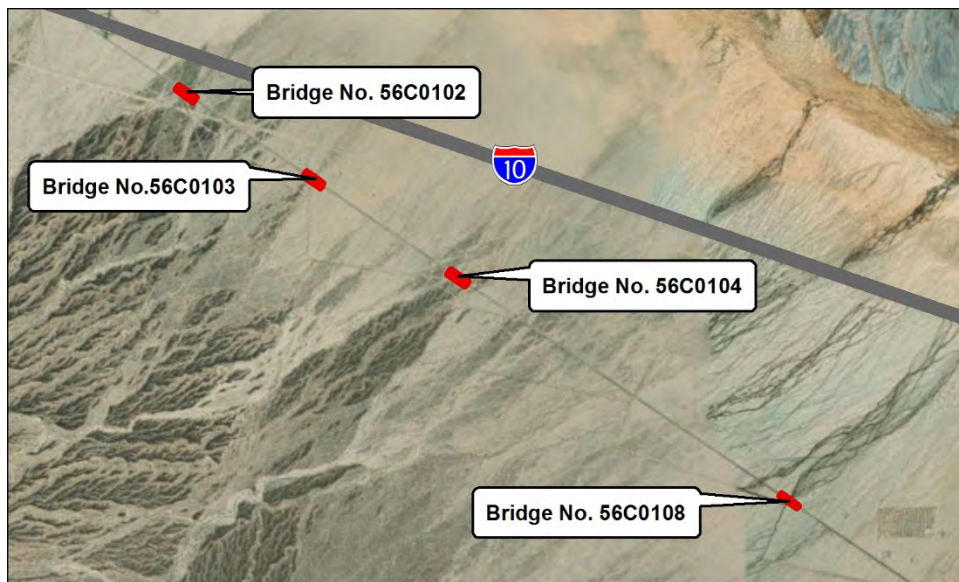


Chuckwalla Valley Road Bridge Replacement Projects Natural Environment Study

(Minimal Impacts)

Including Focused Studies for Special-Status Species and a Delineation of
Federal and State Jurisdictional Water Resources, Unincorporated
Riverside County, California



08-RIV-Chuckwalla Valley Road

Over Aztec Ditch (Br. No. 56C0102; Federal Project No. BRLO-5956[239])
Over Tarantula Ditch (Br. No. 56C0103; Federal Project No. BRLO-5956[227])
Over Sutro Ditch (Br. No. 56C0104; Federal Project No. BRLO-5956[226])
Over Acari Ditch (Br. No. 56C0108; Federal Project No. BRLO-5956[225])

February 2020

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Chuckwalla Valley Road Bridge Replacement Projects Natural Environment Study (Minimal Impacts)

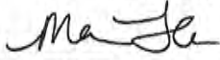
08-RIV-Chuckwalla Valley Road

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February 2020

STATE OF CALIFORNIA
Department of Transportation and
Riverside County Transportation Department

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For individuals with sensory disabilities, this document is available in Braille, large print, on audiocassette, or computer disk. To obtain a copy in one of these alternate formats, please call or write to County of Riverside Transportation Department, Attn: Frances Segovia, 2525 14th Street, Riverside, CA 92501, (951) 955-1646; use the California Relay Service 1 (800) 735-2929 TTY, 1(800)735-2929 (Voice) or 711.

Summary

The County of Riverside (County), in cooperation with California Department of Transportation (Caltrans), is proposing to replace the Aztec Ditch Bridge (#56C0102), Tarantula Ditch Bridge (#56C0103), Sutro Ditch Bridge (#56C0104), and Acari Ditch Bridge (#56C0108) on Chuckwalla Valley Road. These bridges have been identified as scour critical and structurally deficient bridges along Chuckwalla Valley Road east of Desert Center in unincorporated Riverside County, California. The County proposes replacing the existing four 2-lane timber bridges along Chuckwalla Valley Road with new 2-lane modern bridges with a curb-to-curb roadway width of 32 feet at the same locations. Modern traffic barriers/railings meeting current Caltrans safety design standards would also be constructed.

The project sites were evaluated for over 136 special-status plant and wildlife species. Appendix C provides a list of the special-status species that were analyzed for the proposed project sites. Focused surveys were performed for desert tortoise (*Gopherus agassizii*), burrowing owl (*Athene cunicularia*), rare plants, and special-status bats. None of these species were found during focused studies. In addition, a jurisdictional delineation for federal and state waters and streambeds was conducted.

No sensitive natural vegetation communities were identified within the Biological Study Areas (BSAs). However, the projects occur within the federally designated Critical Habitat for desert tortoise. The creosote bush scrub and desert wash vegetation communities provide low quality Physical Biological Features (PBFs) necessary for the species' conservation. The BSAs occur near the edge of desert tortoise Critical Habitat and maintaining unimpeded movement, including via bridge undercrossings, within and among populations throughout the Chuckwalla Valley is essential for the conservation of desert tortoise.

Only one special-status species, loggerhead shrike (*Lanius ludovicianus*; California Species of Special Concern [SSC]), was observed foraging within the BSAs of the bridges. No nesting habitat would be affected. No other special-status species were found during focused studies.

The proposed bridge replacements would have permanent and temporary impacts on waters under the U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), and California Department of Fish and Wildlife (CDFW) jurisdiction. No wetland waters of the U.S. (WoUS)/waters of the state (WoS) would be affected by the proposed projects.

Aztec Ditch Bridge (#56C0102) would have a permanent impact on 0.027 acre and a temporary impact on 0.708 acre of non-wetland WoUS/WoS; a permanent impact on 0.054 acre of CDFW unvegetated streambed and 0.035 acre of CDFW riparian; and a temporary impact on 0.811 acre of CDFW unvegetated streambed and 0.105 acre of CDFW riparian.

Tarantula Ditch Bridge (#56C0103) would have a permanent impact on 0.039 acre and a temporary impact on 0.780 acre of non-wetland WoUS/WoS; a permanent impact on 0.046 acre of CDFW unvegetated streambed and 0.093 acre of CDFW riparian; and a temporary impact on 0.983 acre of CDFW unvegetated streambed and 0.193 acre of CDFW riparian.

Sutro Ditch Bridge (#56C0104) would have a permanent impact on 0.018 acre and a temporary impact on 0.487 acre of non-wetland WoUS/WoS; a permanent impact on 0.031 acre of CDFW unvegetated streambed and 0.067 acre CDFW riparian; and a temporary impact on 0.640 acre of CDFW unvegetated streambed and 0.141 acre of CDFW riparian.

Acari Ditch Bridge (#56C0108) would have a permanent impact on 0.007 acre and a temporary impact on 0.188 acre of non-wetland WoUS/WoS; a permanent impact on 0.020 acre of CDFW unvegetated streambed and 0.017 acre of CDFW riparian; and a temporary impact on 0.205 acre of CDFW unvegetated streambed and 0.024 acre of CDFW riparian.

Caltrans has determined, in accordance with Section 7 of the Federal Endangered Species Act of 1973 (FESA), that the proposed replacement of Aztec Ditch Bridge, Tarantula Ditch Bridge, Sutro Ditch Bridge, and Acari Ditch Bridge will have “no effect” on desert tortoise due to the species absence during focused studies. However, the project sites occur within federally designated Critical Habitat. The projects would result in a “may affect, but not likely to adversely affect” determination for the desert tortoise designated Critical Habitat due to the impacts not affecting the long-term conservation value of the habitat. Avoidance and minimization measures for desert tortoise and other sensitive biological resources are provided in Table S-1.

Table S-1. Biological Resources Potentially Affected and Associated Avoidance, Minimization, and Mitigation Measures

Biological Resource	Avoidance/Minimization Measure	Compensatory Mitigation
Natural Communities	BIO-1 (Temporary Construction Areas within Washes) BIO-2 (Best Management Practices)	n/a
Biological Corridors	BIO-1 (Temporary Construction Areas within Washes) BIO-2 (Best Management Practices)	n/a
Waters of the United States./ Waters of the State	BIO-1 (Temporary Construction Areas within Washes) BIO-2 (Best Management Practices)	BIO-3 (Mitigation for Replacement/Restoration of Jurisdictional Waters)
State Streambeds	BIO-1 (Temporary Construction Areas within Washes) BIO-2 (Best Management Practices)	BIO-3 (Mitigation for Replacement/Restoration of Jurisdictional Waters)
Desert Tortoise	BIO-1 (Temporary Construction Areas within Washes) BIO-2 (Best Management Practices) BIO-4 (Preconstruction Desert Tortoise Survey) BIO-5 (Desert Tortoise Fencing) BIO-6 (Biological Monitor) BIO-7 (Worker Environmental Awareness Program Training)	n/a
Burrowing Owl	BIO-8 (Preconstruction Burrowing Owl Survey)	n/a
Special-status Bats	BIO-9 (Preconstruction Bat Survey and Exclusion)	n/a
Special-status Mammals	BIO-2 (Best Management Practices)	n/a
Migratory Birds	BIO-10 (Preconstruction Survey for Nesting Birds)	n/a

Permits, reviews, and approvals necessary for the proposed projects are provided in Table S-2.

Table S-2. Permits and Approvals

Agency	Permit/Approval	Status
California Department of Fish and Wildlife (CDFW)	1602 Lake and Streambed Alteration Agreement	Application to be submitted following adoption of the CEQA document

Regional Water Quality Control Board (RWQCB)	CWA Section 401 Water Quality Certification	Application to be submitted following adoption of the CEQA document
U.S. Army Corps of Engineers (USACE)	CWA Section 404 Nationwide Permits	Application to be submitted following adoption of the CEQA document
U.S. Fish and Wildlife Service (USFWS)	Section 7 Consultation	Not yet initiated

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Acronyms and Abbreviations

Acari Ditch Bridge (#56C0108)	Chuckwalla Road Bridge over Acari Wash
ADT	average daily traffic
Aztec Ditch Bridge (#56C0102)	Chuckwalla Road Bridge over Aztec Wash
BMP	Best Management Practice
BSA	Biological Study Area
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CESA	California Endangered Species Act
CFGF	California Fish and Game Code
CNDDDB	California Natural Diversity Database
County	County of Riverside
CWA	Clean Water Act
EBL	Eligible Bridge List
FESA	Endangered Species Act of 1973
GPS	Global Positioning System
I-10	Interstate 10
JD	jurisdictional delineation
JSA	jurisdictional delineation study area
LOD	limits of disturbance
MBTA	Migratory Bird Treaty Act

NEPA	National Environmental Policy Act
NOAA Fisheries	National Marine Fisheries Service
NWP	Nationwide Permit
PBF	Physical Biological Feature
RWQCB	Regional Water Quality Control Board
SD	Structurally Deficient
SR	Sufficiency Rating
SSC	Species of Special Concern
Sutro Ditch Bridge (#56C0104)	Chuckwalla Road Bridge over Sutro Wash
Tarantula Ditch Bridge (#56C0101)	Chuckwalla Road Bridge over Tarantula Wash
TMP	traffic management plan
USACE	U.S. Army Corps of Engineers
USGS	U.S. Geological Survey
WoS	waters of the state
WoUS	waters of the U.S.
ZOI	Zone of Influence

Chapter 1 Introduction

1.1 History

The four existing bridges along Chuckwalla Valley Road were constructed in 1931 and widened in 1944. These timber bridges are supported on timber cap beams at the bents and abutment seats, all on timber pile columns.

Classified as a Local Rural Road, Chuckwalla Valley Road mostly serves vehicles accessing local utilities and off-road recreation. The average daily traffic (ADT) volume is approximately 40 vehicles. Periodically, the road carries detoured traffic from the heavily traveled I-10 when the freeway is temporarily closed for construction or emergency incidents. Therefore, it is important to maintain this frontage road in sound condition at all times.

1.2 Project Purpose and Need

Chuckwalla Valley Road is an approximately 16-mile stretch of frontage road that runs parallel to Interstate 10 (I-10). It connects Corn Springs Road and I-10 at the west end and Ford Dry Lake Road and I-10 at the east end. The existing timber bridges carry two lanes (one lane in each direction) of traffic over the Aztec, Tarantula, Sutro, and Acari ditches. The timber bridges range from 41 to 60 feet in length and are approximately 24 feet and 8 inches wide from curb-to-curb. Currently, load restrictions posted on the four bridges limit the vehicular load-carrying capacity below normal standards.

The bridges are listed in the federal Eligible Bridge List (EBL) as "Structurally Deficient (SD)" with a low Sufficiency Rating (SR) between 39.3 and 49.2. An SR is essentially an overall rating of the bridge's functional/geometric obsolescence, and its essentiality to the public. A low sufficiency rating may be due to structural defects, narrow lanes, low vertical clearance, or any of many possible issues. A bridge is healthy when its SR is more than 80.0. Bridges with an SR equal to or less than 80.0 and more than 50.0 require rehabilitation or widening. When the SR falls below 50.0, bridge replacement is considered for public safety.

The need for the project is outlined below:

Replace the existing structurally deficient two-lane bridges with new two-lane bridges to provide safe facilities.

Meet current design standards and accommodate the local roadway requirements.

Continue to use the Chuckwalla Valley Road as a frontage road to carry detoured traffic and emergency vehicles when I-10 is closed due to construction or during emergency incidents.

Maintain access for vehicles serving various utilities and farmlands located along the road.

1.3 Project Description

The County of Riverside (County), in cooperation with California Department of Transportation (Caltrans), proposes to replace the following four (4) existing structurally deficient timber bridges along Chuckwalla Valley Road near Desert Center in Riverside County, California (Appendix A: Figures):

- Chuckwalla Valley Road Bridge over Aztec Ditch (State Br. No. 56C0102) (Federal Aid Project No. BRLO-5956[239])
- Chuckwalla Valley Road Bridge over Tarantula Ditch (State Br. No. 56C0103) (Federal Aid Project No. BRLO-5956[227])
- Chuckwalla Valley Road Bridge over Sutro Ditch (State Br. No. 56C0104) (Federal Aid Project No. BRLO-5956[226])
- Chuckwalla Valley Road Bridge over Acari Ditch (State Br. No. 56C0108) (Federal Aid Project No. BRLO-5956[225])

The proposed projects will replace the existing 2-lane timber bridges with new 2-lane modern bridges with a curb-to-curb roadway width of 32 feet at the same locations. The proposed road width would consist of two 12-foot-wide travel lanes, one lane in each direction, and a 4-foot-wide shoulder on each side. Modern traffic barriers/railings meeting current Caltrans safety design standards would be constructed. The proposed bridges would be approximately 60 to 80 feet long, depending on the channel hydraulic capacity and water surface freeboard requirements. Raising the elevation of the bridges is not anticipated. However, if raising the bridge elevation is found to be necessary to meet freeboard requirements, the total vertical increase is not anticipated to exceed 1 foot. Additionally, approach roadway improvements would be provided and channel improvements would be administered to avoid future scour problems. It is envisioned that the channel bottom will remain earthen.

The existing bridges do not carry any utilities and the proposed bridge construction is not expected to include new utilities. A telephone line runs along the north side of the project area and may be near bridge wing walls. Further coordination with the utility provider will determine whether relocation will be required.

All construction activities would be conducted within the existing roadway right of way, with construction staging and material laydown areas on the roadway itself. Chuckwalla Valley Road between the Corn Springs Road intersection to 6.3 miles east of the intersection would be closed during construction. The construction duration would be further determined during the project development. It is envisioned that all four bridges would be either constructed at the same time or staged in sequence, depending on the finding of available access to adjacent utilities and properties. A traffic management plan (TMP) would be prepared to address closure of the road and access to local utilities and properties.

The bridge locations are depicted in Appendix A, Figures 1 and 2. The proposed project design of each bridge is available in Appendix A, Figure 3, and the Biological Study Area (BSA) for each bridge is depicted Appendix A, Figure 4.

Table 1 lists the U.S. Geological Survey (USGS) 7.5-Minute topographic quadrangles (USGS 1983) and section, township, ranges of each bridge location.

Table 1. USGS 7.5-Minute Quadrangle and Section, Township, Range for Each Bridge

Bridge	USGS 7.5 Minute Quadrangle	Section/Township/Range
Aztec Ditch Bridge (#56C0102)	Sidewinder Well	Section 6-Township 65-Range 17E
Tarantula Ditch Bridge (#56C0103)	Sidewinder Well	Section 9-Township 65-Range 17E
Sutro Ditch Bridge (#56C0104)	Sidewinder Well	Section 15-Township 65-Range 17E
Acari Ditch Bridge (#56C0108)	Sidewinder Well and Aztec Mines	Section 30, Township 65, Range 18E

Chapter 2 Study Methods

This section summarizes the regulatory requirements relevant to the proposed projects for protecting biological resources and discusses the study methods used to evaluate the BSAs of the proposed projects. The studies required for the proposed projects included an initial field reconnaissance and habitat evaluation for special-status species; a delineation of jurisdictional waters, wetlands, and streambeds; and focused surveys for special-status species with a reasonable potential to occur in the BSAs, including special-status plants, burrowing owl (*Athene cunicularia*; California Department of Fish and Wildlife [CDFW] Species of Special Concern [SSC]), desert tortoise (*Gopherus agassizii*, state and federally listed threatened), and special-status bats.

The following subsections provide the basis for these studies and the methods used.

2.1 Regulatory Requirements

Relevant federal, state, and local laws and regulations to protect or manage biological resources are as follows:

Federal

- Endangered Species Act of 1973 (FESA) (including designated critical habitat for listed species)
- Federal Water Pollution Control Act (Clear Water Act [CWA] Sections 401 and 404)
- Migratory Bird Treaty Act (MBTA)
- Executive Order 13112, Invasive Species
- National Environmental Policy Act (NEPA) of 1969

State

- California Environmental Quality Act (CEQA)
- California Department of Transportation, Standard Environmental Reference, Volume 3, Biological Resources
- California Endangered Species Act (CESA)
- California Native Plant Protection Act
- California Fish and Game Code (CFGF), including codes for the state Endangered Species Act (Sections 2080.1 and 2081[b]), those related to the federal MBTA (Sections 3503, 3503.5, 3505, 3800, 3801.6), and those for Lake or Streambed Alteration Agreements (Section 1600 et. seq.)
- Porter-Cologne Water Quality Act (coordinated with CWA Section 401)

Local

- No local plans or habitat conservation plans are located within the BSAs for all projects.

2.2 Studies Required

A reconnaissance-level biological study and delineation of jurisdictional waters and streambeds was necessary to satisfy federal, state, and local regulatory requirements for each of the four bridge replacement projects. Based on the literature search (Section 2.2.1) and field review (Section 2.2.2) described below, habitat assessments and/or focused studies for the following biological and aquatic resources were necessary: burrowing owl, special-status plants, special-status bats, desert tortoise, and jurisdictional waters.

2.2.1 Literature Search

Relevant reference literature and natural resource databases were reviewed for potentially occurring plant and animal species and natural vegetation communities with special regulatory or management status and having a reasonable potential to occur within the BSAs. This evaluation included a review of the California Natural Diversity Database (CNDDB) Special Animals List (CDFW 2019a); California Native Plant Society (CNPS) Electronic Inventory (CNPS 2020); U.S. Fish and Wildlife Service (USFWS) Information, Planning, and Conservation (IPaC) (Appendix B) decision support system, and USFWS National Wetlands Inventory (USFWS 2019). A search of the CNDDB (CDFW 2020) and California Native Plant Society (CNPS 2020) was performed for the USGS 7.5-minute topographic Sidewinder Well and Aztec Mines quadrangle maps—on which the projects are located—and the surrounding quadrangles (Aztec Mines, East of Aztec Mines, Ford Dry Lake, Palen Mountains, Palen Lake, East of Victory Pass, Corn Spring, and Pilot Mountain; USGS 1983).

All database searches were updated on February 10, 2020 to ensure the most current data was being used. The results of the database search were used to generate a list of special-status species and natural vegetation communities potentially occurring in the project area. An official USFWS species list was obtained on January 16, 2020 (Appendix B). The projects occur outside of the National Marine Fisheries Service (NOAA Fisheries) jurisdiction; therefore, no NOAA Fisheries species list was acquired.

2.2.2 Field Reviews

Prior to field visits, Google Earth imagery (dated from April 30, 2017 through August 26, 2019) was carefully reviewed at various scales, and a 200-foot-scale (1 inch = 200 feet) aerial photograph of the BSAs were obtained. Areas of potential resource value were marked on field maps and later investigated in the field.

2.2.3 Survey Methods

A reconnaissance survey and habitat assessment for plant, animals, and natural communities were performed in each of the four BSAs, and the BSAs were reviewed for potential sensitive biological and aquatic resources. Vegetation communities were mapped on an iPad with integrated aerial-based imagery. All of the BSAs were fully accessible as lands occurred within the County right of way. Survey dates, site conditions, and personnel for each survey type are provided in Appendix G, Tables G-2 through G-5

Common plant species observed in the field were identified to species level by visual characteristics and morphology. Taxonomic nomenclature for plants followed the *Jepson Manual: Vascular Plants of California* (Baldwin et al. 2012). Classification of vegetation

communities followed the *California Manual of Vegetation* (Sawyer, Keeler-Wolfe, and Evans 2009). All plants as well as animal species observed or detected through sign (e.g., tracks, scat) were recorded and are listed in Appendix D.

Rare Plant Surveys

Several special-status plants were determined to have a potential to occur within the BSAs (Appendix C). A habitat assessment and focused survey for special-status plants were conducted in May and October of 2017. Due to slight revisions of the study areas (described in Section 3.1.1), additional site visits were performed at each bridge in the spring of 2019 to ensure all areas of the BSA were studied for rare plants. The *Guidelines for Conducting and Reporting Botanical Inventories* (USFWS 2000) was followed. To ensure each target special-status species was detected during the blooming period, the 2017 survey was performed during three separate survey windows (spring, summer, and fall season) to increase species detection. If feasible, reference populations were visited to determine whether known populations of target species were in bloom during the survey windows. The 2019 focused surveys were performed in the late spring based on the special-status species having potential to occur with the expanded BSAs of each bridge. A complete list of all species observed was recorded in field notes and is provided in Appendix D.

Burrowing Owl Surveys

The habitat assessment and focused survey for burrowing owl followed the *Staff Report on Burrowing Owl Mitigation* (CDFG 2012). The habitat evaluation was performed to identify potential habitat at a broad landscape-level during the initial reconnaissance survey. The Burrowing Owl Survey Area consisted of a 500-foot buffer around each of the existing bridge locations, with physical access occurring only within the BSAs (300-foot buffer) and a visual-only assessment with binoculars occurring within an additional 200-foot buffer area due to access restrictions outside of the BSAs.

The habitat assessment consisted of a pedestrian survey along transects generally spaced at 30 feet apart within the 300-foot buffer to ensure 100% physical ground coverage. Binoculars were used to scan all visible areas within the remainder of Burrowing Owl Study Area. All open lands that were sparsely vegetated were considered potentially suitable habitat, as were burrow structures that could potentially be used by burrowing owls. All suitable burrows were mapped with a Global Positioning System (GPS) using the ArcCollector application on an iPad.

Following the habitat assessment, a focused survey was initiated. The focused survey consisted of four separate site visits spaced at intervals during the CDFG (2012) protocol survey window from February 15 to July 15. The first survey was conducted at each site between February 15th and April 15th, with additional site visits between April 15th and July 15th, all spaced at least 3 weeks apart, and with the last site visit occurring after June 15th. Each focused survey was performed within all suitable habitat during weather conditions optimal for detecting burrowing owl. Surveys occurred between morning civil twilight to 10:00 am or two hours before sunset until evening civil twilight. The surveys were conducted using line transects spaced generally at 30 feet apart, adjusting for vegetation height and density. All potential burrowing owls or burrowing owl burrows (i.e., burrows with the presence of one or more burrowing owls, pellets, or sign/whitewash) were recorded with GPS.

Desert Tortoise Surveys

The focused surveys for desert tortoise were initiated in May 2017 at all four bridge replacement projects and followed the USFWS Guidance (USFWS 2010)¹. Using the 2010 protocol methodology a pedestrian survey was conducted throughout the LOD to ensure a 100% coverage survey. The 2010 protocol requires focused studies within the Zone of Influence and includes walking transects established at 200-, 400-, and 600-meter intervals from each bridge and surveyed where legally accessible. All desert tortoise sign (e.g., scat, burrows, carcasses) observed were recorded using the USFWS 2010 Desert Tortoise Pre-Project Survey Data Sheets (Appendix E). An updated desert tortoise focused survey was conducted in 2019 and followed the most recent USFWS Guidance (USFWS 2018) using the Small Project survey method. The 2018 protocol requires an Action Area to be established on a project-by-project basis based on an evaluation of the potential effects. An Action Area is the area surveyed based on the specific area that may be affected by the Proposed Action including all areas to be affected directly or indirectly. As the Proposed Action is mainly confined to the immediate bridge being replaced the Action Area was defined as the LOD and a 300-foot buffer to account for indirect effects of the project. A pedestrian survey of the Action Area) was performed and spaced approximately 30 feet apart to allow for 100% coverage.

Bat Surveys

A habitat assessment was performed in June 2017 to evaluate the presence of potential bat roosts within the BSAs of each bridge. Each bridge was closely reviewed for potential structures and conditions suitable for bat roosts. In July 2017, a focused emergence survey for colonial bats was performed by visually observing bridges at dusk when bats would be emerging from their roosts and foraging. Bat echolocation calls were recorded using Anabat Bat Detection System and analyzed using Sonobat software to identify the bat species in the vicinity of the bridges.

Jurisdictional Delineation

A delineation of federal and state jurisdictional aquatic resources was conducted within the JSA (LOD plus a 100-foot buffer) for all four projects in February 2019. All potentially jurisdictional aquatic resources were mapped using the ArcCollector application on an iPad and a Trimble ProXT receiver, providing sub-meter accuracy. The complete methodology for the jurisdictional delineation is provided in Appendix F, Jurisdictional Delineation Report.

