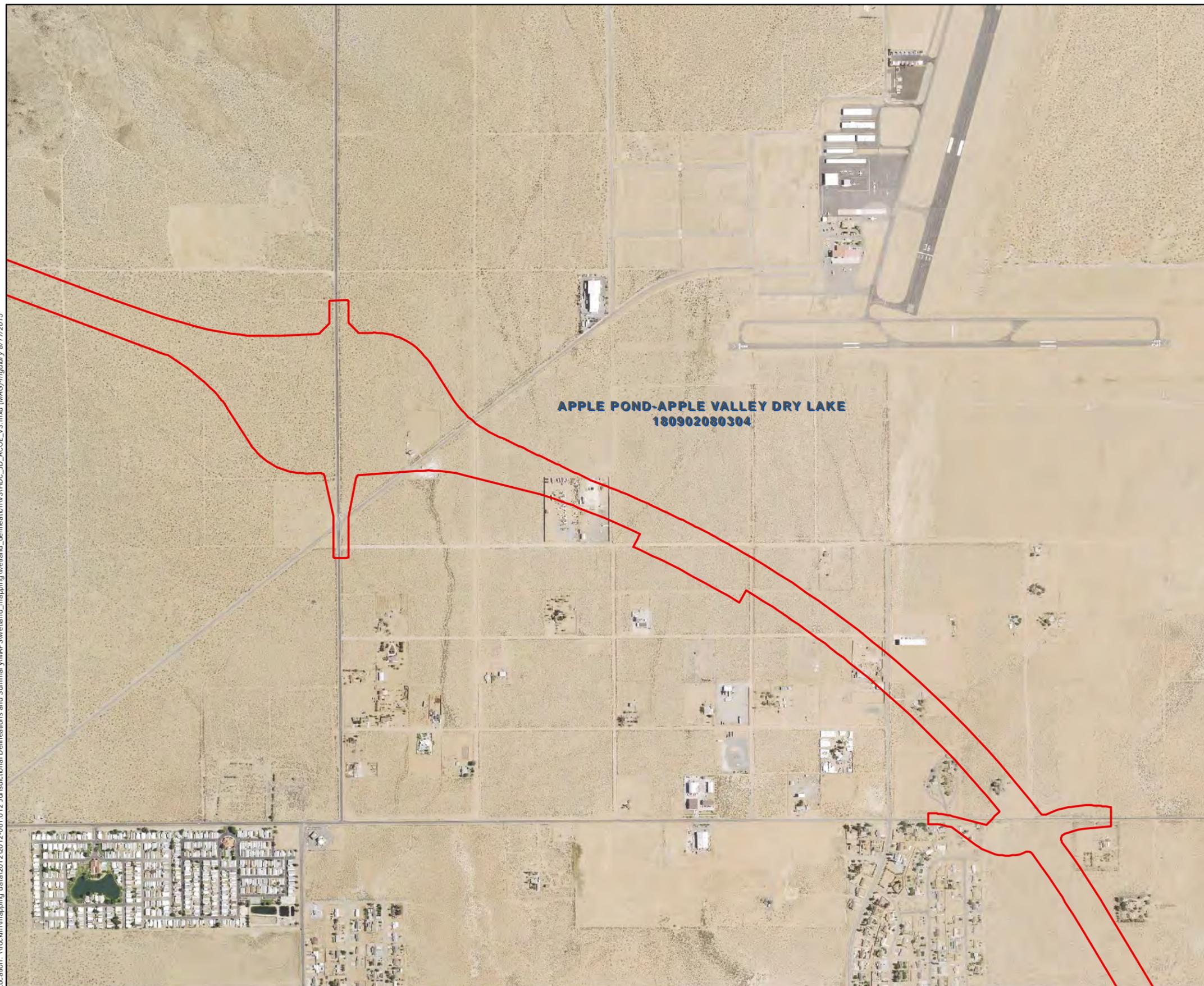
Summary Jurisdictional Delineation Map Sheet: 4 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
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 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC



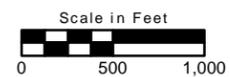
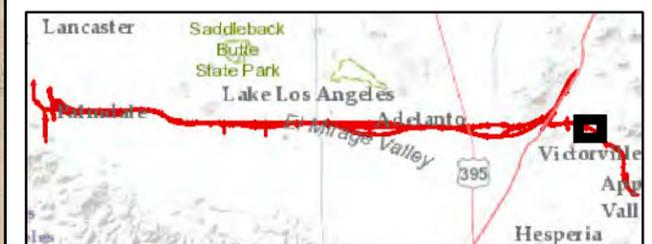
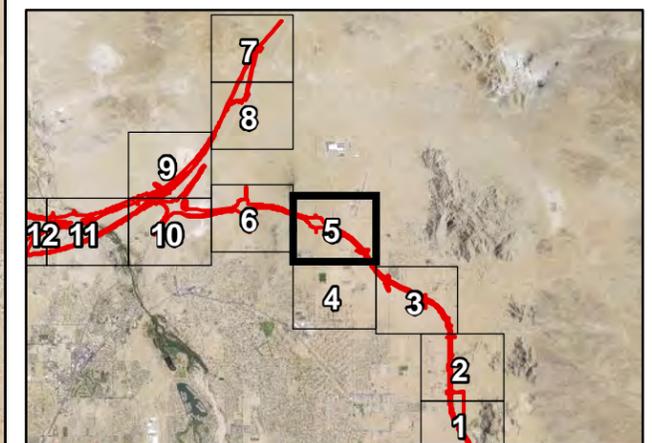
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Summary Jurisdictional Delineation Map Sheet: 5 of 17

-  Biological Study Area
 -  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US
-  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters
-  Non-Jurisdictional

Source: ECORP, ICF, AMEC

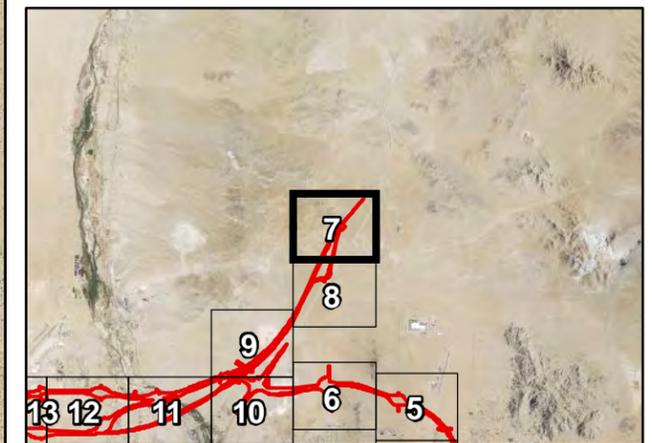


BELL MOUNTAIN WASH
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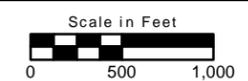
**Summary Jurisdictional
Delineation Map
Sheet: 7 of 17**

- Biological Study Area
- HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
- Ephemeral Stream
- Wetland
- Adjacent Waters
- Non-Jurisdictional Waters**
- Non-Jurisdictional

Source: ECORP, ICF, AMEC



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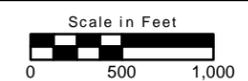
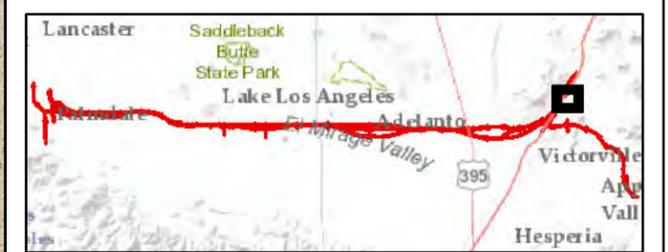
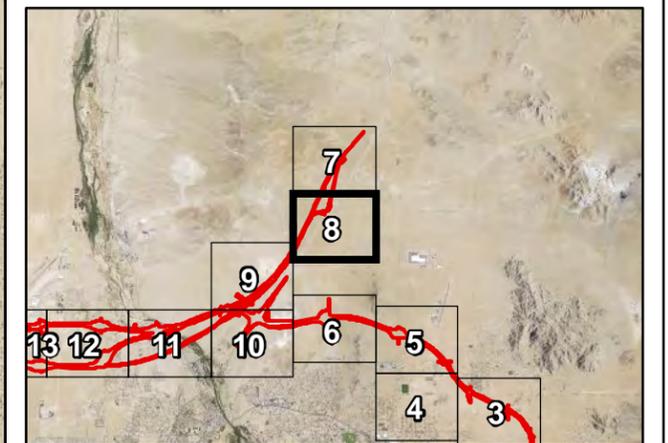
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Summary Jurisdictional Delineation Map Sheet: 8 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
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 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

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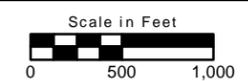
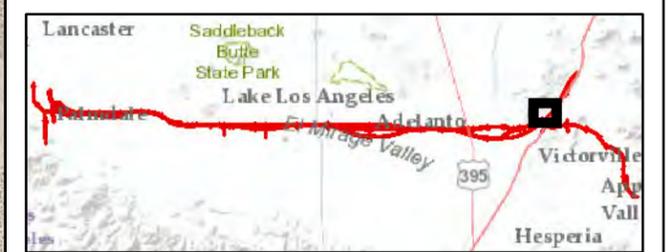
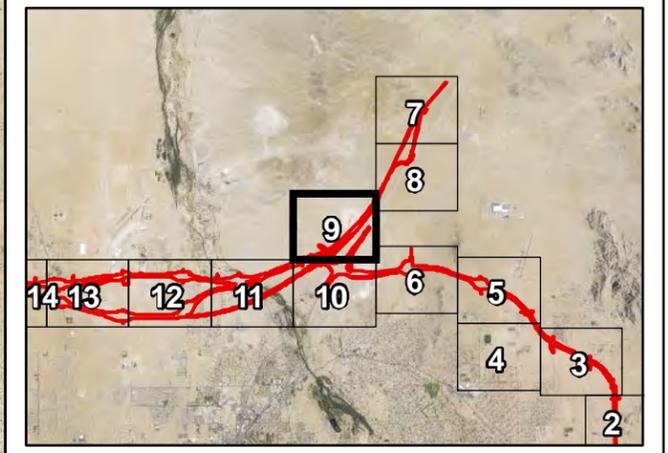
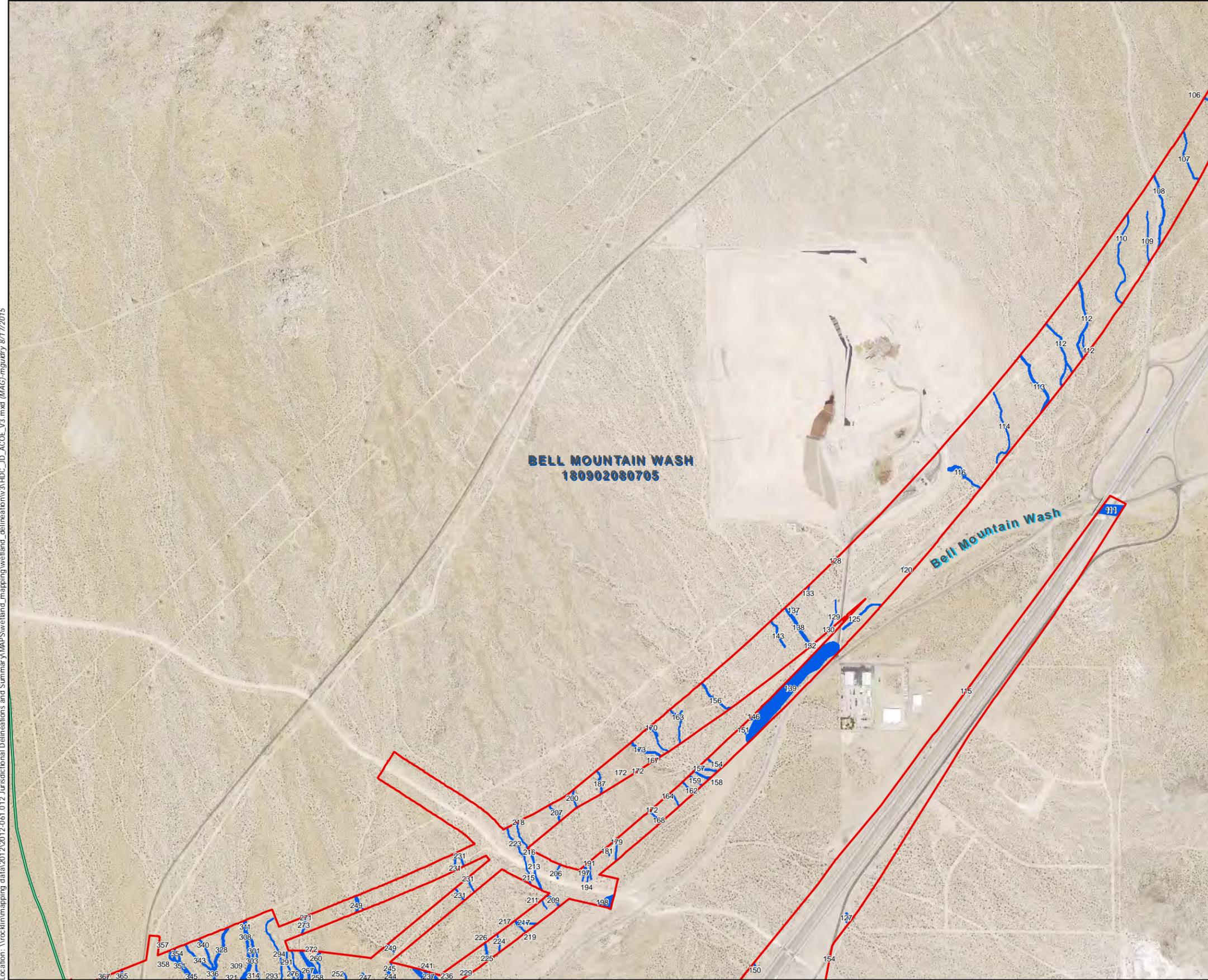


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Summary Jurisdictional Delineation Map Sheet: 9 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
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 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC

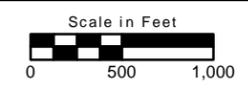
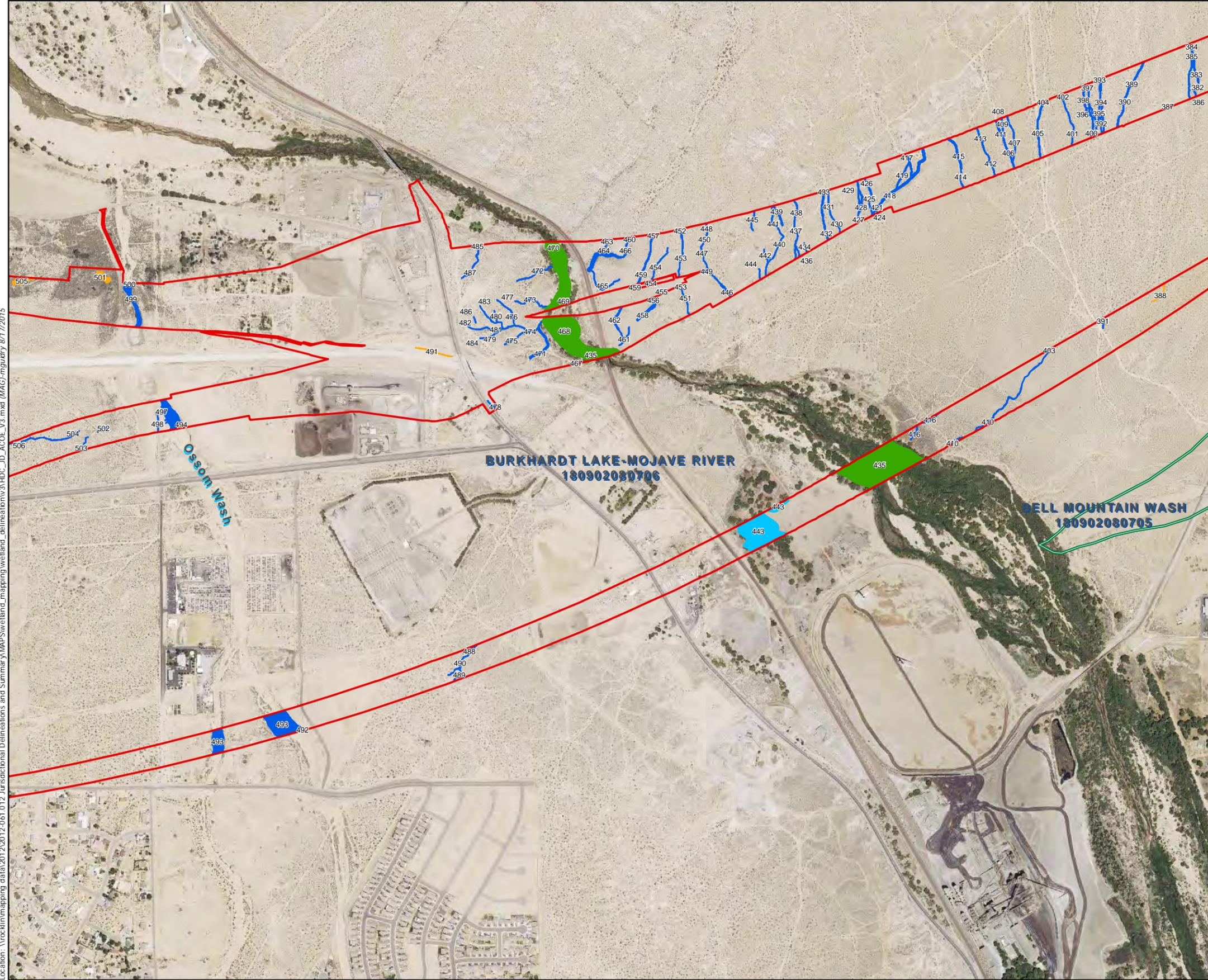
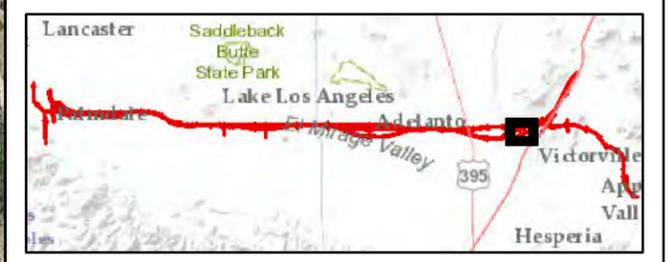
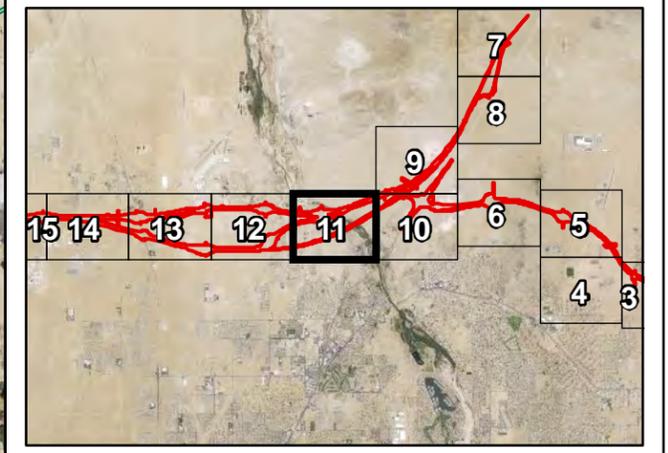


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Summary Jurisdictional Delineation Map Sheet: 11 of 17

- Biological Study Area
- HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
 - Ephemeral Stream
 - Wetland
 - Adjacent Waters
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 - Non-Jurisdictional

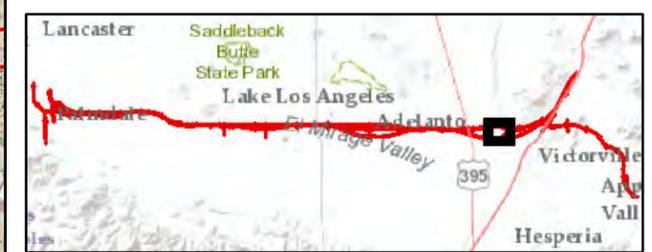
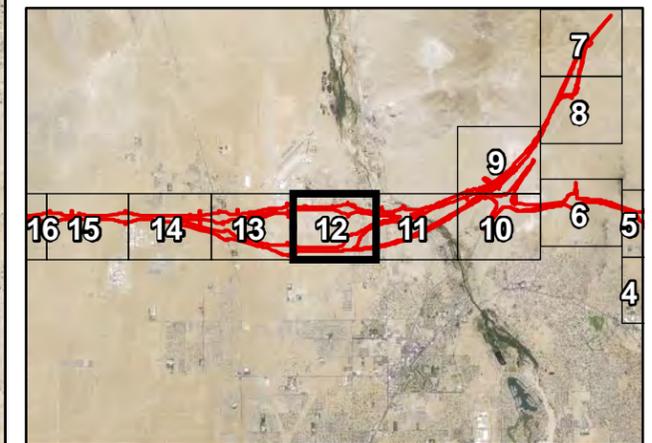
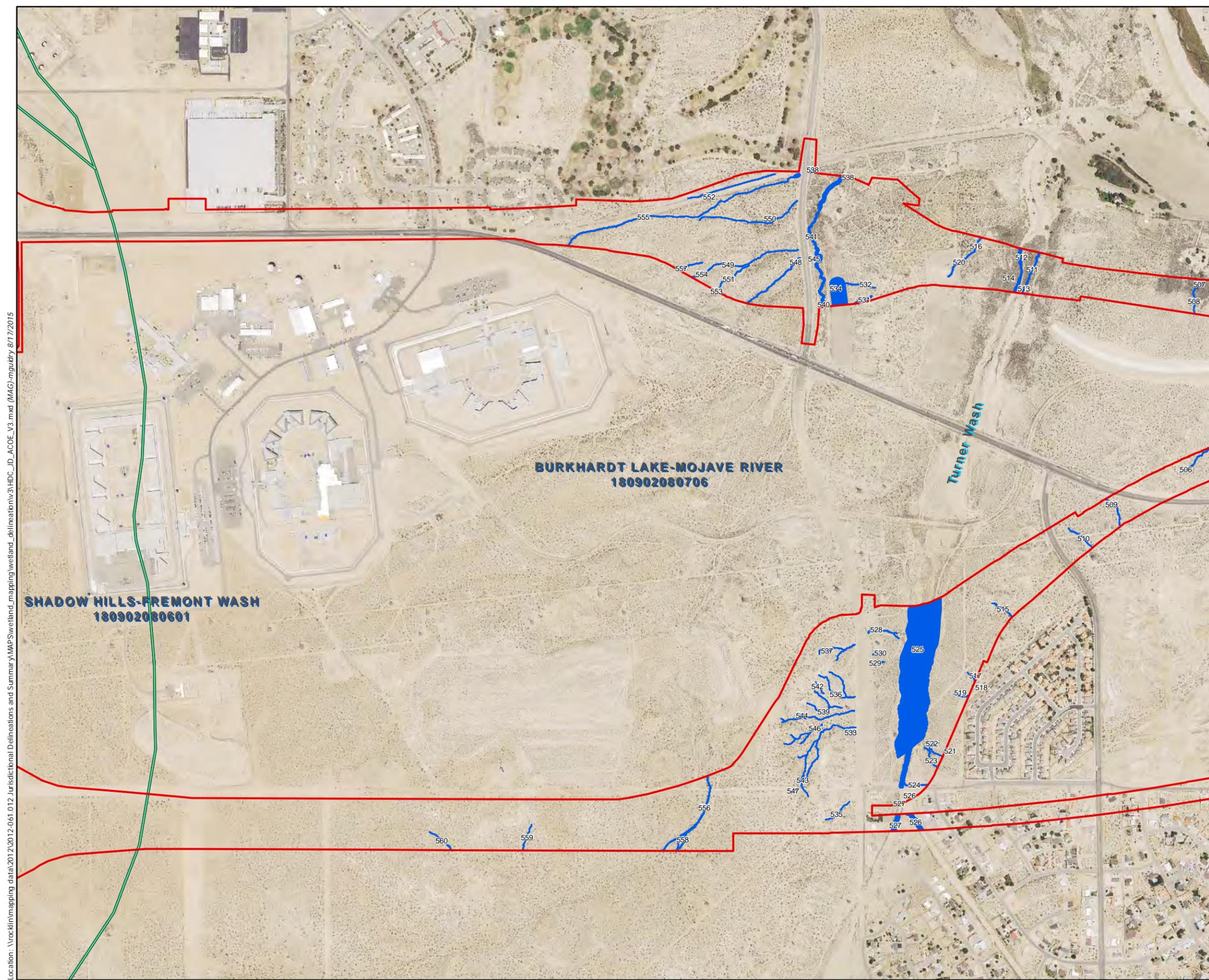
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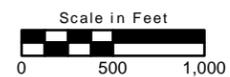
Summary Jurisdictional Delineation Map Sheet: 12 of 17

- Biological Study Area
- HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
- Ephemeral Stream
- Wetland
- Adjacent Waters
- Non-Jurisdictional Waters**
- Non-Jurisdictional