2.3 Personnel Survey Dates

Fieldwork was performed from April through October 2017 and February through April 2019. A list of the personnel performing surveys and their qualifications are provided in Appendix G, Table G-1. Survey dates, survey types, site conditions, and personnel for each survey type are provided in Appendix G, Table G-2 through G-5.

¹ The Desert Tortoise (Mojave Population) Field Manual (*Gopherus agassizii*) (USFWS 2009) was the current survey protocol at the time of the 2017 field surveys. The current survey protocol was updated in 2018 and was used for the 2019 surveys.

2.4 Agency Coordination and Professional Contacts

An official USFWS species lists for the proposed projects was obtained on March 18, 2019 and updated on January 16, 2020 (Appendix B). In May 2019, Aaron Burton (Caltrans) contacted John Taylor (USFWS) to discuss the proposed projects. Since the proposed bridge replacements occur within Critical Habitat for desert tortoise, the USFWS will require a Biological Assessment and formal Section 7 consultation for potential effects on desert tortoise Critical Habitat.

2.5 Limitations That May Influence Results

The project design of the proposed bridge replacements was not available at the time of the 2017 biological resource studies. Therefore, the study areas established for the 2017 biological resource surveys were based on the limits of the existing Chuckwalla Valley Road bridges over Aztec Ditch Bridge (#56C0102), Tarantula Ditch Bridge (#56C0103), Sutro Ditch Bridge (#56C0104), and Acari Ditch Bridge (#56C0108) and a 300-foot buffer. The LOD was developed in January 2019 and the final BSAs were slightly extended east and west along Chuckwalla Valley Road to accommodate staging areas on the existing paved roadway. Due to small portions of the LOD of the four bridges occurring within lands outside of the original study areas, surveys were repeated in 2019 for rare plants within the extended BSAs for all bridge projects. Because the LOD was completely within the Burrowing Owl Survey Area and no potential bat roosts were present, no additional surveys were deemed necessary for these species. To ensure the desert tortoise surveys remained valid, the focused survey for desert tortoise was repeated using the most current survey protocol around the current LOD. Despite the LOD expansion, site conditions did not differ appreciably between the 2017 and 2019 field seasons, and there are no limitations that influenced the results in this report.

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Chapter 3 Results: Environmental Setting

The proposed projects are located in the central portion of the Chuckwalla Valley in an unincorporated area of Riverside County. The proposed projects are within the Colorado Desert, and located approximately 10 miles east of Desert Center, California and 24 miles west of Blythe, California. The BSAs have similar physical and biological conditions. The four bridges are located along Chuckwalla Valley Road, a frontage road that runs west/east south of I-10. The road is primarily used to access local utilities and recreational areas, making daily traffic minimal. It is also used as an emergency access bypass road for I-10. The following sections detail the physical and biological conditions for each bridge location.

3.1 Description of the Existing Biological and Physical Conditions

3.1.1 Study Area

The study areas used during the 2017 field studies were based on the existing bridge and a 300-ft buffer because the LOD was not available at the time. In 2019, the project engineers developed the LOD (Appendix A, Figure 4) and the final BSA was extended to the east and west to ensure it encompassed the entire LOD. The jurisdictional delineation (JD) study area (JSA) includes the limits of disturbance plus a 100-foot buffer. The BSA and JSA were developed to ensure that they encompass any changes to the project design.

3.1.2 Physical Conditions

The BSAs land use includes local and county road rights of way used to access utilities and conduct maintenance activities, as well as surrounding open lands. I-10 occurs approximately 1,300 feet north of the westernmost BSA and 10,000 feet north of the easternmost BSA. The areas directly north and south of the BSAs contain open space with some human disturbance from off-road vehicle recreation and utility maintenance. Representative photographs of the bridge BSAs are included in Appendix H. Photographs were taken in June and July of 2017.

Elevations within the BSAs decrease from west to east and range from:

- 687 to 698 feet for Aztec Ditch Bridge (#56C0102)
- 665 to 677 feet for Tarantula Ditch Bridge (#56C0103)
- 642 to 650 feet for Sutro Ditch Bridge (#56C0104)
- 552 to 559 feet for Acari Ditch Bridge (#56C0108)

Soils have not been digitally mapped by USGS within the BSAs of the four bridges. Associated point data indicates that soils types Carrizo and coarse-silty, mixed superactive, hypothermic typic haplogy exist within the map unit containing the BSAs (USDA/NRCS 2019). Refer to Appendix A, Figure 5.

The BSAs occur in a floodplain composed of sandy washes within the Southern Mojave Watershed. Hydrological flows originate in the Chuckwalla Mountains to the southwest and flow from southwest to northeast. Historically, flows passed unaltered across the landscape; however, the flow paths of the various drainages located south of Chuckwalla Valley Road have been manipulated upstream with man-made earthen berms or dikes designed to funnel flows toward single concentrated flow paths under Chuckwalla Valley Road. Within the BSAs, these

flow paths occur within Aztec Ditch, Tarantula Ditch, Sutro Ditch, and Acari Ditch. Based on historical topography maps, the berms were put in place before I-10 was built and when Chuckwalla Valley Road was the primary roadway in the area (Historic Aerials 1953).

3.1.3 Biological Conditions in the Study Area

The biological conditions within the BSAs of the proposed projects consist of the vegetation communities, plants, and animals. The jurisdictional delineation report provides additional details for the hydrologic conditions within the BSAs (Appendix F). Further details for each of the BSAs is provided below.

Vegetation Communities

The vegetation communities/land use types mapped within the BSAs of each bridge were similar, which is expected based on the bridges occurring within the same geographical area within relatively short distances between the BSAs. Three vegetation communities/land use types were identified within the four BSAs: creosote bush scrub, desert wash, and developed/disturbed. The vegetation communities and land use types for all four bridge BSAs are shown in Appendix A, Figure 6 and are described below. Refer to Appendix D for a complete list of the plants detected during the surveys in the bridge BSAs. The creosote bush scrub (*Larrea tridentata* shrubland alliance) vegetation community is characteristically dominated by creosote bush but may also include other shrubs, such as white bursage (*Ambrosia dumosa*). The community may also include a low cover of emergent trees, such as smoketree (*Psoralea argophylla*), catclaw acacia (*Senegalia greggii*), and palo verde (*Parkinsonia aculeata*), as well as seasonal annuals or perennial grasses. Within the BSAs, the community is composed primarily of creosote bush, white bursage, cheesebush (*Ambrosia salicifolia*), kidney leaf buckwheat (*Eriogonum reinforme*), and Thomas' eriogonum (*Eriogonum thomasi*), along with other small herbaceous species.

The desert wash vegetation community occurs within Aztec Ditch, Tarantula Ditch, Sutro Ditch, and Acari Ditch. The bottom of the wash channel is composed of coarse sandy soil splays from past rain events. The desert washes have no vegetation or are sparsely vegetated with species from the adjacent creosote bush scrub vegetation communities described above. Within the BSAs, the cheesebush and palo verde were observed sparsely scattered within and adjacent to the desert wash.

The developed/disturbed land use type was designated for the existing paved roadway and shoulder that has been mechanically disturbed by road maintenance activities.

Table 2 summarizes the vegetation communities and land cover types found within the BSAs.

Table 2. Vegetation Communities/Land Use Types within the BSAs

Vegetation Community	Chuckwalla Valley Road Bridges			
	Aztec Ditch Bridge (#56C0102)	Tarantula Ditch Bridge (#56C0103)	Sutro Ditch Bridge (#56C0104)	Acari Ditch Bridge (#56C0108)
Creosote Bush	18.96	19.02	20.38	17.48
Desert Wash	4.27	3.94	3.06	2.82
Developed/Disturbed	1.50	1.41	1.30	1.11
Total Within BSAs	24.73	24.37	24.74	21.41

Wildlife Species

The majority of wildlife species detected were birds, followed by mammals and reptiles. Common bird species included northern mockingbird (*Mimus polyglottos*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), mourning dove (*Zenaida macroura*), rock pigeon (*Columba livia*), cactus wren (*Campylorhynchus brunneicapillus*), and Costa's hummingbird (*Calypte costae*). Two reptiles were observed: gopher snake (*Pituophis catenifer*) and side-blotched lizard (*Uta stansburiana*). Mammals included black-tailed jackrabbit (*Lepus californicus*), woodrat (*Neotoma* sp.), and canyon bat (*Parastrellus hesperus*). Refer to Appendix D for a complete list of wildlife detected within the BSAs.

3.1.4 Habitat Connectivity

Wildlife movement corridors are habitat linkages used by wildlife for movement between suitable wildlife habitat areas in a region otherwise fragmented by rugged terrain, substantial changes in vegetation communities, or human disturbance. The scale of use of these corridors can vary (e.g., dispersal, daily foraging, migration routes). Natural features such as canyon drainages, ridgelines, or areas with vegetation cover may provide corridors for wildlife movement, as can engineered structures such as bridges, culverts, and flood-control channels. Wildlife corridors are important because they provide many species access to resources such as habitats, food, water, and mates; allow species dispersal and migration; and facilitate genetic connectivity between populations (Beier and Loe 1992). These corridors also provide similar value and function to plant species and natural communities, such as dispersal and connectivity.

Regionally, the Chuckwalla Valley acts as a natural corridor between the Chuckwalla Mountains and Little San Bernardino Mountains in eastern Riverside County. There is low disturbance from human development, with I-10 being the major impediment to wildlife movement in the region. Due to the low average daily traffic volumes on Chuckwalla Valley Road (approximately 40 vehicles per day), there is already a low potential for wildlife vehicle encounters from crossing Chuckwalla Valley Road. There is a potential that diversion dikes south of Chuckwalla Valley Road could funnel some wildlife toward the Chuckwalla Valley Road bridge undercrossings and provide value for wildlife connectivity; however, many species, including desert tortoise, can climb the dikes and are not restricted to the ditches. Since there are no obstructions or barriers that would prevent wildlife from crossing over the Chuckwalla Valley Road, wildlife are not currently forced to utilize the bridge undercrossings. Due to the heights of the existing bridges (5 to 9 feet), there is a potential for birds, reptiles (e.g., desert tortoise), and small- to medium-sized wildlife (e.g., coyote [*Canis latrans*], kit fox [*Vulpes macrotis*], black-tailed jackrabbit) with low to high mobility to use the undercrossing of bridges.

3.2 Regional Species and Habitats and Natural Communities of Concern

Based on the CNDDDB (CDFW 2020), CNPS (2020), and USFWS IPaC database queries (Appendix B), there were 28 special-status plant species, 13 animal species, and one natural community of special concern identified that could potentially occur within the regional vicinity of the four BSAs. Determinations for likelihood of occurrence were based on presence or suitable habitat, soils, quality of habitat, geographic range, elevation, and species-specific tolerances to disturbances within the BSAs. Species natural life history requirements and an analysis of the likelihood of occurrence for all special-status species and natural communities of concern potentially occurring in the region are provided in Appendix C.

The BSAs occur outside of the jurisdictional boundaries of NOAA Fisheries; however, all of the BSAs occur within federally designated critical habitat for desert tortoise (refer to Section 4.1.1).

Chapter 4 **Results: Biological Resources, Discussion of Impacts and Mitigation**

This section describes the results of surveys, project impacts, and the avoidance, minimization, and mitigation requirements for those impacts.

The BSAs were evaluated for anticipated direct and indirect effects on biological resources that may result from permanent and temporary impacts associated with construction of the proposed bridge replacements. Permanent impacts include roadway and shoulder improvements, regrading of slopes, bridge footings, bridge columns, installation of wingwalls, guardrails, and riprap. Temporary impacts would occur during removal of the existing bridges and bridge replacement, within staging areas on the existing pavement, and where light grading or access for vehicles and personnel within the work area is needed. All temporary impacts would be returned to original conditions once project construction is complete. The existing 1.16-foot bridge columns would also be removed; a single row of 2.5-foot-diameter columns would be installed at Aztec Ditch, Sutro Ditch, and Acari Ditch bridges. Figure 7 in Appendix A illustrates the permanent and temporary impact areas identified for the proposed bridge replacements.

The direct effects are those that can be expected from direct removal of resources and disturbances to the land. Examples of direct impacts include the mortality of wildlife and plants and permanent loss of habitat. Indirect effects are those effects that give rise to delayed secondary effects or are farther in distance. Examples of indirect effects include increased levels of environmental toxins, increased noise levels, and invasion by nonnative animals and plants, which stresses or alters competition among natives. Indirect effects are those that can be assumed to increase mortality, reduce productivity, and/or reduce the functions and values of natural open space for native species.

4.1 Habitats and Natural Communities of Special Concern

Natural communities of special concern are classified as sensitive because they have restricted ranges and cumulative losses throughout the region, and may support a high number of endemic and/or special-status plant and wildlife species. In some cases, aquatic resources, such as wetlands and/or waters of the U.S. (WoUS), waters of the state (WoS), and state streambeds and associated riparian vegetation, are also considered sensitive natural communities. Additionally, some natural communities of concern function as wildlife movement corridors that are important habitat features needed for regional genetic exchange and species migration.

4.1.1 Discussion of Natural Communities of Concern

As described in Section 3.1.2, there were two natural vegetation communities, creosote bush scrub and desert wash, present within the BSAs of all four bridge locations. None of the communities occurring within the BSAs are classified as sensitive by CDFW (2019b). Based on the literature review, only desert fan palm oasis woodland, which does not occur within the BSAs, was identified as a natural community of special concern within the region.

Survey Results

Vegetation Communities of Special Concern

The vegetation communities/land use types within each of the bridges BSAs are desert wash, creosote bush scrub, and developed/disturbed habitat, none of which are natural communities of concern (Appendix A, Figure 6). Therefore, no vegetation communities of special concern are present in the BSAs.

Critical Habitat

Each of the BSAs is within the Chuckwalla Critical Habitat Unit for desert tortoise and within the Colorado Desert Recovery Unit for desert tortoise (Appendix A, Figure 8) (USFWS 2009, 2018). Critical habitat for the Mojave population of desert tortoise was established in 1994 and considered essential to the recovery of this population of the species. The creosote bush scrub and desert wash in the BSAs provide the Physical Biological Features (PBFs) for desert tortoise. PBFs are the main physical and biological features that support the species' life-history and are essential for the species' conservation. For additional details regarding desert tortoise and species requirements, refer to Section 4.3.1.

Project Impacts

The proposed projects would affect creosote bush scrub and desert wash during construction. No impacts on vegetation communities of special concern would occur, as none are present within the LOD. The permanent and temporary direct effects on vegetation communities are identified in Table 3.

Table 3. Impacts on Vegetation Communities by the Proposed Projects

Vegetation Communities/ Land Use Type	Aztec Ditch Bridge #56C0102		Tarantula Ditch Bridge #56C0103		Sutro Ditch Bridge #56C0104		Acari Ditch Bridge #56C0108	
	Perm-anent Impact (acres)	Temp-orary Impact (acres)	Perm-anent Impact (acres)	Temp-orary Impact (acres)	Perm-anent Impact (acres)	Temp-orary Impact (acres)	Perm-anent Impact (acres)	Temp-orary Impact (acres)
Creosote Bush Scrub	0.10	2.41	0.09	2.36	0.12	2.39	0.11	0.98
Desert Wash	0.07	0.37	0.07	0.39	0.07	0.49	0.03	0.12
Developed/ Disturbed	0.32	0.56	0.26	0.57	0.29	0.47	0.19	0.45
Total (acres)	0.49	3.35	0.42	3.32	0.48	3.35	0.33	1.55

Natural communities in the BSAs provide the PBFs for desert tortoise within Critical Habitat. Further details and analysis of impacts for desert tortoise Critical Habitat and PBFs are provided in Section 4.3.1. However, Measure **BIO-1** would ensure that creosote bush scrub and desert wash habitats within the temporary impact area are returned to their pre-project conditions after construction completion.

Potential indirect effects on natural communities include increase of dust, runoff from chemical spills into the waterways, erosion, increased risk of fire, and introduction and spread of invasive weeds. These potential indirect effects may also contribute to the degradation of desert tortoise Critical Habitat. However, implementation of Best Management Practices (BMPs) in Measure

BIO-2 would ensure any potential indirect effects on open lands adjacent to the proposed project sites would be greatly reduced and/or avoided.

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-1** would ensure that all temporary construction areas on undeveloped lands would be returned to pre-project conditions. Measure **BIO-2** would implement BMPs to reduce the potential for indirect effects on biological and aquatic resources.

BIO-1: Temporary Construction Areas. Post-construction, all temporary construction areas within waters and uplands will be returned to preconstruction contours, decompacted, and hydroseeded with a native seed mix. Ephemeral washes and their banks will be recontoured with native sandy soils. No riprap or other obstructive material will be placed under the new bridges other than what is proposed for the project.

BIO-2: Best Management Practices. The following BMPs will be included at a minimum to reduce impacts on biological and aquatic resources.

- Dust control measures will be implemented to minimize airborne dust impacts on adjacent vegetation.
- Activities that may produce sparks, including welding or grinding, will use protective gear to reduce fire risks, such as shields and protective mats. Fire suppression capabilities, including extinguishers, shovels, and water tankers, will be available on site whenever construction occurs during the fire season (as determined by the Riverside County Fire Department).
- Trash will be stored in closed containers so that it is not readily accessible to wildlife and will be removed from the construction sites daily to avoid attracting predators to the project sites.
- Exotic plant species removed during construction will be properly handled to prevent sprouting or regrowth. Trucks carrying vegetation that will be removed from the project sites will be covered and vegetation disposed of in accordance with applicable laws and regulations.
- Plans for water pollution and erosion control will be developed and implemented in accordance with Regional Water Quality Control Board (RWQCB) requirements. The plans will describe sediment and hazardous materials control, dewatering or diversion structures, fueling and equipment management practices, and use of plant material for erosion control. Plans will be reviewed and approved by Caltrans prior to construction. The water pollution and erosion control plan will include the following at a minimum:
 - No fluids or sediment from construction will enter into ephemeral washes.
 - Sediment and erosion control measures will be implemented until such time soils are determined to be successfully stabilized.
 - No erodible materials will be deposited into watercourses. Brush, loose soils, or other debris material will not be stockpiled within stream channels or on adjacent banks.

- Equipment maintenance, staging, and dispensing of fuel, oil, coolant, or any other toxic substances will occur only in designated areas within the proposed grading limits of the project sites. These designated areas will be clearly marked and located in such a manner as to contain runoff into watercourses.
- Storage of equipment, fueling, and staging areas will be located on non-sensitive upland sites with minimal risks of direct drainage into watercourses. These designated areas will be located to prevent runoff from entering sensitive habitat, including watercourses. Necessary precautions will be taken to prevent the release of cement or other toxic substances into surface waters. Project-related spills of hazardous materials will be reported to appropriate entities including, but not limited to, the applicable jurisdictional County, USFWS, CDFW, and RWQCB, and will be cleaned up immediately and contaminated soils removed to approved disposal areas.

4.1.2 Discussion of Connectivity

Survey Results

No studies or modeling for wildlife movement were conducted for the proposed project. Therefore, the analysis provided is based on literature review and qualitative analysis of the project area. The majority of the area around the proposed bridge BSAs is open, relatively flat, and mildly disturbed land. Chuckwalla Valley Road crosses the center of each of the BSAs and is a paved road that is used by approximately 40 vehicles or fewer per day. While the washes at each bridge may potentially have more vegetative cover than the surrounding areas, the low traffic volumes on Chuckwalla Valley Road, low presence of humans or domestic predators, and lack of any restrictive barriers for road crossings, would not restrict wildlife movement across the region. As mentioned in Section 3.1.4, the I-10 is the greatest barrier for wildlife movement regionally. Since there is low vehicular useage along Chuckwalla Road and the road is for the most part at-grade with the remainder of the existing landscape, and the bridge undercrossings are small in size compared to the entirety of Chuckwalla Valley Road, it is more likely that wildlife of all sizes would cross at-grade than at the undercrossings.

Nonetheless, the area between the Chocolate Mountains and Palen McCoy Mountains through the Chuckwalla Valley is a known habitat corridor for wildlife (Penrod et al. 2012). Species found to utilize the corridors in the region are desert kit fox (*Vulpes macrotis*), desert tortoise, and American badger (*Taxidea taxus*). The openness of each bridge is sufficient to facilitate movement of these species should they choose to move through the wash and under the bridge. In addition, the diversion dikes west of Chuckwalla Valley Road have steep slopes and may funnel some wildlife, especially smaller species, through the Aztec Ditch, Tarantula Ditch, Sutro Ditch, and Acari Ditch undercrossings. Larger species, such as bighorn sheep and highly mobile species (i.e. birds and insects) would be expected to cross over Chuckwalla Valley Road during migrations. This is based on the least-cost analysis modeling² described by SC Wildlands (Penrod et al. 2012).

² Least-cost modeling is based on the idea that dispersing wildlife will follow the path of least resistance or easiest route.

Project Impacts

During construction, it is anticipated that there would be a temporal effect on wildlife movement through the undercrossings at Aztec Ditch, Tarantula Ditch, Sutro Ditch, and Acari Ditch. Construction activities and the increase of human presence would generate noises and vibrations that may deter wildlife from the project areas or from using the undercrossings. Large mammals traversing the region are expected to avoid the project sites and cross over Chuckwalla Valley Road and would be generally unaffected. However, diversion dikes could potentially funnel wildlife toward the construction area, which could directly affect wildlife during construction activities, including injury or mortality of individual species. Existing bridge columns at Aztec Ditch, Sutro Ditch, and Acari Ditch Bridges would be replaced with new bridge columns, but these would not impede wildlife movement after construction is completed. Refer to Section 4.3 for further analysis of direct effects on special-status animals that could traverse the project areas.

During construction, access to the bridge replacements would be limited to local residents, maintenance vehicles for utilities, and construction personnel. It is not expected that there would be an appreciable increase in wildlife/vehicle interactions during construction because the area from west of Aztec Ditch Bridge (#56C0102) and east of Acari Ditch Bridge (#56C0108) would be closed to public access. In addition, upon completion, the bridge underpasses would be fully permeable for wildlife movement.

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-1** would ensure that sandy soils within desert washes are returned to original conditions. Project BMPs described in Measure **BIO-2** will reduce the potential effects on wildlife that are potentially using the desert washes to pass under Chuckwalla Valley Road. **BIO-3** would decrease the likelihood that wildlife would enter the disturbance area of the projects and attempt to access the wash under the bridge during construction. Further measures specific to desert tortoise are discussed in Section 4.3.1.

4.1.3 Discussion of Wetlands and Other Waters

This section summarizes the results of the investigation of potential jurisdictional WoUS and WoS subject to U.S. Army Corps of Engineers (USACE), RWQCB, and CDFW jurisdiction. CDFW jurisdictional resources include state streambeds and associated riparian vegetation.

Survey Results

Potential jurisdictional waters were found within each of the JSAs. The Jurisdictional Delineation Report (Appendix F; ICF 2019) provides the full descriptions of jurisdictional water resources within the JSAs. Table 4 summarizes the total amount of jurisdictional water resources at each bridge location.

Table 4. Summary of USACE, RWQCB, and CDFW Jurisdictional Resources

Chuckwalla Valley Road Bridges	USACE/RWQCB ¹ Non-wetland (acres)	CDFW Unvegetated Streambed (acres)	CDFW Riparian (acres)
Aztec Ditch Bridge (#56C0102)	1.86	2.08	0.38

Chuckwalla Valley Road Bridges	USACE/RWQCB¹ Non-wetland (acres)	CDFW Unvegetated Streambed (acres)	CDFW Riparian (acres)
Tarantula Ditch Bridge (#56C0103)	2.01	2.27	0.51
Sutro Ditch Bridge (#56C0104)	1.03	1.34	0.33
Acari Ditch Bridge (#56C0108)	1.33	1.56	0.11

¹ No USACE/RWQCB Wetland WoUS are present in the JSAs.

Summaries of the jurisdictional waters at each bridge location are provided below.

Aztec Ditch Bridge (#56C0102)

A total of six features were delineated within the JSA of Aztec Ditch Bridge (#56C0102). West of the JSA, there are two man-made earthen diversion dikes that redirect flows from the various desert channels south of Chuckwalla Valley Road through Aztec Ditch. All jurisdictional features are sandy channels typical of arid fluvial systems. Vegetation was composed of creosote bush, cheesebush, combseed, and honey mesquite. Riparian vegetation mapped within Aztec Ditch was composed of Athel tamarisk, palo verde, and honey mesquite. A total of 1.86 acres of USACE/RWQCB non-wetland waters are present in the JSA of Aztec Ditch Bridge (#56C0102). No jurisdictional wetlands are present. In addition, there are 2.08 acres of CDFW unvegetated streambed and 0.38 acre of CDFW riparian within the JSA of Aztec Ditch Bridge (#56C0102).

Tarantula Ditch Bridge (#56C0103)

A total of seven features were delineated within the JSA of Tarantula Ditch Bridge (#56C0103). In the vicinity of the JSA there are two man-made earthen diversion dikes on either side of Tarantula Ditch that redirect flows from the various desert channels south of Chuckwalla Valley Road toward the bridge. All jurisdictional features within the JSA are sandy channels typical of arid fluvial systems. Vegetation was composed of creosote bush, cheesebush, combseed, white bursage, Emory's rockdaisy (*Perityle emoryi*), Athel tamarisk, and palo verde. Riparian vegetation mapped within Tarantula Ditch was composed of Athel tamarisk, palo verde, and honey mesquite. A total of 2.01 acres of USACE/RWQCB non-wetland waters are present in the JSA of Tarantula Ditch Bridge (#56C0103). No jurisdictional wetlands are present. In addition, there are 2.27 acres of CDFW unvegetated streambed and 0.51 acre of riparian within the JSA of Tarantula Ditch Bridge (#56C0103).

Sutro Ditch Bridge (#56C0104)

A total of 10 features were delineated within the JSA for the Sutro Ditch Bridge (#56C0104). In the vicinity of the JSA there is one man-made earthen diversion dike that redirects flows from the various desert channels southwest of Chuckwalla Valley Road through Sutro Ditch. All of the features are sandy drainages typical of arid fluvial systems. Vegetation was composed of creosote bush, white bursage, combseed, and palo verde. Riparian vegetation mapped within Sutro Ditch was composed of Athel tamarisk, palo verde, and honey mesquite. A total of 1.03 acres of USACE/RWQCB non-wetland waters are present in the JSA of Sutro Ditch Bridge (#56C0104). No jurisdictional wetlands are present. In addition, there are 1.34 acres of CDFW unvegetated streambed and 0.33 acre of riparian within the JSA of Sutro Ditch Bridge (#56C0104).

Acari Ditch Bridge (#56C0108)

A total of 11 features were delineated within the JSA for the Acari Ditch Bridge (#56C0108). All of the features are sandy drainages typical of arid fluvial systems. In the vicinity of the JSA there are two large earthen diversion dikes that redirect flows from the various desert channels southwest of Acari Ditch Bridge (#56C0108). Vegetation was composed of creosote bush, desert dandelion (*Malacothrix glabrata*), and cheesebush. Riparian vegetation mapped within Acari Ditch was composed of Athel tamarisk and palo verde. A total of 1.33 acres of USACE/RWQCB non-wetland waters are present in the JSA of Acari Ditch Bridge (#56C0108). No jurisdictional wetlands are present. In addition, there are 1.56 acres of CDFW unvegetated streambed and 0.11 acre of riparian within the JSA of Acari Ditch Bridge (#56C0108).

Project Impacts

Construction activities would potentially affect jurisdictional waters both temporarily and permanently at each bridge location. Temporary affects would occur within the work area needed to construct the new bridges. During construction, soil compaction may occur within jurisdictional waters, which may affect flow rates through the project sites and downstream areas. The potential indirect effects on jurisdictional waters include introduction of invasive plants, sedimentation, erosion, and chemical spills that may affect downstream resources. Table 5 provides the breakdown of permanent and temporary impacts at each bridge.

Table 5. Summary of Proposed Impacts on USACE/RWQCB and CDFW Jurisdictional Resources

	USACE/ RWQCB Non-wetland ¹ (acres)		CDFW Unvegetated Streambed (acres)		CDFW Riparian (acres)	
	Permanent Impact (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Temporary Impact (acres)	Permanent Impact (acres)	Temporary Impact (acres)
Chuckwalla Valley Road Bridges						
Aztec Ditch Bridge (#56C0102)	0.027	0.708	0.054	0.811	0.035	0.105
Tarantula Ditch Bridge (#56C0103)	0.039	0.780	0.046	0.983	0.093	0.193
Sutro Ditch Bridge (#56C0104)	0.018	0.487	0.031	0.640	0.067	0.141
Acari Ditch Bridge (#56C0108)	0.007	0.188	0.020	0.205	0.017	0.024

¹ No USACE/RWQCB wetland WoUS/WoS would be affected by the proposed bridges.

Aztec Ditch Bridge (#56C0102)

Replacement of Aztec Ditch Bridge (#56C0102) would result in permanent impacts on 0.027 acre and temporary impacts on 0.708 acre of non-wetland WoUS. No federally jurisdictional wetlands would be affected. In addition, permanent impacts would occur on 0.054 acre of CDFW unvegetated streambed and 0.035 acre of CDFW riparian, and temporary impacts would occur on 0.811 acre of CDFW unvegetated streambed and 0.105 acre of CDFW riparian. No federally jurisdictional wetlands would be affected.

Tarantula Ditch Bridge (#56C0103)

Replacement of Tarantula Ditch Bridge (#56C0103) would result in permanent impacts on 0.039 acre and temporary impacts on 0.780 acre of non-wetland WoUS. No federally jurisdictional wetlands would be affected. In addition, permanent impacts would occur on 0.046 acre of CDFW unvegetated streambed and 0.093 acre of CDFW riparian. Temporary impacts would occur on 0.983 acre of CDFW unvegetated streambed and 0.193 acre of CDFW riparian.

Sutro Ditch Bridge (#56C0104)

Replacement of Sutro Ditch Bridge would result in permanent impacts on 0.018 acre and temporary impacts on 0.487 acre of non-wetland WoUS. No federally jurisdictional wetlands would be affected. In addition, permanent impacts would occur on 0.031 acre of CDFW unvegetated streambed and 0.067 acre of CDFW riparian. Temporary impacts would occur on 0.640 acre of CDFW unvegetated streambed and 0.141 acre of CDFW riparian.

Acari Ditch Bridge (#56C0108)

Replacement of Acari Ditch Bridge (#56C0108) would result in permanent impacts on 0.007 acre and temporary impacts on 0.188 acre of non-wetland WoUS. No federally jurisdictional wetlands would be affected. In addition, permanent impacts would occur on 0.020 acre of CDFW unvegetated streambed and 0.017 acre of CDFW riparian. Temporary impacts would occur on 0.205 acre of CDFW unvegetated streambed and 0.024 acre of CDFW riparian.

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-1** would ensure that temporary construction areas in jurisdictional areas would be restored to pre-project conditions. Measure **BIO-2** would ensure that indirect effects on potentially jurisdictional aquatic features would be minimized within the disturbance area and would not occur outside of the project areas.

Permanent effects on WoUS/WoS and CDFW jurisdictional resources would be unavoidable and may require compensatory mitigation under Section 401 and 404 of the CWA, Porter Cologne Water Quality Act, and Section 1602 of the CFGC (Measure **BIO-3**).

BIO-3: Mitigation for Replacement/Restoration of Jurisdictional Waters. Permanent and temporary impacts from the replacement of Chuckwalla Valley Road Bridges will require compensatory mitigation for jurisdictional waters. Compensation can be a combination of enhancement, restoration, and/or rehabilitation. Compensation can also occur through the purchase of credits through a local in-lieu fee program or other agency-approved mitigation provider of federal and state jurisdictional water resources. The temporary impacts will be restored with implementation of Measure **BIO-1**. Final mitigation ratios and mitigation types will be determined through consultation with USACE, RWQCB, and CDFW.

4.2 Special-Status Plant Species

The plants listed are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the presence of habitat required by the special-status plants occurring on site. Refer to Appendix C for a detailed analysis for all special-status plants with a potential to occur in the BSAs.

4.2.1 Discussion of Special-status Plant Species

This section discusses the results of surveys, project impacts on special-status plant species, and avoidance and minimization efforts and compensatory mitigation for special-status plant species with a potential to occur within the BSAs of the bridges.

Survey Results

Of the 28 special-status plant species evaluated for the proposed projects, suitable habitat was present for 22 special-status plant species. The special-status plants with suitable habitat are chaparral sand-verbena (*Abronia villosa* var. *aurita*), Harwood's milk-vetch (*Astragalus insularis* var. *harwoodii*), pink fairy-duster (*Calliandra eriophylla*), Emory's crucifixion-thorn (*Castela emoryi*), Las Animas colubrina (*Colubrina californica*), spiny abrojo (*Condalia globosa* var. *pubescens*), Alverson's foxtail cactus (*Coryphantha alversonii*), glandular ditaxis (*Ditaxis claryana*), California ditaxis (*Ditaxis serrata* var. *californica*), Harwood's eriastrum (*Eriastrum harwoodii*), Abram's spurge (*Euphorbia abramsiana*), Utah vine milkweed (*Funastrum utahense*), ribbed cryptantha (*Johnstonella costata*), Torrey's box-thorn (*Lycium torreyi*), Darlington's blazing star (*Mentzelia puberula*), desert beardtongue (*Penstemon pseudospectabilis* ssp. *pseudospectabilis*), narrow-leaf sandpaper-plant (*Petalonyx linearis*), desert unicorn-plant (*Proboscidea althaeifolia*), Orocopia sage (*Salvia greatae*), desert spike-moss (*Selaginella eremophila*), Cove's cassia (*Senna covesii*), and Palmer's jackass clover (*Wislizenia refracta* ssp. *palmeri*). None of these species were found during the rare plant focused studies within each of the BSAs.

Project Impacts

No impacts on special-status plants would occur, as none are present within the BSAs.

Avoidance and Minimization Efforts/Compensatory Mitigation

No avoidance or minimization measures are required.

4.3 Special-Status Animal Species Occurrences

Animals are considered to be of special concern based on (1) federal, state, or local laws regulating their development; (2) limited distributions; and/or (3) the habitat requirements of special-status animals occurring on site. Of the 12 special-status animal species with potential to occur, suitable habitat was present for 7 species: desert tortoise (federally and state-listed as endangered), burrowing owl (SSC), Western mastiff bat (*Eumops perotis californicus*, SSC), Pallid bat (*Antrozous pallidus*, SSC), desert bighorn sheep (*Ovis canadensis nelsoni*, California Fully Protected Species), American badger (SSC), and loggerhead shrike (SSC).

4.3.1 Discussion of Desert Tortoise

The desert tortoise is a federally and state-listed threatened species found throughout the Mojave and Sonoran Desert regions within canyons, washes, rocky foothills, alluvial fans, and other open areas. The species is found within succulent scrub, creosote bush scrub, and blue paloverde (*Parkinsonia florida*)-ironwood (*Olneya tesota*)-smoke tree (*Psoralea argemone*) vegetation communities high in species richness (USFWS 2009). The desert tortoise inhabits burrows and is most active from March through June and from September through October.

Survey Results

Suitable habitat for desert tortoise is present within desert wash and creosote bush scrub communities in the BSAs as follows:

- Aztec Ditch Bridge (#56C0102): 23.23 acres
- Tarantula Ditch Bridge (#56C0103): 22.96 acres
- Sutro Ditch Bridge (#56C0104): 23.44 acres
- Acari Ditch Bridge (#56C0108): 20.30 acres

There were a few burrows documented during the 2017 survey season within the Zone of Influence³ (ZOI) that were potentially suitable for desert tortoise, but no potential burrows were found in 2019 surveys within the Action Area. No desert tortoises or definitive desert tortoise sign were observed during the 2017 or 2019 surveys. Hereafter, all the analysis for desert tortoise is based off the Action Area. Because the species was not found during focused surveys and no sign was observed in the Action Area, it is considered absent (Appendix A, Figures 11a through 11d).

The Action Area for desert tortoise occurs within the northwestern edge of federally designated Critical Habitat (refer to Section 4.1.1 for additional details). Appendix A, Figure 8, illustrates the location of the BSAs relative to Critical Habitat. The biological and physical factors for desert tortoise PBFs contribute to foraging, dispersal, shelter, genetic exchange, and egg laying. Existing pressures on the PBFs within the Action Area include vehicular traffic along Chuckwalla Valley Road, maintenance of the road right of way and local utilities, and off-road vehicle use of open lands in the vicinity. These activities have left the project sites sparsely vegetated and degraded habitat quality in areas adjacent to the road. Regardless, the bridge undercrossings may serve as an important core habitat linkage for desert tortoise movement and genetic exchange through the Chuckwalla Valley even if the species is not present within the Action Area (refer to Section 4.1.2 for additional details).

Project Impacts

Project construction would result in direct effects on suitable habitat for desert tortoise, and although desert tortoise was absent during surveys, there is a potential for the species to occur in the vicinity of the LOD prior to and during construction. In addition, the BSAs also occur within

³ As stated in Section 2.2.3, the USFWS protocol methodology for surveys in 2017, used the USFWS 2010 guidelines, whereas the 2019 surveys used the most recent USFWS 2019 guidelines. The USFWS 2010 survey protocol describes the Zone of Influence as the survey area and USFWS 2018 survey protocol describes the Action Area as the area surveyed. Both ZOI and Action Area refer to the survey area used for desert tortoise surveys.

a desert tortoise core movement area (SC Wildlands 2012). During construction, there would be a temporal effect on any potential desert tortoise movement through the bridge undercrossings (refer to Section 4.1.2 for additional discussion on wildlife movement). Measures **BIO-5** through **BIO-8** would ensure potential direct effects are fully avoided during construction activities.

The projects would also have direct effects on desert tortoise Critical Habitat in the Chuckwalla Critical Habitat Unit. As mentioned in Section 4.1.3, the creosote bush scrub and desert wash provide PBFs for desert tortoise, although they are generally low to moderate quality due to the existing County right of way and associated disturbance, off-road vehicle use, and maintenance activities for utilities. The majority of the permanent impacts on Critical Habitat would be limited to areas directly adjacent to the existing roadway and diversion dikes. Temporary impacts on Critical Habitat would be limited to the construction duration and, following construction, movement within and among populations of desert tortoise through the Chuckwalla Valley would be unimpeded. The permanent and temporary impacts on PBFs for the BSAs are provided in Table 6.

Table 6. Impacts on Desert Tortoise Critical Habitat with PBFs

Railroad Avenue Bridges	Permanent Impact (acres)	Temporary Impact (acres)	Total Impact on Critical Habitat (acres)
Aztec Ditch Bridge (#56C0102)	0.17	2.78	2.95
Tarantula Ditch Bridge (#56C0103)	0.16	2.75	2.91
Sutro Ditch Bridge (#56C0104)	0.19	2.88	3.07
Acari Ditch Bridge (#56C0108)	0.14	1.10	1.24

Potential indirect effects within the Action Area⁴ include an increased generation of dust, noise, vibrations that could collapse burrows, trash that can attract predators, and degradation of habitat adjacent to the BSAs. However, implementation of avoidance and minimization Measure **BIO-2** would reduce the potential indirect effects within the Action Area.

It is Caltrans' determination the projects would have "no effect" on desert tortoise due to the species' absence from the Chuckwalla Valley Road Bridges (#56C0102, 56C0103, 56C0104, and 56C0108) Action Area. The proposed projects would likely result in a "may affect, but not likely to adversely affect" determination for the desert tortoise designated Critical Habitat due to the impacts not affecting the long-term conservation value of the habitat.

Avoidance and Minimization Efforts/Compensatory Mitigation

Since no take of desert tortoise is anticipated, all measures incorporated would be implemented to ensure full avoidance of impacts on desert tortoise. Measure **BIO-4** would be implemented to ensure no desert tortoises are present prior to construction and Measure **BIO-5** would ensure that this species would not enter the construction area. Establishment of desert tortoise fencing (measure **BIO-5**) would ensure the species does not enter the project areas. Measure **BIO-1** would ensure that any temporary construction areas on undeveloped lands would be returned to pre-project conditions. This measure would ensure that Critical Habitat would continue to be suitable for desert tortoise after construction is complete without impediments to tortoise movement. Measures **BIO-5** and **BIO-6** would ensure there would be no direct effects on desert

⁴ The impacts analysis for desert tortoise is based on the Action Area.

tortoise individuals during construction activities. Measure **BIO-2** would ensure potential indirect effects would not affect desert tortoise in the vicinity of the project areas.

BIO-4: Preconstruction Desert Tortoise Survey. An Approved Biologist will conduct a preconstruction survey of all work areas for desert tortoise no more than 7 days prior to the start of construction activities, including staging of the project areas. The Approved Biologist will review the Action Area for fresh sign of desert tortoise, including living tortoises, tortoise remains, burrows, tracks, scat, or egg shells. If desert tortoise or their sign is found, the Approved Biologist will immediately contact the USFWS, Caltrans, and the County. No work activities (including staging of the project site) would be permissible until consultation has been completed.

If no desert tortoise or sign are found, measure **BIO-5** (Installation of Desert Tortoise Fencing) will be implemented immediately before the start of construction or project staging.

If construction activities cease for at least 7 days, a new preconstruction survey will be required prior to construction activities resuming. This will ensure desert tortoise have not moved into the project site, and any repairs of exclusion fencing (**BIO-5**) can be conducted prior to work activities.

BIO-5: Desert Tortoise Exclusion Fencing. The construction areas will be the minimal area necessary to complete the proposed projects and will be specified in the construction plans. Desert tortoise exclusion fencing will be installed under the direction of an Approved Biologist around the perimeter of the project sites to exclude desert tortoise from the construction areas. This temporary fencing will be installed after the preconstruction survey (Measure **BIO-4**) and prior to the initiation of construction activities. Exclusion fencing will be maintained until the completion of all construction-related activities. Specifications for the temporary exclusion fencing will use the most recent USFWS guideline for fence installation. The Approved Biologist will inspect the exclusion fencing at least monthly and immediately following a rainfall event (i.e., the same day or the morning after an evening rain). Any fencing that has been damaged will be repaired within two days. Fencing will be monitored and maintained at a frequency necessary to ensure its effectiveness.

BIO-6: Biological Monitor. An Approved Biologist will monitor construction activities throughout project construction to ensure that practicable measures are being employed and to avoid incidental disturbance of areas of desert tortoise Critical Habitat outside of the LOD. The project proponent will submit the qualifications of the Approved Biologist to the USFWS and CDFW at least 30 days prior to the preconstruction survey in measure **BIO-4**. Ongoing monitoring and reporting will occur throughout the duration of construction activities to ensure BMPs in measure **BIO-2** are implemented and desert tortoise exclusion fencing (**BIO-5**) is maintained. The biological monitor will inspect all work areas each day before work can begin. The biological monitor will not capture, handle, or move desert tortoise from the Action Area without prior authorization from the USFWS.

BIO-7: Worker Environmental Awareness Program Training. A worker education program will be developed and presented to all construction personnel prior to the start of construction activities. The training will be presented by a qualified biologist.

The biologist will describe the work limits in which the project must be accomplished and all approved access routes. The training will include general behavior and ecology of desert tortoise and other sensitive species (i.e. nesting birds), identification of the species, reporting requirements, and protection measures being implemented for the project, which may include but not be limited to:

- Project personnel will not be allowed to bring pets into the project sites.
- No hazards to the desert tortoise (e.g., auger holes, trenches, pits, or other steep-sided depressions) will be left unfenced or uncovered; such hazards will be eliminated prior to the construction crew and the biologist(s) leaving the project construction site for the day.
- During construction-related activities for the projects, motor vehicles will be limited to approved designated roadways and areas identified as permanently or temporarily affected by construction of the projects. All motor vehicles driving on approved non-paved roads in the project area will not exceed 20 miles per hour.
- Anyone who operates a motor vehicle or construction equipment will check under the parked vehicles/equipment for the presence of desert tortoises before vehicle/equipment is moved.
- Should any desert tortoise be injured or killed, all activities will be halted within 500 feet of the incident, and the FCR and/or Authorized Biologist immediately contacted. The FCR and/or Authorized Biologist will be responsible for reporting the incident to the USFWS and CDFW.

4.3.2 Discussion of Burrowing Owl

This section addresses potential effects on burrowing owl, a state SSC. This species inhabits open, dry, level, or nearly level grassland, prairie, desert floor, and shrubland habitats when shrub cover is less than 30 percent. In Southern California, a substantial number of birds are found in microhabitats that have been highly altered by man, including flood control and irrigation basins, dikes, and banks; abandoned fields surrounded by agriculture; and road cuts and margins. There is a strong association between burrowing owls and burrowing mammals, especially ground squirrels (*Otospermophilus* spp.); however, they also occupy man-made structures such as banks and ditches, piles of broken concrete, and even abandoned structures.

Survey Results

Suitable habitat for burrowing owl is present throughout all undeveloped areas of the BSAs as follows:

- Aztec Ditch Bridge (#56C0102): 23.23 acres
- Tarantula Ditch Bridge (#56C0103): 22.96 acres
- Sutor Ditch Bridge (#56C0104): 23.44 acres
- Acari Ditch Bridge (#56C0108): 20.30 acres

There were no burrowing owls or burrowing owl sign (i.e., whitewash, tracks) found during the focused survey (Appendix A, Figure 12).

Project Impacts

Construction activities would directly affect suitable habitat for burrowing owl. Table 7 provides impacts on suitable habitat for burrowing owl.

Table 7. Impacts on Suitable Habitat for Burrowing Owl

Railroad Avenue Bridges	Permanent Impact (acres)	Temporary Impact (acres)	Total Impact on Critical Habitat (acres)
Aztec Ditch Bridge (#56C0102)	0.17	2.78	2.95
Tarantula Ditch Bridge (#56C0103)	0.16	2.75	2.91
Sutro Ditch Bridge (#56C0104)	0.19	2.88	3.07
Acari Ditch Bridge (#56C0108)	0.14	1.10	1.24

Although no direct impacts are anticipated on burrowing owl due to the species' absence from the bridge project sites, there is a potential for the species to occur within the project vicinity prior to and during construction. Because this species is highly mobile, there is a potential for the species to migrate to the project areas. Potential indirect effects that may occur on burrowing owl include an increased generation of dust, noise, or vibrations that could collapse burrows; trash that can attract predators; and degradation of habitat adjacent to the project areas.

Avoidance and Minimization Efforts/Compensatory Mitigation

Because suitable habitat is present, Measure **BIO-8** will be implemented to ensure there are no impacts on burrowing owl that may occur before or during construction.

BIO-8: Preconstruction Burrowing Owl Survey. A preconstruction burrowing owl survey will be performed following CDFW's Take Avoidance Survey Methodology (Appendix D) (CDFW 2012). The survey will be conducted within 500-ft of the LOD and any staging areas at least 14 days prior to the initiation of ground disturbance activities. The survey will be performed by a biologist experienced in performing surveys for burrowing owl and species identification. All burrows within the survey area will be examined to determine occupancy by burrowing owl. If the burrow is occupied, it will be flagged or staked, and a 160-foot buffer applied during the non-breeding season (September 1 through March 14) and 500-ft buffer applied during the breeding season (March 15 through August 31). No construction activities will be permitted within the avoidance buffer until the qualified biologist determines the burrowing owl or its young are no longer dependent on the burrow (breeding and non-breeding season). If the burrow is found unoccupied during the non-breeding season, the burrow can be made inaccessible to owls (e.g., one-way doors), and the project may proceed.

4.3.3 Discussion of Special-status Bats

Based on the literature review and reconnaissance survey, western mastiff bat and pallid bat could potentially occur within the BSAs. These bat species are known to roost in crevices within trees, bridges, rock crevices, caves, culverts, and buildings. Both of these bats are California SSC.

There are other common species of bats that may have potential to occur but have no special status. CDFW has increased its requirements for projects to ensure that direct mortality of bats does not occur regardless of whether the species has special status. Bat populations throughout the state of California have declined greatly in the past decade because of human development (habitat loss and degradation), increased predation pressures, and possibly disease. These bat species would benefit from the protective measures identified in this section.

Survey Results

A habitat assessment was conducted at all four bridge projects. All four bridges are constructed of wood with plentiful gaps and crevices throughout all the structures, providing suitable habitat in a relatively bare biome. No signs of bat roosting, such as guano or urine stains, were observed during the habitat assessment of the bridges. No other structures were adjacent to the projects.

Only one species of bat was documented during the acoustic surveys: canyon bat. Another call recorded could not be determined due to poor quality of the call. Canyon bat is common regionally and could potentially roost within the bridges or in rock outcrops occurring in the area. No special-status bats were documented during acoustic and emergence surveys; therefore, they are not expected to occur. Based on the results of the habitat evaluation, lack of sign under bridges, and the emergence/acoustic survey, the four bridges are not expected to support large colonial bat roosts but are suitable for individual bats for a stop-over visit.

Project Impacts

Bridge removal could directly affect common bats that are potentially using the bridges for day or night roosts. Project construction may also indirectly affect common bats foraging in the vicinity or roosting in nearby tamarisk trees through noise, increased human presence, and vibrations from construction equipment, which may result in bats temporarily leaving their roosts or, if breeding, abandoning their maternity colony. If common colonial bats are roosting or breeding within or adjacent to the Chuckwalla Valley Road bridges prior to the bridge removal and construction, these effects could be biologically important to these species based on the limited roost/maternity sites in desert environments and constrain the projects due to required compliance with the CFGC (Section 4150) and the California Environmental Quality Act. However, implementation of Measure **BIO-9** would ensure any effects on common bats during construction of the proposed projects would be fully avoided.

Avoidance and Minimization Efforts/Compensatory Mitigation

Implementation of Measure **BIO-9** will ensure that potential effects on roosting or breeding bats are fully avoided. No compensatory mitigation is required.

BIO-9: Preconstruction Bat Survey and Exclusion. To avoid direct mortality on bats, and their daytime or maternity roosts, a qualified bat biologist will be retained to conduct bat and bat roosting site surveys prior to commencement of potential roost habitat impacts. This preconstruction survey will be conducted within 200 feet of each bridge location during the general bat maternity season (April 1- and September 30). The survey will occur at dusk and will include both acoustic data collection and an emergence count. If roosting sites or bats are not found, no further action will be necessary. Otherwise, the following exclusion is applicable:

- *Part A.* If the preconstruction survey finds bats to be roosting and bridge removal is scheduled to occur between October 1 and March 31 (outside of the maternity season of April 1 through September 30), bats shall be evicted by the methods discussed below. In addition, if bat roosts are found in the bridge and the project may perform work underneath or within 200 feet of the bridge with bats (between April 1 and September 30), the discussion below would also apply.

The eviction of bats shall be conducted using bat exclusion techniques developed by Bat Conservation International (BCI) in consultation with CDFW and under the supervision of a qualified bat biologist. These techniques allow the bats to exit the roosting site but prevent re-entry. This process will include, but not be limited to, the installation of one-way exclusion devices bridge(s). Sealing the bridge at the time of abandonment, where applicable, may prevent the need for the exclusion process. Where exclusionary devices are installed on the bridge, the devices shall remain in place for seven days, at which time the exclusion points and any other potential entrances shall be sealed. A visual inspection of the bridge by a qualified bat biologist will be required prior to bridge removal to verify that all bats have been successfully excluded.

- *Part B.* If the preconstruction survey finds bats to be roosting and bridge removal is scheduled to occur during the maternity season (April 1 through September 30), a qualified bat biologist will monitor the roost to determine if the roost site is a maternal roost. This may be determined by either visual inspection of the roost for bat pups, if possible, or monitoring the roost after the adults leave for the night to listen for bat pups. If the roost is determined to not be a maternal roost, then the bats shall be evicted as described above under *Part A*. If the roost is determined to be a maternal roost, eviction of the maternal roost cannot occur during the nursery season, because bat pups cannot leave the roost until they have reached maturity. Once the maternity season is completed, construction and bridge removal can commence.