Source: ECORP, ICF, AMEC



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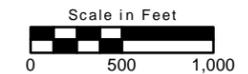
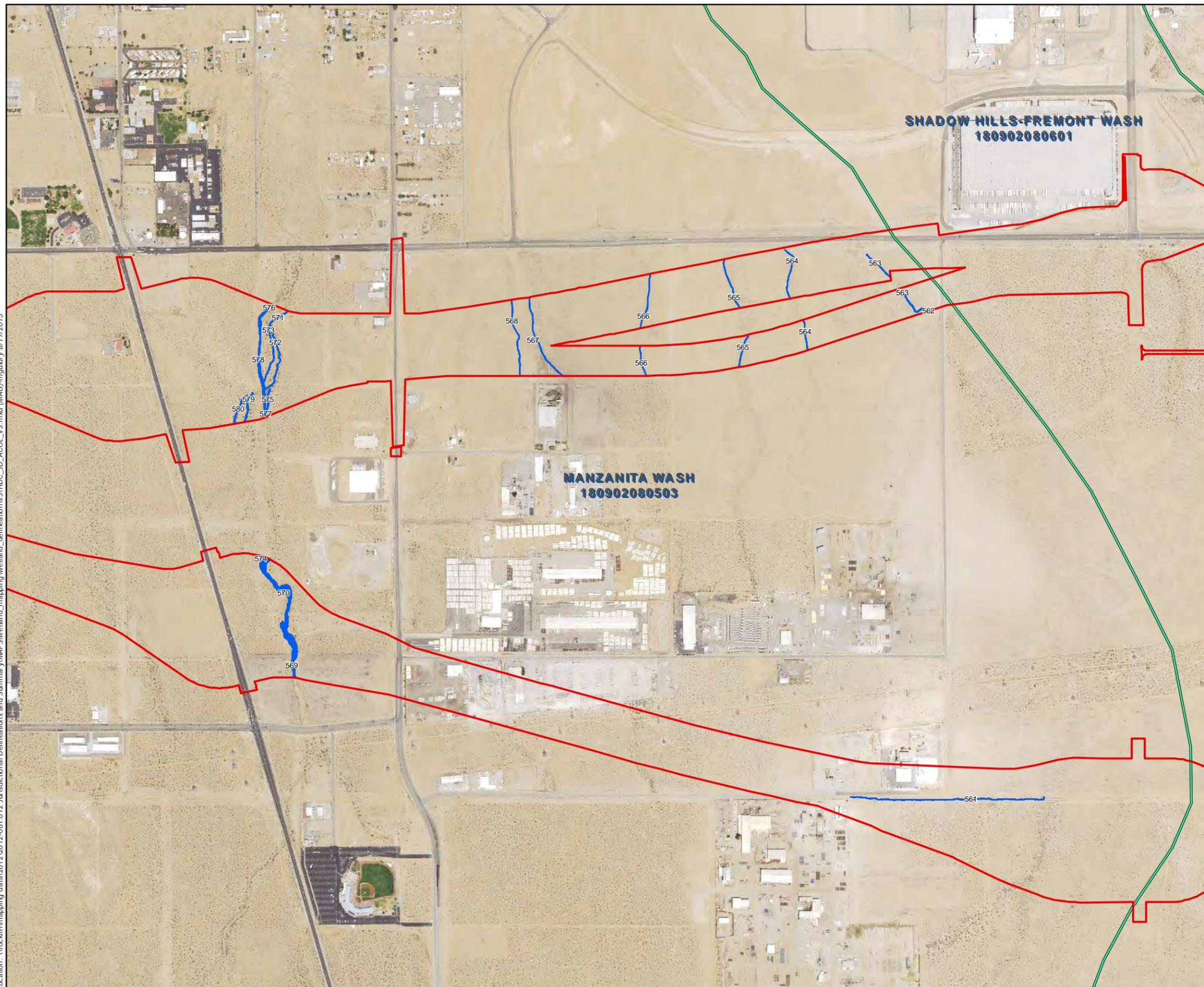
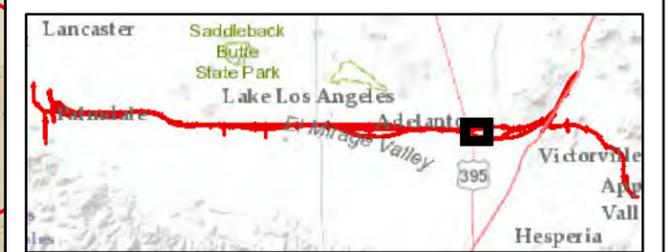
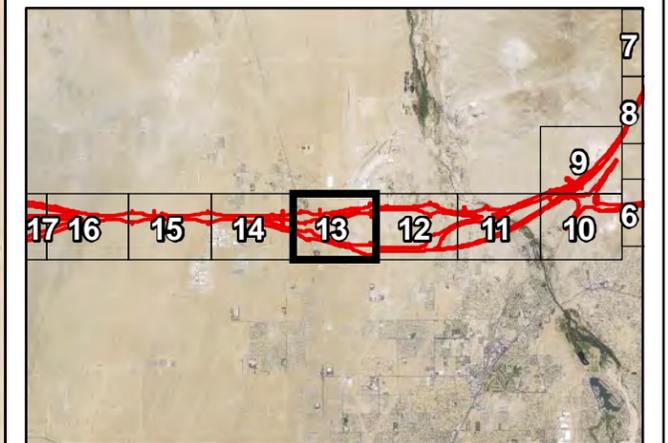


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Summary Jurisdictional Delineation Map Sheet: 13 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
 -  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC

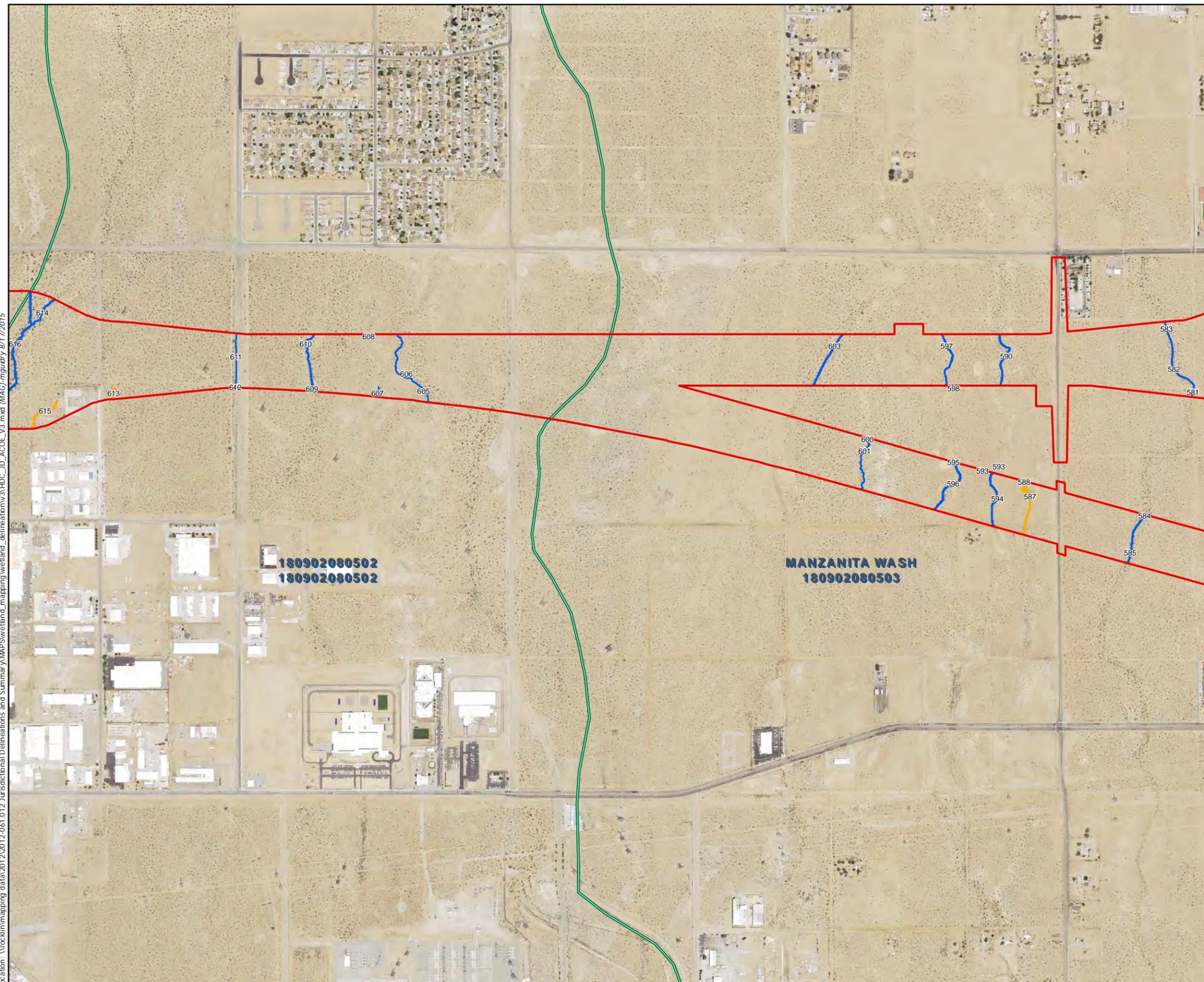
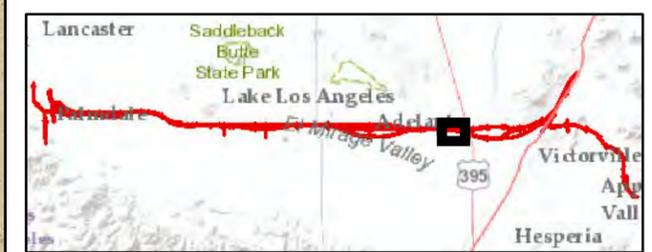
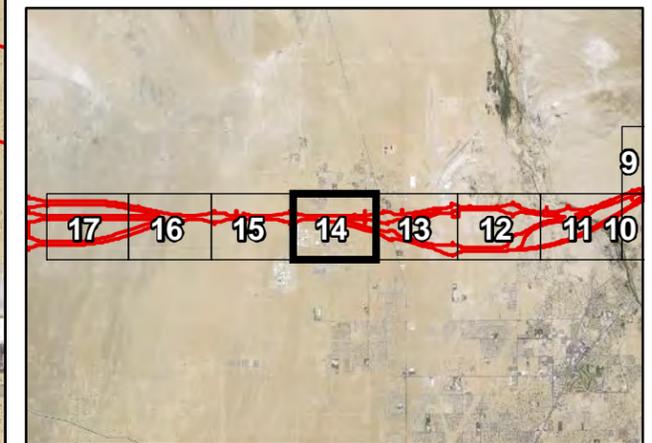


Summary Jurisdictional Delineation Map

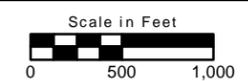
Sheet: 14 of 17

- Biological Study Area
 - HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US
- Ephemeral Stream
 - Wetland
 - Adjacent Waters
- Non-Jurisdictional Waters
- Non-Jurisdictional

Source: ECORP, ICF, AMEC

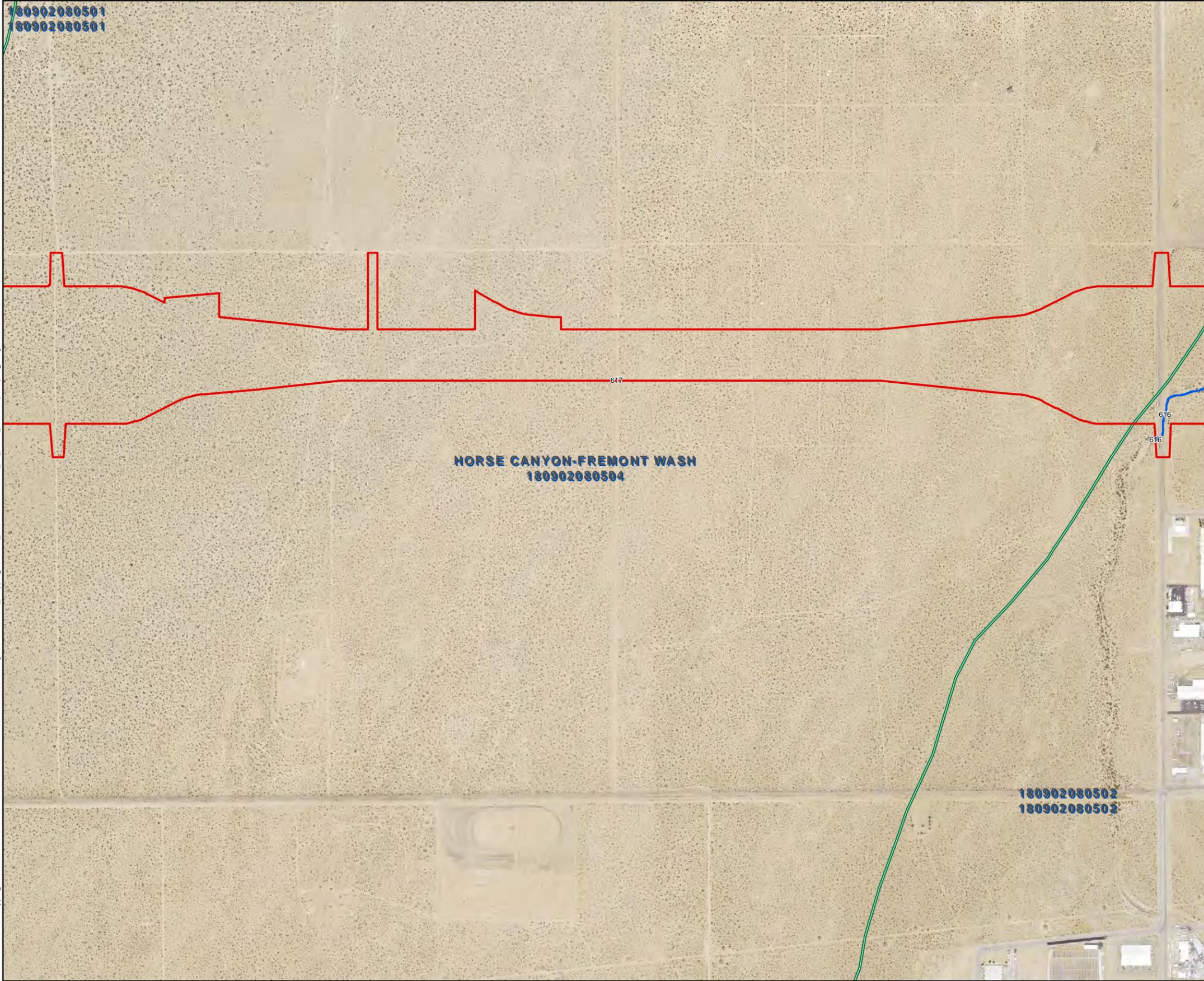


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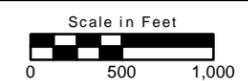
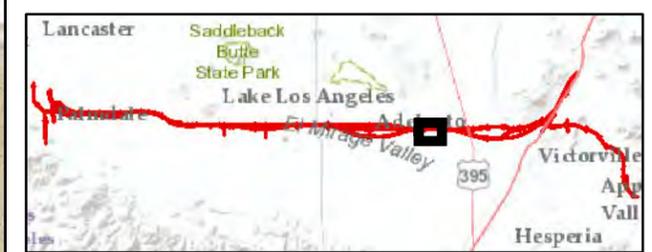
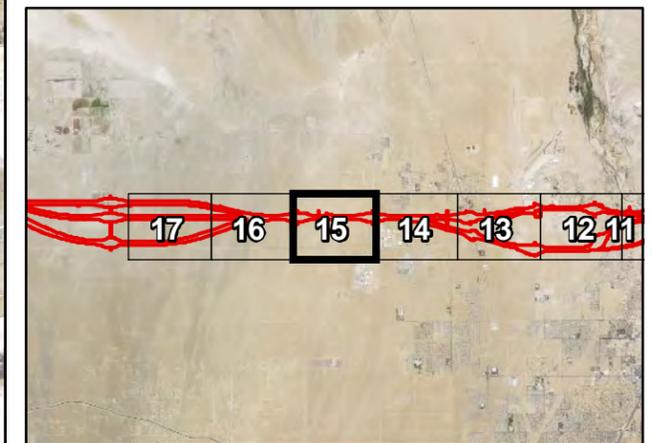
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Summary Jurisdictional Delineation Map Sheet: 15 of 17

-  Biological Study Area
-  HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
 -  Ephemeral Stream
 -  Wetland
 -  Adjacent Waters
- Non-Jurisdictional Waters**
 -  Non-Jurisdictional

Source: ECORP, ICF, AMEC

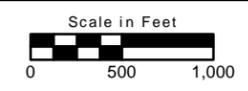
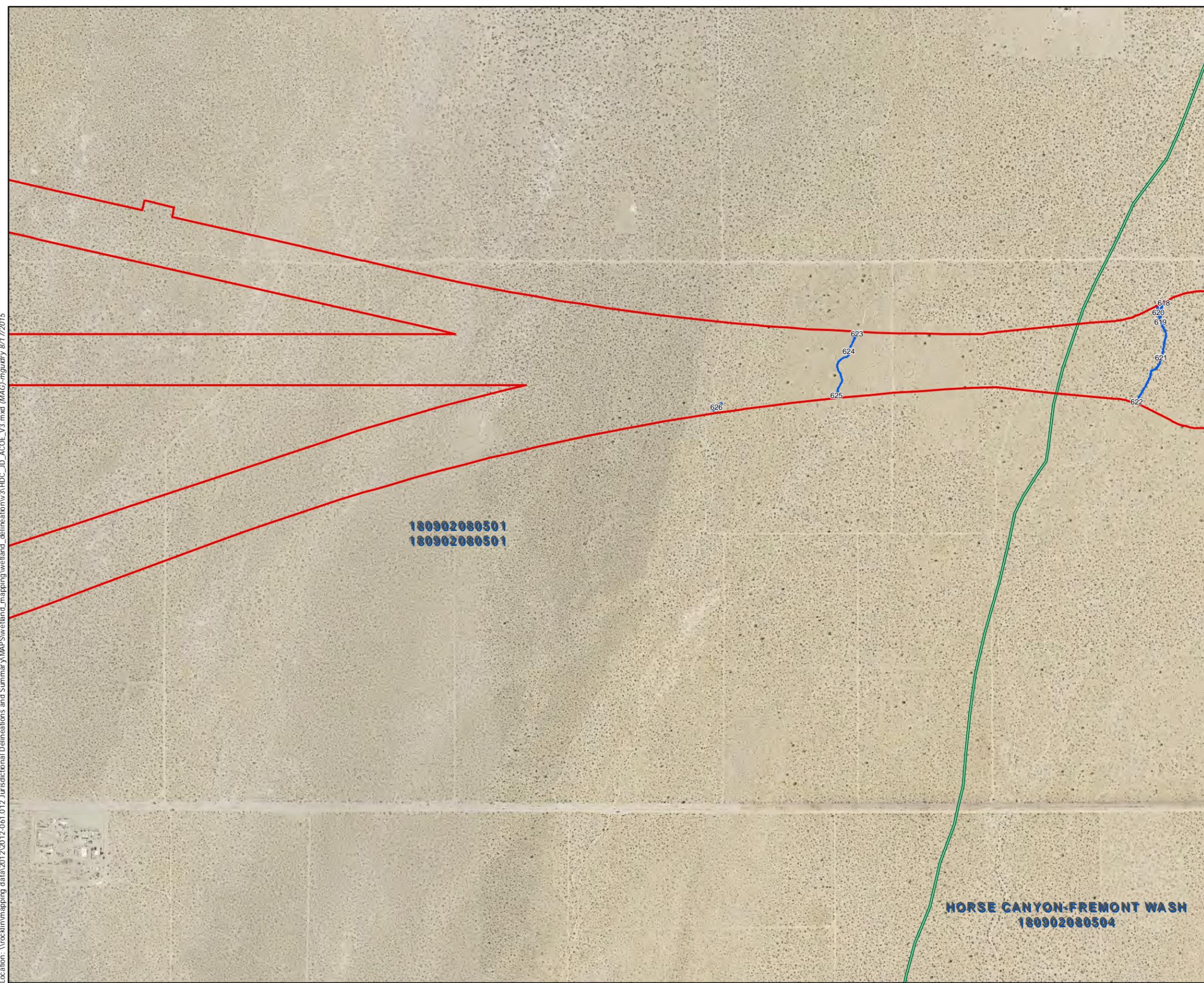
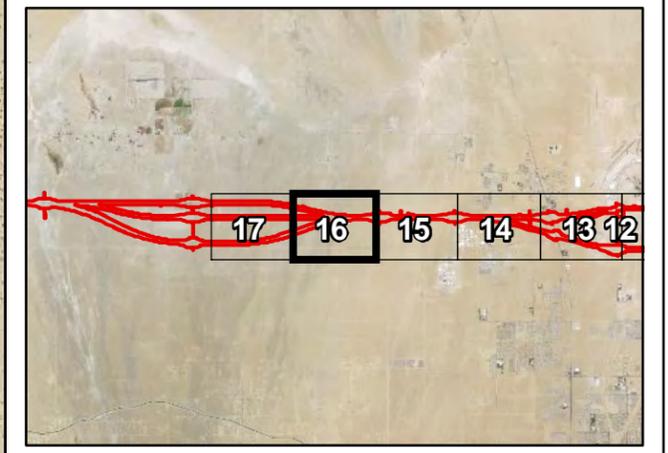


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Summary Jurisdictional Delineation Map Sheet: 16 of 17

- Biological Study Area
- HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
- Ephemeral Stream
- Wetland
- Adjacent Waters
- Non-Jurisdictional Waters**
- Non-Jurisdictional

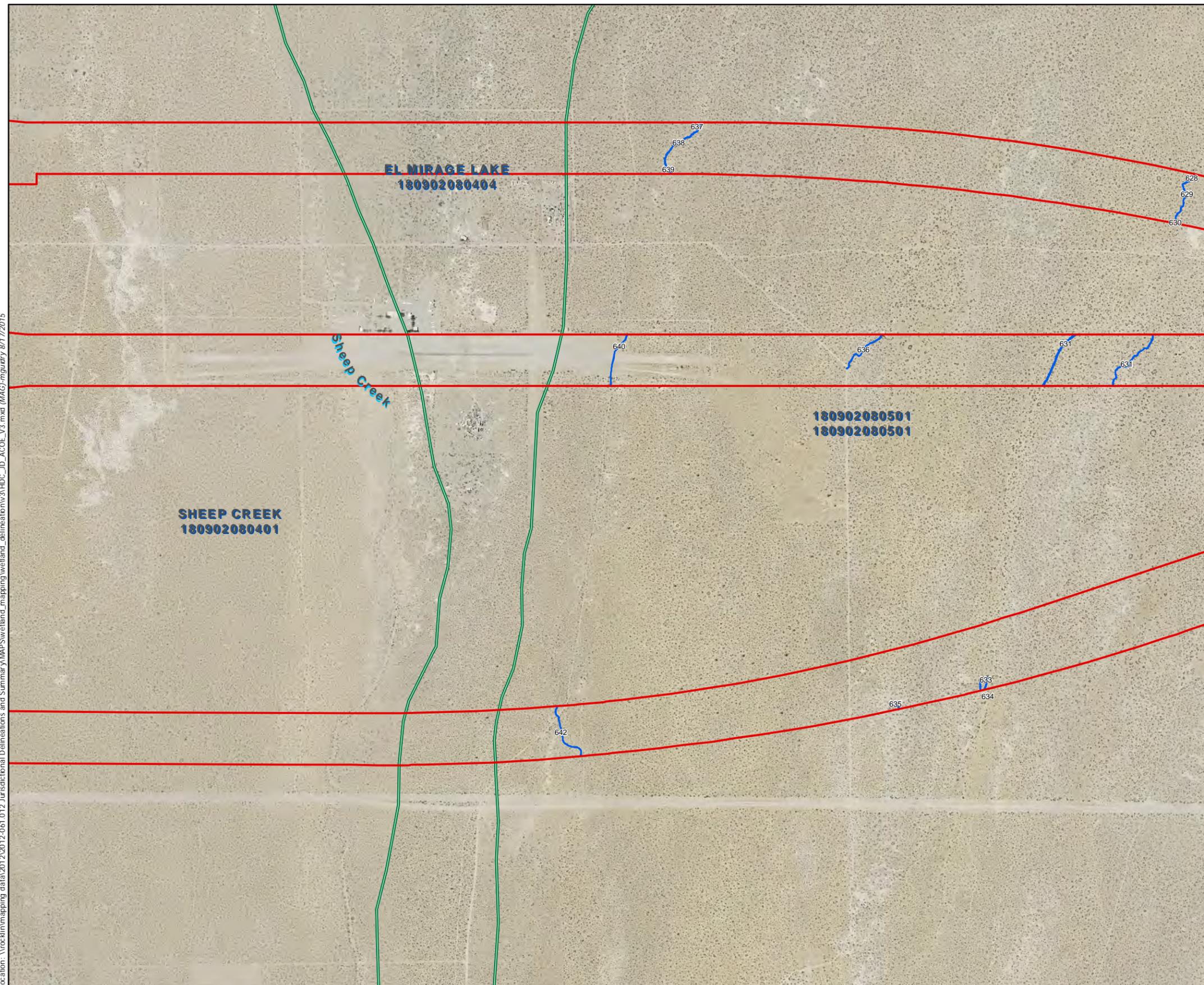
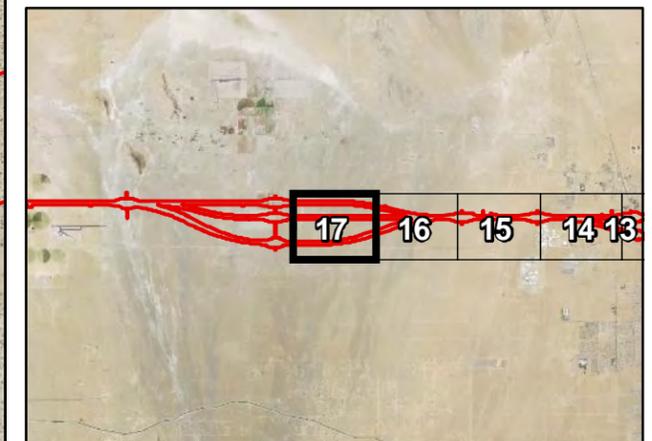
Source: ECORP, ICF, AMEC



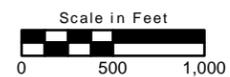
Summary Jurisdictional Delineation Map Sheet: 17 of 17

- Biological Study Area
- HUC 12 Watersheds (USGS Watershed Boundary Dataset)
- Waters of the US**
- Ephemeral Stream
- Wetland
- Adjacent Waters
- Non-Jurisdictional Waters**
- Non-Jurisdictional

Source: ECORP, ICF, AMEC



Location: \\rock\m\mapping_data\2012\061-012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\3\HDC_ID_ACOE_V3.mxd (MAG)mguidry 8/17/2015



Appendix C: USACE Jurisdictional Delineation Tables

Appendix C, Table 1. GIS Data by Feature ID (not all features were in the current BSA)

ACOE_Feat_ID	Type	Survey (Firm/Type/Date)	StreamWid	BankToBar	CanopyWid	CDFW_Buf	ACOE_Buff	Comment	GIS_Note	Agency	Acres	BUFF_DIST	ORIG_FID	HUC10_Name	HUC12_Name	Miles_TO_Mojave	Lat	Long
1	Ephemeral Stream	ECORP 2015								ACOE	0.003662			Bell Mountain Wash-Mojave River	Bell Mountain Wash	7.221626282	34.6468855	-117.2230265
2	Ephemeral Stream	ECORP 2015								ACOE	0.00286			Bell Mountain Wash-Mojave River	Bell Mountain Wash	7.165133953	34.6462587	-117.2236857
3	Ephemeral Stream	ECORP 2015								ACOE	0.007849			Bell Mountain Wash-Mojave River	Bell Mountain Wash	7.129523277	34.64586501	-117.2241054
4	Ephemeral Stream	ECORP 2015								ACOE	0.00113			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.941846371	34.64382276	-117.226261
5	Ephemeral Stream	ECORP 2015								ACOE	0.0022			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.93542099	34.64372558	-117.2263571
6	Ephemeral Stream	ECORP 2015								ACOE	0.002409			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.911035538	34.64350139	-117.2266221
7	Ephemeral Stream	ECORP 2015								ACOE	0.002177			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.904707909	34.6434294	-117.2266711
8	Ephemeral Stream	ECORP 2015								ACOE	0.00108			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.881023407	34.64312815	-117.2269979
9	Ephemeral Stream	ECORP 2015								ACOE	0.001256			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.861758709	34.64294086	-117.2271912
10	Ephemeral Stream	ECORP 2015								ACOE	0.001014			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.753639221	34.64175337	-117.2284807
11	Ephemeral Stream	ECORP 2015								ACOE	0.002384			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.749641895	34.64171559	-117.2284958
12	Ephemeral Stream	ECORP 2015								ACOE	0.003186			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.734451294	34.64155382	-117.2286918
13	Ephemeral Stream	ECORP 2015								ACOE	0.002161			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.721033096	34.64139035	-117.2288617
14	Ephemeral Stream	ECORP 2015								ACOE	0.001185			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.599413395	34.6400783	-117.2302388
15	Ephemeral Stream	ECORP 2015								ACOE	0.00265			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.587695599	34.6399749	-117.230366
16	Ephemeral Stream	ECORP 2015								ACOE	0.001091			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.580245972	34.63985419	-117.2304964
17	Ephemeral Stream	ECORP 2015								ACOE	0.002643			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.544812202	34.63950453	-117.2308481
18	Ephemeral Stream	ECORP 2015								ACOE	0.001086			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.541700363	34.63941597	-117.2309223
19	Ephemeral Stream	ECORP 2015								ACOE	0.001192			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.531515598	34.63933067	-117.2310661
20	Ephemeral Stream	ECORP 2015								ACOE	0.001099			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.468779564	34.6386362	-117.2317677
21	Ephemeral Stream	ECORP 2015								ACOE	0.001365			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.45587635	34.6385264	-117.2318797
22	Ephemeral Stream	ECORP 2015								ACOE	0.001086			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.423313141	34.63813315	-117.2322971
23	Ephemeral Stream	ECORP 2015								ACOE	0.00255			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.409711361	34.63803672	-117.2324107
24	Ephemeral Stream	ECORP supplemental 2014	5	5		2.5	2.5			ACOE	0.052292	2.5	383	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.328842163	34.63660279	-117.2324406
25	Ephemeral Stream	ECORP supplemental 2014	5	7		3.5	2.5			ACOE	0.051092	2.5	382	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.313531876	34.63636822	-117.2326203
26	Ephemeral Stream	ECORP 2015								ACOE	0.001197			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.386695385	34.63777377	-117.2326859
27	Ephemeral Stream	ECORP supplemental 2014	4	4		2	2			ACOE	0.023318	2	384	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.259485722	34.63563573	-117.2328877
28	Ephemeral Stream	ECORP supplemental 2014	4	4		2	2			ACOE	0.034957	2	380	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.27693367	34.63596635	-117.2329368
29	Ephemeral Stream	ECORP 2015								ACOE	0.002367			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.354651928	34.6374408	-117.2330502
30	Ephemeral Stream	ECORP supplemental 2014	10	10		5	5			ACOE	0.080829	5	377	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.232004166	34.63552706	-117.2332089
31	Ephemeral Stream	ECORP supplemental 2014	4	4		2	2			ACOE	0.012108	2	381	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.287630558	34.63624682	-117.2332151
32	Ephemeral Stream	ECORP supplemental 2014	4	4		2	2			ACOE	0.024725	2	378	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.228473186	34.63540552	-117.2332489
33	Ephemeral Stream	ECORP supplemental 2014								ACOE	0.024491			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.321875572	34.63705838	-117.2334239
34	Ephemeral Stream	ECORP supplemental 2014	3	3		1.5	1.5			ACOE	0.009861	1.5	379	Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.244897842	34.63563085	-117.2334947
35	Ephemeral Stream	ECORP supplemental 2014								ACOE	0.026908			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.308496952	34.63687148	-117.2335777
36	Ephemeral Stream	ECORP supplemental 2014								ACOE	0.029363			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.25741148	34.63632033	-117.2340144
37	Ephemeral Stream	ECORP 2013								ACOE	0.014081			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.269050598	34.63656207	-117.2340641
38	Ephemeral Stream	ECORP 2013								ACOE	0.03072			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.220863342	34.63594035	-117.2344824
39	Ephemeral Stream	ECORP 2013								ACOE	0.032059			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.191490173	34.63557733	-117.2347288
40	Ephemeral Stream	AMEC	1							ACOE	0.012734			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.685029984	34.57469154	-117.2356333
41	Ephemeral Stream	ECORP 2013								ACOE	0.080489			Bell Mountain Wash-Mojave River	Bell Mountain Wash	6.041860104	34.63421665	-117.2352888
42	Ephemeral Stream	ECORP 2013								ACOE	0.013881			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.960606098	34.63202915	-117.2358399
43	Ephemeral Stream	ECORP 2013								ACOE	0.005328			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.858679295	34.63013443	-117.2359533
44	Ephemeral Stream	ECORP 2013								ACOE	0.006769			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.727804661	34.62855498	-117.2362697
45	Ephemeral Stream	ECORP 2013								ACOE	0.007844			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.825880051	34.63031427	-117.2366663
46	Ephemeral Stream	ECORP 2013								ACOE	0.052014			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.88684988	34.63213411	-117.2367699
47	Ephemeral Stream	ECORP 2013								ACOE	0.007539			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.853405476	34.63126713	-117.2369857
48	Ephemeral Stream	ECORP 2013								ACOE	0.046972			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.595088482	34.62811767	-117.2381148
49	Ephemeral Stream	ECORP 2013								ACOE	0.002727			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.761604786	34.6299557	-117.2381137
50	Ephemeral Stream	ECORP 2013								ACOE	0.015699			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.805006981	34.63076056	-117.2382584
51	Ephemeral Stream	ECORP supplemental 2014	3	3		1.5	1.5			ACOE	0.00218	1.5	402	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.348949432	34.62185818	-117.2383417
52	Ephemeral Stream	ECORP supplemental 2014	5	5		2.5	2.5			ACOE	0.005122	2.5	399	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.347856045	34.62183319	-117.2383614
53	Ephemeral Stream	ECORP supplemental 2014	2	3		1.5	1			ACOE	0.002605	1	400	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.341002464	34.62172615	-117.2384141
54	Ephemeral Stream	ECORP supplemental 2014	3	3		1.5	1.5			ACOE	0.004862	1.5	401	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.330155849	34.62157569	-117.2384857
55	Ephemeral Stream	ECORP supplemental 2014	3	3		1.5	1.5			ACOE	0.003374	1.5	398	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.28840065	34.62086829	-117.2386524
56	Ephemeral Stream	ECORP supplemental 2014	3	3		1.5	1.5			ACOE	0.010408	1.5	397	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.284038544	34.62095963	-117.2387772
57	Ephemeral Stream	ECORP 2013								ACOE	0.032394			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.421700478	34.62581358	-117.2387941
58	Ephemeral Stream	ECORP supplemental 2014	2	3		1.5	1			ACOE	0.006276	1	396	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.271165371	34.6208064	-117.2388502

59	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.002624	1	448	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.52357173	34.57593172	-117.2395114
60	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.048026	2.5	393	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.140568733	34.618636	-117.239144
61	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	ACOE	0.022886	3.5	395	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.184975624	34.61939241	-117.2392552
62	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.031474	2	392	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.130138874	34.61832737	-117.2392768
63	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.016494	2.5	394	Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.183644295	34.61932719	-117.2392774
64	Ephemeral Stream	ECORP supplemental 2014	3	5	2.5	1.5	ACOE	0.015772	1.5	449	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.586245775	34.57874309	-117.2399202
65	Ephemeral Stream	ECORP supplemental 2014	3	5	2.5	1.5	ACOE	0.022165	1.5	446	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.530915737	34.57724134	-117.239978
66	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.016637	1	447	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.519797087	34.57704154	-117.24023
67	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.016882	1	445	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.492774487	34.57702714	-117.2407431
68	Ephemeral Stream	ECORP supplemental 2014	12	12	6	6	ACOE	0.043046	6	390	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.990121365	34.61642801	-117.2405195
69	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.011875	1	444	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.439059019	34.57641723	-117.2411932
70	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.007017	1	391	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.97216177	34.61627372	-117.2408411
71	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.0148	2.5	388	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.95207119	34.61609398	-117.2410893
72	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.019996	5	387	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.9502635	34.6160466	-117.2411467
73	Ephemeral Stream	ECORP 2013					ACOE	0.024073			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.487239838	34.62666637	-117.2411431
74	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.031014	7.5	389	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.942109585	34.61603789	-117.241264
75	Ephemeral Stream	ECORP supplemental 2014	3	5	2.5	1.5	ACOE	0.025197	1.5	443	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.430980444	34.57669458	-117.2416612
76	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.025313	7.5	386	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.935601711	34.61599249	-117.2413296
77	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.02158	7.5	385	Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.94954586	34.61624461	-117.2413633
78	Ephemeral Stream	ECORP supplemental 2014	1	2	1	0.5	ACOE	0.002898	0.5	442	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.393787384	34.57633014	-117.2422015
79	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.020411	1	441	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.380098104	34.57664573	-117.2424357
80	Ephemeral Stream	ECORP 2013					ACOE	0.058906			Bell Mountain Wash-Mojave River	Bell Mountain Wash	5.010288715	34.62009704	-117.2426915
81	Ephemeral Stream	ECORP supplemental 2014	1	2	1	0.5	ACOE	0.009617	0.5	440	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.32143259	34.57615971	-117.2434024
82	Ephemeral Stream	ECORP 2013					ACOE	0.031588			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.950252056	34.61884216	-117.2433284
83	Ephemeral Stream	ECORP 2013					ACOE	0.024849			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.849683762	34.61608967	-117.2434641
84	Ephemeral Stream	ECORP supplemental 2014	2	3	1.5	1	ACOE	0.022185	1	439	Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.274203777	34.57575968	-117.2438676
85	Ephemeral Stream	ECORP 2013					ACOE	0.106455			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.799408913	34.61752635	-117.2449743
86	Ephemeral Stream	AMEC	6				ACOE	0.016922			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.068256617	34.57238059	-117.2459456
87	Ephemeral Stream	ECORP 2013					ACOE	0.008016			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.711340427	34.61516558	-117.2456343
88	Ephemeral Stream	ECORP 2013					ACOE	0.06636			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.722364426	34.61648884	-117.2459405
89	Ephemeral Stream	AMEC	8				ACOE	0.074008			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.994215965	34.57263851	-117.2468843
90	Ephemeral Stream	ECORP 2013					ACOE	0.0038			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.743125439	34.61653865	-117.2469285
91	Ephemeral Stream	ECORP 2013					ACOE	0.05778			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.613529205	34.6151038	-117.2472279
92	Ephemeral Stream	ECORP 2013					ACOE	0.028034			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.570152283	34.61446064	-117.2480229
93	Ephemeral Stream	ECORP 2013					ACOE	0.004042			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.540120125	34.61347318	-117.2481152
94	Ephemeral Stream	ECORP 2013					ACOE	0.044062			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.466608047	34.61279577	-117.2488963
95	Ephemeral Stream	ECORP 2013					ACOE	0.011577			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.168519974	34.60884972	-117.2515243
96	Ephemeral Stream	ECORP 2013					ACOE	0.007108			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.161036015	34.6087906	-117.2518928
97	Ephemeral Stream	ECORP 2013					ACOE	0.076825			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.064536572	34.60781796	-117.2522298
98	Ephemeral Stream	AMEC	3				ACOE	0.051296			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.686611652	34.57289161	-117.2527641
99	Ephemeral Stream	ECORP 2013					ACOE	0.005407			Bell Mountain Wash-Mojave River	Bell Mountain Wash	4.041604996	34.60702871	-117.2526898
100	Ephemeral Stream	AMEC	1				ACOE	0.004884			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.685633421	34.5723743	-117.2534424
101	Ephemeral Stream	ECORP 2013					ACOE	0.047053			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.975304127	34.60647195	-117.2532154
102	Ephemeral Stream	ECORP 2013					ACOE	0.055274			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.906152487	34.60554727	-117.2535774
103	Ephemeral Stream	AMEC	1				ACOE	0.005486			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.568381786	34.57214171	-117.2556588
104	Ephemeral Stream	AMEC	3				ACOE	0.047652			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.54920125	34.57263869	-117.2560534
105	Ephemeral Stream	AMEC	1				ACOE	0.007428			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.54474473	34.57253262	-117.2563877
106	Ephemeral Stream	ECORP 2013					ACOE	0.171116			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.547939301	34.60105443	-117.2564416
107	Ephemeral Stream	ECORP 2013					ACOE	0.049942			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.491584778	34.59968695	-117.2572339
108	Ephemeral Stream	ECORP 2013					ACOE	0.153258			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.326916695	34.59838759	-117.2583334
109	Ephemeral Stream	ECORP 2013					ACOE	0.034504			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.323346615	34.59758391	-117.2586391
110	Ephemeral Stream	ECORP 2013					ACOE	0.135538			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.237411737	34.59730139	-117.2595059
111	Ephemeral Stream	AMEC	90				ACOE	0.414257			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.946434259	34.5903529	-117.2600474
112	Ephemeral Stream	ECORP 2013					ACOE	0.331592			Bell Mountain Wash-Mojave River	Bell Mountain Wash	3.001139879	34.59517383	-117.261202
113	Ephemeral Stream	ECORP 2013					ACOE	0.235317			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.981477499	34.59389388	-117.2624682
114	Ephemeral Stream	ECORP 2013					ACOE	0.066124			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.871974945	34.59266981	-117.2634557
115	Ephemeral Stream	AMEC	2				ACOE	0.00032			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.563111544	34.58551536	-117.2646603
116	Ephemeral Stream	ECORP 2013					ACOE	0.185316			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.794368267	34.59132768	-117.2647385
117	Ephemeral Stream	ECORP supplemental 2014	1	2	1	0.5	ACOE	0.00824	0.5	438	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.066454887	34.57313551	-117.2658411
118	Ephemeral Stream	ECORP supplemental 2014	2	3	1.5	1	ACOE	0.019661	1	437	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.043970823	34.57306003	-117.2660505
119	Ephemeral Stream	ECORP supplemental 2014	3	5	2.5	1.5	ACOE	0.022407	1.5	436	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.034150124	34.5729445	-117.2663883

120	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.009778	2.5	403	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.615238667	34.5887875	-117.2665636
121	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.010463	1.5	434	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.027438879	34.57342507	-117.2668941
122	Ephemeral Stream	ECORP supplemental 2014	3	5	2.5	1.5	ACOE	0.015356	1.5	433	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.012899637	34.5733879	-117.2670969
123	Ephemeral Stream	ECORP supplemental 2014	1	2	1	0.5	ACOE	0.008149	0.5	435	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.988350868	34.57330169	-117.2673923
124	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.013078	1.5	376	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.897179008	34.57096485	-117.2679456
125	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.108174	5	404	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.45534277	34.58757433	-117.268068
126	Ephemeral Stream	AMEC	5				ACOE	0.291506			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.743496537	34.5722937	-117.2684204
127	Ephemeral Stream	AMEC	12				ACOE	0.024105			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.136616468	34.57946178	-117.2685879
128	Ephemeral Stream	ECORP 2013					ACOE	0.015697			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.521721601	34.58928606	-117.2688757
129	Ephemeral Stream	ECORP 2013					ACOE	0.006186			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.442424774	34.58761678	-117.2689288
130	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.002197	1.5	405	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.433996201	34.58719589	-117.2691076
132	Ephemeral Stream	ECORP supplemental 2014	16	20	10	8	ACOE	0.005232	8	406	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.388831854	34.58676005	-117.2697269
133	Ephemeral Stream	ECORP 2013					ACOE	0.010438			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.445995092	34.58856357	-117.2697732
134	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.001217	2	430	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.981891394	34.57678143	-117.2699079
135	Ephemeral Stream	AMEC	3				ACOE	0.00531			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.974230766	34.57683682	-117.2700291
136	Ephemeral Stream	AMEC	3				ACOE	0.094101			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.745779037	34.57248299	-117.2702396
137	Ephemeral Stream	ECORP 2013					ACOE	0.004421			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.406921387	34.58769279	-117.2702319
138	Ephemeral Stream	ECORP 2013					ACOE	0.183794			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.388850927	34.58743224	-117.2702592
139	Ephemeral Stream	ECORP supplemental 2014	120	120	60	60	ACOE	3.264184	60	407	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.187307358	34.58558283	-117.2704153
140	Ephemeral Stream	AMEC	10				ACOE	0.079082			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.960269332	34.57733124	-117.2705383
141	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	ACOE	0.001144	3.5	431	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.905404091	34.57546401	-117.2705633
142	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.001802	5	432	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.893208146	34.57524517	-117.2706615
143	Ephemeral Stream	ECORP 2013					ACOE	0.062588			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.35182786	34.58732799	-117.2709162
144	Ephemeral Stream	AMEC	6				ACOE	0.079313			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.847118855	34.57581194	-117.2713732
145	Ephemeral Stream	AMEC	6				ACOE	0.080784			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.840452194	34.57558586	-117.2714076
146	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.002081	2	410	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.226227522	34.58489116	-117.271588
147	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	ACOE	0.00502	3.5	409	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.216747046	34.58480683	-117.2716835
148	Ephemeral Stream	AMEC	2				ACOE	0.049759			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.707516074	34.57323502	-117.2717956
149	Ephemeral Stream	AMEC	2				ACOE	0.044553			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.809719682	34.57509263	-117.2718293
150	Ephemeral Stream	AMEC	6				ACOE	0.013176			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.928628087	34.57837314	-117.2719022
151	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.01749	4	408	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.193363428	34.58452887	-117.2719132
152	Ephemeral Stream	AMEC	10				ACOE	0.247175			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.691311598	34.57280927	-117.2720736
153	Ephemeral Stream	AMEC	5				ACOE	0.043275			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.70799005	34.57335461	-117.2728304
154	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3	ACOE	0.022517	3	411	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.110224962	34.58363191	-117.2728859
154	Ephemeral Stream	AMEC	10				ACOE	0.002299			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.071967125	34.57834175	-117.2691819
155	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.002942	2	414	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.087095499	34.58324006	-117.273062
156	Ephemeral Stream	ECORP 2013					ACOE	0.083262			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.174182653	34.58560477	-117.2730518
157	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.035976	4	412	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.085455418	34.58346004	-117.2731106
158	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.038412	5	413	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.074202538	34.58331204	-117.2733219
159	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.029397	4	415	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.064256907	34.5831754	-117.2734986
160	Ephemeral Stream	AMEC	3				ACOE	0.01348			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.754255652	34.57602865	-117.2736517
161	Ephemeral Stream	AMEC	5				ACOE	0.005638			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.62032938	34.57208534	-117.2737792
162	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.014499	2	416	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.047235727	34.58299248	-117.2737415
163	Ephemeral Stream	ECORP 2013					ACOE	0.021079			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.078427553	34.58488076	-117.2741271
164	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.019091	2.5	417	Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.013184071	34.58268511	-117.2741778
165	Ephemeral Stream	AMEC	4				ACOE	0.033518			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.705819964	34.57626964	-117.274578
166	Ephemeral Stream	AMEC	3				ACOE	0.017315			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.709044099	34.57584785	-117.2746458
167	Ephemeral Stream	ECORP 2013					ACOE	0.001653			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.029100418	34.58363731	-117.2746934
168	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.024543	4	418	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.965522647	34.58217695	-117.2747739
169	Ephemeral Stream	AMEC	6				ACOE	0.015424			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.654898405	34.57461184	-117.2748715
170	Ephemeral Stream	ECORP 2013					ACOE	0.056078			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.056528807	34.58441774	-117.274801
171	Ephemeral Stream	AMEC	3				ACOE	0.024317			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.630194783	34.57493015	-117.2752025
172	Ephemeral Stream	ECORP 2013					ACOE	0.002803			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.966581941	34.58292677	-117.2751409
173	Ephemeral Stream	ECORP 2013					ACOE	0.080322			Bell Mountain Wash-Mojave River	Bell Mountain Wash	2.018479109	34.58403862	-117.27519
174	Ephemeral Stream	AMEC	2				ACOE	0.007332			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.552117109	34.57203122	-117.2753045
175	Ephemeral Stream	AMEC	10				ACOE	0.010567			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.588046074	34.57374479	-117.2757133
176	Ephemeral Stream	AMEC	10				ACOE	0.026168			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.580903292	34.57376245	-117.2758275
177	Ephemeral Stream	AMEC	12				ACOE	0.189771			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.577089667	34.57477982	-117.2758261
178	Ephemeral Stream	AMEC	3				ACOE	0.006335			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.482676506	34.57111651	-117.2759268
179	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3	ACOE	0.029869	3	419	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.8583951	34.58135068	-117.2760723
180	Ephemeral Stream	AMEC	4				ACOE	0.016617			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.562268853	34.57373167	-117.2762056