4.3.4 Discussion of Special-Status Mammals

Survey Results

The BSAs provides suitable habitat for desert bighorn sheep and American badger to forage while moving between the Chocolate Mountains and Palen McCoy Mountains. Desert bighorn sheep typically spend most of their time in high elevations with rocky steep terrain and sparse vegetation; however, this species will use alluvial fans and washes as a water source and for foraging. Valleys are used as a means to move between mountain ranges to access more resources or lambing habitat. Although the BSAs contains open habitat that is suitable for American badger, no burrows were observed that were suitable for American badger during field surveys.

Project Impacts

Project activities would unlikely have a direct effect on desert bighorn sheep and American badger, as these species are both sensitive to human disturbance and presence. Presence of humans and noise from construction activities would deter the species from the project sites. Areas just west of Aztec Ditch Bridge (#56C0102) and east of Acari Ditch Bridge (#56C0108) would be closed to through traffic and would only be used for access by construction vehicles.

There is a low potential for effects on these species from construction vehicles due to the implementation of measures for desert tortoise (refer to Section 4.3.1).

Avoidance and Minimization Efforts/Compensatory Mitigation

Measure **BIO-7** limits vehicle speed limits to 20 miles per hour to reduce the likelihood of collision with sensitive species if a road crossing takes place during work activities. As the projects require the closure of Chuckwalla Valley Road, these species will be able to safely cross the road at grade instead of using the bridge undercrossings within the desert wash. Measure **BIO-7** requires that desert tortoise fencing include aspects to allow visibility of fencing to desert bighorn sheep. This would remove any negative effects of the species unknowingly coming into contact with the fencing. This measure will also deter both desert bighorn sheep and American badger from entering the project areas.

4.3.5 Discussion of Migratory Birds

Many species of native birds expected to occur within the BSAs are protected under the MBTA and similar provisions of the CFGC.

Survey Results

Loggerhead shrike is a California SSC and was incidentally observed foraging within the BSAs of the bridges. There is no suitable nesting habitat within the BSAs of Aztec Ditch Bridge (#56C0102), Tarantula Ditch Bridge (#56C0103), Sutro Ditch Bridge (#56C0104), and Acari Ditch Bridge (#56C0108). However, this species was incidentally observed foraging within the BSAs of the bridges. There is a potential for this species to nest in honey mesquite associated with the desert wash.

Suitable habitat is also present for a number of common bird species that may nest or forage in the bridge BSAs and are afforded protections under the MBTA and similar provisions of the CFGC. Other birds documented in the BSAs were black-tailed gnatcatcher (*Polioptila melanura*), verdin (*Auriparus flaviceps*), red-tailed hawk (*Buteo jamaicensis*), California quail (*Callipepla californica*), cactus wren (*Campylorhynchus brunneicapillus*), Wilson's warbler (*Cardellina pusilla*), rock pigeon (*Columba livia*), American crow (*Corvus brachyrhynchos*), common raven (*Corvus corax*), lark sparrow (*Chondestes grammacus*), desert roadrunner (*Geococcyx californianus*), northern mockingbird (*Mimus polyglottos*), ash-throated flycatcher (*Myiarchus cinerascens*), house finch (*Haemorrhous mexicanus*), cliff swallow (*Petrochelidon pyrrhonota*), phainopepla (*Phainopepla nitens*), common grackle (*Quiscalus quiscula*), Say's phoebe (*Sayornis saya*), yellow-rumped warbler (*Setophaga coronata*), northern rough-winged swallow (*Stelgidopteryx serripennis*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), and mourning dove (*Zenaida macroura*).

Project Impacts

The proposed projects could potentially affect nesting birds, including loggerhead shrike, protected under the MBTA and similar provisions of the CFGC. Disturbances from noise, dust, and vibrations generated by construction activities could also result in nest abandonment in natural habitats adjacent to the impact area. However, implementation of Measure BIO-10 would ensure there are no effects on loggerhead shrike or other migratory nesting birds.

Avoidance and Minimization Efforts/Compensatory Mitigation

A preconstruction nesting bird survey described in Measure **BIO-10** will ensure there are no effects on birds nesting within or adjacent to the project impact areas of the four Chuckwalla Valley Road bridges.

BIO-10: Preconstruction Survey for Nesting Birds. If construction activities are initiated during the bird breeding season (defined as February 15 through September 15), a preconstruction survey by an experienced ornithologist will occur within 3 days prior to construction activities. The survey will occur within all suitable nesting habitat within the LOD and a 100-foot buffer, as access is allowed. If nesting birds are found, a 100-foot (or a width determined through coordination with the wildlife agencies) avoidance area will be established around the nest until a qualified ornithologist has determined that young have fledged, or nesting activities have ceased.

Chapter 5

Conclusions and Regulatory Determination

5.1 Federal Endangered Species Act Consultation Summary

Formal consultation under FESA has not been initiated. Caltrans will initiate formal consultation with USFWS with the submittal of the Biological Assessment to USFWS. The USFWS Species List was obtained on March 18, 2019, and updated January 16, 2020 (Appendix B).

5.1.1 Aztec Ditch Bridge (#56C0102)

Based on the USFWS species listed generated on January 16, 2020, and the CNDDDB database search (CDFW 2020), the only federally listed species with potential to occur in the vicinity of Aztec Ditch Bridge (#56C0102) is desert tortoise. In addition, federally designated USFWS Critical Habitat for desert tortoise occurs within the BSA.

Desert tortoise was not found during the 2017 and 2019 focused survey within the Action Area for Aztec Ditch Bridge (#56C0102). As described in Section 4.3.1, the Action Area provides the PBFs necessary for the desert tortoise. Permanent impacts would occur on approximately 0.17 acre and temporary impacts would occur on approximately 2.78 acres of PBFs within Critical Habitat. Although no desert tortoise were found during focused studies, there is a potential for desert tortoise to move through the project area during construction activities. To ensure there are no direct effects on desert tortoise, measures **BIO-4** through **BIO-7** would be implemented. Measure **BIO-2** would address potential indirect effects on desert tortoise within the Action Area. Measure **BIO-1** would ensure potential movement through the Action Area would be uninhibited in the future.

Caltrans has determined, in accordance with Section 7 of FESA, that the proposed replacement of Aztec Ditch Bridge (#56C0102) on Chuckwalla Valley Road will have “no effect” on desert tortoise due to the species absence during focused studies. However, the projects would have a “may affect, but not likely to adversely affect” determination for designated Critical Habitat due to impacts on PBFs for the desert tortoise.

5.1.2 Tarantula Ditch Bridge (#56C0103)

Based on the USFWS species listed generated on January 16, 2020, and the CNDDDB (CDFW 2020) database search, the only federally listed species with potential to occur within the BSA of Tarantula Ditch Bridge (#56C0103) is desert tortoise. In addition, federally designated USFWS Critical Habitat for desert tortoise occurs within the BSA.

Desert tortoise was not found during the 2017 and 2019 focused surveys within the Action Area of Tarantula Ditch Bridge (#56C0103). As described in Section 4.3.1, the Action Area provides the PBFs necessary for the species. Permanent impacts would occur on approximately 0.16 acre and temporary impacts would occur on approximately 2.75 acres of PBFs within Critical Habitat. Although no desert tortoise were found during focused studies, there is a potential for desert tortoise to move through the project area during construction activities. To ensure there are no direct effects on desert tortoise, measures **BIO-4** through **BIO-7** would be implemented. Measure **BIO-2** would address potential indirect effects on desert tortoise within the Action

Area. Measure **BIO-1** would ensure potential movement through the Action Area would be uninhibited in the future.

Caltrans has determined, in accordance with Section 7 of FESA, that the proposed replacement of Tarantula Ditch Bridge (#56C0103) along Chuckwalla Valley Road Bridge will have “no effect” on desert tortoise due to the species’ absence during focused studies. However, the projects would have a “may affect, but not likely to adversely affect” determination for designated Critical Habitat due to impacts on PBFs for the desert tortoise.

5.1.3 Sutro Ditch Bridge (#56C0104)

Based on the USFWS species listed generated on January 16, 2020, and the CNDDDB (CDFW 2020) database search, the only federally listed species with potential to occur within the BSA of Sutro Ditch Bridge (#56C0104) is desert tortoise. In addition, federally designated USFWS Critical Habitat for listed species occurs within the BSA.

Desert tortoise was not found during the 2017 and 2019 focused surveys within the Action Area of Sutro Ditch Bridge (#56C0104). As described in Section 4.3.1, the Action Area provides the PBFs necessary for the species. Permanent impacts would occur on approximately 0.19 acre and temporary impacts would occur on approximately 2.88 acres of PBFs within Critical Habitat. Although no desert tortoise were found during focused studies, there is a potential for desert tortoise to move through the project area. To ensure there are no direct effects on desert tortoise, measures **BIO-4** through **BIO-7** would be implemented. Measure **BIO-2** would address potential indirect effects on desert tortoise within the Action Area. Measure **BIO-1** would ensure potential movement through the Action Area would be uninhibited in the future.

Caltrans has determined, in accordance with Section 7 of FESA, that the proposed replacement of Chuckwalla Valley Road Bridge over Sutro Ditch Bridge (#56C0104) will have “no effect” on desert tortoise due to the species’ absence during focused studies. However, the projects would have a “may affect, but not likely to adversely affect” determination for designated Critical Habitat due to impacts on PBFs for the desert tortoise.

5.1.4 Acari Ditch Bridge (#56C0108)

Based on the USFWS species listed generated on January 16, 2020, and the CNDDDB (CDFW 2020) database search, the only federally listed species with potential to occur within the BSA of Acari Ditch Bridge (#56C0108) is desert tortoise. In addition, federally designated USFWS Critical Habitat for desert tortoise occurs within the BSA.

Desert tortoise was not found during the 2017 and 2019 focused surveys within the Action Area of Acari Ditch Bridge (#56C0108). As described in Section 4.3.1, the Action Area provides the PBFs necessary for the species. Permanent impacts would occur on approximately 0.14 acre and temporary impacts would occur on approximately 1.10 acres of PBFs within Critical Habitat. Although no desert tortoise were found during focused studies, there is a potential for desert tortoise to move through the project area. To ensure there are no direct effects on desert tortoise, measures **BIO-4** through **BIO-7** would be implemented. Measure **BIO-2** would address potential indirect effects on desert tortoise within the Action Area. Measure **BIO-1** would ensure potential movement through the Action Area would be uninhibited in the future.

Caltrans has determined, in accordance with Section 7 of FESA, that the proposed replacement of Chuckwalla Valley Road Bridge over Acari Ditch Bridge (Bridge #56C0108) will have “no effect” on desert tortoise due to the species’ absence during focused studies. However, the projects would have a “may affect, but not likely to adversely affect” determination for designated Critical Habitat due to impacts on PBFs for the desert tortoise.

5.2 Essential Fish Habitat Consultation Summary

The project sites occur outside of the boundaries of NOAA Fisheries and no Essential Fish Habitat is present. Therefore, no consultation with NOAA Fisheries is necessary.

5.3 Wetlands and Other Waters Coordination Summary

The proposed bridge projects qualify for use of non-notifying Nationwide Permit (NWP) 14 (*Linear Transportation Projects*). A summary of the impacts on jurisdictional waters and required permits for each bridge is provided below. No consultation with USACE, RWQCB, or CDFW has occurred to date.

5.3.1 Aztec Ditch Bridge (#56C0102)

Construction of Aztec Ditch Bridge (#56C0102) would have a permanent effect on 0.027 acre and temporary effect on 0.708 acre of non-wetland WoUS/WoS. No federally jurisdictional wetlands are present. Because the loss of federal WoUS/WoS would be less than 0.10 acre, the replacement of Aztec Ditch Bridge (#56C0102) would not require pre-construction notification under NWP 14. Impacts on WoUS/WoS would trigger the need for Section 401 Water Quality Certification, which would be issued by RWQCB. A Streambed Alteration Agreement, as regulated by Section 1600 et seq. of the CFGC, would be required for permanent impacts on 0.054 acre of CDFW unvegetated streambed and 0.035 acre of CDFW riparian, and temporary impacts on 0.811 acre of CDFW unvegetated streambed and 0.105 acre of CDFW riparian.

5.3.2 Tarantula Ditch Bridge (#56C0103)

Construction of Tarantula Ditch Bridge (#56C0103) would have a permanent effect on 0.039 acre and temporary effect on 0.780 acre of non-wetland WoUS/WoS. No federally jurisdictional wetlands are present. Because the loss of federal WoUS/WoS would be less than 0.10 acre, the replacement of Tarantula Ditch Bridge (#56C0103) would not require pre-construction notification under NWP 14. Impacts on WoUS/WoS would trigger the need for Section 401 Water Quality Certification, which would be issued by RWQCB. A Streambed Alteration Agreement, as regulated by Section 1600 et seq. of the CFGC, would be required for permanent impacts on 0.046 acre of CDFW unvegetated streambed and 0.093 acre of CDFW riparian, and temporary impacts on 0.983 acre of CDFW unvegetated streambed and 0.193 acre of riparian.

5.3.3 Sutro Ditch Bridge (#56C0104)

Construction of Sutro Ditch Bridge (#56C0104) would have a permanent effect on 0.018 acre and temporary effect on 0.487 acre of non-wetland WoUS/WoS. No federally jurisdictional wetlands are present. Because the loss of federal WoUS/WoS would be less than 0.10 acre, the replacement of Sutro Ditch Bridge (#56C0104) would not require pre-construction notification under NWP 14. Impacts on WoUS/WoS would trigger the need for Section 401 Water Quality

Certification, which would be issued by RWQCB. A Streambed Alteration Agreement, as regulated by Section 1600 et seq. of the CFGC, would be required for permanent impacts on 0.031 acre of CDFW unvegetated streambed and 0.067 acre of CDFW riparian, and temporary impacts on 0.640 acre of CDFW unvegetated streambed and 0.141 acre of CDFW riparian.

5.3.4 Acari Ditch Bridge (#56C0108)

Construction of Acari Ditch Bridge (#56C0108) would have a permanent effect on 0.007 acre and temporary effect on 0.188 acre of non-wetland WoUS/WoS. No federally jurisdictional wetlands are present. Because the loss of federal WoUS/WoS would be less than 0.10 acre, the replacement of Acari Ditch Bridge (#56C0108) would not require pre-construction notification under NWP 14. Impacts on WoUS/WoS would trigger the need for Section 401 Water Quality Certification, which would be issued by RWQCB. A Streambed Alteration Agreement, as regulated by Section 1600 et seq. of the CFGC, would be required for permanent impacts on 0.020 acre of CDFW unvegetated streambed and 0.017 acre of CDFW riparian, and temporary impacts on 0.205 acre of CDFW unvegetated streambed and 0.024 acre of CDFW riparian.

5.4 Invasive Species (Executive Order 13112)

Invasive plants are currently present within the project BSAs. Construction of the projects will occur within the existing right of way easements for the roadway. There is a potential for invasive plants to be transported to and from the project sites. Because the project LODs occur along an existing traveled roadway, the operation of the projects is not expected to increase the transport of invasive species beyond levels currently present. Implementation of project BMPs (measure **BIO-2**) will reduce the potential spread of invasive species during project construction.

5.5 Other

5.5.1 California Endangered Species Act Consultation Summary

No formal consultation under CESA for the proposed projects has occurred to date. There were two state-listed species evaluated for the proposed projects based on the database and literature searches completed for the proposed projects (refer to Appendix C): elf owl (*Micrathene whitneyi*) and desert tortoise. There is no suitable habitat for elf owl.

As previously discussed, suitable habitat for desert tortoise occurs throughout the Chuckwalla Valley and within the project site areas. However, based on the results of the 2017 and 2019 focused surveys, desert tortoise is absent from the Action Area. Although no desert tortoise were found during focused studies, there is a potential for desert tortoise to move through the project areas. To ensure there are no direct effects on desert tortoise, measures **BIO-4** through **BIO-8** would be implemented. Measure BIO-2 would address potential indirect effects on desert tortoise within the project areas. Measure BIO-1 would ensure potential movement through the bridge undercrossings would be uninhibited in the future. Due to the species' absence from the project areas and with the implementation of avoidance and minimization measures, no take of desert tortoise would occur.

5.5.2 Migratory Bird Treaty Act

Native bird species and their nests are protected under the MBTA. The MBTA states that all migratory birds and their parts (including eggs, nests, and feathers) are fully protected. The

MBTA prohibits the take, possession, import, export, transport, selling, purchase, barter, or offering for sale, purchase, or barter, any migratory bird, its eggs, parts, and nests, except as authorized under a valid permit. Implementation of measure **BIO-10** will ensure there are no impacts on nesting birds that would conflict with the federal MBTA.

5.5.3 California Fish and Game Code (3503, 3503.5, and 3800)

The CFGC protects nesting birds and non-game birds from take or nest destruction. Implementation of measure **BIO-10** will help to avoid any impacts on nesting birds.

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Chapter 6 References

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Appendices

- A Figures
- B USFWS Species List
- C Special Status Species Likelihood of Occurrence
- D Plant and Animal Species Observed/Detected
- E Desert Tortoise Pre-Project Survey Data Sheets
- F Jurisdictional Delineation Report
- G Survey Dates and Personnel
- H Site Photos for the Chuckwalla Valley Road Bridges (#56C0102, #56C0103, #56C0104, and #56C0108)

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APPENDIX A: FIGURES

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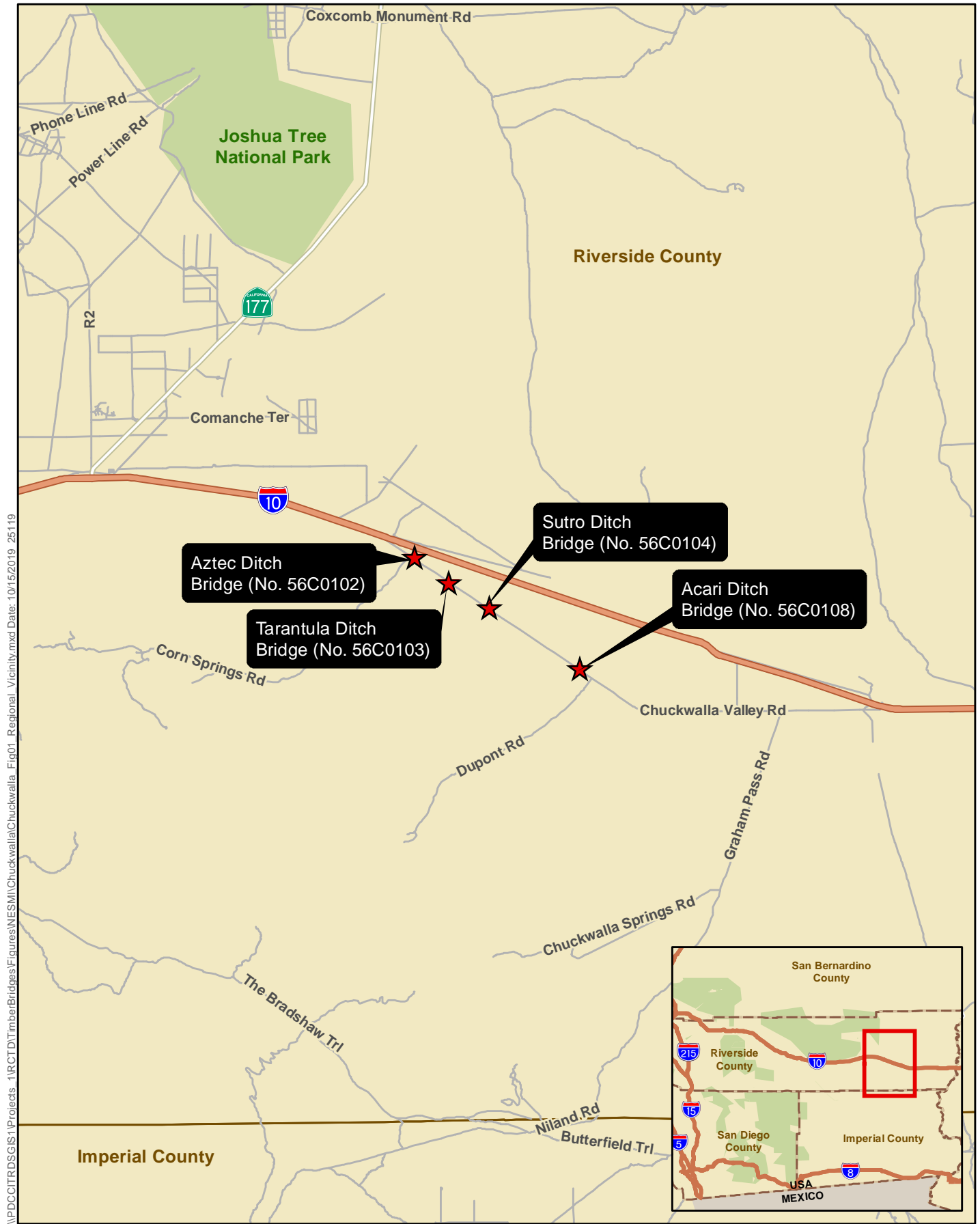


Figure 1
Regional Vicinity Map
Chuckwalla Valley Road Bridge Replacement

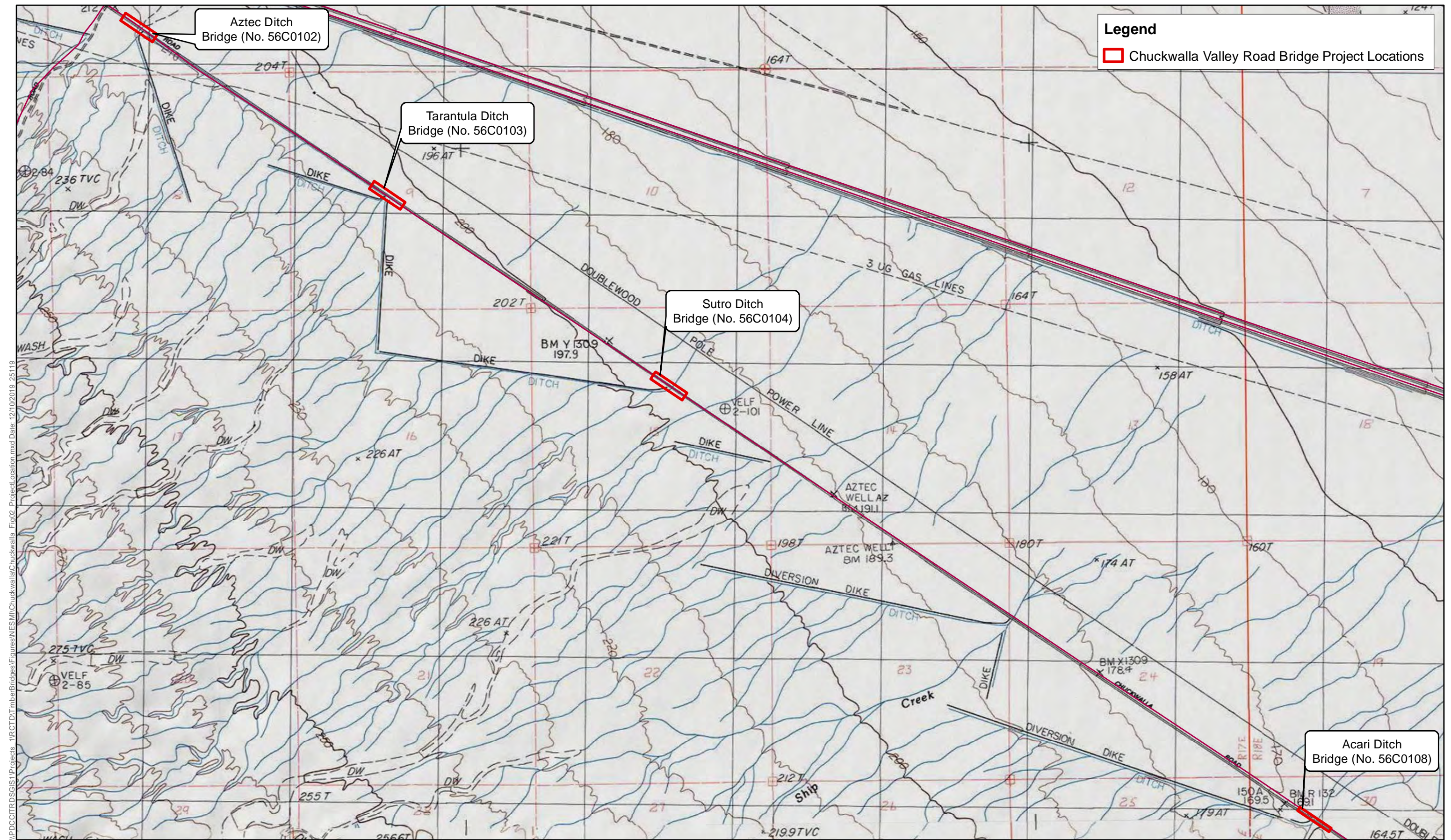
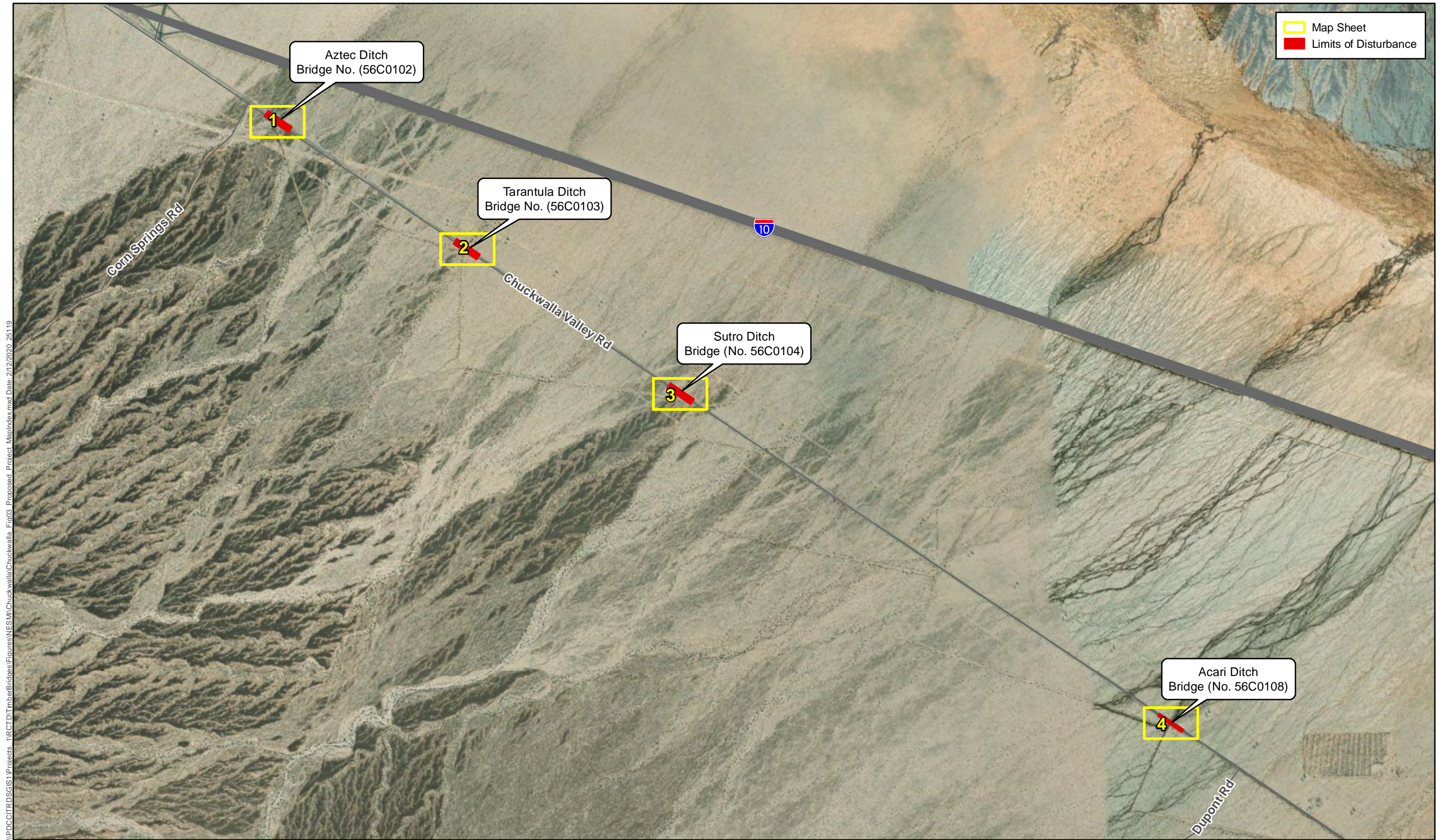
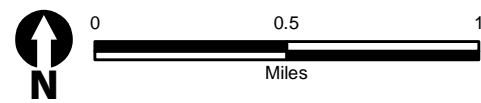