181	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.009195	2.5	420	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.855936766	34.58128932	-117.2763678
182	Ephemeral Stream	AMEC	3				ACOE	0.000829			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.443482518	34.57046214	-117.2764714
183	Ephemeral Stream	AMEC	10				ACOE	0.067885			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.443007469	34.5710516	-117.2765128
184	Ephemeral Stream	AMEC	12				ACOE	0.271574			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.547846913	34.57463841	-117.2764919
185	Ephemeral Stream	AMEC	8				ACOE	0.002446			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.431041002	34.57031979	-117.276606
186	Ephemeral Stream	AMEC	8				ACOE	0.039156			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.551104307	34.5740909	-117.2765896
187	Ephemeral Stream	ECORP 2013					ACOE	0.028566			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.913613319	34.58332358	-117.2766765
188	Ephemeral Stream	AMEC	4				ACOE	0.018673			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.536078691	34.57374011	-117.2767803
189	Ephemeral Stream	AMEC	20				ACOE	0.178812			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.558915615	34.57504807	-117.2768802
190	Ephemeral Stream	AMEC	4				ACOE	0.039631			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.516849279	34.57379535	-117.2769668
191	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.012111	1.5	421	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.801653862	34.58077958	-117.2769321
192	Ephemeral Stream	AMEC	10				ACOE	0.063612			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.396478295	34.57031261	-117.2770801
193	Ephemeral Stream	AMEC	10				ACOE	0.37535			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.540125132	34.57455787	-117.277076
194	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.010748	1.5	422	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.793427944	34.58067979	-117.2770315
195	Ephemeral Stream	AMEC	8				ACOE	0.022501			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.592635155	34.57587685	-117.2770806
196	Ephemeral Stream	AMEC	6				ACOE	0.041456			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.577420712	34.57568872	-117.2771665
197	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.014042	2	423	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.787489414	34.58070696	-117.2771385
198	Ephemeral Stream						Added per ACOE	0.275428			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.601217389	34.57914246	-117.2773064
199	Ephemeral Stream	AMEC	10				ACOE	0.043641			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.544236779	34.57516707	-117.2774729
200	Ephemeral Stream	ECORP 2013					ACOE	0.02148			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.835750818	34.58272493	-117.2774651
201	Ephemeral Stream	AMEC	8				ACOE	0.016728			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.543661475	34.57501245	-117.2775713
202	Ephemeral Stream	AMEC	2				ACOE	0.004238			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.538155675	34.57502063	-117.277728
203	Ephemeral Stream	AMEC	4				ACOE	0.59005			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.546149015	34.57622147	-117.2777298
204	Ephemeral Stream	AMEC	12				ACOE	0.04195			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.530935884	34.57508285	-117.2778703
205	Ephemeral Stream	AMEC	6				ACOE	0.03408			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.387293577	34.57213456	-117.2779359
206	Ephemeral Stream	ECORP supplemental 2015					Added per ACOE	0.023962			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.755432844	34.58102317	-117.2779143
207	Ephemeral Stream	ECORP 2013					ACOE	0.034918			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.794888496	34.58245657	-117.2780873
208	Ephemeral Stream	AMEC	4				ACOE	0.018422			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.491002321	34.57469545	-117.2781712
209	Ephemeral Stream	ECORP supplemental 2014	12	12	6	6	ACOE	0.045337	6	424	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.719107389	34.57998191	-117.2781381
209	Ephemeral Stream	AMEC	3				ACOE	3.71E-05			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.444428325	34.57062138	-117.2763253
210	Ephemeral Stream	AMEC	8				ACOE	0.036566			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.369577765	34.57143128	-117.2782984
211	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.006895	1.5	425	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.703757524	34.57987477	-117.2784463
212	Ephemeral Stream	AMEC	12				ACOE	0.146001			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.552069664	34.5765591	-117.2784824
213	Ephemeral Stream	ECORP supplemental 2015					Added per ACOE	0.108566			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.717050195	34.58068032	-117.2786753
214	Ephemeral Stream	AMEC	12				ACOE	0.148088			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.533859015	34.57641129	-117.2788371
215	Ephemeral Stream	ECORP supplemental 2015					Added per ACOE	0.019247			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.708078742	34.58054572	-117.2788625
216	Ephemeral Stream	ECORP 2013					ACOE	0.000105			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.746377349	34.58127982	-117.2788892
217	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	ACOE	0.034001	3.5	427	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.644352555	34.57936953	-117.2790307
218	Ephemeral Stream	ECORP 2013					ACOE	0.024434			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.74639833	34.58237632	-117.2790891
219	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.01474	2	426	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.642930627	34.57928698	-117.2792403
220	Ephemeral Stream	AMEC	95				ACOE	1.781649			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.440727234	34.57580867	-117.2793626
221	Ephemeral Stream	AMEC	3				ACOE	0.009056			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.440146089	34.57538339	-117.2793844
222	Ephemeral Stream	AMEC	15				ACOE	0.0155			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.546596885	34.57725975	-117.2794096
223	Ephemeral Stream	ECORP 2013					ACOE	0.038574			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.731592178	34.5819794	-117.2796512
224	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.016912	2	429	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.585244894	34.57886217	-117.279914
225	Ephemeral Stream	AMEC	15				ACOE	0.032729			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.51593864	34.57793687	-117.2802328
226	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.044142	7.5	428	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.562534094	34.57869344	-117.2803373
227	Ephemeral Stream	AMEC	95				ACOE	1.499221			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.337060332	34.57689473	-117.280561
228	Ephemeral Stream	AMEC	6				ACOE	0.024304			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.449176311	34.57649955	-117.2807022
229	Ephemeral Stream	AMEC	4				ACOE	0.007461			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.504334211	34.57786598	-117.2808818
230	Ephemeral Stream	AMEC	8				ACOE	0.021672			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.428341985	34.57626462	-117.2810323
231	Ephemeral Stream	ECORP 2013					ACOE	0.089141			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.594328761	34.58059166	-117.2811149
232	Ephemeral Stream	AMEC	4				ACOE	0.023326			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.465654016	34.57721477	-117.2811813
233	Ephemeral Stream	AMEC	8				ACOE	0.092775			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.465142131	34.57743311	-117.281274
234	Ephemeral Stream	AMEC	8				ACOE	0.024841			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.420361757	34.5766728	-117.2815509
235	Ephemeral Stream	AMEC	10				ACOE	0.103836			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.400106788	34.57699083	-117.2817375
236	Ephemeral Stream	AMEC	8				ACOE	0.141177			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.452423453	34.57760437	-117.281785
237	Ephemeral Stream	AMEC	6				ACOE	0.02842			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.454661846	34.57790839	-117.2821253
238	Ephemeral Stream	AMEC	8				ACOE	0.026786			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.302667856	34.57591082	-117.2822732
239	Ephemeral Stream	AMEC	3				ACOE	0.010962			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.995600522	34.56615896	-117.2824781
240	Ephemeral Stream	AMEC	6				ACOE	0.049239			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.36279285	34.57701823	-117.2824755

241	Ephemeral Stream	AMEC		30				ACOE	0.216948			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.332137465	34.57745141	-117.2826113
242	Ephemeral Stream	AMEC		6				ACOE	0.022811			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.309943914	34.5757667	-117.2827782
243	Ephemeral Stream	AMEC		3				ACOE	0.0144			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.375426888	34.57709149	-117.2830899
244	Ephemeral Stream	AMEC		6				ACOE	0.088791			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.30569303	34.57712955	-117.2832037
245	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.013721	2.5	326	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.401217103	34.57815596	-117.2834692
246	Ephemeral Stream	AMEC		6				ACOE	0.012694			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.900648296	34.56460976	-117.2838568
247	Ephemeral Stream	AMEC		3				ACOE	0.028852			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.319112062	34.57737125	-117.2841036
248	Ephemeral Stream	AMEC		3				ACOE	0.00905			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.331400871	34.57731208	-117.2842676
249	Ephemeral Stream	ECORP 2013						ACOE	0.056479			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.4142313	34.57941859	-117.2842536
250	Ephemeral Stream	AMEC		3				ACOE	0.008454			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.289000869	34.57676352	-117.284466
251	Ephemeral Stream	ECORP supplemental 2014		8	8	4	4	ACOE	0.014641	4	373	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.25737977	34.57600124	-117.2847694
252	Ephemeral Stream	AMEC		4				ACOE	0.020652			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.305619478	34.5778143	-117.2850228
253	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.015824	2.5	372	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.238651156	34.57598925	-117.2851319
254	Ephemeral Stream	AMEC		6				ACOE	0.042847			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.253534079	34.57681952	-117.2852252
255	Ephemeral Stream	AMEC		4				ACOE	0.011407			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.305395484	34.57774065	-117.2852987
256	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.016322	1.5	371	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.209970832	34.57585044	-117.2853498
257	Ephemeral Stream	ECORP supplemental 2014		2	2	1	1	ACOE	0.007282	1	374	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.201428056	34.57566486	-117.2857
258	Ephemeral Stream	AMEC		8				ACOE	0.035593			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.27974081	34.57779716	-117.285756
259	Ephemeral Stream	ECORP supplemental 2014		2	2	1	1	ACOE	0.007231	1	375	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.194502592	34.57561927	-117.2857897
260	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.029841	2.5	336	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.300509691	34.57831689	-117.2857924
261	Ephemeral Stream	AMEC		3				ACOE	0.008508			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.225726724	34.57668994	-117.2858156
262	Ephemeral Stream	ECORP supplemental 2014		11	11	5.5	5.5	ACOE	0.041908	5.5	319	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.300346494	34.57823623	-117.2859671
263	Ephemeral Stream	ECORP supplemental 2014		15	15	7.5	7.5	ACOE	0.032929	7.5	318	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.295631409	34.57816074	-117.2859866
264	Ephemeral Stream	AMEC		12				ACOE	0.122468			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.204164028	34.57721965	-117.2860341
265	Ephemeral Stream	ECORP supplemental 2014		15	15	7.5	7.5	ACOE	0.056144	7.5	370	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.170640469	34.57547995	-117.2860733
266	Ephemeral Stream	AMEC		10				ACOE	0.043566			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.246924043	34.57758671	-117.2860787
267	Ephemeral Stream	ECORP supplemental 2014		18	18	9	9	ACOE	0.031051	9	317	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.287607193	34.57813648	-117.2861018
268	Ephemeral Stream	AMEC		10				ACOE	0.038441			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.213787079	34.57667181	-117.2861307
269	Ephemeral Stream	ECORP supplemental 2014		14	14	7	7	ACOE	0.018422	7	324	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.298261642	34.578313	-117.2861415
270	Ephemeral Stream	AMEC		10				ACOE	0.015493			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.209629774	34.57653089	-117.2861758
271	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.004016	3	523	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.356751442	34.57956993	-117.2861839
272	Ephemeral Stream	ECORP supplemental 2014		20	20	10	10	ACOE	0.05191	10	333	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.301388025	34.57852058	-117.2862683
272	Ephemeral Stream	AMEC		8				ACOE	0.003513			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.463775754	34.57812887	-117.2821498
273	Ephemeral Stream	ECORP 2013						ACOE	0.036618			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.323349833	34.57925272	-117.2862729
274	Ephemeral Stream	AMEC		4				ACOE	0.005401			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.217113972	34.57692669	-117.2863439
275	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.002436	1.5	314	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.279300451	34.57806225	-117.286339
275	Ephemeral Stream	AMEC		10				ACOE	0.000138			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.455834985	34.57816561	-117.2823759
276	Ephemeral Stream	AMEC		3				ACOE	0.009585			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.257739544	34.57783536	-117.2863433
277	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.004409	2.5	313	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.277138352	34.57806105	-117.2863646
278	Ephemeral Stream	AMEC		4				ACOE	0.009504			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.261255026	34.57787241	-117.2863766
279	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.00134	1.5	322	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.279569626	34.57812426	-117.2864118
280	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.003727	1.5	323	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.273422718	34.57806315	-117.2864234
281	Ephemeral Stream	AMEC		4				ACOE	0.005113			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.265329599	34.5779232	-117.2864508
282	Ephemeral Stream	AMEC		6				ACOE	0.02013			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.237300754	34.57762439	-117.2864839
283	Ephemeral Stream	ECORP supplemental 2014		2	2	1	1	ACOE	0.000553	1	354	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.192067027	34.57630825	-117.2865257
284	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.005926	1.5	367	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.139877081	34.57511501	-117.2865576
285	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.006127	1.5	368	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.133347869	34.57508993	-117.2866089
286	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.024112	2.5	337	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.279199123	34.57838527	-117.2865835
287	Ephemeral Stream	AMEC		8				ACOE	0.049633			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.192940593	34.57710741	-117.2866169
288	Ephemeral Stream	ECORP supplemental 2014		7	7	3.5	3.5	ACOE	0.006732	3.5	355	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.184113145	34.57627064	-117.286648
289	Ephemeral Stream	ECORP supplemental 2014		4	4	2	2	ACOE	0.007364	2	369	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.140678883	34.57532296	-117.2866715
290	Ephemeral Stream	AMEC		4				ACOE	0.012266			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.186032295	34.57685411	-117.2866716
291	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5	ACOE	0.033081	2.5	310	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.262253046	34.57826592	-117.2867523
292	Ephemeral Stream	AMEC		4				ACOE	0.006977			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.229244471	34.5775135	-117.2868759
293	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.001269	1.5	307	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.242583871	34.57785827	-117.2869917
294	Ephemeral Stream	ECORP supplemental 2014		4	4	2	2	ACOE	0.065426	2	306	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.239431858	34.5787278	-117.2871867
295	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.003439	3	364	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.084780574	34.57464172	-117.2873371
296	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.018777	3	365	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.084973216	34.57485662	-117.2874232
297	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.017925	3	366	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.084298253	34.57483546	-117.2874914
298	Ephemeral Stream	ECORP supplemental 2014		15	15	7.5	7.5	ACOE	0.056217	7.5	363	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.070329666	34.57470834	-117.2876661
299	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.048415	5	352	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.103745699	34.5757796	-117.2876925

300	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.023552	4	353	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.104853153	34.57570328	-117.287775
301	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3	ACOE	0.049415	3	305	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.209056973	34.57824119	-117.2877807
302	Ephemeral Stream	AMEC	4				ACOE	0.006092			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.176652789	34.57751861	-117.287834
303	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.033363	5	338	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.225276351	34.57851105	-117.2879304
304	Ephemeral Stream	ECORP supplemental 2014	13	13	6.5	6.5	ACOE	0.053666	6.5	341	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.249018312	34.57894052	-117.2879766
305	Ephemeral Stream	AMEC	8				ACOE	0.005185			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.142911315	34.57718758	-117.2879965
306	Ephemeral Stream	ECORP supplemental 2014	25	25	12.5	12.5	ACOE	0.098057	12.5	350	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.083714485	34.57554797	-117.2880179
307	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.014692	2	362	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.043033957	34.57449755	-117.2881122
308	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.105698	7.5	325	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.223653078	34.57873346	-117.288078
309	Ephemeral Stream	ECORP supplemental 2014	27	27	13.5	13.5	ACOE	0.075551	13.5	315	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.202297091	34.5781551	-117.2880933
310	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.008962	2	304	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.19295311	34.57786502	-117.2881385
311	Ephemeral Stream	ECORP supplemental 2014	25	25	12.5	12.5	ACOE	0.071226	12.5	342	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.262122393	34.57934095	-117.2881611
312	Ephemeral Stream	AMEC	12				ACOE	0.016202			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.119288564	34.57691774	-117.2881884
313	Ephemeral Stream	ECORP supplemental 2014	13	13	6.5	6.5	ACOE	0.046581	6.5	351	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.073697686	34.57541088	-117.2882235
314	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.010067	2.5	303	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.187053919	34.5778418	-117.288218
315	Ephemeral Stream	ECORP supplemental 2014	21	21	10.5	10.5	ACOE	0.007815	10.5	312	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.199104428	34.5779972	-117.2882239
316	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.0381	7.5	302	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.178735614	34.57784671	-117.2883303
317	Ephemeral Stream	AMEC	4				ACOE	0.00258			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.113435268	34.57692074	-117.2884351
318	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.019831	2.5	361	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.00984323	34.57431162	-117.2884975
319	Ephemeral Stream	ECORP supplemental 2014	13	13	6.5	6.5	ACOE	0.048463	6.5	348	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.043003678	34.5751478	-117.2886149
320	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.048852	5	360	Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.994006634	34.57424534	-117.2886405
321	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.015155	2.5	311	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.16428113	34.5778333	-117.2886659
322	Ephemeral Stream	ECORP supplemental 2014	20	20	10	10	ACOE	0.081272	10	349	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.032469511	34.5750844	-117.2886931
323	Ephemeral Stream	ECORP supplemental 2014	14	14	7	7	ACOE	0.02561	7	345	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.025338054	34.57486083	-117.2888142
324	Ephemeral Stream	ECORP supplemental 2014	25	25	12.5	12.5	ACOE	0.054648	12.5	344	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.029433966	34.57511923	-117.2888659
325	Ephemeral Stream	ECORP supplemental 2014	22	22	11	11	ACOE	0.021164	11	359	Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.99424839	34.57431278	-117.2889257
326	Ephemeral Stream	ECORP supplemental 2014	25	25	12.5	12.5	ACOE	0.093795	12.5	358	Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.980306804	34.57409466	-117.2889594
327	Ephemeral Stream	ECORP supplemental 2014	14	14	7	7	ACOE	0.044131	7	346	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.009313107	34.57479762	-117.2889647
328	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.171927	7.5	316	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.166575432	34.57870697	-117.2889734
329	Ephemeral Stream	AMEC	8				ACOE	0.004456			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.0876863	34.5768713	-117.2890802
330	Ephemeral Stream	AMEC	8				ACOE	0.005687			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.119701028	34.57735904	-117.2890772
331	Ephemeral Stream	ECORP supplemental 2014	16	16	8	8	ACOE	0.022662	8	347	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.001939178	34.57461687	-117.2891341
332	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.011347	5	343	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.014320254	34.57498531	-117.2891481
333	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.017861	4.5	308	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.146277785	34.57771786	-117.2891452
334	Ephemeral Stream	ECORP 2013					ACOE	0.009675			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.004110456	34.574797	-117.2891844
335	Ephemeral Stream	ECORP supplemental 2014	15	15	7.5	7.5	ACOE	0.029944	7.5	309	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.1549716	34.5779506	-117.2891862
336	Ephemeral Stream	ECORP supplemental 2014	12	16	8	6	ACOE	0.000284	6	320	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.165485263	34.57806555	-117.2892252
337	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.021391	4.5	301	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.135753751	34.57770152	-117.289264
338	Ephemeral Stream	ECORP supplemental 2014	35	35	17.5	17.5	ACOE	0.139973	17.5	357	Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.947965205	34.57388188	-117.2894231
339	Ephemeral Stream	ECORP 2013					ACOE	0.008843			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.97770083	34.57442065	-117.2894262
340	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.077858	4.5	340	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.166112423	34.57856309	-117.2893922
341	Ephemeral Stream	ECORP 2013					ACOE	0.005261			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.97048372	34.57436717	-117.2895381
342	Ephemeral Stream	AMEC	15				ACOE	0.00528			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.066790104	34.57684927	-117.2895301
343	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.080478	4.5	339	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.166465998	34.57848301	-117.2897068
344	Ephemeral Stream	AMEC	6				ACOE	0.002407			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.097390771	34.57728117	-117.2897692
345	Ephemeral Stream	ECORP supplemental 2014	16	16	8	8	ACOE	0.089222	8	300	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.119098186	34.57781383	-117.2897968
346	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.010892	4.5	356	Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.91931355	34.57349001	-117.289855
347	Ephemeral Stream	AMEC	4				ACOE	0.001779			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.079538941	34.57699926	-117.2899159
348	Ephemeral Stream	ECORP 2013					ACOE	0.016088			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.926130772	34.57399434	-117.2899744
349	Ephemeral Stream	ECORP supplemental 2014	12	12	6	6	ACOE	0.060592	6	299	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.110282063	34.5777657	-117.2899616
350	Ephemeral Stream	ECORP 2013					ACOE	0.013541			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.915554702	34.57381373	-117.2900794
351	Ephemeral Stream	ECORP supplemental 2014	30	30	15	15	ACOE	0.107706	15	321	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.134421706	34.57823963	-117.2901851
352	Ephemeral Stream	ECORP 2013					ACOE	0.002977			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.882895231	34.57315266	-117.2903812
353	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.01608	2.5	298	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.091063261	34.57756534	-117.2903783
354	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.029233	4.5	332	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.144717813	34.57859851	-117.2903729
355	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.005276	5	331	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.140748858	34.57841483	-117.2904031
356	Ephemeral Stream	AMEC	3				ACOE	0.00271			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.015212417	34.57654233	-117.290446
357	Ephemeral Stream	ECORP supplemental 2014	13	13	6.5	6.5	ACOE	0.033392	6.5	335	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.140785336	34.57858422	-117.2905097
358	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.029025	5	334	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.137591958	34.57855299	-117.2905864
359	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.007292	2.5	297	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.073422313	34.57739136	-117.290689
360	Ephemeral Stream	ECORP 2013					ACOE	0.130637			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.795227051	34.57276436	-117.2911466

361	Ephemeral Stream	AMEC		15				ACOE	0.016203			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.913767695	34.57608891	-117.291921
362	Ephemeral Stream	AMEC		6				ACOE	0.011637			Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.002900958	34.57688684	-117.2919187
363	Ephemeral Stream	AMEC		12				ACOE	0.025841			Bell Mountain Wash-Mojave River	Bell Mountain Wash	0.973868549	34.57665604	-117.2920221
364	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.007076	4.5	294	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.00679481	34.57700232	-117.2920377
365	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.111536	4.5	296	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.011243939	34.57752361	-117.2920451
366	Ephemeral Stream	ECORP supplemental 2014		21	21	10.5	10.5	ACOE	0.034253	10.5	293	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.000993967	34.57703485	-117.2921272
367	Ephemeral Stream	ECORP supplemental 2014		21	21	10.5	10.5	ACOE	0.182013	10.5	295	Bell Mountain Wash-Mojave River	Bell Mountain Wash	1.0092206	34.57756912	-117.2925059
368	Ephemeral Stream	ECORP 2013						ACOE	0.00474			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.661051214	34.57196377	-117.2936816
369	Ephemeral Stream	ECORP supplemental 2014		25	25	12.5	12.5	width varie ACOE	0.174859	12.5	290	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.938560784	34.57726084	-117.2938316
370	Ephemeral Stream	ECORP supplemental 2014		11	11	5.5	5.5	width varie ACOE	0.04172	5.5	522	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.9107759	34.57660162	-117.2938681
371	Ephemeral Stream	AMEC		12				ACOE	0.016999			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.819400728	34.57568857	-117.2938984
372	Ephemeral Stream	ECORP 2013						ACOE	0.001229			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.674279273	34.57216514	-117.2939575
373	Ephemeral Stream	ECORP 2013						ACOE	0.028666			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.492062867	34.57038073	-117.2941309
374	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.037089	3	292	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.933417022	34.57710823	-117.2941608
375	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	ACOE	0.001892	1.5	285	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.95624733	34.57745558	-117.2944151
376	Ephemeral Stream	AMEC		6				ACOE	0.010286			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.799743176	34.57534585	-117.29462
377	Ephemeral Stream	ECORP supplemental 2014		7	7	3.5	3.5	ACOE	0.073143	3.5	289	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.871229589	34.57672916	-117.2947795
378	Ephemeral Stream	AMEC		6				ACOE	0.010459			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.76066941	34.57512352	-117.2953065
379	Ephemeral Stream	AMEC		3				ACOE	0.003182			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.80449146	34.57557903	-117.2953876
380	Ephemeral Stream	ECORP 2013						ACOE	0.02006			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.375437438	34.56981621	-117.2955929
381	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.097562	4.5	288	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.830324531	34.57648456	-117.2955413
382	Ephemeral Stream	AMEC		7				ACOE	0.024			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.738826752	34.57525042	-117.2963651
383	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.069132	5	287	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.803195596	34.57615732	-117.2964064
384	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.021088	5	291	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.847936511	34.5766955	-117.2965151
385	Ephemeral Stream	ECORP supplemental 2014		8	8	4	4	ACOE	0.056578	4	286	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.791178346	34.57610725	-117.2965565
386	Ephemeral Stream	AMEC		6				ACOE	0.01977			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.650435328	34.57440793	-117.2965939
387	Ephemeral Stream	AMEC		4				ACOE	0.002645			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.629572332	34.57420414	-117.297181
388	Ephemeral Stream	ECORP 2013						NJ per MAC ACOE	0.010798			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.418164164	34.57024858	-117.2974964
389	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.075869	5	284	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.736377597	34.5759248	-117.2983261
390	Ephemeral Stream	AMEC		8				ACOE	0.071278			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.490343064	34.57380886	-117.299207
391	Ephemeral Stream	ECORP 2013						ACOE	0.011565			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.322871059	34.56936827	-117.2994355
392	Ephemeral Stream	AMEC		4				ACOE	0.015067			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.648678422	34.57464772	-117.2994751
393	Ephemeral Stream	ECORP supplemental 2014		17	17	8.5	8.5	ACOE	0.042024	8.5	283	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.723094702	34.5757268	-117.2994871
394	Ephemeral Stream	AMEC		8				ACOE	0.082338			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.618868649	34.5747467	-117.2994995
395	Ephemeral Stream	AMEC		6				ACOE	0.047004			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.631884634	34.57472884	-117.2995834
396	Ephemeral Stream	AMEC		4				ACOE	0.017001			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.662446797	34.57490751	-117.2997158
397	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.015547	5	282	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.711181939	34.57563758	-117.2999121
398	Ephemeral Stream	AMEC		8				ACOE	0.04548			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.673962414	34.57518389	-117.2999816
399	Ephemeral Stream	ECORP supplemental 2014		10	10	5	5	ACOE	0.015678	5	281	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.704331934	34.57560695	-117.3000292
400	Ephemeral Stream	AMEC		8				ACOE	0.088289			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.460975379	34.57365115	-117.3001332
401	Ephemeral Stream	AMEC		5				ACOE	0.054653			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.55332458	34.57425317	-117.3005103
402	Ephemeral Stream	ECORP supplemental 2014		11	11	5.5	5.5	ACOE	0.016061	5.5	280	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.671785951	34.57539239	-117.3007053
403	Ephemeral Stream	ECORP supplemental 2014		3	4	2	1.5	ACOE	0.000981	1.5	233	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.235785753	34.56859728	-117.3012083
404	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.018781	4.5	279	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.634960294	34.57516531	-117.3013832
405	Ephemeral Stream	AMEC		8				ACOE	0.087953			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.42110008	34.57328922	-117.3015838
406	Ephemeral Stream	AMEC		8				ACOE	0.069763			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.413316131	34.57314238	-117.3022842
407	Ephemeral Stream	AMEC		4				ACOE	0.033543			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.52739054	34.57415603	-117.3023176
408	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3	ACOE	0.013848	3	277	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.583438396	34.57476309	-117.302491
409	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.02832	4.5	276	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.56649828	34.5746591	-117.3026817
410	Ephemeral Stream	ECORP 2013						ACOE	0.121653			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.017213793	34.56711568	-117.3028477
411	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.036043	4.5	278	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.557823062	34.57455873	-117.3028063
412	Ephemeral Stream	AMEC		4				ACOE	0.027043			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.396485746	34.57271545	-117.3029047
413	Ephemeral Stream	ECORP supplemental 2014		7	7	3.5	3.5	ACOE	0.036024	3.5	275	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.521775305	34.57430171	-117.3034003
414	Ephemeral Stream	AMEC		5				ACOE	0.023504			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.329750061	34.57237383	-117.3038317
415	Ephemeral Stream	ECORP supplemental 2014		12	12	6	6	ACOE	0.093516	6	274	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.471023023	34.57392804	-117.3041809
416	Ephemeral Stream	ECORP 2013						ACOE	0.035416			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.015341221	34.56693775	-117.3051172
417	Ephemeral Stream	ECORP supplemental 2014		9	9	4.5	4.5	ACOE	0.049853	4.5	272	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.42465353	34.57360061	-117.3057075
418	Ephemeral Stream	ECORP supplemental 2014		18	18	9	9	ACOE	0.298786	9	271	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.366441071	34.57327378	-117.3057702
419	Ephemeral Stream	ECORP supplemental 2014		7	7	3.5	3.5	ACOE	0.045709	3.5	273	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.396748036	34.5733211	-117.30594
420	Ephemeral Stream	AMEC		3				ACOE	0.001226			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.306993186	34.57204907	-117.3067074
421	Ephemeral Stream	AMEC		14				ACOE	0.054507			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.129905894	34.57120366	-117.3067936

422	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	width varie	ACOE	0.006813	2.5	521	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.365581512	34.5727066	-117.3069037
423	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5		ACOE	0.004123	1.5	269	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.362513959	34.57270072	-117.3069571
424	Ephemeral Stream	AMEC	3					ACOE	0.00639			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.34225896	34.57242407	-117.3069802
425	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2		ACOE	0.007795	2	270	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.355729938	34.5726582	-117.3070159
426	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	width varie	ACOE	0.041799	5	268	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.372471154	34.57302059	-117.3070553
427	Ephemeral Stream	AMEC	4					ACOE	0.013709			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.268599153	34.57181273	-117.3071454
428	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4		ACOE	0.042648	4	267	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.335197985	34.57262662	-117.307295
429	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5		ACOE	0.053833	4.5	266	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.344768405	34.57282994	-117.307376
430	Ephemeral Stream	AMEC	4					ACOE	0.014185			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.238731146	34.57157765	-117.3079923
431	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3		ACOE	0.041055	3	265	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.309863389	34.57254276	-117.3083304
432	Ephemeral Stream	AMEC	8					ACOE	0.044566			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.225082368	34.57157338	-117.3083941
433	Ephemeral Stream	ECORP supplemental 2014	12	12	6	6		ACOE	0.066665	6	264	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.31160748	34.57259239	-117.3085406
434	Ephemeral Stream	AMEC	4					ACOE	0.008856			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.208411127	34.57115815	-117.3089894
435	Wetland	ECORP 2013						ACOE	5.201446			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0	34.56664859	-117.3091267
436	Ephemeral Stream	AMEC	4					ACOE	0.010747			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.205304056	34.57111757	-117.3093416
437	Ephemeral Stream	AMEC	5					ACOE	0.043571			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.200203404	34.57140404	-117.3094273
438	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3		ACOE	0.03115	3	263	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.295145303	34.57239317	-117.309423
439	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5		ACOE	0.049803	5	262	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.288957685	34.57227448	-117.309982
440	Ephemeral Stream	AMEC	3					ACOE	0.039801			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.19273071	34.5713067	-117.3101264
441	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.024232	2.5	261	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.289668471	34.57223823	-117.3101749
442	Ephemeral Stream	AMEC	3					ACOE	0.009668			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.22189562	34.57118123	-117.3104059
443	Adjacent Waters	ECORP supplemental 2015					Data collec	ACOE	2.504943			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.054420348	34.56426345	-117.3106263
444	Ephemeral Stream	AMEC	3					ACOE	0.007635			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.188046768	34.57069239	-117.3106101
445	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3		ACOE	0.027493	3	260	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.27678442	34.57212777	-117.3108223
446	Ephemeral Stream	ECORP supplemental 2014	16	16	8	8		ACOE	0.05656	8	234	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.150807172	34.57026072	-117.3116942
447	Ephemeral Stream	AMEC	3					ACOE	0.028894			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.170609117	34.57087361	-117.3122514
448	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.013187	2.5	258	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.25128442	34.57192435	-117.3123127
449	Ephemeral Stream	AMEC	3					ACOE	0.004784			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.187139779	34.57077804	-117.3123373
450	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.017459	2.5	259	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.222929373	34.5715769	-117.3124113
451	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2		ACOE	0.024702	2	235	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.102467366	34.56996351	-117.313014
452	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5		ACOE	0.017736	4.5	257	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.217742637	34.57180116	-117.3131534
453	Ephemeral Stream	AMEC	3					ACOE	0.031083			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.14055185	34.57098765	-117.3131773
454	Ephemeral Stream	AMEC	3					ACOE	0.028778			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.12765561	34.57084688	-117.3139348
455	Ephemeral Stream	ECORP supplemental 2014	18	18	9	9	widths vary	ACOE	0.005256	9	518	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.115354568	34.5701188	-117.3140368
456	Ephemeral Stream	ECORP supplemental 2014	25	25	12.5	12.5	widths vary	ACOE	0.06287	12.5	519	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.096938044	34.56991192	-117.3140529
457	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5		ACOE	0.016587	5	256	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.16057691	34.57169377	-117.3140857
458	Ephemeral Stream	ECORP supplemental 2014	16	16	8	8	widths vary	ACOE	0.06655	8	236	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.070336066	34.56963429	-117.3143854
459	Ephemeral Stream	AMEC	8					ACOE	0.092533			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.113268204	34.57085614	-117.314395
460	Ephemeral Stream	ECORP supplemental 2014	10	23	11.5	5		ACOE	0.020035	5	255	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.1153429	34.57161365	-117.3148535
461	Ephemeral Stream	ECORP 2013						ACOE	0.016357			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.024085304	34.56904862	-117.3150329
462	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5		ACOE	0.057812	5	237	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.052993719	34.5697174	-117.3151437
463	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.010646	2.5	254	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.075660579	34.57153747	-117.3155615
464	Ephemeral Stream	AMEC	4					ACOE	0.004861			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.068521678	34.57136757	-117.3156729
465	Ephemeral Stream	AMEC	3					ACOE	0.031152			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.04028197	34.57049812	-117.3157089
466	Ephemeral Stream	AMEC	30					ACOE	0.289067			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.034668025	34.57115703	-117.3157232
467	Ephemeral Stream	ECORP 2013						ACOE	0.004979			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.008965734	34.56828776	-117.3163061
468	Wetland	ECORP supplemental 2014						ACOE	2.239686			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0	34.56920126	-117.3169378
469	Wetland	AMEC	0					ACOE	1.604769			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0	34.57044394	-117.3170819
470	Wetland	ECORP supplemental 2014	57	150	259	130	28.5	ACOE	0.349016	28.5	253	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0	34.57145597	-117.3173069
471	Ephemeral Stream	ECORP supplemental 2014	14	14	7	7		ACOE	0.140525	7	242	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.012448912	34.5688311	-117.3177227
472	Ephemeral Stream	AMEC	4					ACOE	0.038979			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.02356101	34.57074569	-117.3179034
473	Ephemeral Stream	AMEC	3					ACOE	0.027195			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.004763331	34.56996516	-117.3180299
474	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.039271	2.5	239	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.00636834	34.56928987	-117.3180929
475	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5		ACOE	0.030112	2.5	240	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.03835541	34.56902651	-117.3185536
476	Ephemeral Stream	AMEC	2					ACOE	0.001252			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.060949918	34.56958905	-117.3186823
477	Ephemeral Stream	AMEC	3					ACOE	0.02502			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.057976019	34.56971964	-117.3187762
478	Ephemeral Stream	ECORP 2013						ACOE	0.012674			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.131424949	34.5672853	-117.3191008
479	Ephemeral Stream	AMEC	7					ACOE	0.002783			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.089553066	34.56918692	-117.3191483
480	Ephemeral Stream	AMEC	2					ACOE	0.006409			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.089168333	34.56958893	-117.3191916
481	Ephemeral Stream	AMEC	3					ACOE	0.006148			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.085443325	34.56925071	-117.3191987
482	Ephemeral Stream	AMEC	3					ACOE	0.075053			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.05883041	34.56928845	-117.3193115

483	Ephemeral Stream	AMEC		3					ACOE	0.024762				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.080780372	34.56956001	-117.3193394
484	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5		ACOE	0.01207	1.5	241		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.093789667	34.56907128	-117.3194303
485	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3		ACOE	0.017685	3	252		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.064578831	34.57134717	-117.3197635
486	Ephemeral Stream	AMEC		3					ACOE	0.004283				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.129678443	34.56952201	-117.3198812
487	Ephemeral Stream	AMEC		3					ACOE	0.023301				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.084503293	34.57090675	-117.31996
488	Ephemeral Stream	ECORP supplemental 2014		3	3				ACOE	0.013194				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.5696311	34.56063539	-117.320086
489	Ephemeral Stream	ECORP supplemental 2014		3	3				ACOE	0.012848				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.616035998	34.56001413	-117.320503
490	Ephemeral Stream	AMEC		3					ACOE	0.018233				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.600074291	34.56020033	-117.3205325
491	Ephemeral Stream	ECORP supplemental 2014		3	3	1.5	1.5	NJ per MA	ACOE	0.02534	1.5	243		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.185090885	34.56866477	-117.3212217
492	Ephemeral Stream	AMEC		120					ACOE	0.013354				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.855550051	34.55791492	-117.3253214
493	Ephemeral Stream	ECORP 2013							ACOE	1.813609				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.609972417	34.56074563	-117.3274406
494	Ephemeral Stream	ECORP 2013							ACOE	0.673593				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.461619586	34.56656751	-117.3295251
495	Ephemeral Stream	ECORP 2013							ACOE	0.000995				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.507607162	34.56682702	-117.3299149
496	Ephemeral Stream	ECORP 2013							ACOE	0.00048				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.504009187	34.56689139	-117.3299411
497	Ephemeral Stream	ECORP 2013							ACOE	0.00105				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.488964647	34.56712359	-117.3300897
498	Ephemeral Stream	ECORP 2013							ACOE	0.007807				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.500205517	34.56622404	-117.3302033
499	Ephemeral Stream	AMEC		24					ACOE	0.300653				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.284383535	34.56953612	-117.3309192
500	Ephemeral Stream	ECORP supplemental 2014		74	74	37	37		ACOE	0.09108	37	245		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.270091325	34.57052612	-117.3311171
501	Waters	ECORP supplemental 2015						living cano	Turner Spri	ACOE	0.169567			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.267666429	34.57073401	-117.3319783
502	Ephemeral Stream	ECORP 2013							ACOE	0.005558				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.545372128	34.56665981	-117.3320157
503	Ephemeral Stream	ECORP 2013							ACOE	0.00413				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.568790317	34.56606777	-117.3327969
504	Ephemeral Stream	ECORP 2013							ACOE	0.024274				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.561763465	34.56643291	-117.3335439
505	Waters	ECORP supplemental 2015						ponded are	Turner Spri	ACOE	0.145261			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.294132739	34.57064169	-117.3346005
506	Ephemeral Stream	AMEC		4					ACOE	0.059775				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.589694083	34.56607132	-117.3352687
507	Ephemeral Stream	ECORP supplemental 2015						jd-1	Turner Spri	ACOE	0.010557			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.309428483	34.5706648	-117.3354397
508	Ephemeral Stream	AMEC		4					ACOE	0.025652				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.327276826	34.56999811	-117.3356831
509	Ephemeral Stream	AMEC		3					ACOE	0.023961				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.75162822	34.56456531	-117.3382574
510	Ephemeral Stream	AMEC		4					ACOE	0.028792				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.829299808	34.56368721	-117.3391249
511	Ephemeral Stream	AMEC		8					ACOE	0.066581				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.416116208	34.57139099	-117.3407954
512	Ephemeral Stream	AMEC		60					ACOE	0.141708				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.394438624	34.57198658	-117.3409276
513	Ephemeral Stream	ECORP supplemental 2014		8	8	4	4		ACOE	0.01931	4	232		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.497147381	34.57057294	-117.3411823
514	Ephemeral Stream	ECORP supplemental 2014		20	20	10	10	flares out t	ACOE	0.058244	10	231		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.502311349	34.57062454	-117.3414318
515	Ephemeral Stream	AMEC		4					ACOE	0.028948				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.014670372	34.56172795	-117.3416394
516	Ephemeral Stream	AMEC		4					ACOE	0.022068				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.419022202	34.57201896	-117.3420435
517	Ephemeral Stream	ECORP 2013							ACOE	0.000847				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.149055243	34.56013339	-117.3428162
518	Ephemeral Stream	ECORP 2013							ACOE	0.003166				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.152027845	34.56010173	-117.3429681
519	Ephemeral Stream	ECORP 2013							ACOE	0.003575				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.190373421	34.55961349	-117.3433152
520	Ephemeral Stream	ECORP supplemental 2014		6	6	3	3		ACOE	0.042935	3	230		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.542278111	34.57123636	-117.3433454
521	Ephemeral Stream	ECORP 2013							ACOE	0.005805				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.302509427	34.55801333	-117.3440204
522	Ephemeral Stream	ECORP 2013							ACOE	0.005064				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.294430733	34.55832847	-117.344243
523	Ephemeral Stream	ECORP 2013							ACOE	0.009014				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.313003778	34.5579288	-117.3442524
524	Ephemeral Stream	ECORP 2013							ACOE	0.034267				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.358104467	34.55721547	-117.3445549
525	Ephemeral Stream	ECORP 2013							ACOE	10.08472				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.922442734	34.56134538	-117.344576
526	Ephemeral Stream	AMEC		40					ACOE	0.189538				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.418593645	34.55605881	-117.3447089
527	Ephemeral Stream	AMEC		35					ACOE	0.167143				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.421803236	34.55593763	-117.345595
528	Ephemeral Stream	ECORP 2013							ACOE	0.040032				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.153136969	34.56135805	-117.3459248
529	Ephemeral Stream	ECORP 2013							ACOE	0.002843				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.211827636	34.56053252	-117.3460062
530	Ephemeral Stream	ECORP 2013							ACOE	0.005189				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.19982934	34.56075689	-117.3460418
531	Ephemeral Stream	ECORP supplemental 2014		12	12	6	6		ACOE	0.049256	6	228		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.734847426	34.57030621	-117.3464646
532	Ephemeral Stream	ECORP supplemental 2014		5	5	2.5	2.5		ACOE	0.035941	2.5	229		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.719394505	34.57071893	-117.3465233
533	Ephemeral Stream	ECORP 2013							ACOE	0.00518				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.349572182	34.55865919	-117.3469474
534	Ephemeral Stream	ECORP supplemental 2014		150	150	75	75		ACOE	0.887098	75	227		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.763184905	34.57043494	-117.3472428
535	Ephemeral Stream	AMEC		2					ACOE	0.014648				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.467014551	34.55649637	-117.3473686
536	Ephemeral Stream	ECORP 2013							ACOE	0.019289				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.280593276	34.55988404	-117.3473804
537	Ephemeral Stream	ECORP 2013							ACOE	0.022188				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.21503973	34.56087648	-117.3473913
538	Ephemeral Stream	AMEC		30					ACOE	0.037547				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.624746561	34.57380787	-117.3474482
539	Ephemeral Stream	ECORP 2013							ACOE	0.019999				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.325396895	34.55937019	-117.3477546
540	Ephemeral Stream	ECORP supplemental 2014		12	12	6	6		ACOE	0.01524	6	226		Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.814907074	34.57018535	-117.3477313
541	Ephemeral Stream	AMEC		30					ACOE	0.714215				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.669777453	34.57224127	-117.3477271
542	Ephemeral Stream	ECORP 2013							ACOE	0.003422				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.314541698	34.5598379	-117.3479529
543	Ephemeral Stream	ECORP 2013							ACOE	0.061201				Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.342447042	34.55813732	-117.348001

544	Ephemeral Stream	ECORP 2013				ACOE	0.02348			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.317424417	34.55908499	-117.3479947	
545	Ephemeral Stream	AMEC	4			ACOE	0.008658			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.782361448	34.57141939	-117.3480386	
546	Ephemeral Stream	ECORP 2013				ACOE	0.015236			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.371979952	34.55854759	-117.34852	
547	Ephemeral Stream	ECORP 2013				ACOE	0.002278			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.49341619	34.55710247	-117.3487871	
548	Ephemeral Stream	AMEC	10			ACOE	0.08389			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.811659217	34.57090417	-117.3492386	
549	Ephemeral Stream	AMEC	3			ACOE	0.071346			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.80873394	34.57148145	-117.3498192	
550	Ephemeral Stream	AMEC	3			ACOE	0.080163			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.774113715	34.57255066	-117.3500639	
551	Ephemeral Stream	AMEC	3			ACOE	0.030743			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.903324127	34.57097623	-117.3507132	
552	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.062017	1.5	222	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.792858005	34.57339591	-117.3507342
553	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.000778	1.5	225	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.977265537	34.57057024	-117.3512628
554	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.023558	2	224	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.963831842	34.57106243	-117.3517208
555	Ephemeral Stream	AMEC	3				ACOE	0.268721			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.752060592	34.57284911	-117.3520354
556	Ephemeral Stream	ECORP 2013					ACOE	0.192359			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.55643034	34.55629777	-117.3521966
557	Ephemeral Stream	ECORP supplemental 2014	4	4	2	2	ACOE	0.027421	2	223	Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	0.980430365	34.57125983	-117.3522645
558	Ephemeral Stream	AMEC	6				ACOE	0.016005			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.689977765	34.55572646	-117.3524771
559	Ephemeral Stream	ECORP 2013					ACOE	0.007127			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.861758351	34.55550301	-117.3576786
560	Ephemeral Stream	ECORP 2013					ACOE	0.013306			Bell Mountain Wash-Mojave River	Burkhardt Lake-Mojave River	1.925179601	34.55546557	-117.3593049
561	Ephemeral Stream	ECORP 2013					ACOE	0.088931			Upper Fremont Wash	Manzanita Wash	2.847211838	34.55721647	-117.382887
562	Ephemeral Stream	ECORP supplemental 2014	12	12	6	6	ACOE	0.000303	6	220	Upper Fremont Wash	Manzanita Wash	2.640047073	34.57023475	-117.3834188
563	Ephemeral Stream	AMEC	3				ACOE	0.072708			Upper Fremont Wash	Manzanita Wash	2.640528202	34.57075599	-117.3842511
564	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.03831	1	214	Upper Fremont Wash	Manzanita Wash	2.802011728	34.57059594	-117.3877269
565	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.038913	1	213	Upper Fremont Wash	Manzanita Wash	2.91445446	34.57021964	-117.3895863
566	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.039314	1	212	Upper Fremont Wash	Manzanita Wash	3.047354698	34.56990794	-117.392615
567	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.039801	1	210	Upper Fremont Wash	Manzanita Wash	3.266240835	34.56954704	-117.3959767
568	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.034935	1	211	Upper Fremont Wash	Manzanita Wash	3.299359798	34.56958021	-117.3967544
569	Ephemeral Stream	ECORP 2013					ACOE	0.148078			Upper Fremont Wash	Manzanita Wash	3.958550215	34.56069027	-117.4039664
570	Ephemeral Stream	AMEC	22				ACOE	0.943562			Upper Fremont Wash	Manzanita Wash	3.909351349	34.56243237	-117.4043461
571	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.034333	4	209	Upper Fremont Wash	Manzanita Wash	3.682950497	34.57019069	-117.4044116
572	Ephemeral Stream	AMEC	5				ACOE	0.083479			Upper Fremont Wash	Manzanita Wash	3.720644951	34.56908534	-117.4045599
573	Ephemeral Stream	AMEC	5				ACOE	0.071609			Upper Fremont Wash	Manzanita Wash	3.71774435	34.56925085	-117.4047166
574	Ephemeral Stream	ECORP supplemental 2015					Digitized per ACOE	0.126721			Upper Fremont Wash	Manzanita Wash	3.885238647	34.56389207	-117.4047913
575	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.042688	4	219	Upper Fremont Wash	Manzanita Wash	3.77058506	34.56797462	-117.4047937
576	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.017437	4	208	Upper Fremont Wash	Manzanita Wash	3.705803394	34.57040864	-117.404778
577	Ephemeral Stream	ECORP supplemental 2014	14	14	7	7	ACOE	0.048071	7	216	Upper Fremont Wash	Manzanita Wash	3.789744854	34.56771341	-117.4048949
578	Ephemeral Stream	AMEC	30				ACOE	0.343024			Upper Fremont Wash	Manzanita Wash	3.721140385	34.56906151	-117.4050138
579	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.056715	4	218	Upper Fremont Wash	Manzanita Wash	3.802076578	34.56777843	-117.405445
580	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.059005	4	217	Upper Fremont Wash	Manzanita Wash	3.812707663	34.56773938	-117.4057285
581	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.012537	2.5	215	Upper Fremont Wash	Manzanita Wash	4.251329422	34.56821127	-117.4139961
582	Ephemeral Stream	AMEC	5				ACOE	0.070166			Upper Fremont Wash	Manzanita Wash	4.250808716	34.56900039	-117.4145044
583	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.014773	2.5	207	Upper Fremont Wash	Manzanita Wash	4.258040428	34.56992537	-117.414843
584	Ephemeral Stream	ECORP 2013					ACOE	0.003193			Upper Fremont Wash	Manzanita Wash	4.419469357	34.56500106	-117.4155216
585	Ephemeral Stream	AMEC	8				ACOE	0.092135			Upper Fremont Wash	Manzanita Wash	4.430109978	34.56428553	-117.415941
587	Ephemeral Stream	AMEC	10				NJ per MAC ACOE	0.169191			Upper Fremont Wash	Manzanita Wash	4.605813503	34.56525816	-117.4194099
588	Ephemeral Stream	ECORP 2013					NJ per MAC ACOE	0.012794			Upper Fremont Wash	Manzanita Wash	4.603852749	34.56585342	-117.4194568
590	Ephemeral Stream	AMEC	8				ACOE	0.109867			Upper Fremont Wash	Manzanita Wash	4.542919159	34.56912829	-117.4201336
593	Ephemeral Stream	ECORP 2013					ACOE	0.003117			Upper Fremont Wash	Manzanita Wash	4.646207333	34.56613447	-117.4204605
594	Ephemeral Stream	AMEC	8				ACOE	0.10356			Upper Fremont Wash	Manzanita Wash	4.657665253	34.56534133	-117.4204844
595	Ephemeral Stream	ECORP 2013					ACOE	0.006828			Upper Fremont Wash	Manzanita Wash	4.712883472	34.56643406	-117.4218134
596	Ephemeral Stream	AMEC	10				ACOE	0.134566			Upper Fremont Wash	Manzanita Wash	4.711971283	34.56569492	-117.4219189
597	Ephemeral Stream	AMEC	8				ACOE	0.089229			Upper Fremont Wash	Manzanita Wash	4.646475315	34.56917429	-117.4219282
598	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	3.11E-06	2.5	206	Upper Fremont Wash	Manzanita Wash	4.679813385	34.56840486	-117.4220532
600	Ephemeral Stream	ECORP 2013					ACOE	0.001132			Upper Fremont Wash	Manzanita Wash	4.841216087	34.56705746	-117.4245067
601	Ephemeral Stream	AMEC	3				ACOE	0.039852			Upper Fremont Wash	Manzanita Wash	4.848007202	34.56630516	-117.4246849
603	Ephemeral Stream	AMEC	8				ACOE	0.106107			Upper Fremont Wash	Manzanita Wash	4.827235222	34.56913273	-117.4258465
605	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.013179	1.5	203	Upper Fremont Wash	180902080502	5.591468811	34.56828059	-117.4388563
606	Ephemeral Stream	AMEC	2				ACOE	0.032451			Upper Fremont Wash	180902080502	5.600571156	34.56912057	-117.4395997
607	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.004855	1	202	Upper Fremont Wash	180902080502	5.673575401	34.56832103	-117.4403561
608	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.002029	1	197	Upper Fremont Wash	180902080502	5.663465023	34.56984555	-117.4406699
609	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	ACOE	0.008835	3.5	201	Upper Fremont Wash	180902080502	5.789505005	34.56841826	-117.4425193
610	Ephemeral Stream	AMEC	8				ACOE	0.101807			Upper Fremont Wash	180902080502	5.762107372	34.56924233	-117.4425974
611	Ephemeral Stream	AMEC	1				ACOE	0.011526			Upper Fremont Wash	180902080502	5.900658607	34.5692119	-117.4449716

612	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.000698	1	200	Upper Fremont Wash	180902080502	5.926354408	34.56848681	-117.4449876
613	Ephemeral Stream	ECORP supplemental 2014	7	7	3.5	3.5	NJ per MA(ACOE	0.019242	3.5	199	Upper Fremont Wash	180902080502	6.14226675	34.56833987	-117.4489242
614	Ephemeral Stream	AMEC	6				ACOE	0.050588			Upper Fremont Wash	180902080502	6.196104527	34.57054345	-117.4511893
615	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	NJ per MA(ACOE	0.095702	5	198	Upper Fremont Wash	180902080502	6.250601292	34.56781317	-117.4512421
616	Ephemeral Stream	AMEC	8				ACOE	0.355071			Upper Fremont Wash	180902080502	6.233924866	34.56895205	-117.4525587
617	Ephemeral Stream	AMEC	2				NJ per MA(ACOE	0.000516			Upper Fremont Wash	Horse Canyon-Fremont Wash	7.361676216	34.56820385	-117.4715567
618	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.034319	5	154	Upper Fremont Wash	Horse Canyon-Fremont Wash	8.478429794	34.57079246	-117.4929018
619	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.017217	5	153	Upper Fremont Wash	Horse Canyon-Fremont Wash	8.493366241	34.57044822	-117.4929347
620	Ephemeral Stream	ECORP supplemental 2014	10	10	5	5	ACOE	0.029389	5	155	Upper Fremont Wash	Horse Canyon-Fremont Wash	8.492501259	34.57072626	-117.493014
621	Ephemeral Stream	AMEC	6				ACOE	0.113632			Upper Fremont Wash	Horse Canyon-Fremont Wash	8.491063118	34.56933339	-117.4931201
622	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.007669	4	195	Upper Fremont Wash	Horse Canyon-Fremont Wash	8.575676918	34.56828036	-117.4937436
623	Ephemeral Stream	ECORP supplemental 2014	9	9	4.5	4.5	ACOE	0.015328	4.5	152	Upper Fremont Wash	180902080501	9.044231415	34.57011568	-117.50289
624	Ephemeral Stream	AMEC	4				ACOE	0.055563			Upper Fremont Wash	180902080501	9.05332756	34.56934292	-117.5032984
625	Ephemeral Stream	ECORP supplemental 2014	11	11	5.5	5.5	ACOE	0.017805	5.5	194	Upper Fremont Wash	180902080501	9.107787132	34.5685183	-117.5035084
626	Ephemeral Stream	ECORP supplemental 2014	8	8	4	4	ACOE	0.022136	4	193	Upper Fremont Wash	180902080501	9.321846962	34.56822278	-117.5074196
627	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.008364	1.5	151	Upper Fremont Wash	180902080501	9.757228851	34.57148573	-117.5161455
628	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.009553	1.5	150	Upper Fremont Wash	180902080501	10.5420475	34.5743906	-117.5313767
629	Ephemeral Stream	AMEC	2				ACOE	0.016832			Upper Fremont Wash	180902080501	10.56138134	34.5738852	-117.5315692
630	Ephemeral Stream	ECORP supplemental 2014	2	2	1	1	ACOE	0.004517	1	156	Upper Fremont Wash	180902080501	10.58886528	34.57334566	-117.5318147
631	Ephemeral Stream	ECORP 2013					ACOE	0.168151			Upper Fremont Wash	180902080501	10.62930393	34.56860497	-117.5353442
632	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.013911	2.5	157	Upper Fremont Wash	180902080501	10.82065773	34.5740192	-117.5362289
633	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3	ACOE	0.019688	3	192	Upper Fremont Wash	180902080501	11.13869095	34.56098622	-117.5380241
634	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.013769	2.5	191	Upper Fremont Wash	180902080501	11.15247631	34.56093908	-117.538209
635	Ephemeral Stream	ECORP supplemental 2014	3	3	1.5	1.5	ACOE	0.005659	1.5	190	Upper Fremont Wash	180902080501	11.31222153	34.56037975	-117.5408987
636	Ephemeral Stream	ECORP 2013					ACOE	0.049796			Upper Fremont Wash	180902080501	11.06459808	34.57099886	-117.5410012
637	Ephemeral Stream	ECORP supplemental 2014	5	5	2.5	2.5	ACOE	0.017346	2.5	149	Upper Fremont Wash	180902080501	11.40602112	34.57582822	-117.5472948
638	Ephemeral Stream	AMEC	5				ACOE	0.051439			Upper Fremont Wash	180902080501	11.42468929	34.57534289	-117.5479937
639	Ephemeral Stream	ECORP supplemental 2014	6	6	3	3	ACOE	0.015208	3	158	Upper Fremont Wash	180902080501	11.48076916	34.57473709	-117.5482232
640	Ephemeral Stream	ECORP 2013					ACOE	0.027884			Upper Fremont Wash	180902080501	11.50856209	34.56650228	-117.5504543
642	Ephemeral Stream	AMEC	1				ACOE	0.014282			Upper Fremont Wash	180902080501	11.90127563	34.55968246	-117.5516502

Appendix D: Wetland Determination Data Forms

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: LA County Sampling Date: 9/12/13
 Applicant/Owner: Caltrans State: _____ Sampling Point: B-1-1
 Investigator(s): M. Banyasz / W. Turner Section, Township, Range: 8th & Rancho Vista Rd
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): none Slope (%): 0
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Hesperia fine sandy loam NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation , Soil , or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? (<u>assumed</u>) Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Remarks: <u>Stormwater detention basin w/ inputs from curb & gutter system to the west (assumed). Photo 0600</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>none</u>				Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: <u>assumed 100</u> (A/B)
2. _____				
3. _____				
4. _____				
_____ = Total Cover				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: _____ OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals: _____ (A) _____ (B) Prevalence Index = B/A = _____
Sapling/Shrub Stratum (Plot size: _____) 1. <u>none in wetted portion of basin</u>				
2. _____				
3. _____				
4. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____) 1. _____ 2. _____ 3. _____ 4. _____ 5. _____ 6. _____ 7. _____ 8. _____				
<u>50%</u> = Total Cover				Hydrophytic Vegetation Indicators: <input type="checkbox"/> Dominance Test is >50% <input type="checkbox"/> Prevalence index is ≤3.0 ¹ <input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet) <input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
Woody Vine Stratum (Plot size: _____) 1. _____ 2. _____				
_____ = Total Cover				Hydrophytic Vegetation Present? Yes _____ No _____ ¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				

Remarks: Access restricted. Assumed herb strata was OBL to FAC, upland species were not observed in the bottom of the basin, only on banks & perimeter.