Figure 2
Project Location/USGS Topographic Map
Chuckwalla Valley Road Bridge Replacement



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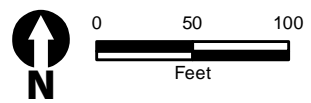


Source: ESRI (2016, 2018)

Figure 3 - Map Index
Proposed Project Design
Chuckwalla Valley Road Bridge Replacement



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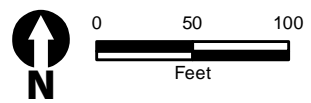


Source: ESRI (2016, 2018)

Figure 3 - Sheet 1
Proposed Project Design - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement

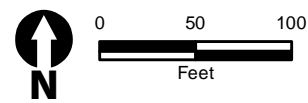


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Source: ESRI (2016, 2018)

Figure 3 - Sheet 2
Proposed Project Design - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement

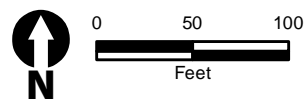


Source: ESRI (2016, 2018)

Figure 3 - Sheet 3
Proposed Project Design - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement



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Source: ESRI (2016, 2018)

Figure 3 - Sheet 4
Proposed Project Design - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

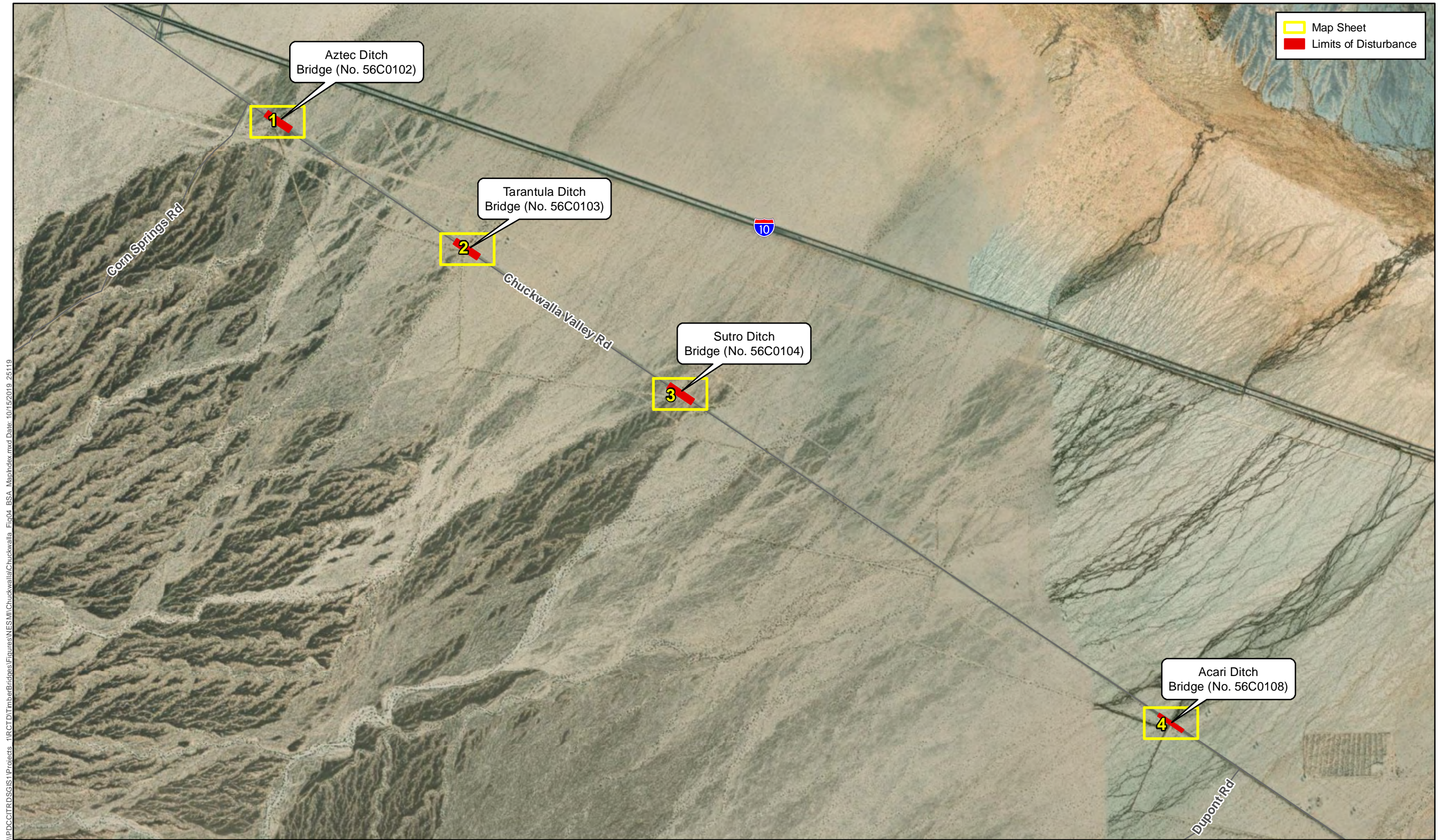
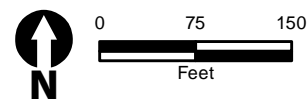


Figure 4 - Map Index
Biological Study Area
Chuckwalla Valley Road Bridge Replacement



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Source: ESRI (2016, 2018)

Figure 4 - Sheet 1
Biological Study Area - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement



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Feet

Source: ESRI (2016, 2018)

Figure 4 - Sheet 2
Biological Study Area - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement

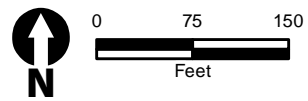


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Figure 4 - Sheet 3
Biological Study Area - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement

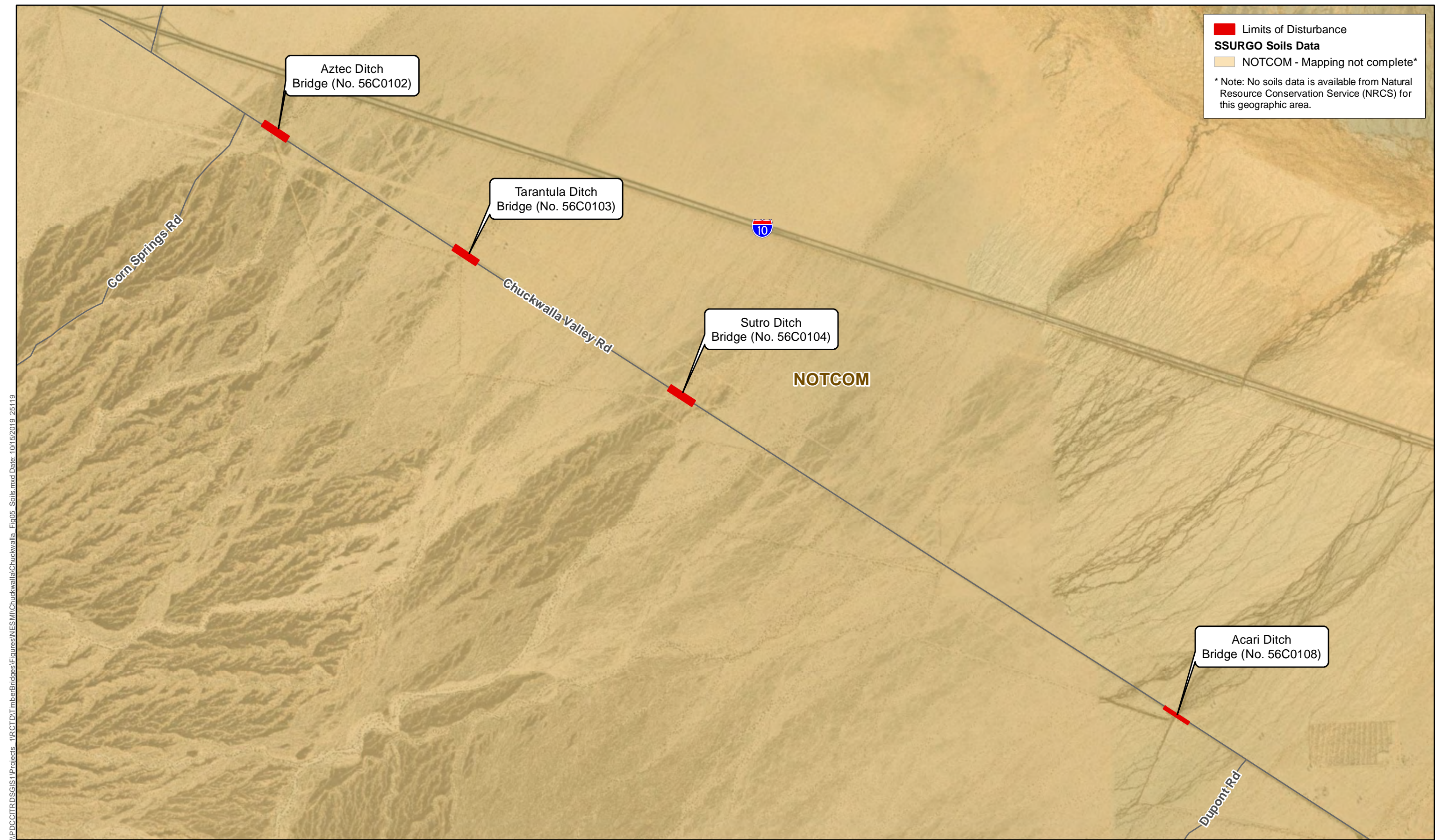


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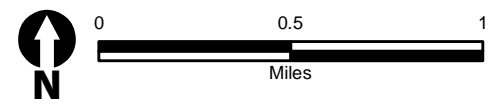


Source: ESRI (2016, 2018)

Figure 4 - Sheet 4
Biological Study Area - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

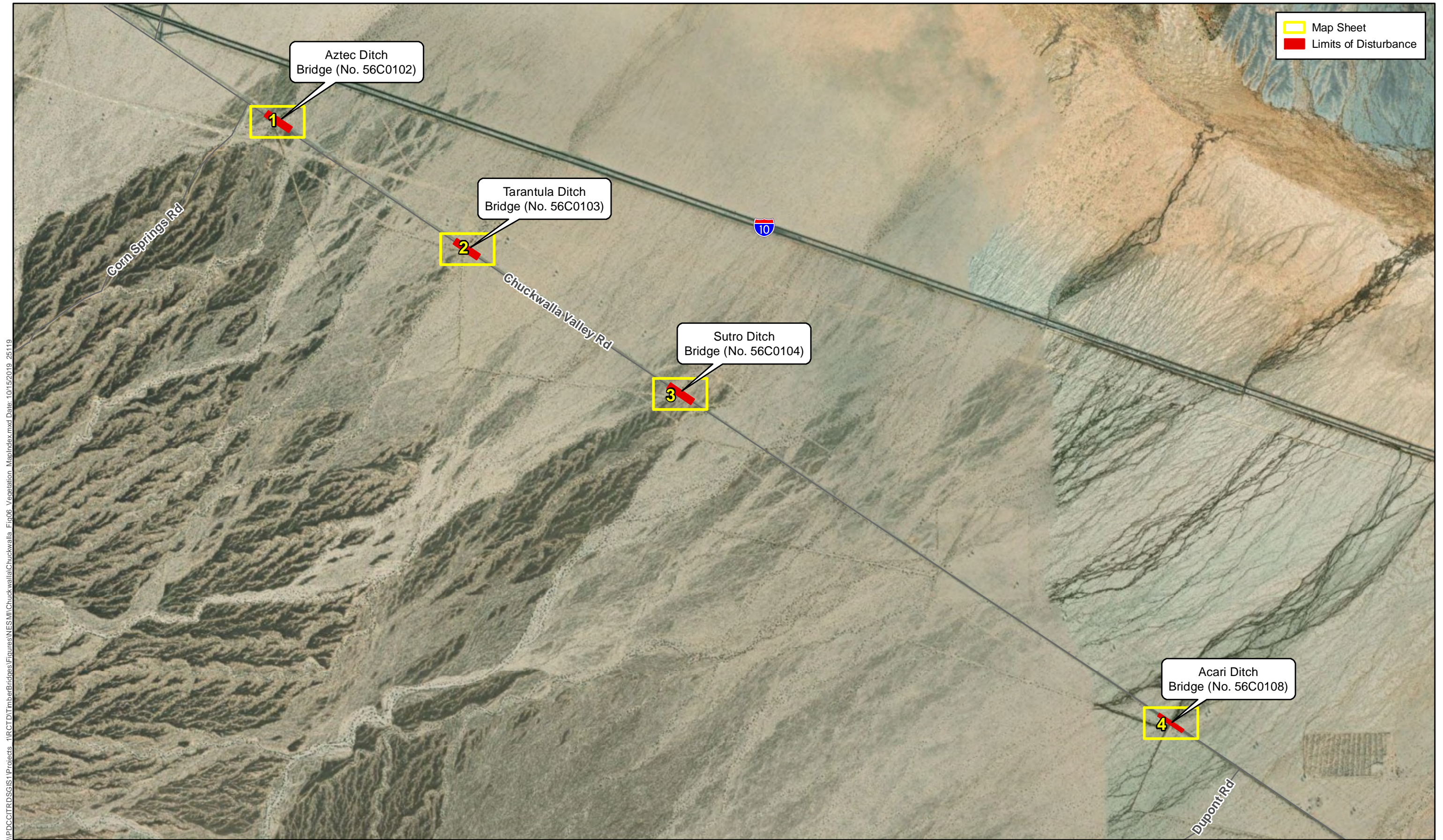


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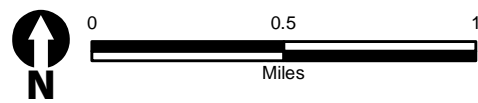


Source: ESRI (2016, 2018); SSURGO Soils

Figure 5
Soils Map
Chuckwalla Valley Road Bridge Replacement

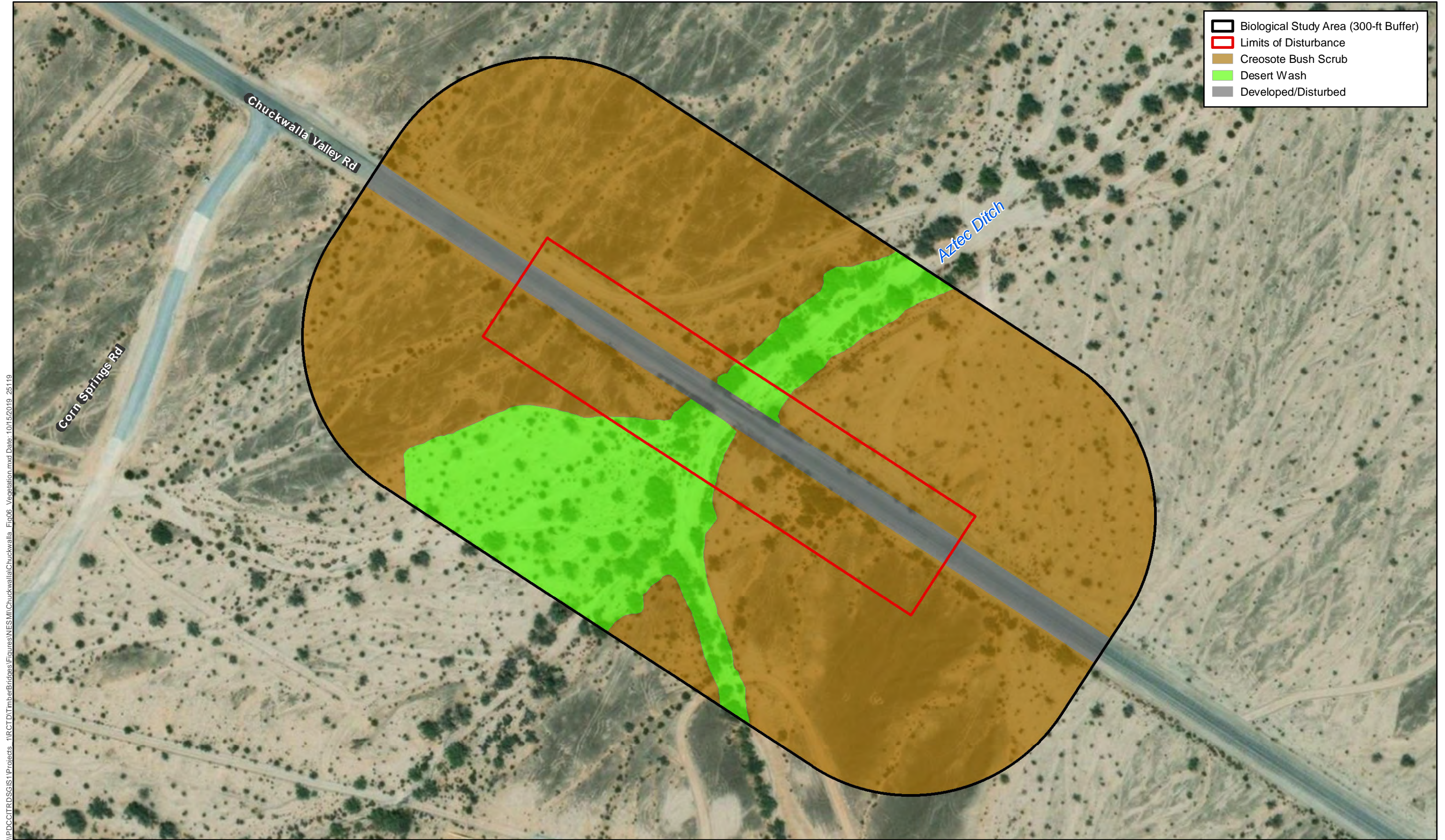


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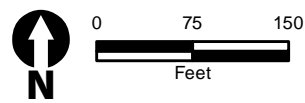


Source: ESRI (2016, 2018)

Figure 6 - Map Index
Vegetation Communities/Land Use Types
Chuckwalla Valley Road Bridge Replacement

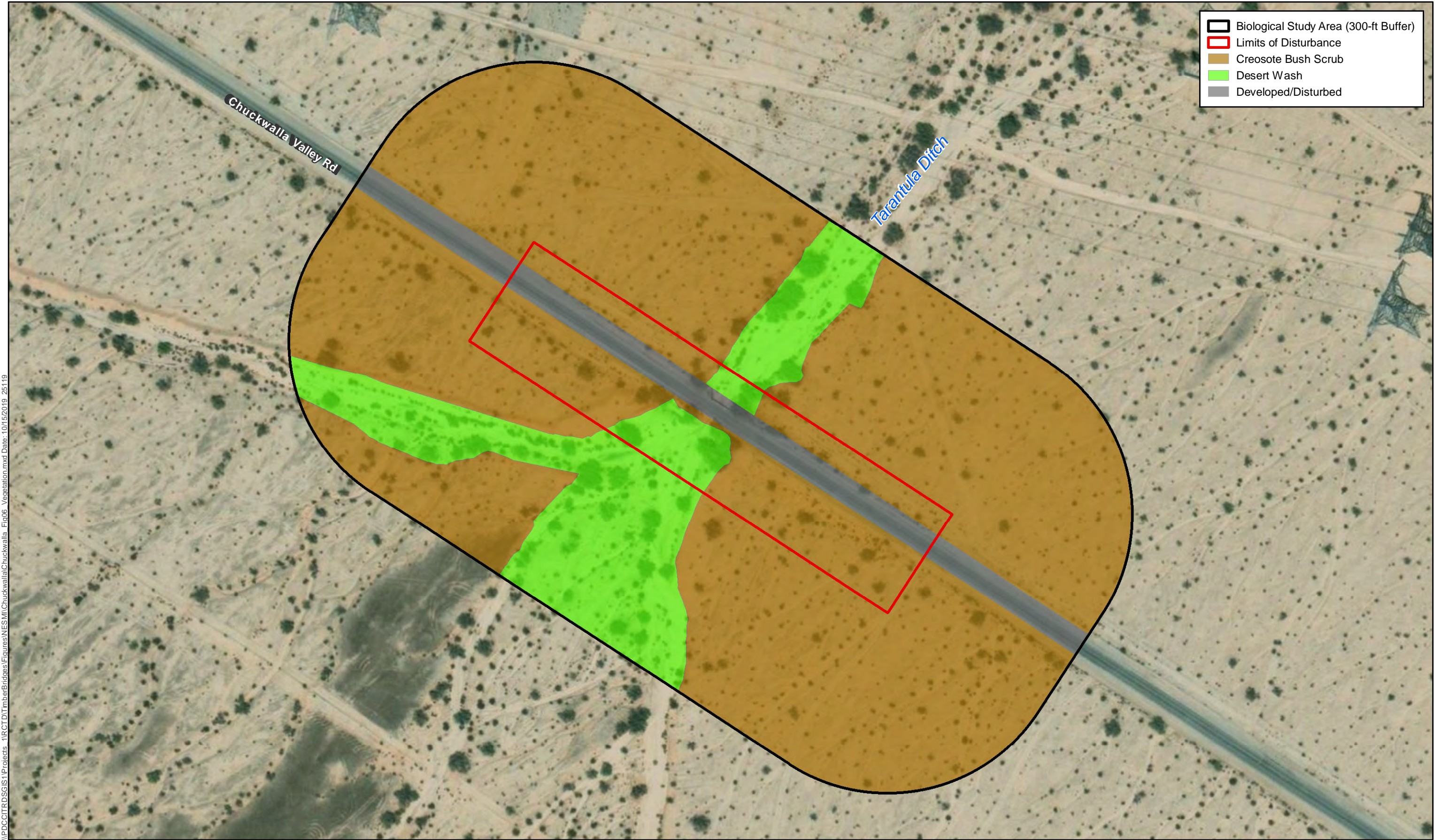


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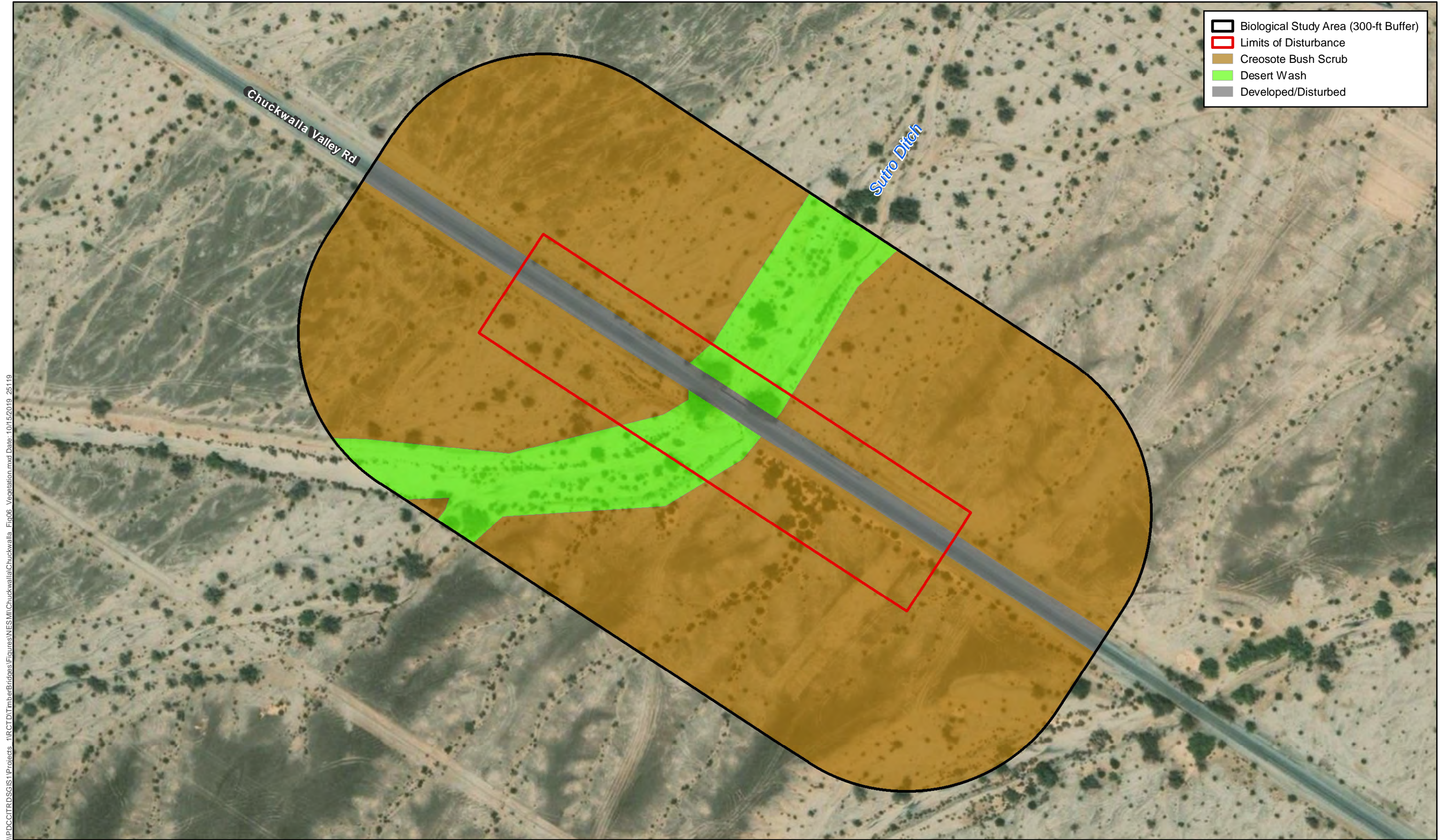


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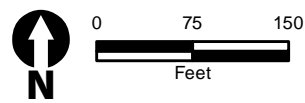
Figure 6 - Sheet 1
Vegetation Communities/Land Use Types - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement



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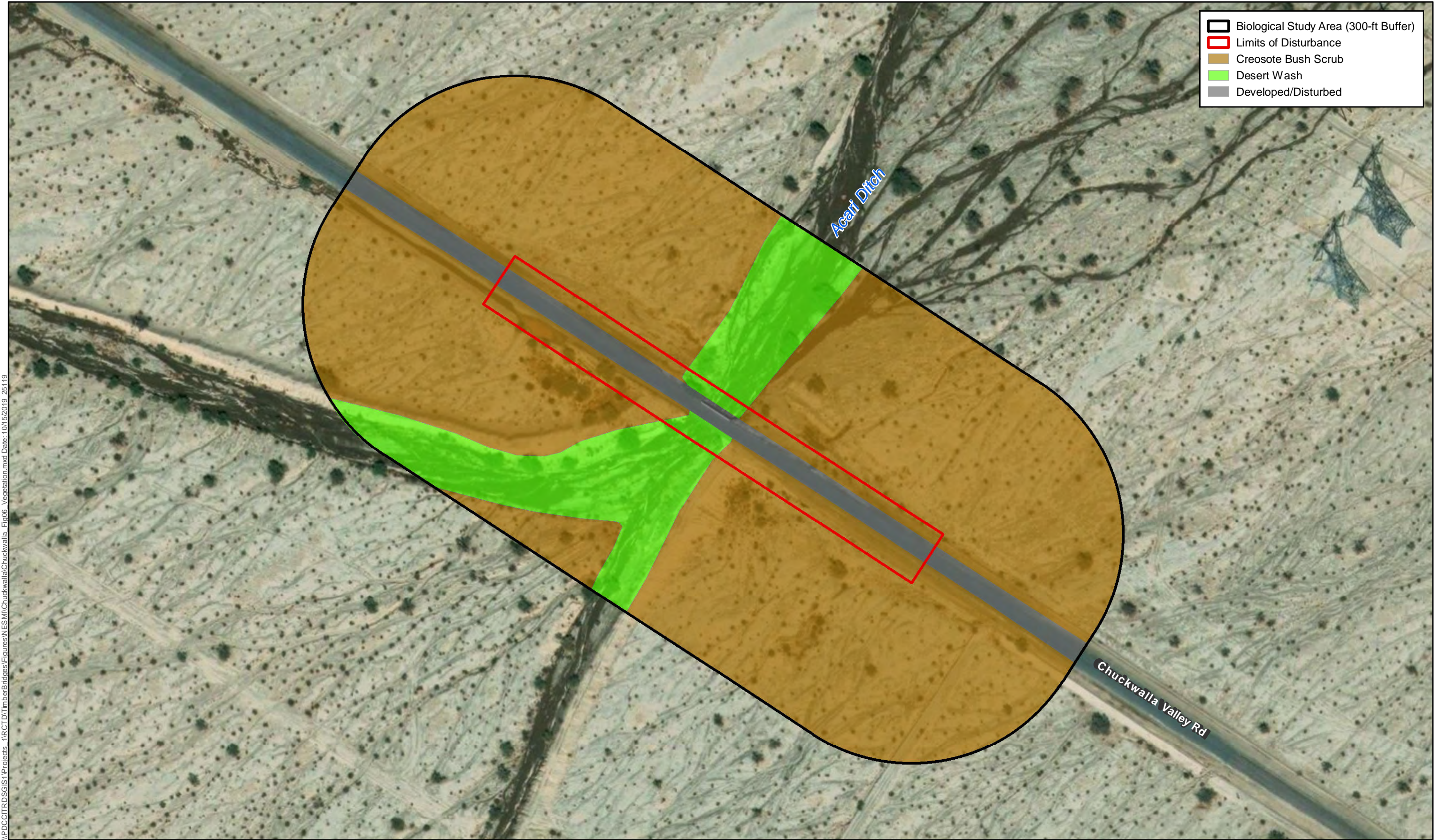


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Source: ESRI (2016, 2018)

Figure 6 - Sheet 3
Vegetation Communities/Land Use Types - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement



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Figure 6 - Sheet 4
Vegetation Communities/Land Use Types - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

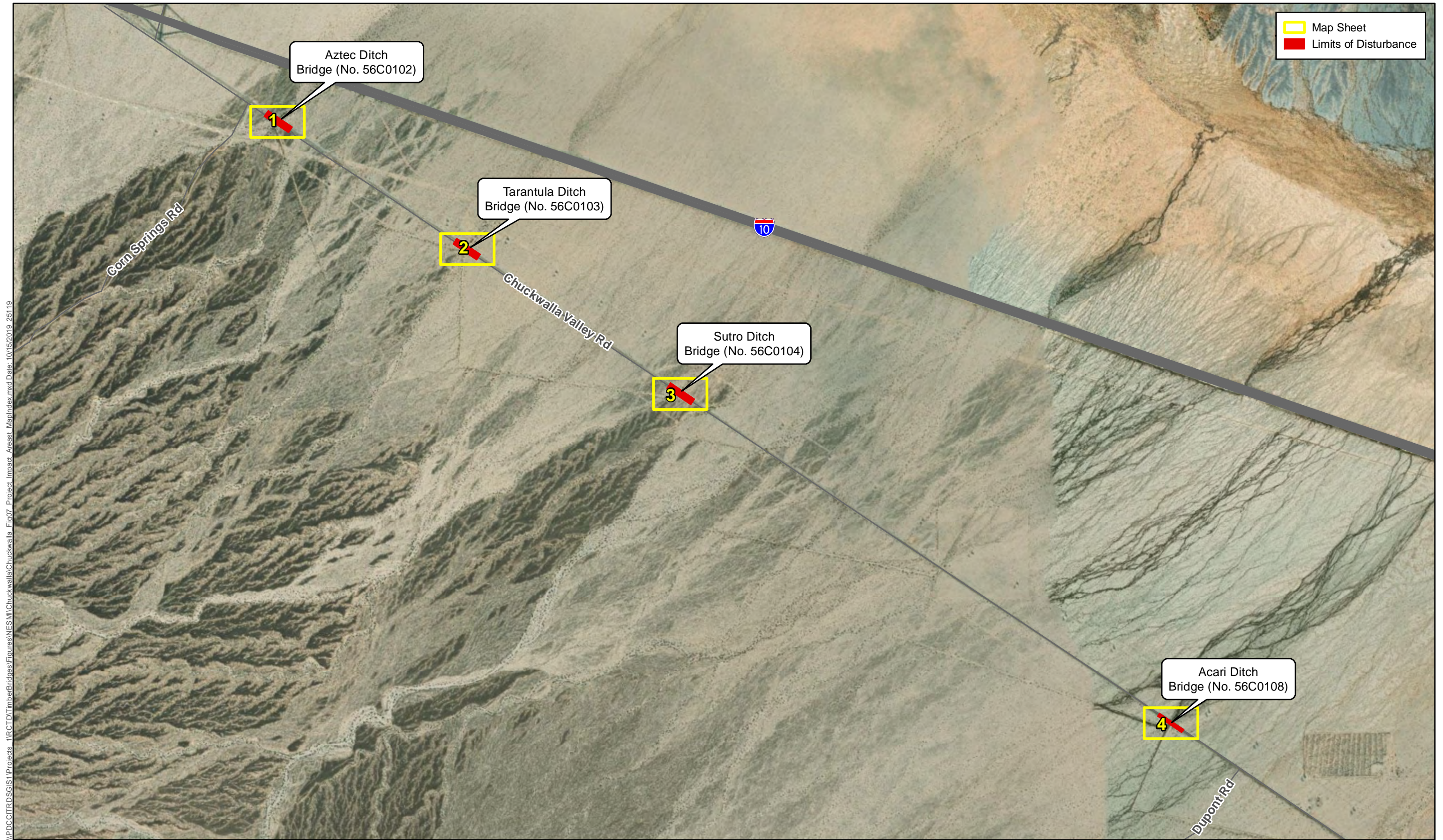
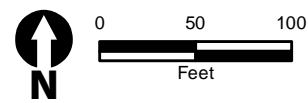


Figure 7 - Map Index
Project Impact Areas
Chuckwalla Valley Road Bridge Replacement

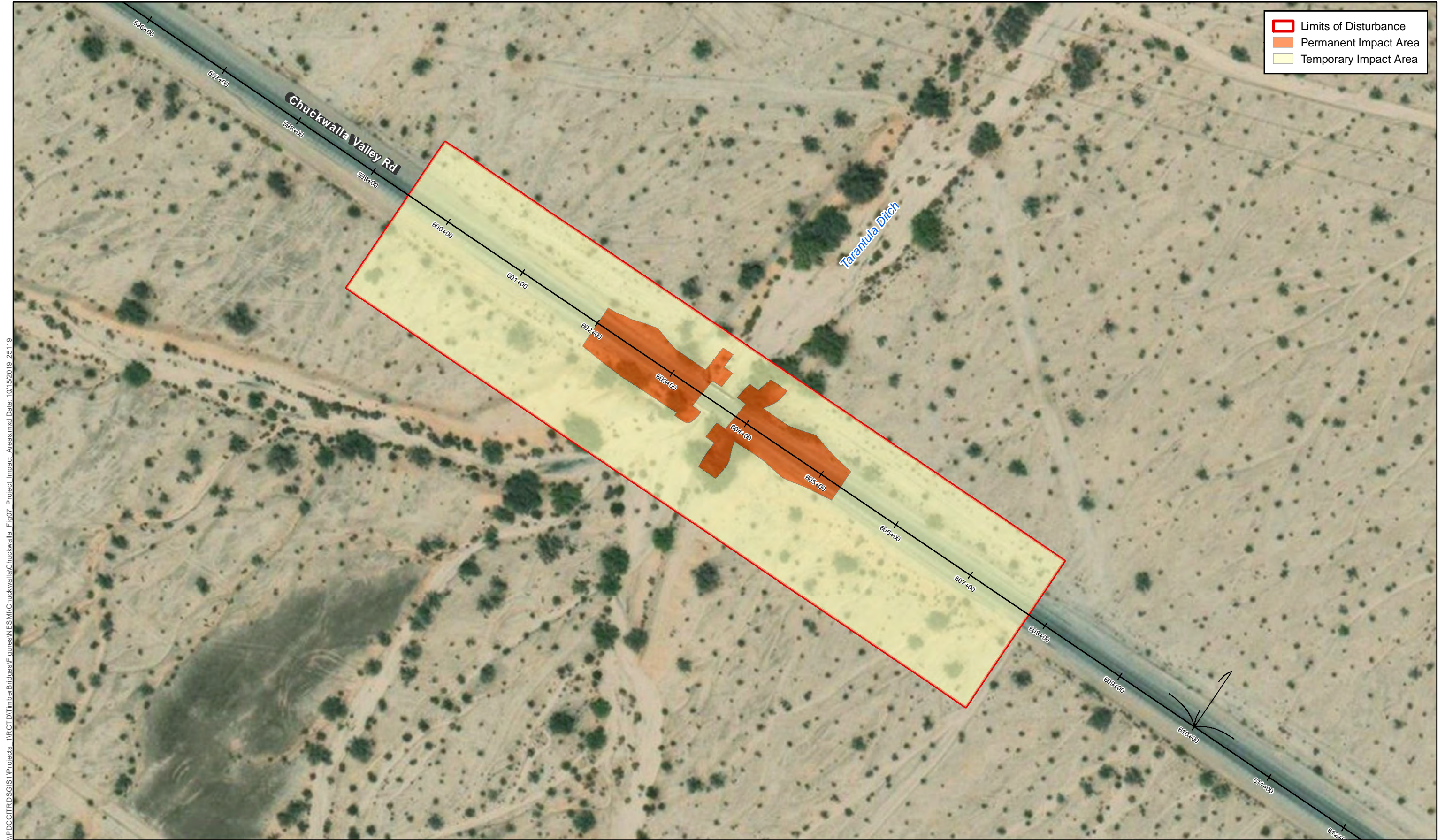


- Limits of Disturbance
- Permanent Impact Area
- Temporary Impact Area

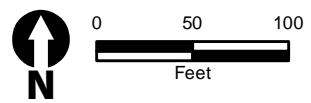


Source: ESRI (2016, 2018)

Figure 7 - Sheet 1
Project Impact Areas - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement



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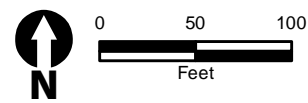


Source: ESRI (2016, 2018)

Figure 7 - Sheet 2
Project Impact Areas - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement



- Limits of Disturbance
- Permanent Impact Area
- Temporary Impact Area

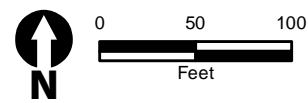


Source: ESRI (2016, 2018)

Figure 7 - Sheet 3
Project Impact Areas - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement



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Project Impact Areas - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

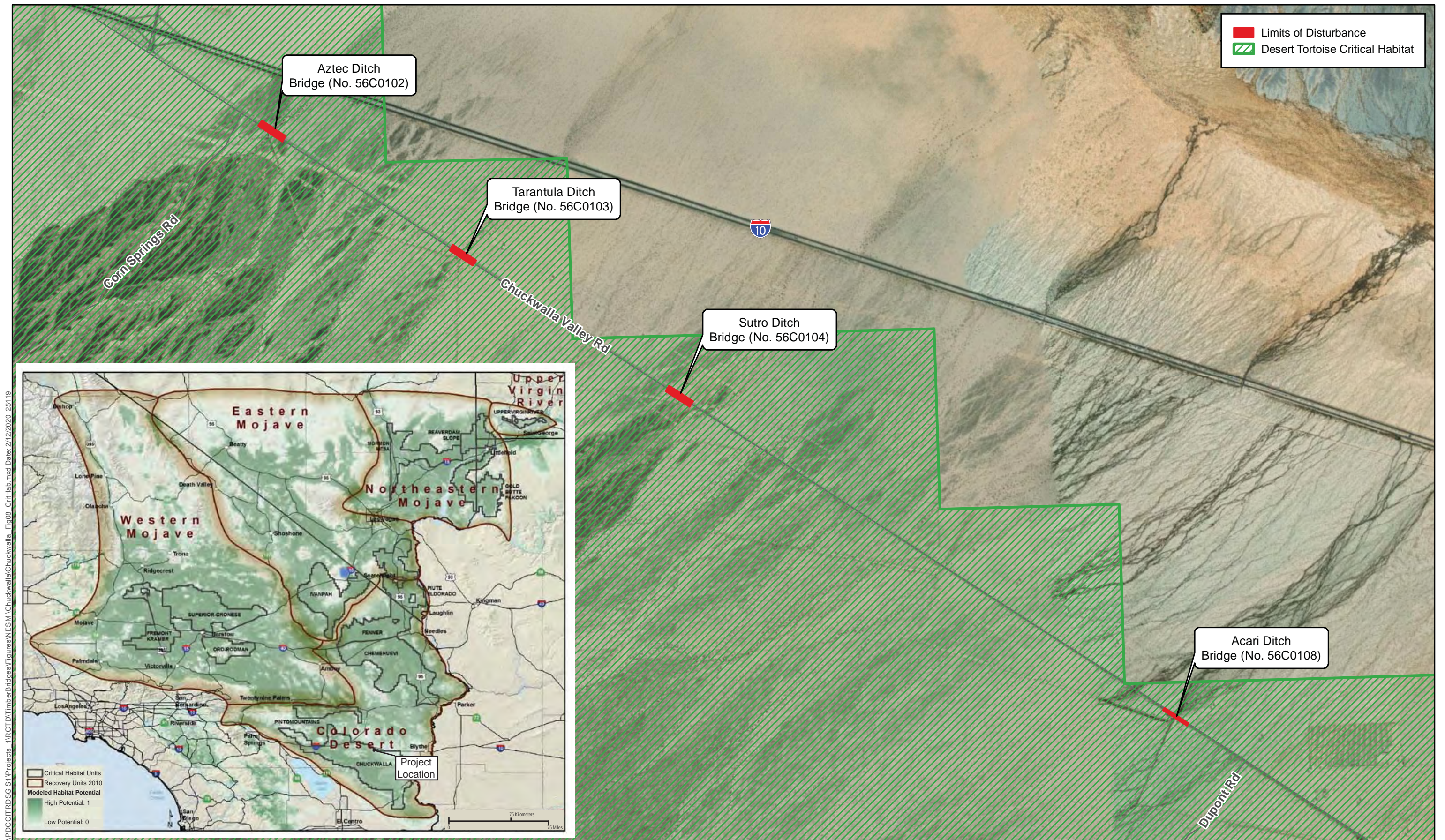
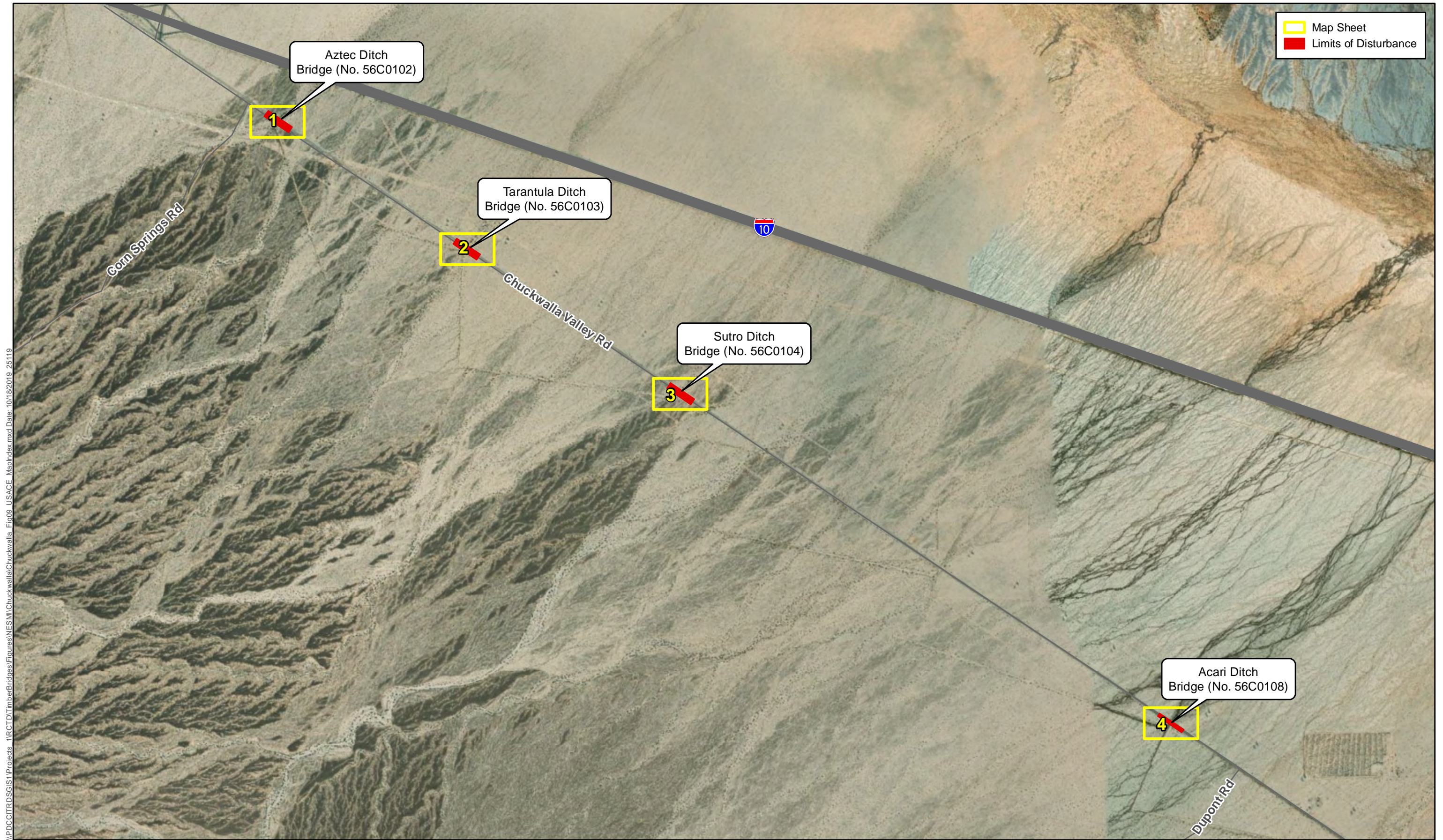
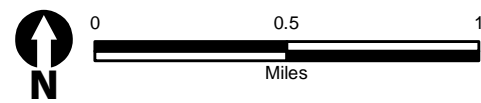


Figure 8
USFWS Critical Habitat
Chuckwalla Valley Road Bridge Replacement

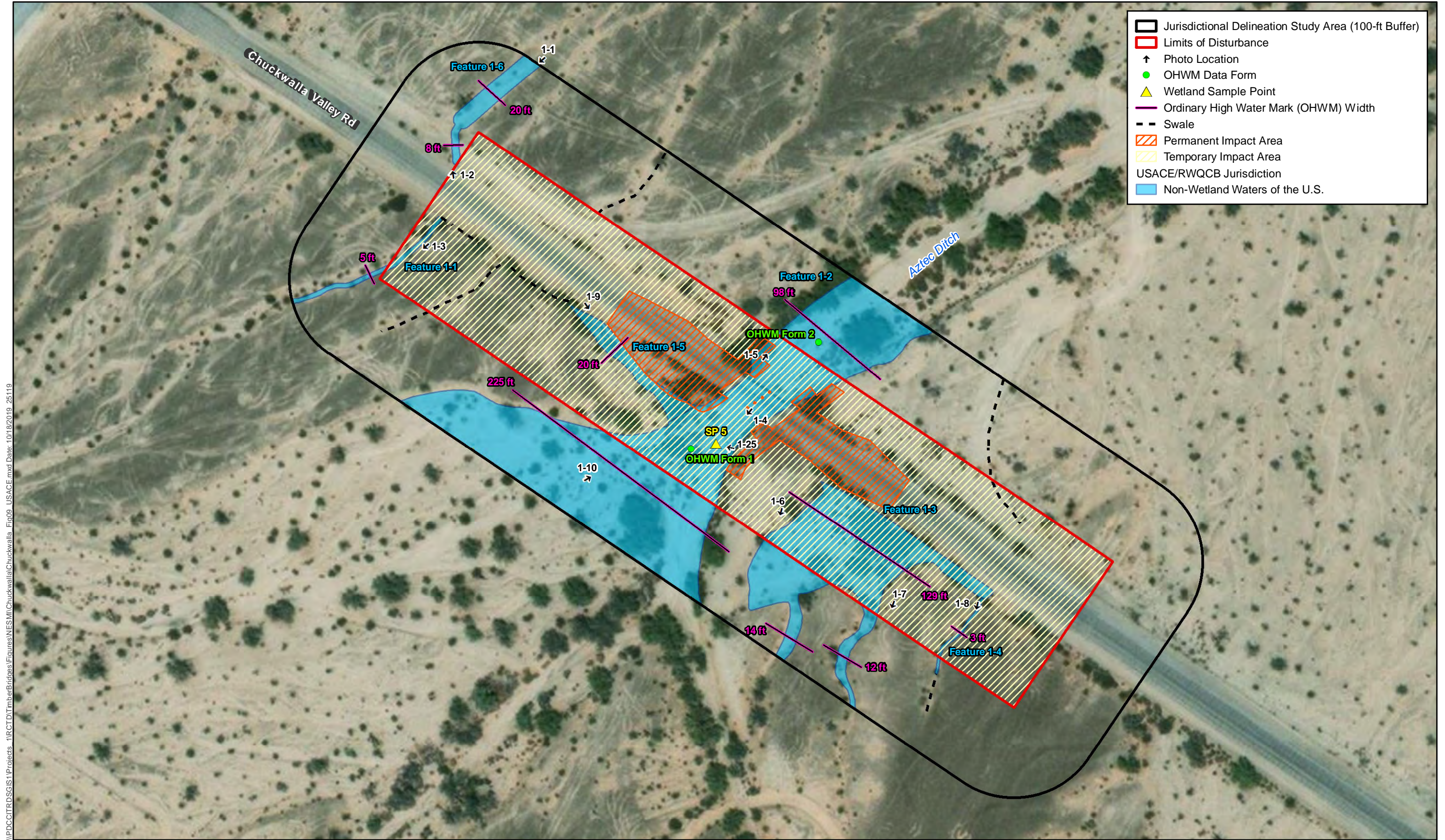


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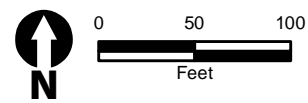