WETLAND DETERMINATION DATA FORM - Arid West Region

Project/Site: High Desert Corridor City/County: Los Angeles County Sampling Date: 9/12/13
 Applicant/Owner: Caltrans State: CA Sampling Point: 13-1-2
 Investigator(s): Jesse Byrd Krissy Walker Section, Township, Range: 17th St. E
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Adelanto coarse sandy loam NWI classification: _____
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes _____ No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil X, or Hydrology X significantly disturbed? Are "Normal Circumstances" present? Yes _____ No _____
 Are Vegetation _____, Soil _____, or Hydrology _____ naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes _____ No _____ Hydric Soil Present? Yes _____ No <u>X</u> Wetland Hydrology Present? Yes <u>X</u> No _____	Is the Sampled Area within a Wetland? Yes _____ No <u>X</u>
Remarks: <p align="center"><i>Access restricted, soil type not hydric, delineated with aerial photography Man-made channel (ditch)</i></p>	

VEGETATION - Use scientific names of plants.

	Absolute % Cover	Dominant Species?	Indicator Status																									
Tree Stratum (Plot size: _____)				Dominance Test worksheet: Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A) Total Number of Dominant Species Across All Strata: _____ (B) Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)																								
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
_____ = Total Cover				Prevalence Index worksheet: <table style="width:100%; border-collapse: collapse;"> <tr> <td style="width:60%;"></td> <td style="width:20%;">Total % Cover of:</td> <td style="width:20%;">Multiply by:</td> </tr> <tr> <td>OBL species _____</td> <td>_____</td> <td>x 1 = _____</td> </tr> <tr> <td>FACW species _____</td> <td>_____</td> <td>x 2 = _____</td> </tr> <tr> <td>FAC species _____</td> <td>_____</td> <td>x 3 = _____</td> </tr> <tr> <td>FACU species _____</td> <td>_____</td> <td>x 4 = _____</td> </tr> <tr> <td>UPL species _____</td> <td>_____</td> <td>x 5 = _____</td> </tr> <tr> <td colspan="2">Column Totals: _____ (A)</td> <td>_____ (B)</td> </tr> <tr> <td colspan="3">Prevalence Index = B/A = _____</td> </tr> </table>		Total % Cover of:	Multiply by:	OBL species _____	_____	x 1 = _____	FACW species _____	_____	x 2 = _____	FAC species _____	_____	x 3 = _____	FACU species _____	_____	x 4 = _____	UPL species _____	_____	x 5 = _____	Column Totals: _____ (A)		_____ (B)	Prevalence Index = B/A = _____		
	Total % Cover of:	Multiply by:																										
OBL species _____	_____	x 1 = _____																										
FACW species _____	_____	x 2 = _____																										
FAC species _____	_____	x 3 = _____																										
FACU species _____	_____	x 4 = _____																										
UPL species _____	_____	x 5 = _____																										
Column Totals: _____ (A)		_____ (B)																										
Prevalence Index = B/A = _____																												
Sapling/Shrub Stratum (Plot size: _____)																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
_____ = Total Cover																												
Herb Stratum (Plot size: _____)																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
3. _____	_____	_____	_____																									
4. _____	_____	_____	_____																									
5. _____	_____	_____	_____																									
6. _____	_____	_____	_____																									
7. _____	_____	_____	_____																									
8. _____	_____	_____	_____																									
_____ = Total Cover																												
Woody Vine Stratum (Plot size: _____)																												
1. _____	_____	_____	_____																									
2. _____	_____	_____	_____																									
_____ = Total Cover																												
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____																												

Remarks:
Access restricted, observed and delineated with aerial photography, vegetation cannot be determined

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: Los Angeles County Sampling Date: 9/12/13
 Applicant/Owner: Caltans State: CA Sampling Point: 13-1-3
 Investigator(s): Jesse Byrd Krissy Walker Section, Township, Range: 20th St. E X E. Ave. P-8
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Rosemond loam NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes _____ No _____	Hydric Soil Present? Yes _____ No _____	Is the Sampled Area within a Wetland? Yes _____ No _____
Wetland Hydrology Present? Yes _____ No _____	Remarks: <u>Access restricted, delineated with aerial photography</u> <u>Man-made dirt channel</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: _____ (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. _____	_____	_____	_____	Total % Cover of: _____ Multiply by: _____
2. _____	_____	_____	_____	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____	_____	_____	_____	___ Dominance Test is >50%
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹
3. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes _____ No _____		

Remarks:
Access restricted, vegetation cannot be determined

SOIL

Sampling Point: 13-1-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type	Loc ²		

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes _____ No X

Remarks:

Access restricted, could not dig pit.

Rosemond loam can be hydric within playas. Man made feature.

HYDROLOGY

Wetland Hydrology Indicators:

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

<input checked="" type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input checked="" type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Secondary Indicators (2 or more required)

Field Observations:

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

Water Table Present? Yes _____ No _____ Depth (Inches): _____

Saturation Present? Yes _____ No _____ Depth (Inches): _____

(Includes capillary fringe)

Wetland Hydrology Present? Yes X No _____

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

Remarks:

Water visible in aerial imagery

Photos: 273, 274, 275

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: HDC JD 2012-061 City/County: Los Angeles County Sampling Date: 9/12/13
 Applicant/Owner: City of Hawthorne State: CA Sampling Point: 2013-pt-[6A]-4
 Investigator(s): Jesse Lynn and Kristy Walker Section, Township, Range: E. Am. P. 13-1-4
 Landform (hillslope, terrace, etc.): Flat - Agricultural Local relief (concave, convex, none): N/A Slope (%): 2/105
 Subregion (LRR): _____ Lat: 34.66219 Long: -118.088 Datum: NAD83
 Soil Map Unit Name: Adakate Coarse Sandy Loam + Hegawa Fine Sandy Loam NWI classification: Not Verified
 Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation Yes, Soil Yes, or Hydrology Yes significantly disturbed? Are "Normal Circumstances" present? Yes _____ No
 Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks.)

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present? <u>N/A: NO ACCESS</u> Yes _____ No _____	
Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	

Remarks: NO ACCESS due to private property fence line. Observed from outside of fencing, wetland hydro and veg. present. Soil Analysis not feasible.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	0			Number of Dominant Species That Are OBL, FACW, or FAC: <u>3</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>N/A: 100</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling Stratum (Plot size: <u>N/A</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Cattail - <i>Typha angustifolia</i></u>	20		OBL	Total % Cover of: _____ Multiply by: _____
2. <u>Sedge - Unknown Sp.</u>	20		OBL/FACW	OBL species _____ x 1 = _____
3. <u>Silver Mustard</u>	20		FAC	FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
6. _____				UPL species _____ x 5 = _____
7. _____				Column Totals: _____ (A) _____ (B)
8. _____				Prevalence Index = B/A = <u>N/A</u>
100 = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<u>N/A</u> Prevalence Index is ≤3.0 ¹
3. _____				<u>N/A</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<u>N/A</u> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>N/A</u>	% Cover of Biotic Crust _____			Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks: NO ACCESS to wetland area/observed from approx. 10-ft. in distance.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: HDC JD 2012-061 City/County: Los Angeles Co. Sampling Date: 9/12/12
 Applicant/Owner: Caltrans State: CA Sampling Point: 2013-pt: [605] - 2
 Investigator(s): Jessie Lynn and Kristy Walker Section, Township, Range: L 25th St. 13-1-5
 Landform (hillslope, terrace, etc.): Flat - Agricultural Local relief (concave, convex, none): NONE Slope (%): 2-5
 Subregion (LRR): _____ Lat: 34.59832467 Long: -118.067 Datum: NAD 83
 Soil Map Unit Name: Romana Loam NWI classification: Not within

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? <u>N/A</u> Yes _____ No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
---	--

Remarks: NO Access due to private road + fence. Agricultural land, with irrigation land clearing.

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>OK</u>	<u>0</u>			Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Cattail - Typha angustifolia</u>	<u>70</u>		<u>OBL</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Salix</u>	<u>2</u>		<u>FACW</u>	OBL species _____ x 1 = _____
3. <u>Schubertia</u>	<u>5</u>		<u>FAC</u>	FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = <u>N/A</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Unknown</u>	<u>0</u>			<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<u>N/A</u> Prevalence Index is ≤3.0 ¹
3. _____				<u>N/A</u> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<u>N/A</u> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. <u>OK</u>	<u>0</u>			¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>OK</u> % Cover of Biotic Crust _____		Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____		

Remarks: NO Access to Wetland area.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: Los Angeles County Sampling Date: 9/12/13
 Applicant/Owner: Caltrans State: CA Sampling Point: 13-1-6
 Investigator(s): Jesse Boyd Section, Township, Range: 25th St E X E Area 8
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: Rosamond fine sandy loam NWI classification: _____

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No <input checked="" type="checkbox"/>	
Remarks: <p align="center"><i>Access restricted, delineated with aerial photography Man-made dirt channel; tractor removing vegetation - on farmland</i></p>			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC:	<u>2</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata:	<u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC:	<u>100</u> (A/B)
4. _____	_____	_____	_____	= Total Cover	
Sapling/Shrub Stratum (Plot size: _____)				Prevalence Index worksheet:	
1. _____	_____	_____	_____	Total % Cover of:	Multiply by:
2. _____	_____	_____	_____	OBL species <u>1</u> x 1 = <u>1</u>	
3. _____	_____	_____	_____	FACW species _____ x 2 = _____	
4. _____	_____	_____	_____	FAC species <u>1</u> x 3 = <u>3</u>	
5. _____	_____	_____	_____	FACU species _____ x 4 = _____	
= Total Cover				UPL species _____ x 5 = _____	
Herb Stratum (Plot size: _____)				Column Totals: <u>2</u> (A) <u>4</u> (B)	
1. <u>Typha</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	Prevalence Index = B/A = <u>2</u>	
2. <u>Rumex crispus</u>	<u>30</u>	<u>Y</u>	<u>FAC</u>		
3. _____	_____	_____	_____		
4. _____	_____	_____	_____		
5. _____	_____	_____	_____		
6. _____	_____	_____	_____		
7. _____	_____	_____	_____		
8. _____	_____	_____	_____		
= Total Cover				Hydrophytic Vegetation Indicators:	
Woody Vine Stratum (Plot size: _____)				<input checked="" type="checkbox"/> Dominance Test is >50%	
1. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹	
2. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
= Total Cover				___ Problematic Hydrophytic Vegetation ¹ (Explain)	
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.	
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/>	

Remarks:

Access restricted, but vegetation observed from eastern end.

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: SB County Sampling Date: 9/17/2013
 Applicant/Owner: Caltrans State: _____ Sampling Point: 13-4-1
 Investigator(s): Mbornypsz / Jbyrd Section, Township, Range: Mojave River
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): concave Slope (%): 2-3
 Subregion (LRR): LR-B Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

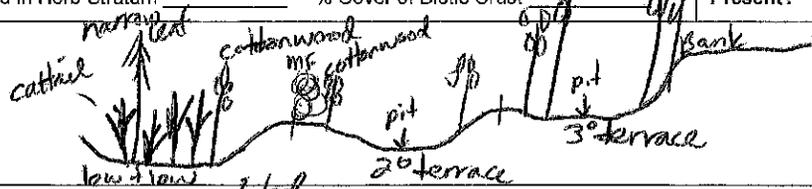
Are climatic / hydrologic conditions on the site typical for this time of year? Yes No _____ (If no, explain in Remarks.)
 Are Vegetation _____, Soil _____, or Hydrology _____ significantly disturbed? Are "Normal Circumstances" present? Yes No _____
 Are Vegetation _____, Soil _____, or Hydrology _____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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center"><i>low-flow channel, inundated.</i></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <i>S. exoniua</i>	10		FACW	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <i>P. fremontii</i>	10		-	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____				
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <i>Bac sal</i>	5		FAC	Total % Cover of: _____ Multiply by: _____
2. <i>pop sac</i>	20		-	OBL species <u>50</u> x 1 = <u>50</u>
3. _____				FACW species <u>12</u> x 2 = <u>24</u>
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
_____ = Total Cover				UPL species <u>30</u> x 5 = <u>150</u>
				Column Totals: <u>92</u> (A) <u>224</u> (B)
				Prevalence Index = B/A = <u>2.38</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <i>typha</i>	50		OBL	<input type="checkbox"/> Dominance Test is >50%
2. <i>mel alb</i>	10		-	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <i>art dra</i>	10		-	<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. <i>epi cil</i>	2		FACW	<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____				
_____ = Total Cover				
% Bare Ground In Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____



WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert blonder City/County: SB County Sampling Date: 9/17/2018
 Applicant/Owner: J Caltray State: _____ Sampling Point: 3-4-2
 Investigator(s): _____ Section, Township, Range: MJ/River
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): 23
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Hydric Soil Present? Yes <input checked="" type="checkbox"/> No <input checked="" type="checkbox"/> Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <u>terrace; had had low veg. cover which could be result of scour after 2010 flooding</u>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>2</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>50%</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>cottonwood</u>	<u>25</u>	_____	_____	Total % Cover of: _____ Multiply by: _____
2. <u>mulefat</u>	<u>20</u>	_____	<u>FAC</u>	OBL species _____ x 1 = _____
3. _____	_____	_____	_____	FACW species _____ x 2 = _____
4. _____	_____	_____	_____	FAC species <u>20</u> x 3 = <u>60</u>
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species <u>25</u> x 5 = <u>125</u>
				Column Totals: <u>45</u> (A) <u>185</u> (B)
				Prevalence Index = B/A = <u>4.1</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>met alb</u>	<u>60</u>	_____	_____	___ Dominance Test is >50% <u>50%</u>
2. _____	_____	_____	_____	___ Prevalence Index is ≤3.0 ¹ <u>NO</u>
3. _____	_____	_____	_____	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	<input checked="" type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum <u>60%</u> % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes _____ No <input checked="" type="checkbox"/>

Remarks: water stained leaf litter in area where scour could have substantially removed vegetation, % cover low w/ upl & fac species.

SOIL

Sampling Point: 13-4-2

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-18"							coarse sand	minor
@ 12"	10YR	10					"	saturated, water filled pit @ 12"

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

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

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

gleyed matrix was observed @ depths below 6", thereby not meeting the Arid West criteria

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3) (subsurface)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

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

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes No _____ Depth (inches): 12"
 Saturation Present? Yes No _____ Depth (inches): 12"

Wetland Hydrology Present? Yes No _____

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: SB County Sampling Date: 9/17/2018
 Applicant/Owner: Cabarrus State: _____ Sampling Point: 13-4-3
 Investigator(s): MBonisz/Sbnd Section, Township, Range: Mojave River
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Quercus agrifolia</u>	<u>20</u>		<u>UPL</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____				Total Number of Dominant Species Across All Strata: <u>3</u> (B)
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>30%</u> (A/B)
4. _____				
= Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>bac sal</u>	<u>5</u>		<u>FAC</u>	Total % Cover of: _____ Multiply by: _____
2. <u>Tanacetum</u>	<u>5</u>		<u>UPL</u>	OBL species _____ x 1 = _____
3. _____				FACW species _____ x 2 = _____
4. _____				FAC species _____ x 3 = _____
5. _____				FACU species _____ x 4 = _____
= Total Cover				UPL species _____ x 5 = _____
				Column Totals: _____ (A) _____ (B)
				Prevalence Index = B/A = _____
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Salsola</u>	<u>2</u>		<u>UPL</u>	<input type="checkbox"/> Dominance Test is >50%
2. <u>art dra</u>	<u>2</u>		<u>UPL</u>	<input type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. _____				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____				
6. _____				
7. _____				
8. _____				
= Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Present?
1. _____				Yes _____ No <input checked="" type="checkbox"/>
2. _____				
= Total Cover				
% Bare Ground in Herb Stratum <u>90%</u>		% Cover of Biotic Crust _____		

Remarks:

SOIL

Sampling Point: 13-4-3

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>0-6</u>	<u>10 YR 3/2</u>	<u>100</u>	<u>none</u>				<u>loamy sand</u>	
<u>6-20</u>	<u>10 YR 5/4</u>	<u>100</u>	<u>none</u>				<u>coarse sand</u>	

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

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

Indicators for Problematic Hydric Soils³:

- Histosol (A1)
- Histic Epipedon (A2)
- Black Histic (A3)
- Hydrogen Sulfide (A4)
- Stratified Layers (A5) (LRR C)
- 1 cm Muck (A9) (LRR D)
- Depleted Below Dark Surface (A11)
- Thick Dark Surface (A12)
- Sandy Mucky Mineral (S1)
- Sandy Gleyed Matrix (S4)

- Sandy Redox (S5)
- Stripped Matrix (S6)
- Loamy Mucky Mineral (F1)
- Loamy Gleyed Matrix (F2)
- Depleted Matrix (F3)
- Redox Dark Surface (F6)
- Depleted Dark Surface (F7)
- Redox Depressions (F8)
- Vernal Pools (F9)

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

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

Restrictive Layer (if present):

Type: _____
Depth (inches): _____

Hydric Soil Present? Yes _____ No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:

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

Secondary Indicators (2 or more required)

- Surface Water (A1)
- High Water Table (A2)
- Saturation (A3)
- Water Marks (B1) (Nonriverine)
- Sediment Deposits (B2) (Nonriverine)
- Drift Deposits (B3) (Nonriverine)
- Surface Soil Cracks (B6)
- Inundation Visible on Aerial Imagery (B7)
- Water-Stained Leaves (B9)

- Salt Crust (B11)
- Biotic Crust (B12)
- Aquatic Invertebrates (B13)
- Hydrogen Sulfide Odor (C1)
- Oxidized Rhizospheres along Living Roots (C3)
- Presence of Reduced Iron (C4)
- Recent Iron Reduction in Tilled Soils (C6)
- Thin Muck Surface (C7)
- Other (Explain in Remarks)

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

Field Observations:

Surface Water Present? Yes _____ No Depth (inches): _____
 Water Table Present? Yes _____ No Depth (inches): _____
 Saturation Present? Yes _____ No Depth (inches): _____
 (includes capillary fringe)

Wetland Hydrology Present? Yes _____ No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: SB County Sampling Date: _____
 Applicant/Owner: Caltrans State: CA Sampling Point: 13-4-4
 Investigator(s): M. Barajas / J. Boyd Section, Township, Range: Mojave Range
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____

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

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

Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ Hydric Soil Present? Yes <input checked="" type="checkbox"/> No _____ Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Remarks: <p align="center" style="font-size: 1.2em;"><i>inundated, no soil sample</i></p>	

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. _____	_____	_____	_____	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. _____	_____	_____	_____	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. _____	_____	_____	_____	Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
4. _____	_____	_____	_____	
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>pop. tre</u>	<u>10</u>	_____	<u>UPL</u>	Total % Cover of: _____ Multiply by: _____
2. <u>salix esp.</u>	<u>10</u>	_____	<u>FACW</u>	OBL species <u>100</u> x 1 = <u>100</u>
3. <u>salix sp.</u>	<u>1</u>	_____	_____	FACW species <u>10</u> x 2 = <u>20</u>
4. _____	_____	_____	_____	FAC species _____ x 3 = _____
5. _____	_____	_____	_____	FACU species _____ x 4 = _____
_____ = Total Cover				UPL species <u>10</u> x 5 = <u>50</u>
				Column Totals: <u>120</u> (A) <u>170</u> (B)
				Prevalence Index = B/A = <u>1.42</u>
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. <u>Schoen. ameri (scirpus)</u>	<u>85</u>	_____	<u>OBL</u>	<input checked="" type="checkbox"/> Dominance Test is >50%
2. <u>Schoen. cal. (scirpus)</u>	<u>5</u>	_____	<u>OBC</u>	<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
3. <u>cattail</u>	<u>10</u>	_____	<u>OBL</u>	___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
4. _____	_____	_____	_____	___ Problematic Hydrophytic Vegetation ¹ (Explain)
5. _____	_____	_____	_____	
6. _____	_____	_____	_____	
7. _____	_____	_____	_____	
8. _____	_____	_____	_____	
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Footnote:
1. _____	_____	_____	_____	¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
2. _____	_____	_____	_____	
_____ = Total Cover				
% Bare Ground in Herb Stratum _____ % Cover of Biotic Crust _____				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____

Remarks: _____

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: SB County Sampling Date: 9/17/2013
 Applicant/Owner: Caltrans State: CA Sampling Point: 13-4-5
 Investigator(s): M Bonmassa / Byrd Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): _____ Local relief (concave, convex, none): _____ Slope (%): _____
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

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

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
1. <u>Sal ex</u>	<u>90</u>		<u>FACW</u>	Number of Dominant Species That Are OBL, FACW, or FAC: <u>1</u> (A)
2. <u>pop tre</u>	<u>5</u>		<u>UPL</u>	Total Number of Dominant Species Across All Strata: <u>1</u> (B)
3. <u>Sal gov</u>	<u>5</u>		<u>FACW</u>	
4. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
_____ = Total Cover				
Sapling/Shrub Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index worksheet:
1. <u>Scho cal</u>	<u>10</u>		<u>OBL</u>	Total % Cover of: _____ Multiply by: _____ OBL species <u>15</u> x 1 = <u>15</u> FACW species <u>95</u> x 2 = <u>190</u> FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species <u>10</u> x 5 = <u>10</u> Column Totals: <u>120</u> (A) <u>215</u> (B)
2. <u>pop tre</u>	<u>5</u>		<u>UPL</u>	
3. _____				
4. _____				
5. _____				
_____ = Total Cover				
Herb Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Prevalence Index = B/A = _____
1. <u>jun mex</u>	<u>5</u>		<u>OBL</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
_____ = Total Cover				
Woody Vine Stratum (Plot size: _____)	Absolute % Cover	Dominant Species?	Indicator Status	Hydrophytic Vegetation Indicators:
1. _____				<input checked="" type="checkbox"/> Dominance Test is >50%
2. _____				<input checked="" type="checkbox"/> Prevalence Index is ≤3.0 ¹
				<input type="checkbox"/> Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)
				<input type="checkbox"/> Problematic Hydrophytic Vegetation ¹ (Explain)
				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.
				Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____
				Remarks: _____ _____

SOIL

Sampling Point: 13-4-5

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
<u>0-3</u>	<u>10YR 4/4</u>	<u>100</u>					<u>loam no hydric indicators</u>	
<u>3-8+</u>		<u>90</u>	<u>black</u>	<u>10</u>	<u>C</u>	<u>PL</u>	<u>sandy loam gleyed matrix</u>	

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

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

<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input checked="" type="checkbox"/> Hydrogen Sulfide (A4) <u>faint</u>	<input checked="" type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks: root channels, redox feature - black inundated, flooded pit @ 8"

HYDROLOGY

Wetland Hydrology Indicators:

<u>Primary Indicators (minimum of one required; check all that apply)</u>		<u>Secondary Indicators (2 or more required)</u>
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input checked="" type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input checked="" type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

Surface Water Present? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Depth (inches): <u>8"</u>	Wetland Hydrology Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
Water Table Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3"</u>	
Saturation Present? Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>	Depth (inches): <u>3"</u>	

(includes capillary fringe)

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

Project/Site: High Desert Corridor City/County: SB County Sampling Date: 9/18/2013
 Applicant/Owner: Caltrans State: CA Sampling Point: 1-18(13-4-16)
 Investigator(s): Alisa Flint Scott Taylor Section, Township, Range: _____
 Landform (hillslope, terrace, etc.) _____ Local relief (concave, convex, none) CONCAVE Slope (%) 2-3
 Subregion (LRR): LRR-D Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

Hydrophytic Vegetation Present?	Yes <input checked="" type="checkbox"/>	No _____	Is the Sampled Area within a Wetland? Yes <input checked="" type="checkbox"/> No _____
Hydric Soil Present?	Yes <input checked="" type="checkbox"/>	No _____	
Wetland Hydrology Present?	Yes <input checked="" type="checkbox"/>	No _____	
Remarks			

VEGETATION – Use scientific names of plants.