Source: ESRI (2016, 2018)

Figure 9 - Map Index
USACE/RWQCB Jurisdictional Results
Chuckwalla Valley Road Bridge Replacement

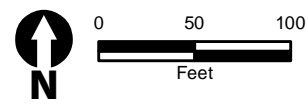
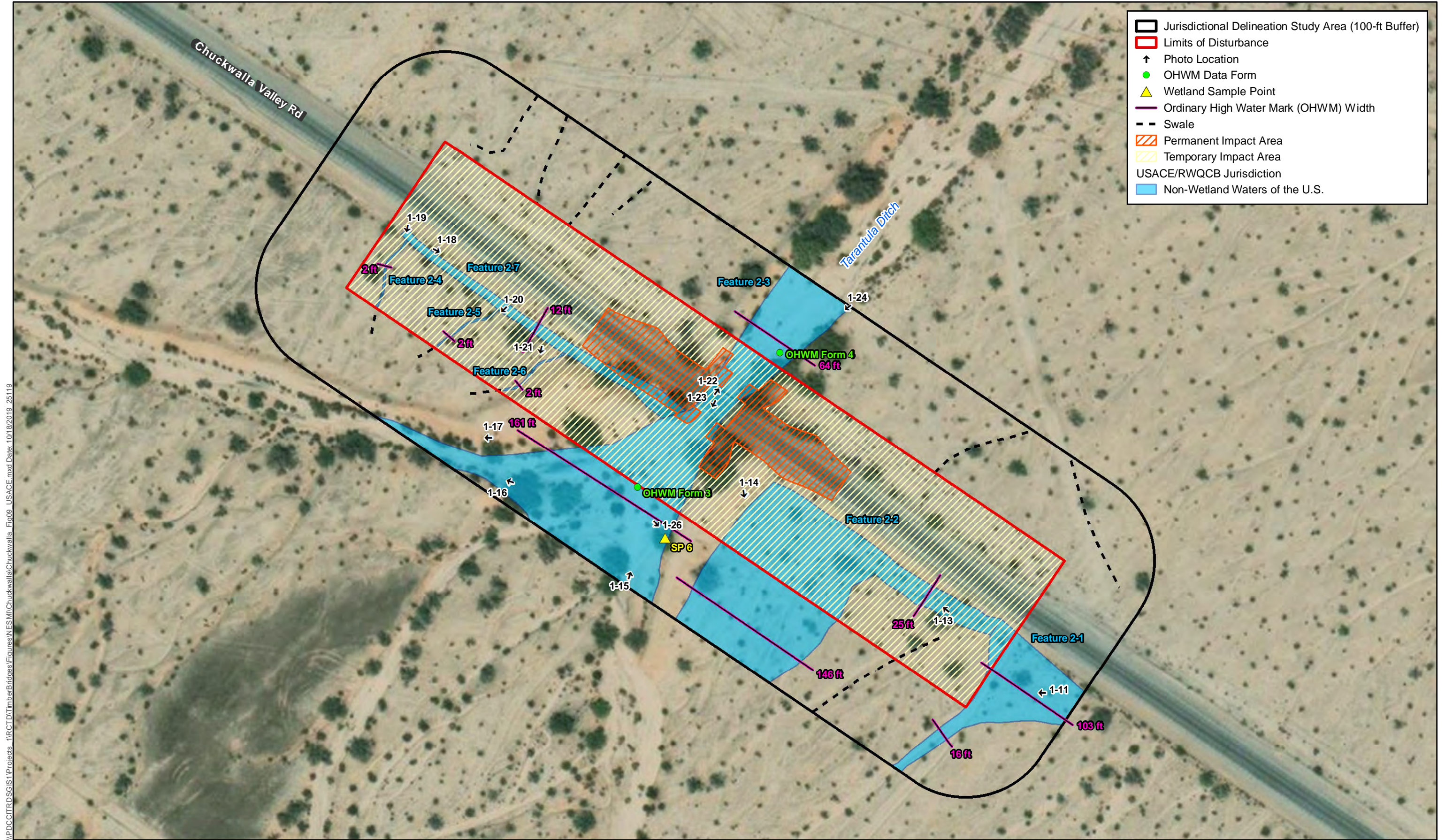


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Source: ESRI (2016, 2018)

Figure 9 - Sheet 1
USACE/RWQCB Jurisdictional Results - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement



Source: ESRI (2016, 2018)

Figure 9 - Sheet 2
USACE/RWQCB Jurisdictional Results - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement

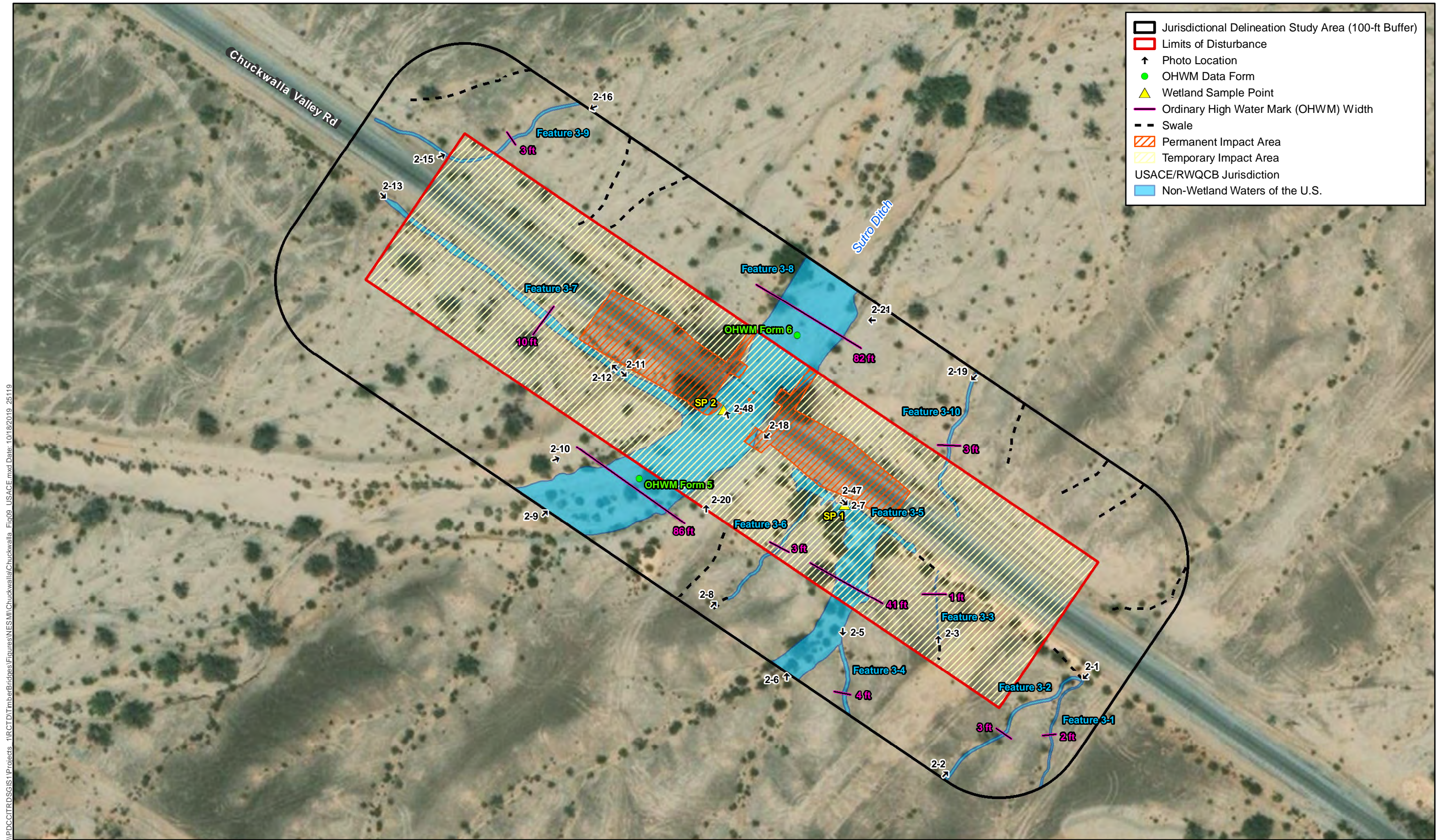
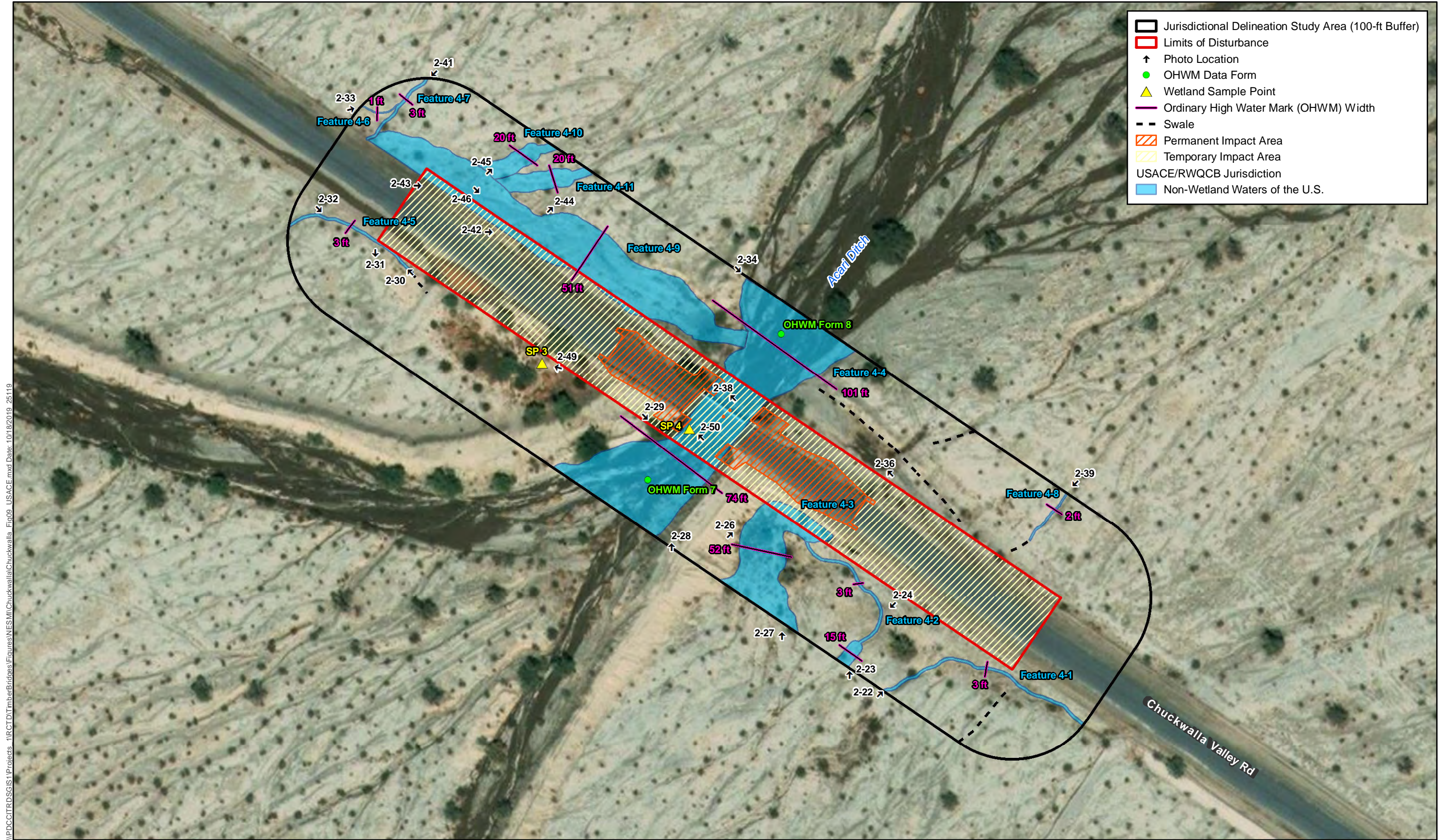
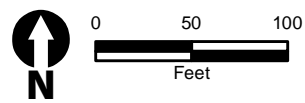


Figure 9 - Sheet 3
USACE/RWQCB Jurisdictional Results - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement



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Source: ESRI (2016, 2018)

Figure 9 - Sheet 4
USACE/RWQCB Jurisdictional Results - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

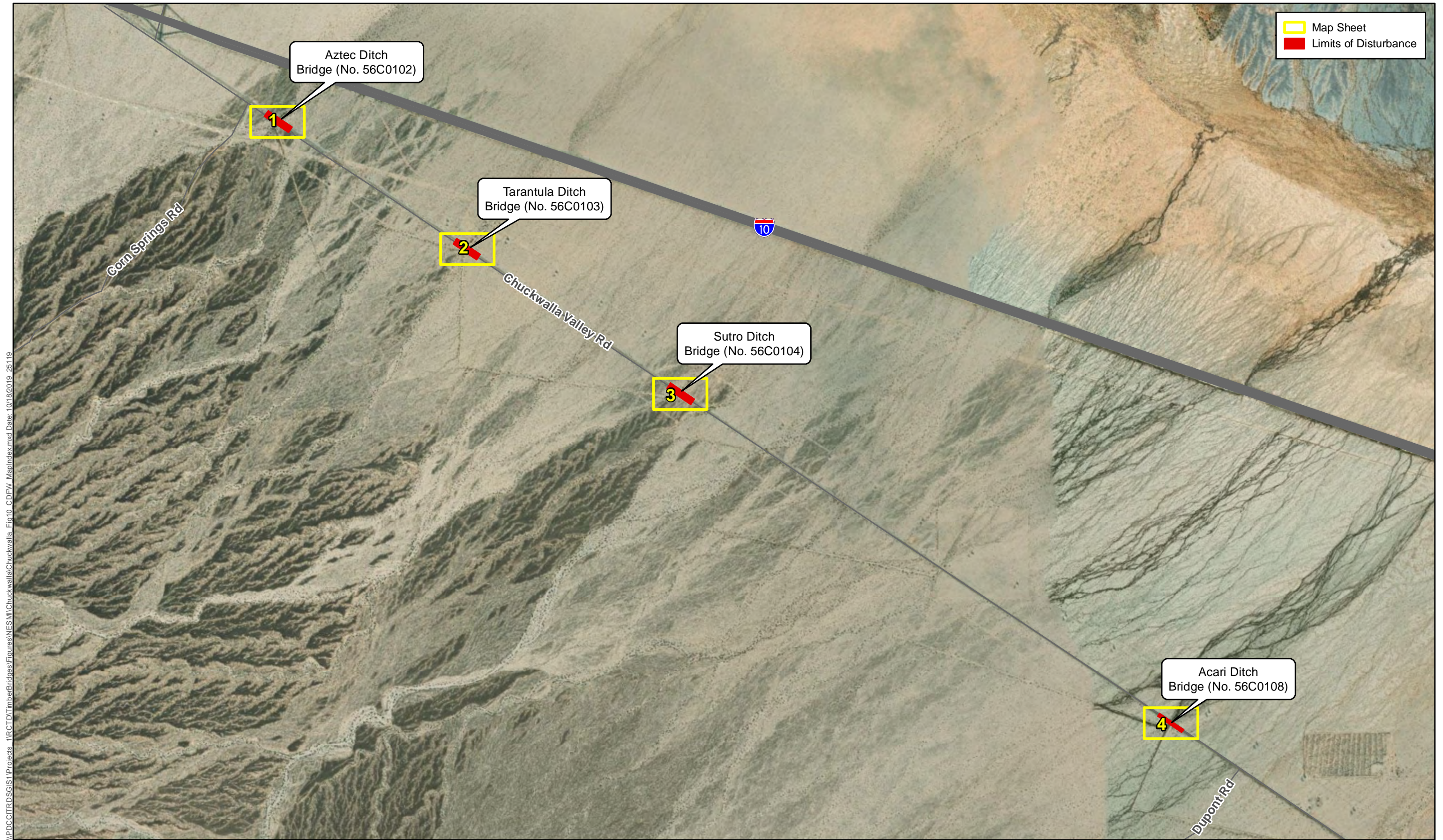
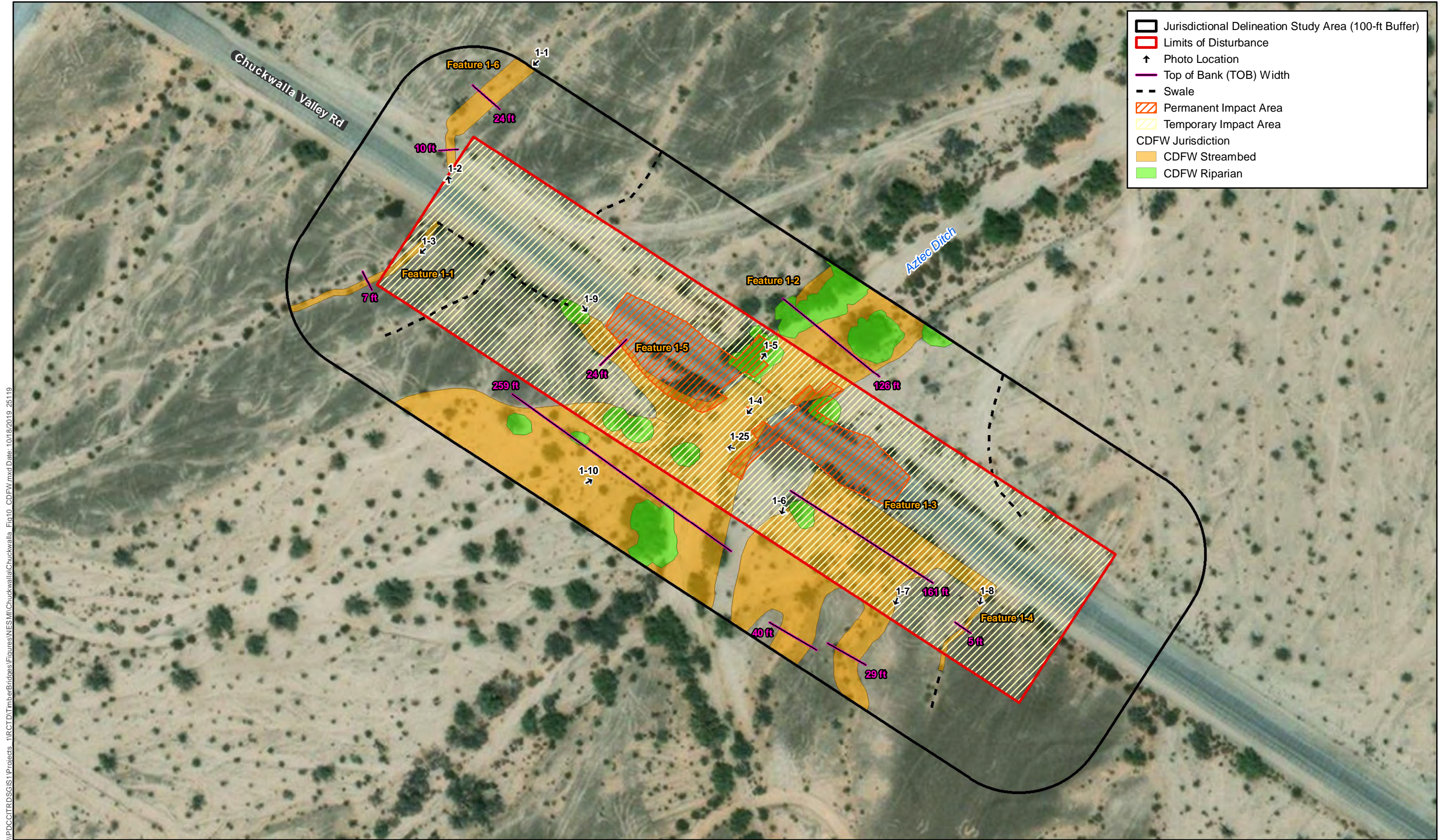
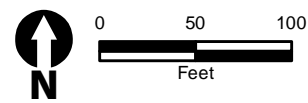


Figure 10 - Map Index
CDFW Jurisdictional Results
Chuckwalla Valley Road Bridge Replacement

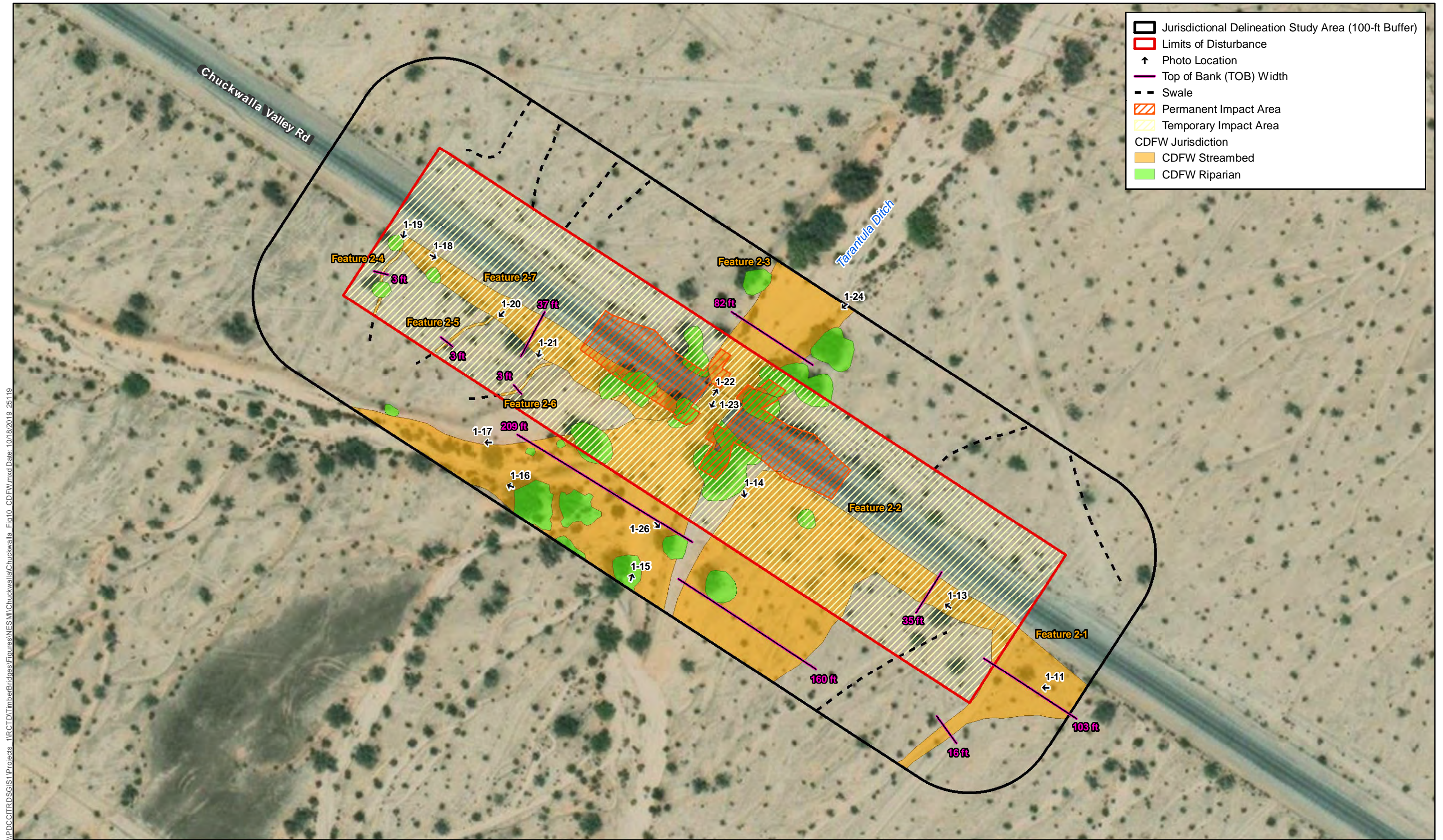


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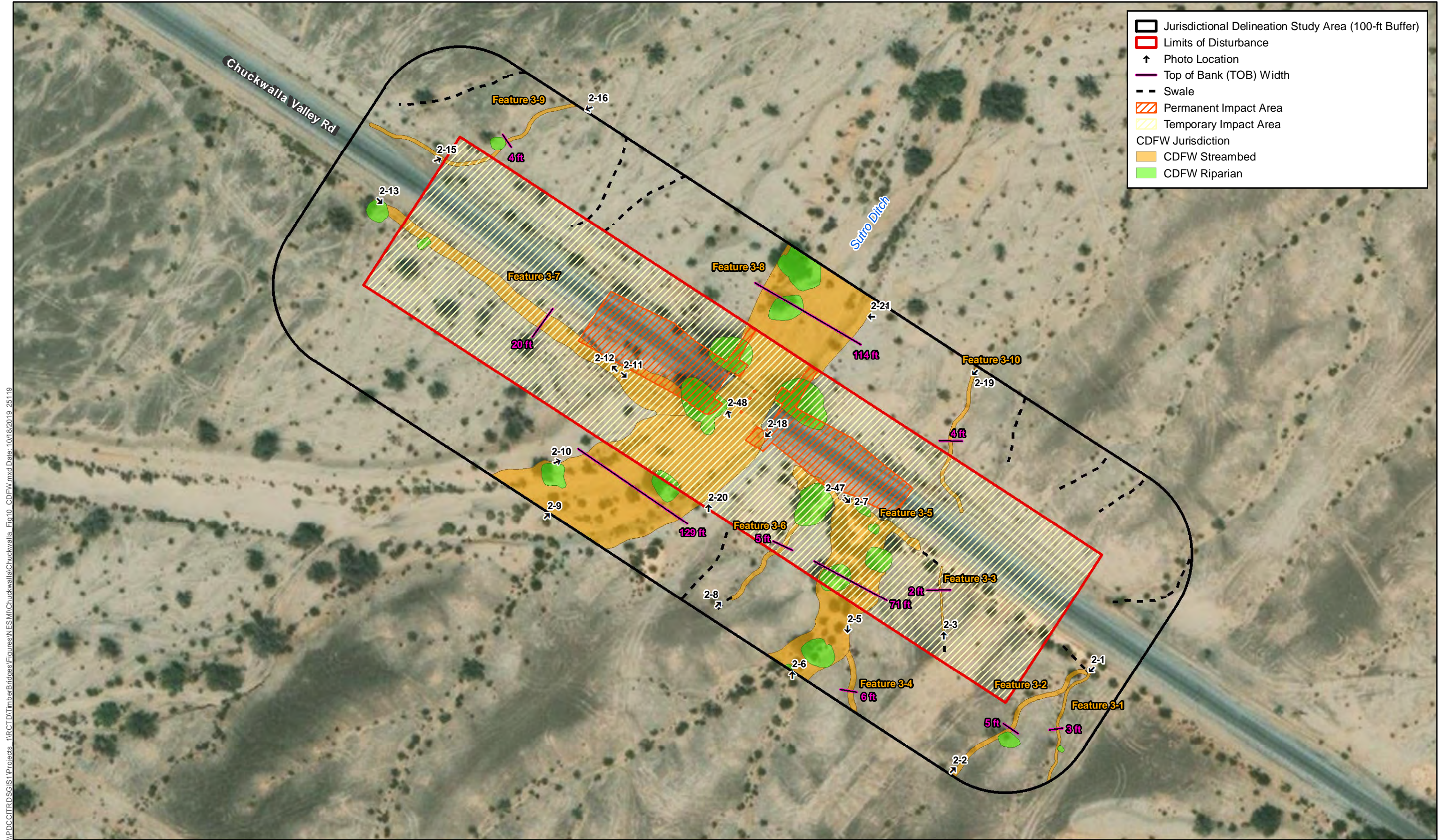
Source: ESRI (2016, 2018)