Stratum (Plot size)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:
<u>Tree Stratum</u> (Plot size: <u>30' radius</u>)				Number of Dominant Species That Are OBL, FACW, or FAC: <u>4</u> (A)
1. <u>S. exigua</u>	<u>10</u>	<u>Y</u>	<u>FACW</u>	Total Number of Dominant Species Across All Strata: <u>4</u> (B)
2. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: <u>100</u> (A/B)
3. _____				Prevalence Index worksheet: Total % Cover of: _____ Multiply by: OBL species _____ x 1 = _____ FACW species _____ x 2 = _____ FAC species _____ x 3 = _____ FACU species _____ x 4 = _____ UPL species _____ x 5 = _____ Column Totals _____ (A) _____ (B) Prevalence Index = B/A = _____
4. _____				
5. _____				
<u>Seeping/Shrub Stratum</u> (Plot size: <u>30' radius</u>)	<u>10</u> = Total Cover			
1. <u>Salix exigua</u>	<u>60</u>	<u>Y</u>	<u>FACW</u>	
2. <u>Scirpus americanus</u>	<u>40</u>	<u>Y</u>	<u>OBL</u>	
3. <u>Scirpus californicus</u>	<u>2</u>	<u>N</u>	<u>OBL</u>	
4. <u>Tamoxia ramosissima</u>	<u>2</u>	<u>N</u>	<u>FA</u>	
5. _____				
<u>Herb Stratum</u> (Plot size: <u>5' radius</u>)	<u>60</u> = Total Cover			
1. <u>Salix exigua</u>	<u>5</u>	<u>Y</u>	<u>FACW</u>	
2. _____				
3. _____				
4. _____				
5. _____				
6. _____				
7. _____				
8. _____				
<u>Woody Vine Stratum</u> (Plot size: <u>30' radius</u>)	<u>5</u> = Total Cover			
1. <u>N/A</u>				
2. _____				
_____ = Total Cover				
% Bare Ground in Herb Stratum: <u>60</u>	% Cover of Biotic Crust: <u>0</u>			
Hydrophytic Vegetation Present? Yes <input checked="" type="checkbox"/> No _____ *Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.				
Remarks				

SOIL

Sampling Point 18(13-4-0)

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
0-5	10YR 4/3		5YR 5/6	1	RM	M	Sandy loam	Below
5-10	10YR 5/2						Sand	Depleted Matrix?

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :	
<input type="checkbox"/> Histosol (A1)	<input checked="" type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)	
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)	
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)	
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)	
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input checked="" type="checkbox"/> Depleted Matrix (F3) ?	<input type="checkbox"/> Other (Explain in Remarks)	
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)		
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)		
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)		
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)		
<input type="checkbox"/> Sandy Gleyed Matrix (S4)			

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

Restrictive Layer (if present):
 Type: _____
 Depth (inches): _____

Hydric Soil Present? Yes No

Remarks:

HYDROLOGY

Wetland Hydrology Indicators:		Secondary Indicators (2 or more required)
Primary Indicators (minimum of one required; check all that apply)		
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)	<input type="checkbox"/> Water Marks (B1) (Riverine)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)	<input checked="" type="checkbox"/> Sediment Deposits (B2) (Riverine)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)	<input checked="" type="checkbox"/> Drift Deposits (B3) (Riverine)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)	<input checked="" type="checkbox"/> Drainage Patterns (B10)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input checked="" type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)	<input type="checkbox"/> Dry-Season Water Table (C2)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)	<input type="checkbox"/> Crayfish Burrows (C8)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)	<input type="checkbox"/> Shallow Aquitard (D3)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)	<input checked="" type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

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

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

Wetland Hydrology Present? Yes No

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

Remarks:

WETLAND DETERMINATION DATA FORM – Arid West Region

UPLAND POINT

Project/Site: HDC City/County: VICTORVILLE, SB Sampling Date: 9/18/13
 Applicant/Owner: _____ State: CA Sampling Point: 2-18(13-4-11)
 Investigator(s): S. Taylor A. Flint Section, Township, Range: _____
 Landform (hillslope, terrace, etc.): SLOPE Local relief (concave, convex, none): CONVEX Slope (%): 5
 Subregion (LRR): _____ Lat: _____ Long: _____ Datum: _____
 Soil Map Unit Name: _____ NWI classification: _____

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

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

Hydrophytic Vegetation Present?	Yes _____ No <input checked="" type="checkbox"/>	Is the Sampled Area within a Wetland?	Yes _____ No <input checked="" type="checkbox"/>
Hydric Soil Present?	Yes _____ No <input checked="" type="checkbox"/>		
Wetland Hydrology Present?	Yes _____ No <input checked="" type="checkbox"/>		
Remarks			

VEGETATION – Use scientific names of plants.

Tree Stratum (Plot size: <u>30</u>)	Absolute % Cover	Dominant Species?	Indicator Status	Dominance Test worksheet:	
1. <u>POP FRIE</u>	<u>40</u>	<u>Y</u>		Number of Dominant Species That Are OBL, FACW, or FAC: _____ (A)	
2. _____				Total Number of Dominant Species Across All Strata _____ (B)	
3. _____				Percent of Dominant Species That Are OBL, FACW, or FAC: _____ (A/B)	
4. _____					
_____ = Total Cover				Prevalence Index worksheet:	
Sapling/Shrub Stratum (Plot size: <u>30</u>)				Total % Cover of: _____	Multiply by: _____
1. <u>ATRI CAN</u>	<u>35</u>	<u>Y</u>		OBL species _____ x 1 = _____	
2. _____				FACW species _____ x 2 = _____	
3. _____				FAC species _____ x 3 = _____	
4. _____				FACU species _____ x 4 = _____	
5. _____				UPL species _____ x 5 = _____	
_____ = Total Cover				Column Totals _____ (A) _____ (B)	
				Prevalence Index = B/A = _____	
Herb Stratum (Plot size: <u>30</u>)				Hydrophytic Vegetation Indicators:	
1. <u>SALSOLA TRA</u>	<u>2</u>			___ Dominance Test is >50%	
2. <u>MYSERY PLANT - WILD LIC</u>	<u>25</u>	<u>Y</u>		___ Prevalence Index is ≤3.0 ¹	
3. <u>SCHMUC ARB</u>	<u>2</u>			___ Morphological Adaptations ¹ (Provide supporting data in Remarks or on a separate sheet)	
4. _____				___ Problematic Hydrophytic Vegetation ¹ (Explain)	
5. _____					
6. _____					
7. _____					
8. _____					
_____ = Total Cover				¹ Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic	
Woody Vine Stratum (Plot size: _____)				Hydrophytic Vegetation Present?	
1. _____				Yes _____ No _____	
2. _____					
_____ = Total Cover					
% Bare Ground in Herb Stratum <u>25</u>		% Cover of Biotic Crust _____			
Remarks					

13-4-18

SOIL

Sampling Point: 2-18

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

Depth (inches)	Matrix		Redox Features				Texture	Remarks
	Color (moist)	%	Color (moist)	%	Type ¹	Loc ²		
1-8							SAND	NO INDICATORS
8-14							SAND	NO INDICATORS

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

Hydric Soil Indicators: (Applicable to all LRRs, unless otherwise noted.)		Indicators for Problematic Hydric Soils ³ :
<input type="checkbox"/> Histosol (A1)	<input type="checkbox"/> Sandy Redox (S5)	<input type="checkbox"/> 1 cm Muck (A9) (LRR C)
<input type="checkbox"/> Histic Epipedon (A2)	<input type="checkbox"/> Stripped Matrix (S6)	<input type="checkbox"/> 2 cm Muck (A10) (LRR B)
<input type="checkbox"/> Black Histic (A3)	<input type="checkbox"/> Loamy Mucky Mineral (F1)	<input type="checkbox"/> Reduced Vertic (F18)
<input type="checkbox"/> Hydrogen Sulfide (A4)	<input type="checkbox"/> Loamy Gleyed Matrix (F2)	<input type="checkbox"/> Red Parent Material (TF2)
<input type="checkbox"/> Stratified Layers (A5) (LRR C)	<input type="checkbox"/> Depleted Matrix (F3)	<input type="checkbox"/> Other (Explain in Remarks)
<input type="checkbox"/> 1 cm Muck (A9) (LRR D)	<input type="checkbox"/> Redox Dark Surface (F6)	
<input type="checkbox"/> Depleted Below Dark Surface (A11)	<input type="checkbox"/> Depleted Dark Surface (F7)	
<input type="checkbox"/> Thick Dark Surface (A12)	<input type="checkbox"/> Redox Depressions (F8)	
<input type="checkbox"/> Sandy Mucky Mineral (S1)	<input type="checkbox"/> Vernal Pools (F9)	
<input type="checkbox"/> Sandy Gleyed Matrix (S4)		

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

Restrictive Layer (if present):

Type: _____

Depth (inches) _____

Hydric Soil Present? Yes _____ No X

Remarks: NO INDICATOR

HYDROLOGY

Wetland Hydrology Indicators:	
Primary Indicators (minimum of one required; check all that apply)	Secondary Indicators (2 or more required)
<input type="checkbox"/> Surface Water (A1)	<input type="checkbox"/> Salt Crust (B11)
<input type="checkbox"/> High Water Table (A2)	<input type="checkbox"/> Biotic Crust (B12)
<input type="checkbox"/> Saturation (A3)	<input type="checkbox"/> Aquatic Invertebrates (B13)
<input type="checkbox"/> Water Marks (B1) (Nonriverine)	<input type="checkbox"/> Hydrogen Sulfide Odor (C1)
<input type="checkbox"/> Sediment Deposits (B2) (Nonriverine)	<input type="checkbox"/> Oxidized Rhizospheres along Living Roots (C3)
<input type="checkbox"/> Drift Deposits (B3) (Nonriverine)	<input type="checkbox"/> Presence of Reduced Iron (C4)
<input type="checkbox"/> Surface Soil Cracks (B6)	<input type="checkbox"/> Recent Iron Reduction in Tilled Soils (C6)
<input type="checkbox"/> Inundation Visible on Aerial Imagery (B7)	<input type="checkbox"/> Thin Muck Surface (C7)
<input type="checkbox"/> Water-Stained Leaves (B9)	<input type="checkbox"/> Other (Explain in Remarks)
	<input type="checkbox"/> Water Marks (B1) (Riverine)
	<input type="checkbox"/> Sediment Deposits (B2) (Riverine)
	<input type="checkbox"/> Drift Deposits (B3) (Riverine)
	<input type="checkbox"/> Drainage Patterns (B10)
	<input type="checkbox"/> Dry-Season Water Table (C2)
	<input type="checkbox"/> Crayfish Burrows (C8)
	<input type="checkbox"/> Saturation Visible on Aerial Imagery (C9)
	<input type="checkbox"/> Shallow Aquitard (D3)
	<input type="checkbox"/> FAC-Neutral Test (D5)

Field Observations:

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

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

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

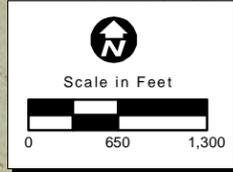
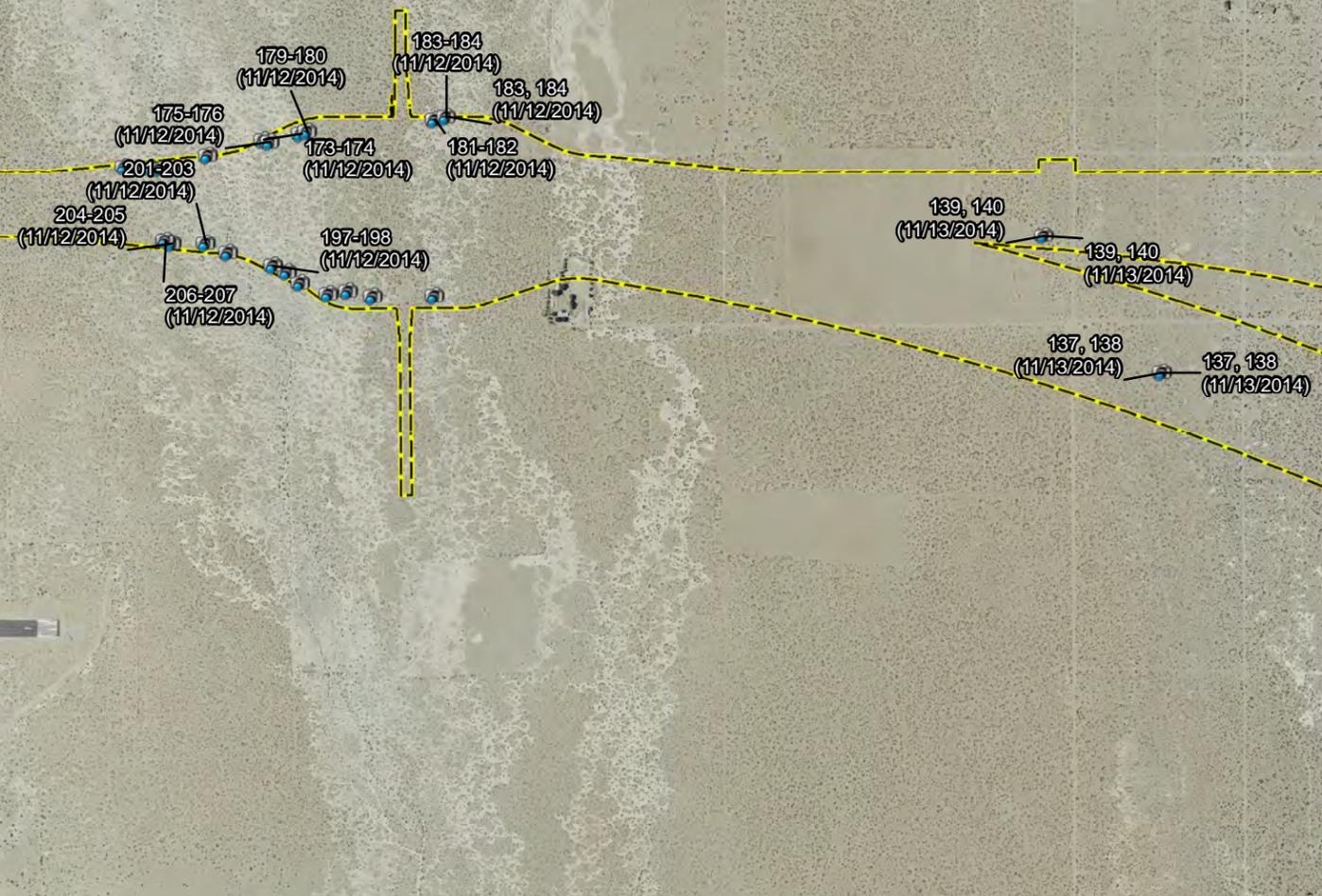
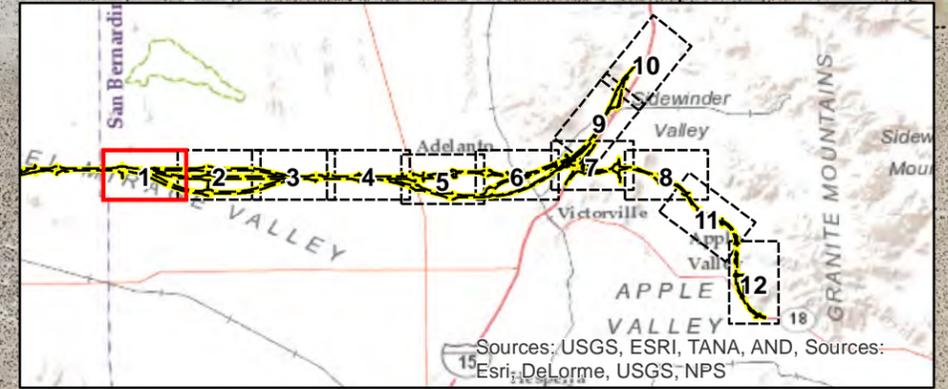
Wetland Hydrology Present? Yes _____ No X

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

Remarks: NO INDICATOR

Appendix E: HDC BSA Photo Map

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\Wetland_mapping\wland_delineation\field_photos\HDC_JD_Photo_Points.mxd 8/14/2015

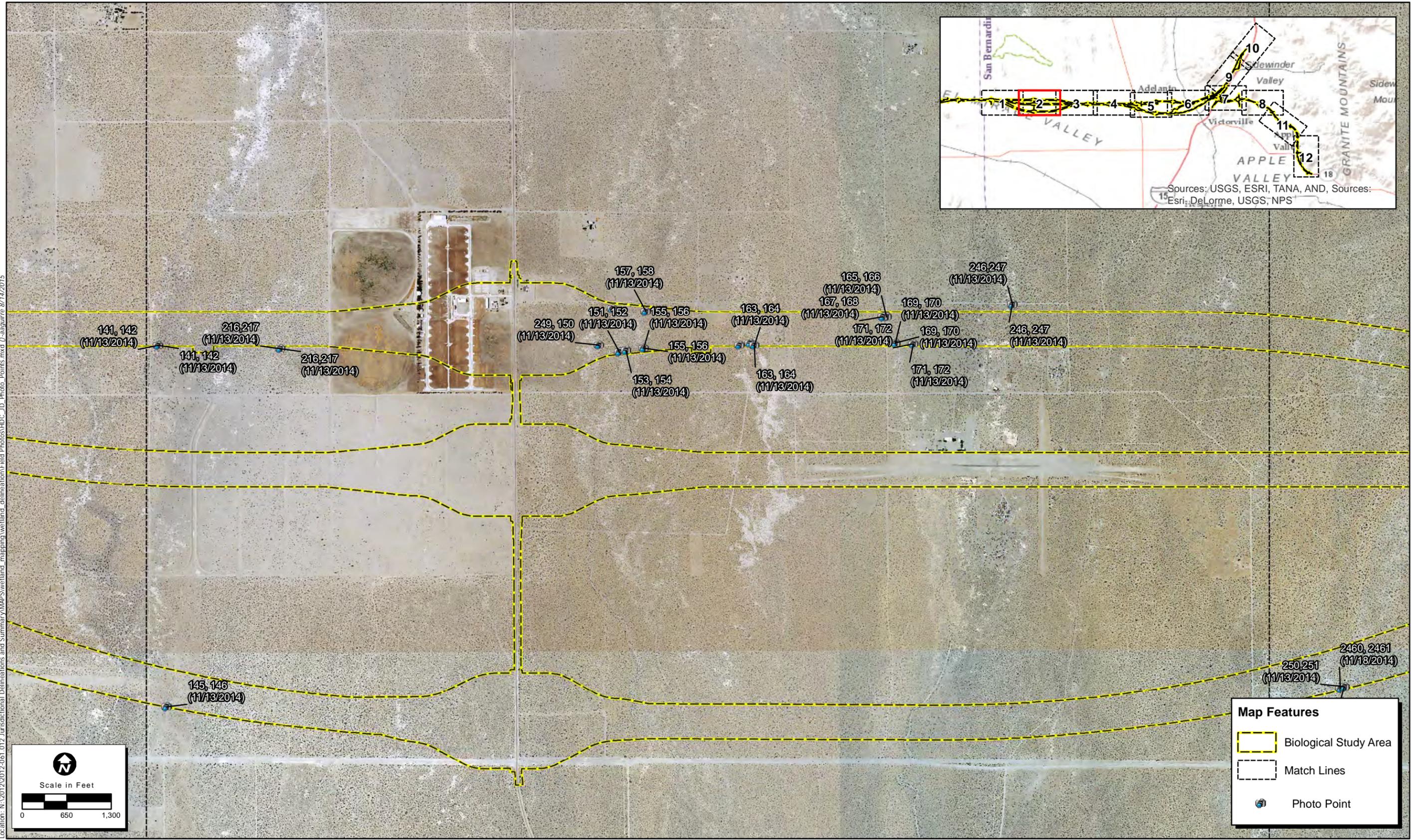


Map Features

- Biological Study Area
- Match Lines
- Photo Point

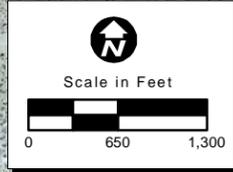
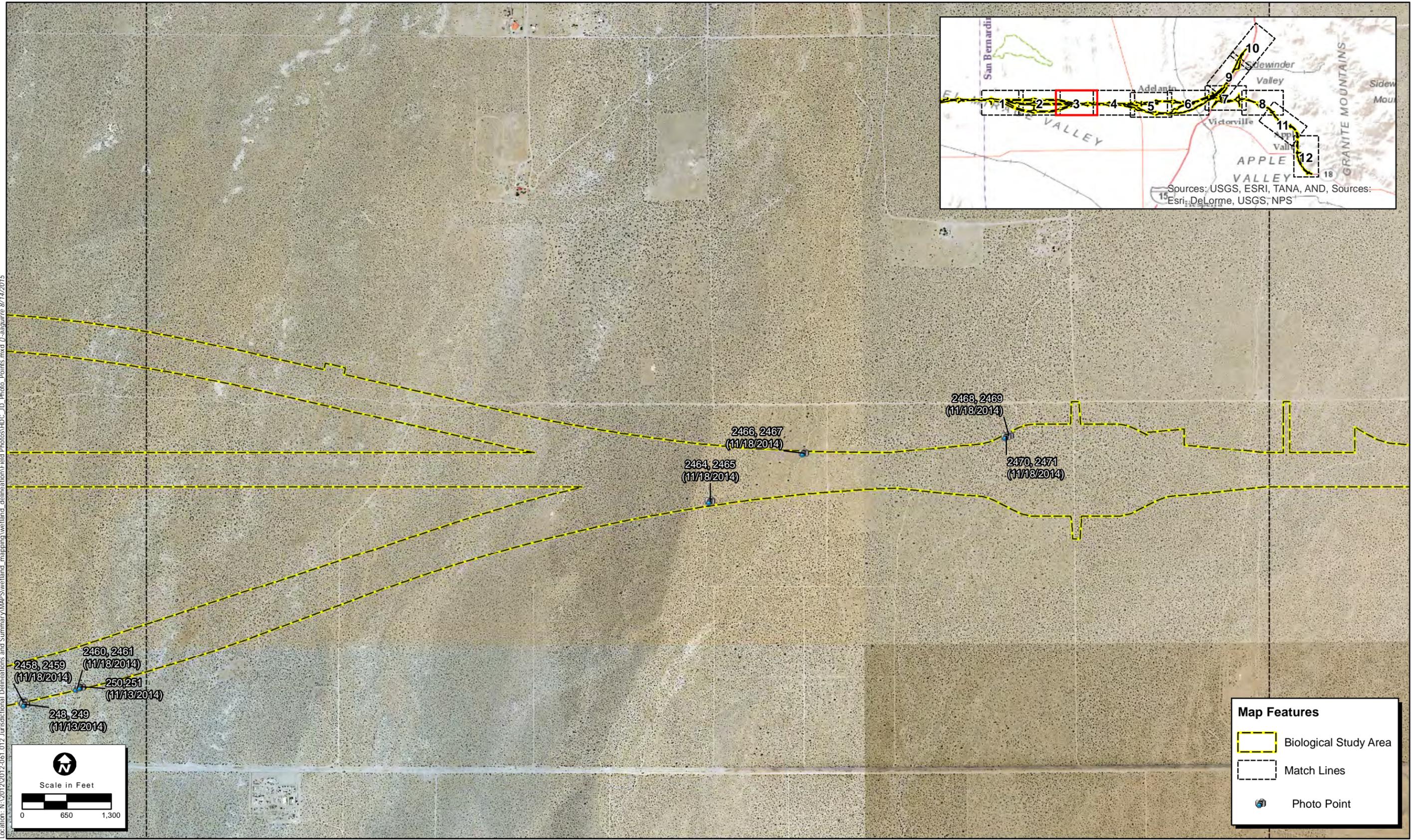
Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd 8/14/2015



Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd, 0_8/14/2015

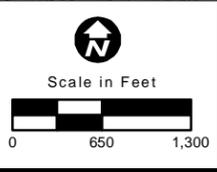


Map Features

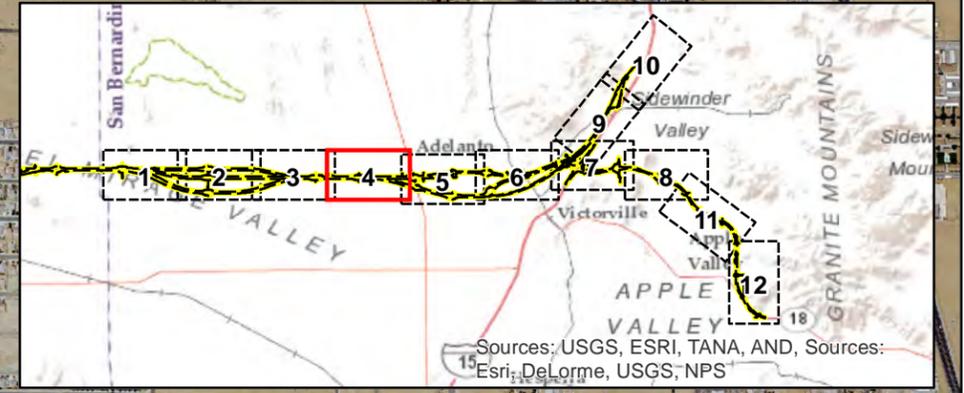
- Biological Study Area
- Match Lines
- Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd 0_8/14/2015



Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP



2472, 2473
(11/18/2014)

2474, 2475
(11/18/2014)

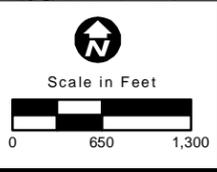
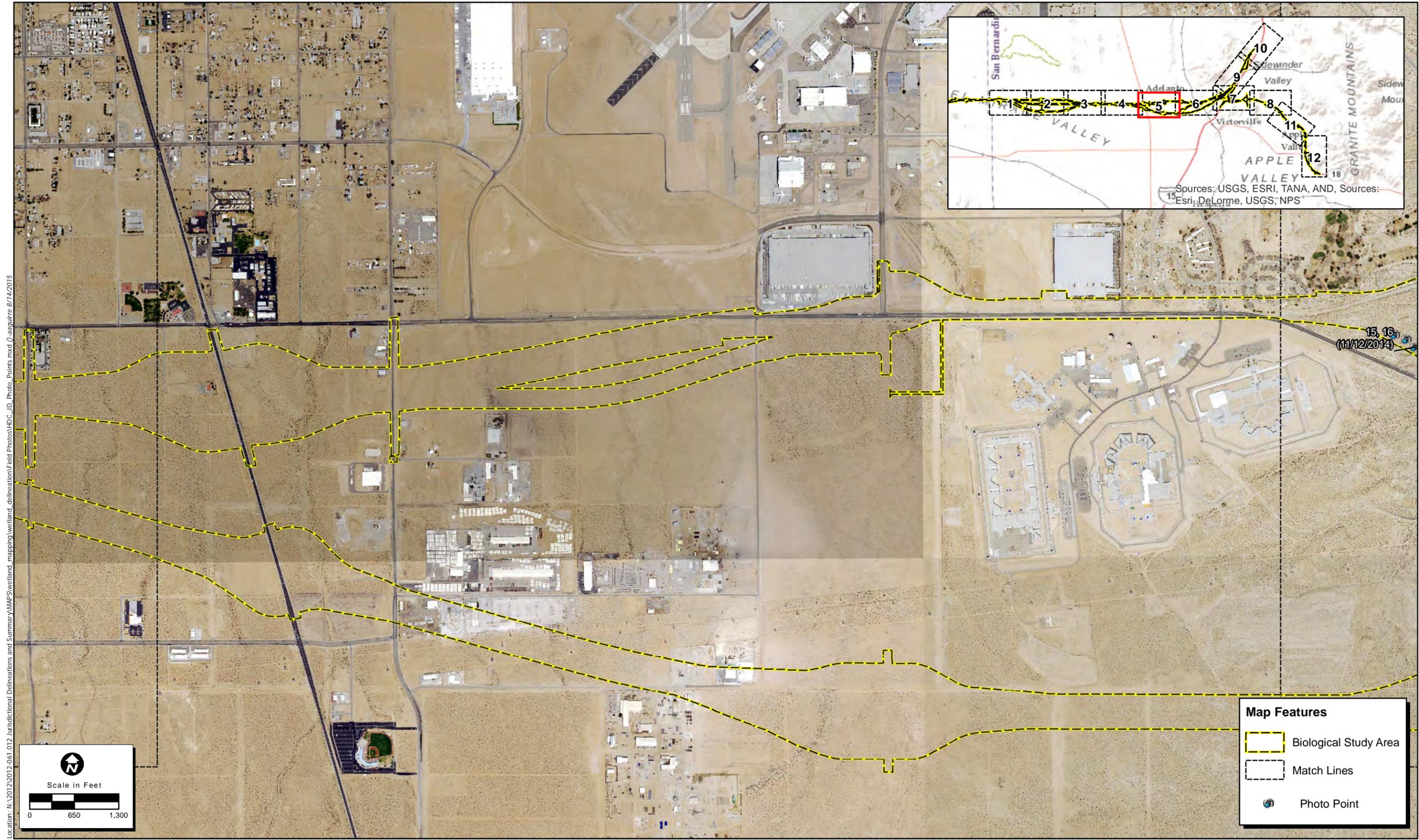
2476, 2477 (11/18/2014) 2478, 2479 (11/18/2014)

2480, 2481
(11/18/2014)

Map Features

- Biological Study Area
- Match Lines
- Photo Point

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAP\Swetland_mapping\swetland_delineation\field_photos\HDC_JD_Photo_Points.mxd 8/14/2015

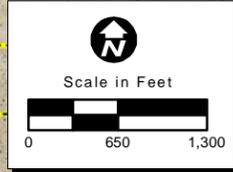
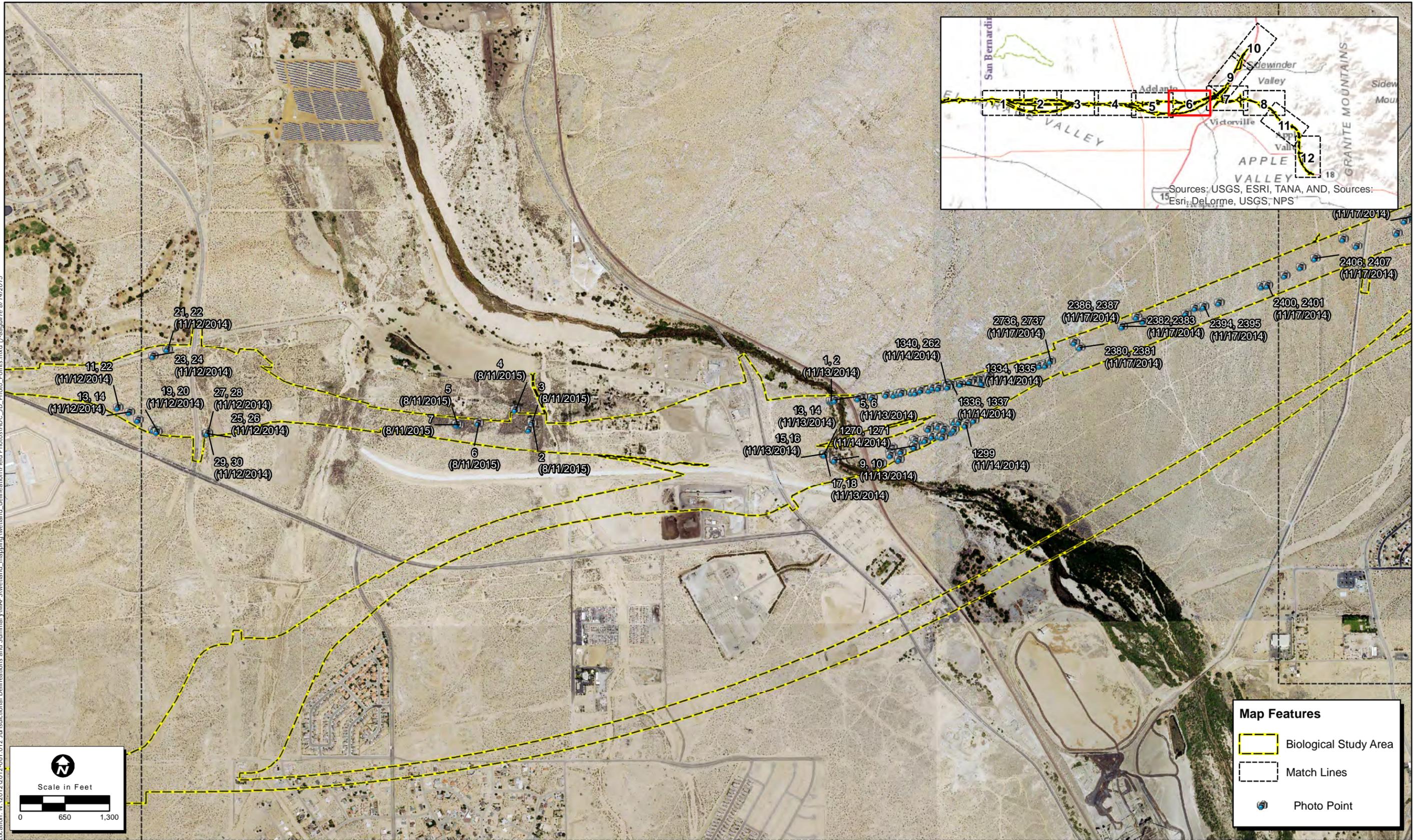


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Photo (or Base) Source: 2014 NAIP

Map Features

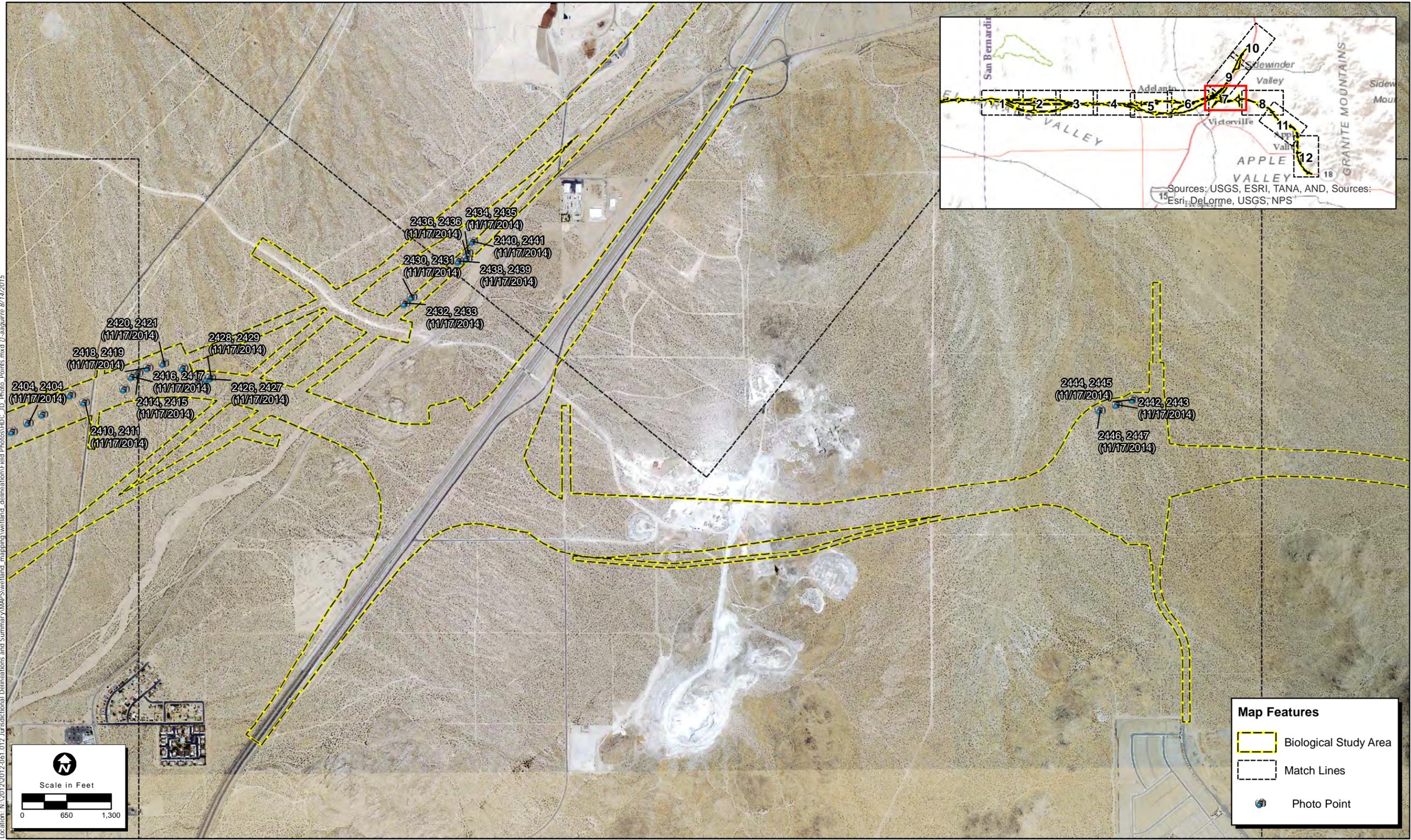
-  Biological Study Area
-  Match Lines
-  Photo Point

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAP\S\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo Points.mxd 0_8/14/2015



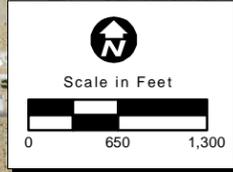
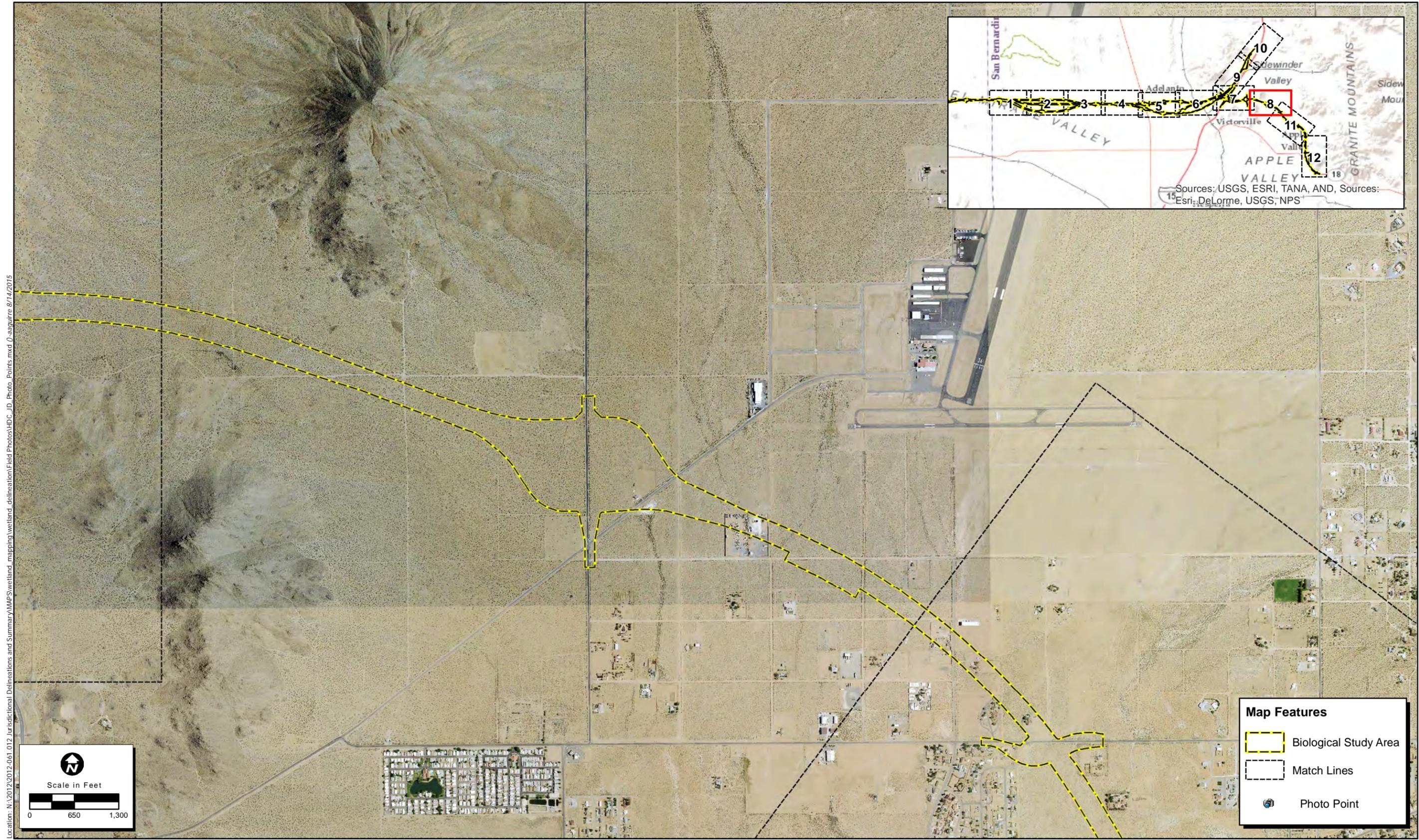
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Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAP\S\wetland_mapping\weldand_delineation\field_photos\HDC_ID_Photo_Points.mxd 0_8/14/2015



Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAP\S\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd, 8/14/2015

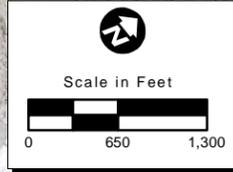
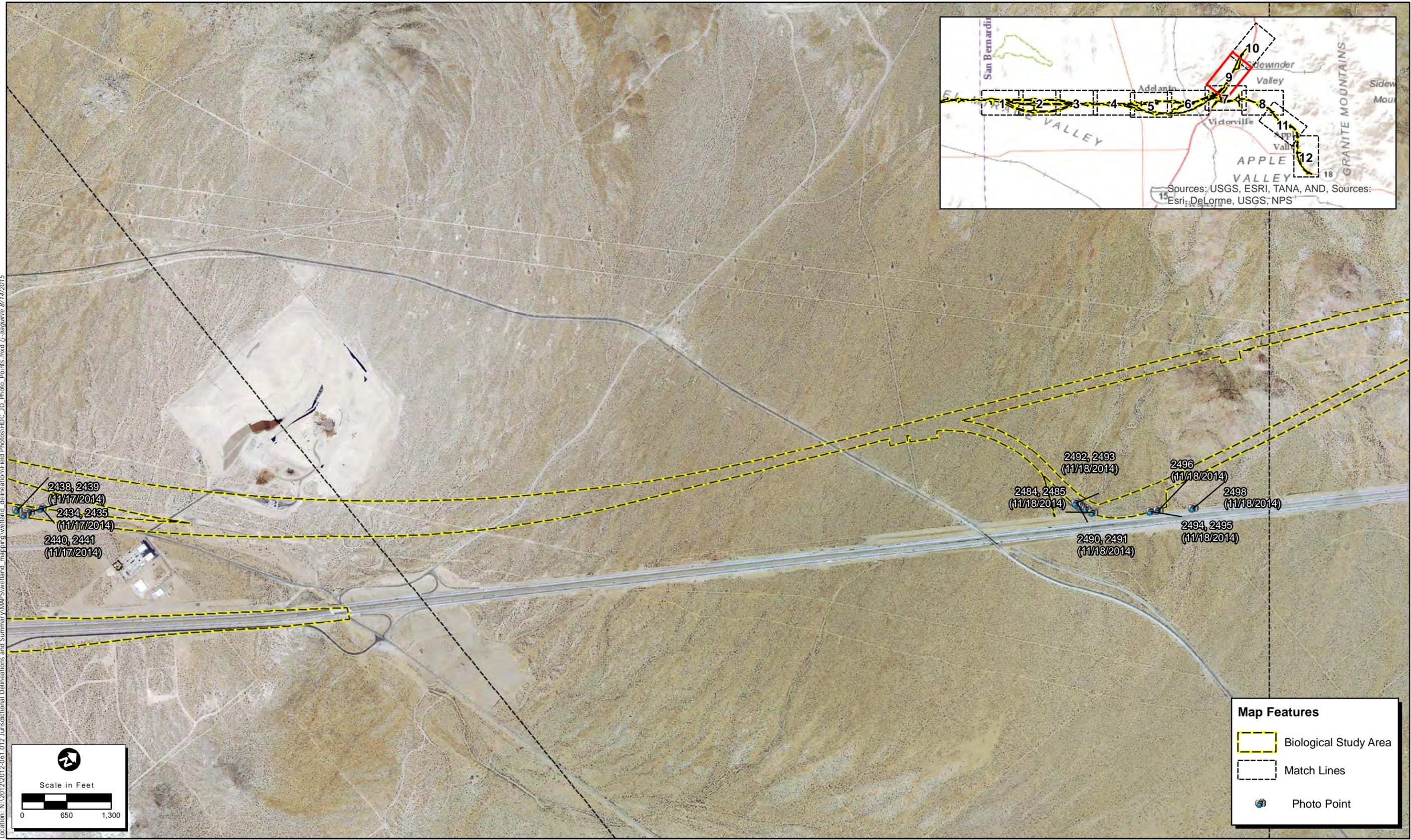


Map Features

-  Biological Study Area
-  Match Lines
-  Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\Field Photos\HDC_JD_Photo_Points.mxd 0_849198 8/14/2015



Map Features

- Biological Study Area
- Match Lines
- Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\Wetland_mapping\Wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd, 8/14/2015



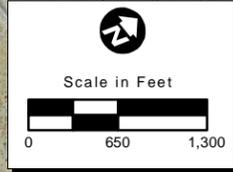
2454, 2455
(11/17/2014)

2452, 2453
(11/17/2014)

2450, 2451
(11/17/2014)

2448, 2449
(11/17/2014)

2456, 2457
(11/17/2014)

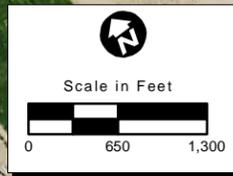


Map Features

-  Biological Study Area
-  Match Lines
-  Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAPS\wetland_mapping\wetland_delineation\field_photos\HDC_JD_Photo_Points.mxd 0_8/14/2015

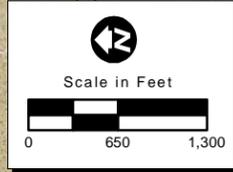
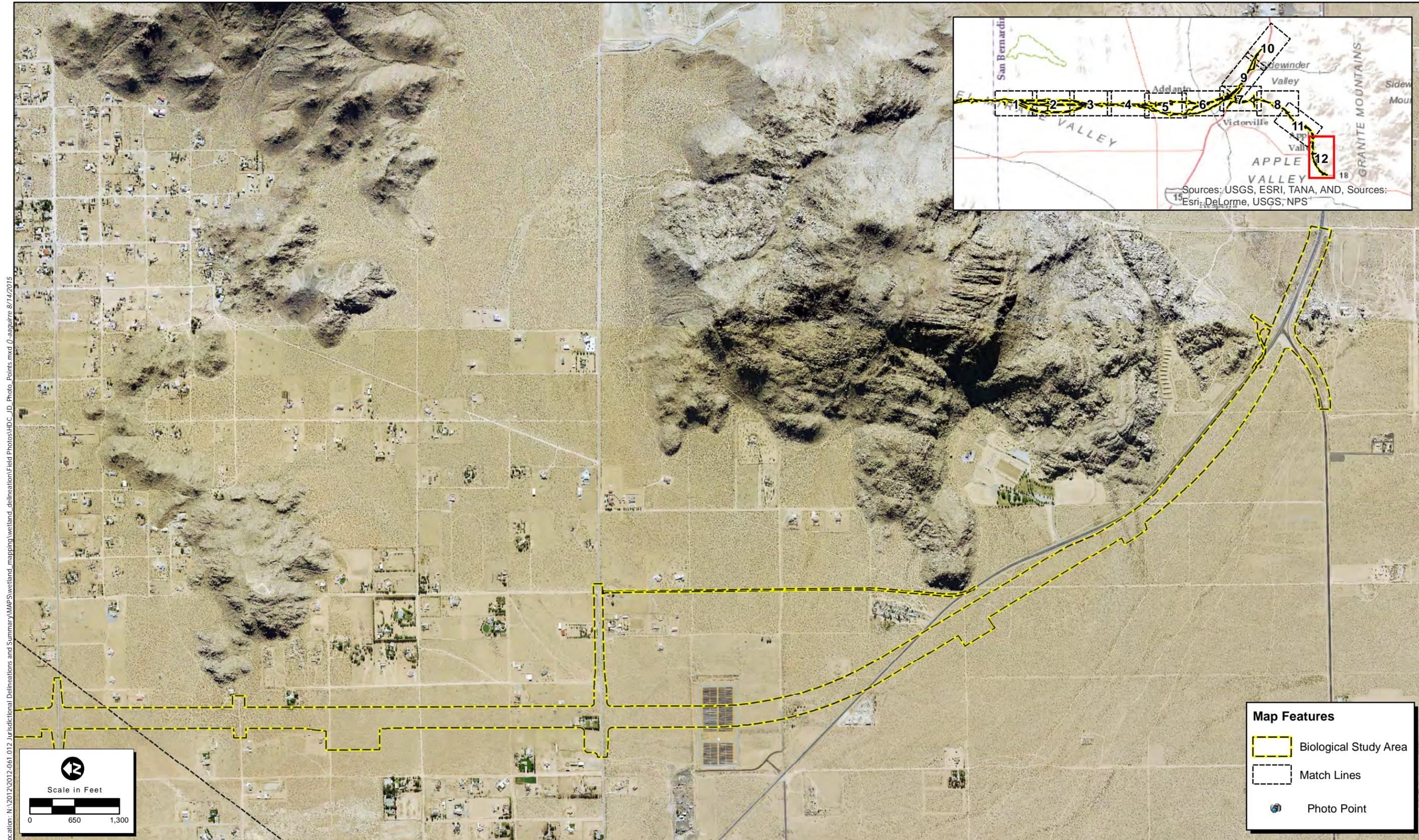


Map Features

-  Biological Study Area
-  Match Lines
-  Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Location: N:\2012\2012-061_012_Jurisdictional Delineations and Summary\MAP\Sweetland_mapping\welland_delineation\field_photos\HDC_JD_Photo_Points.mxd, 8/14/2015



Map Features

-  Biological Study Area
-  Match Lines
-  Photo Point

Map Date: 8/14/2015
Photo (or Base) Source: 2014 NAIP

Appendix F: Attachments

CD with:

Photographs

USACE Jurisdictional Delineation Figures and Tables

GIS Data