Figure 10 - Sheet 1
CDFW Jurisdictional Results - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement

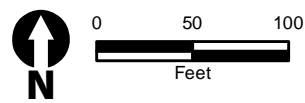


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Figure 10 - Sheet 2
CDFW Jurisdictional Results - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement

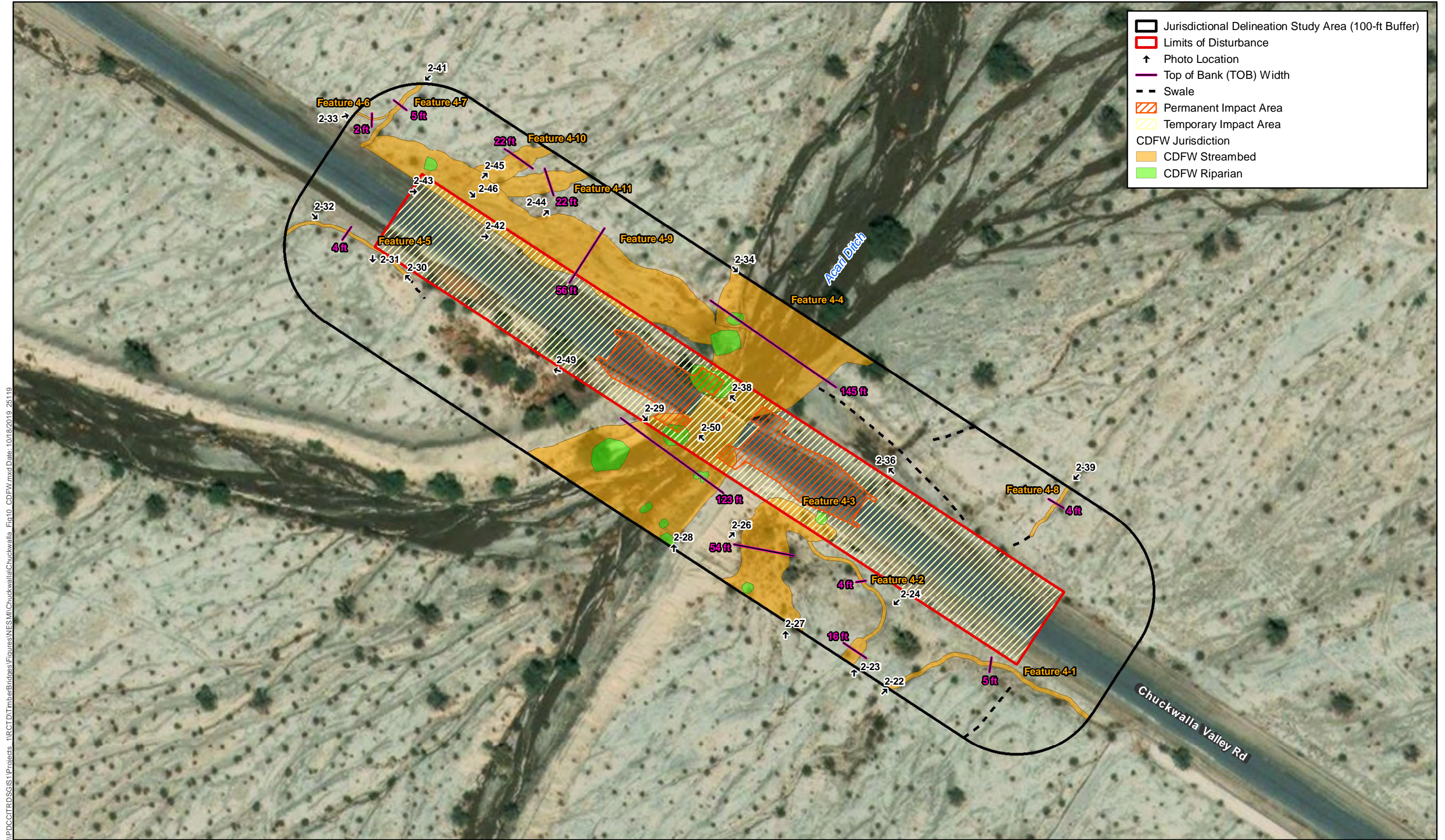


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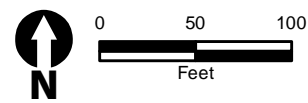


Source: ESRI (2016, 2018)

Figure 10 - Sheet 3
CDFW Jurisdictional Results - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement

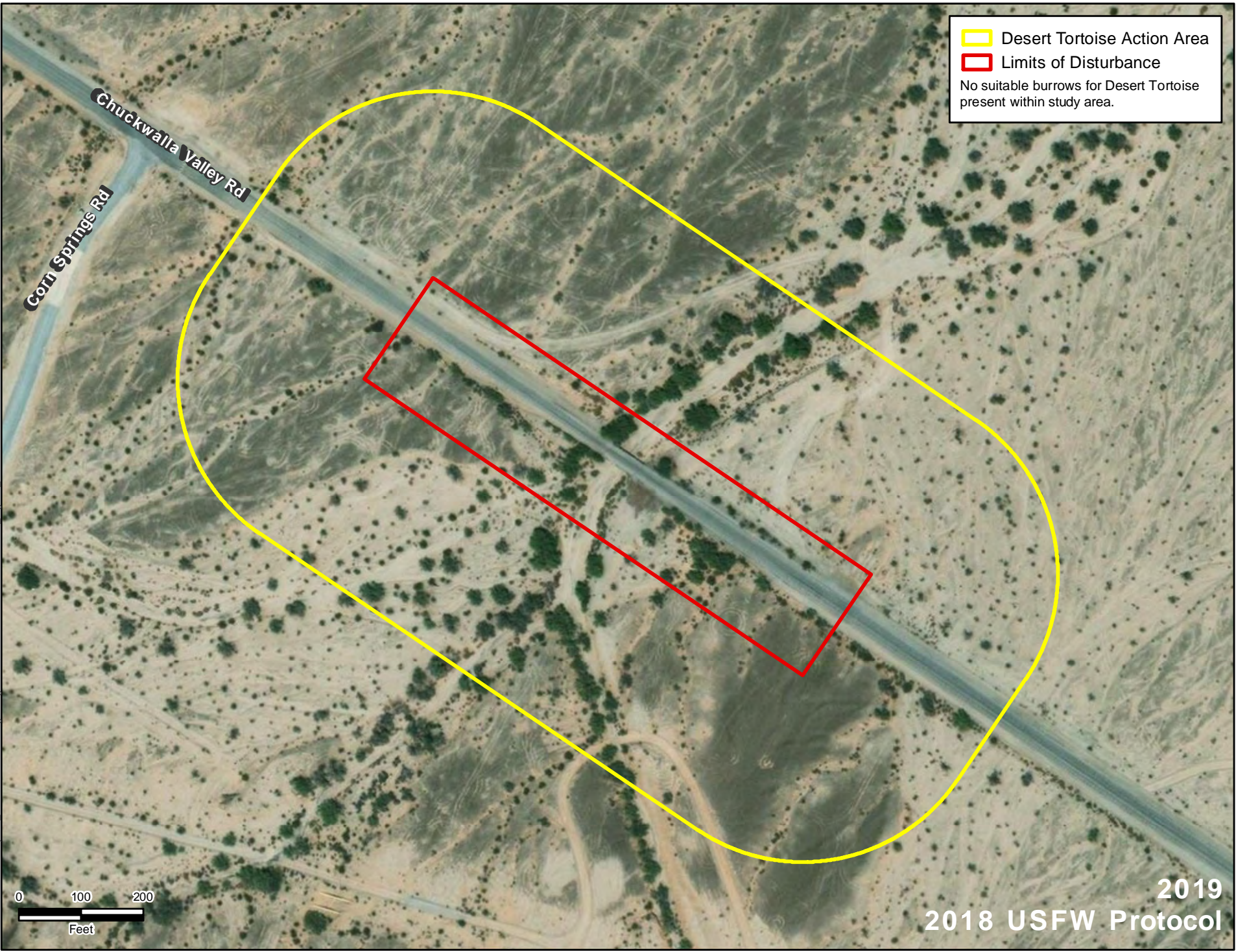
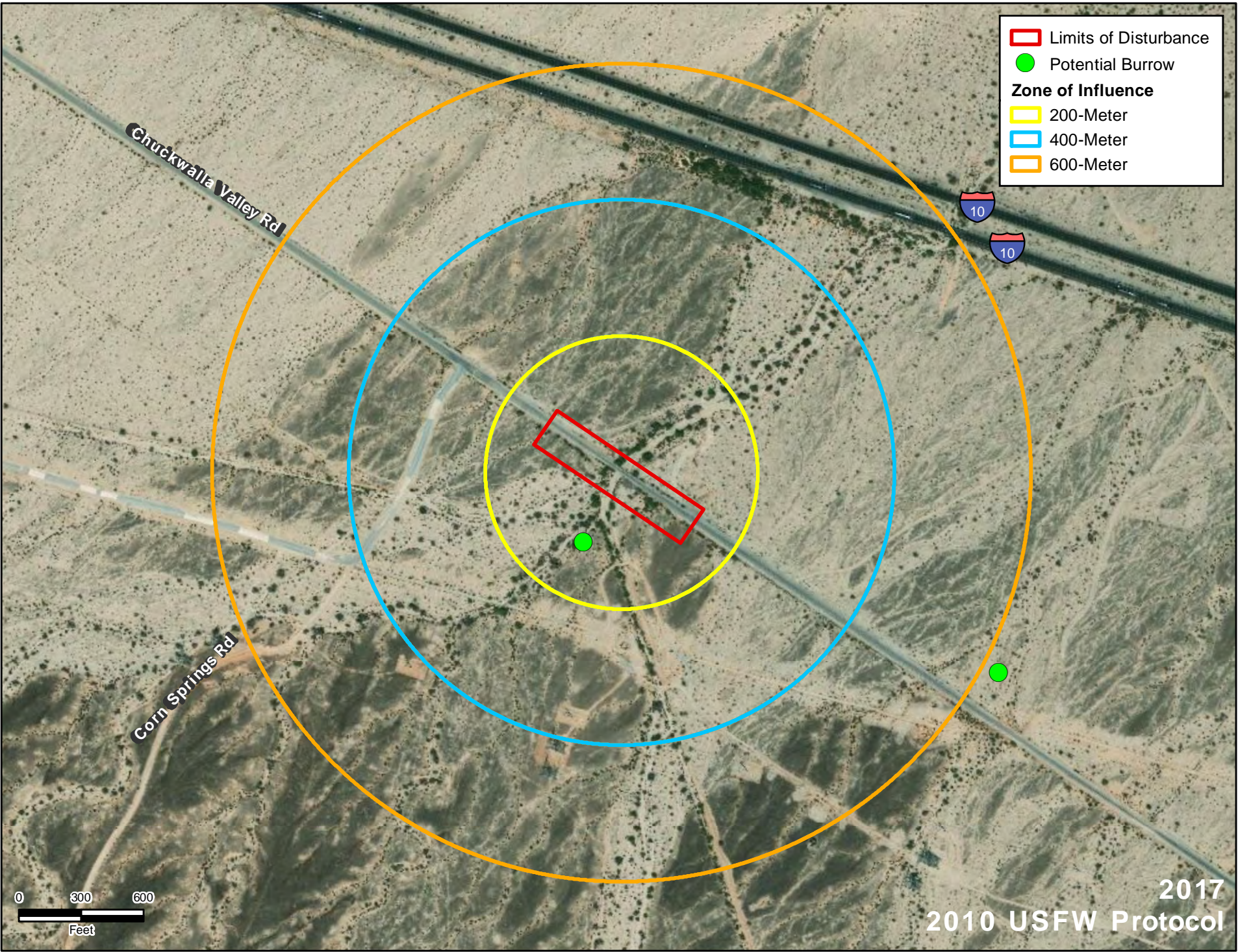


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Source: ESRI (2016, 2018)

Figure 10 - Sheet 4
CDFW Jurisdictional Results - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement



Source: ESRI (2016); CVAG

Figure 11a
 2017/2019 Desert Tortoise Survey Results
 Aztec Ditch Bridge (No. 56C0102)
 Chuckwalla Valley Road Bridge Replacement

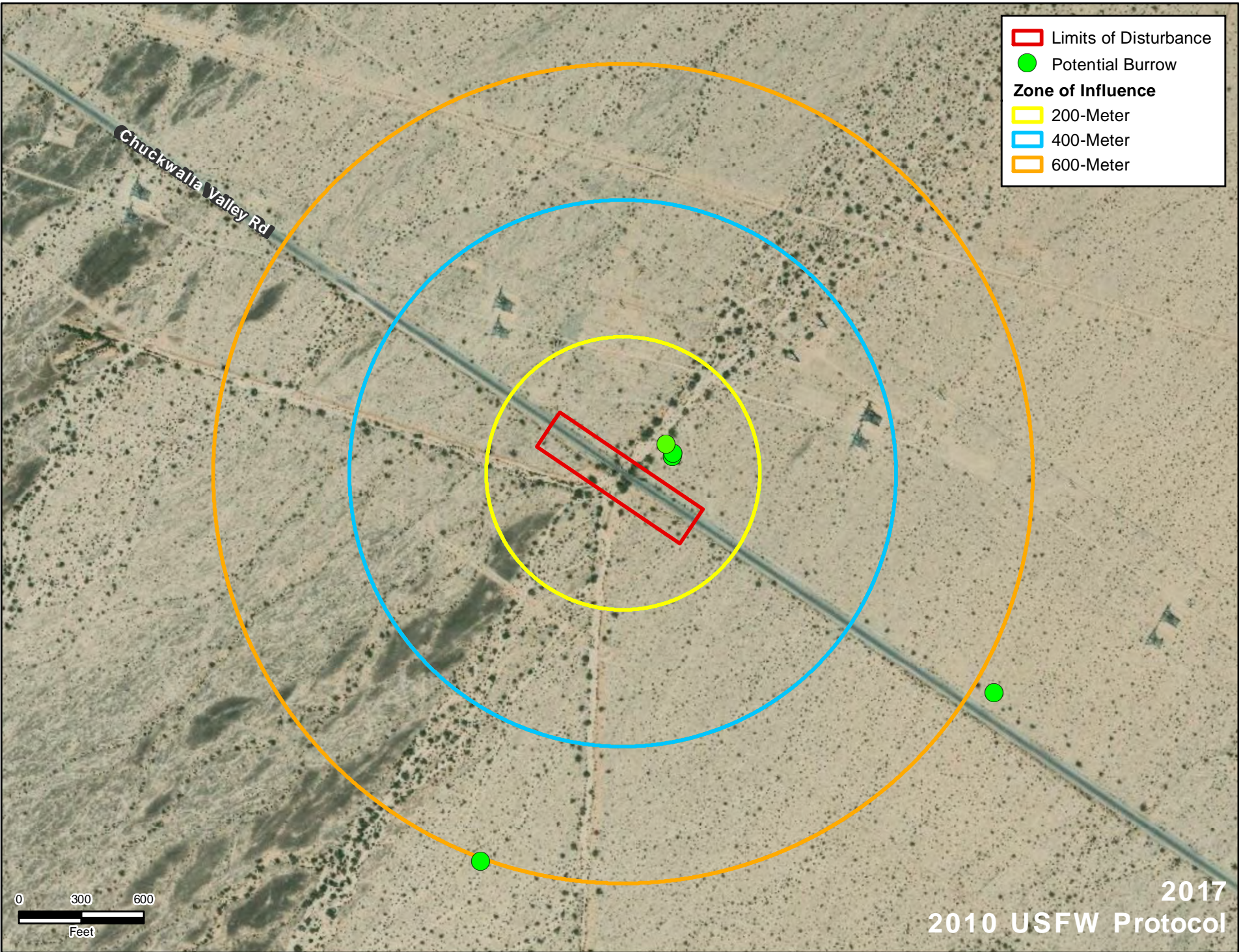
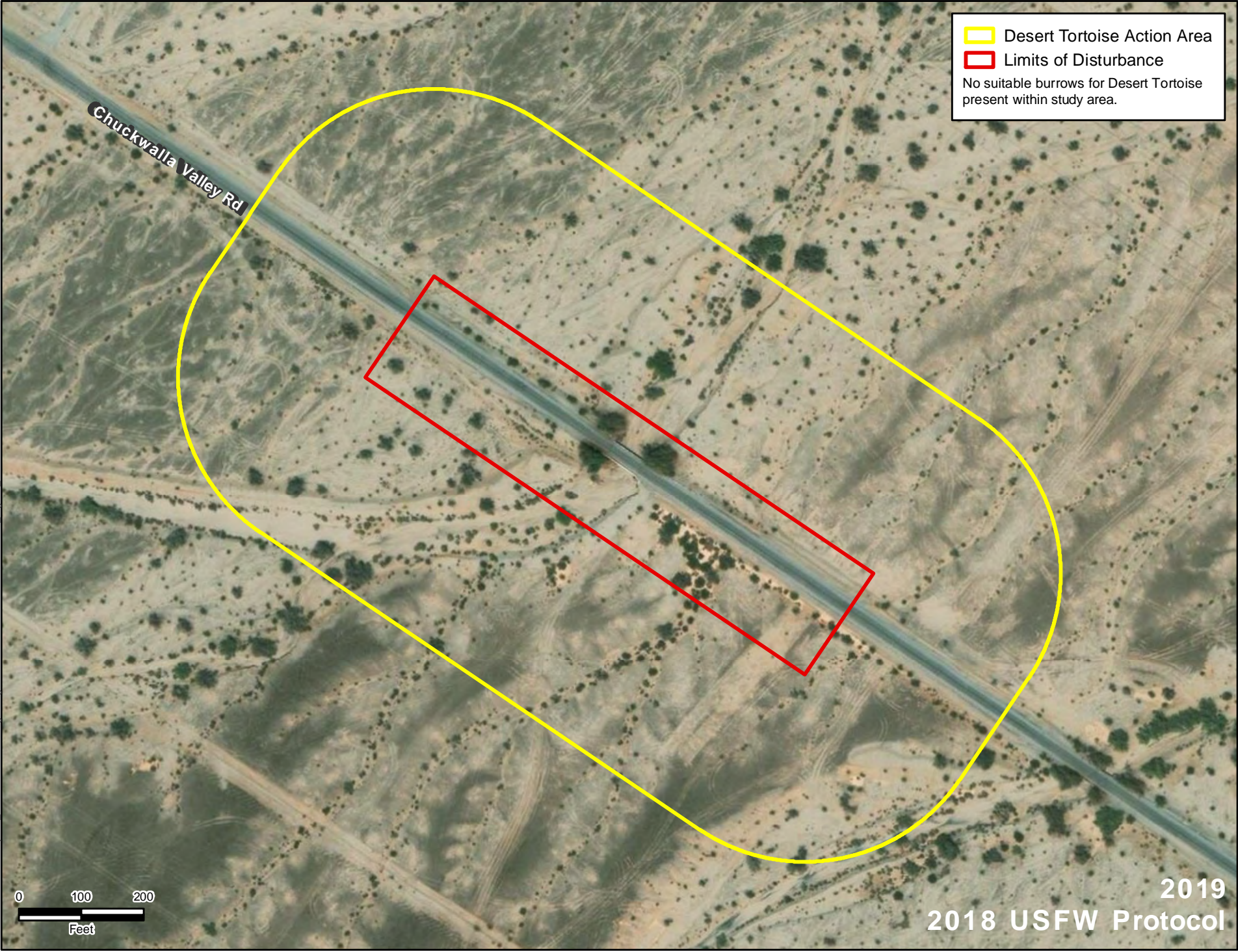
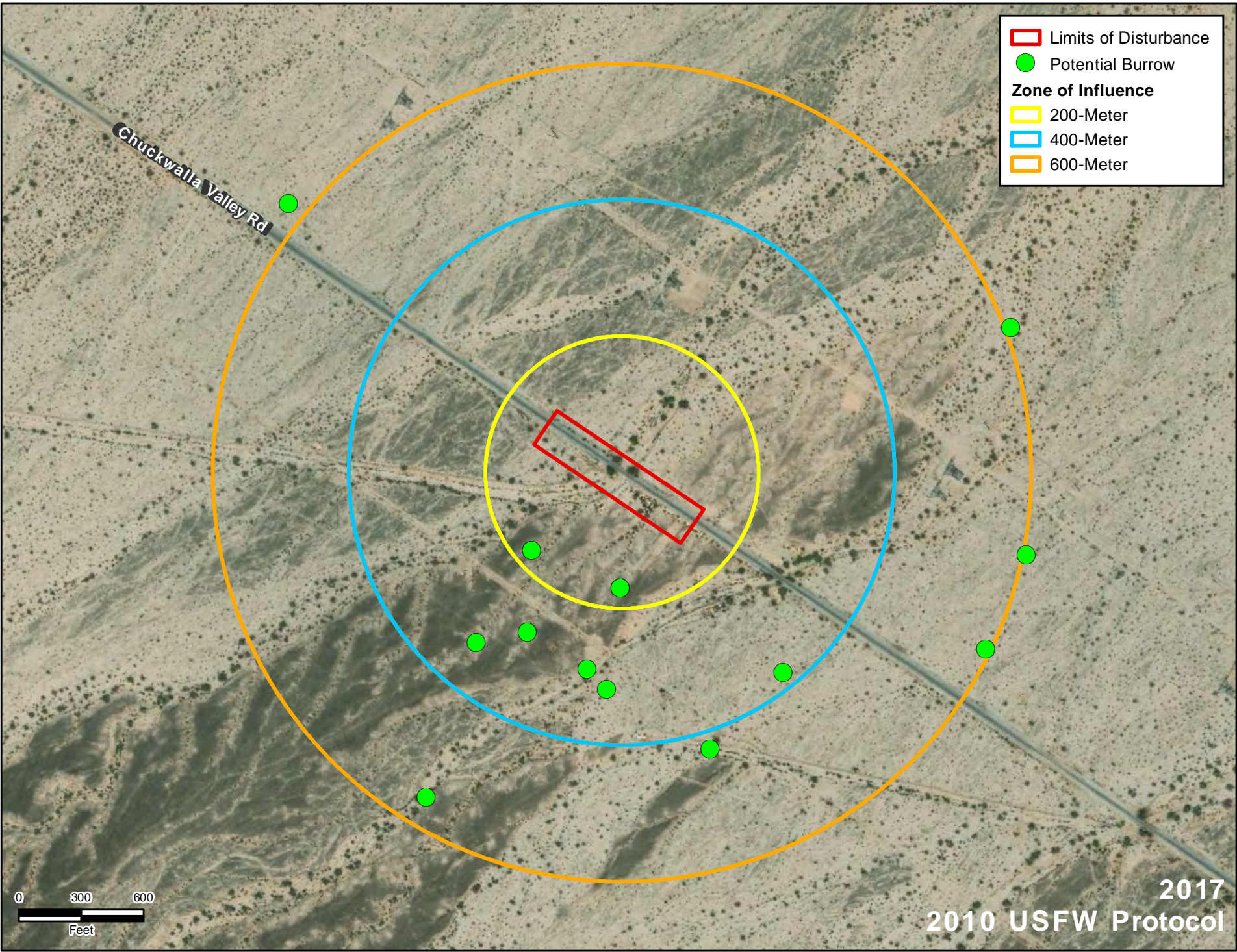
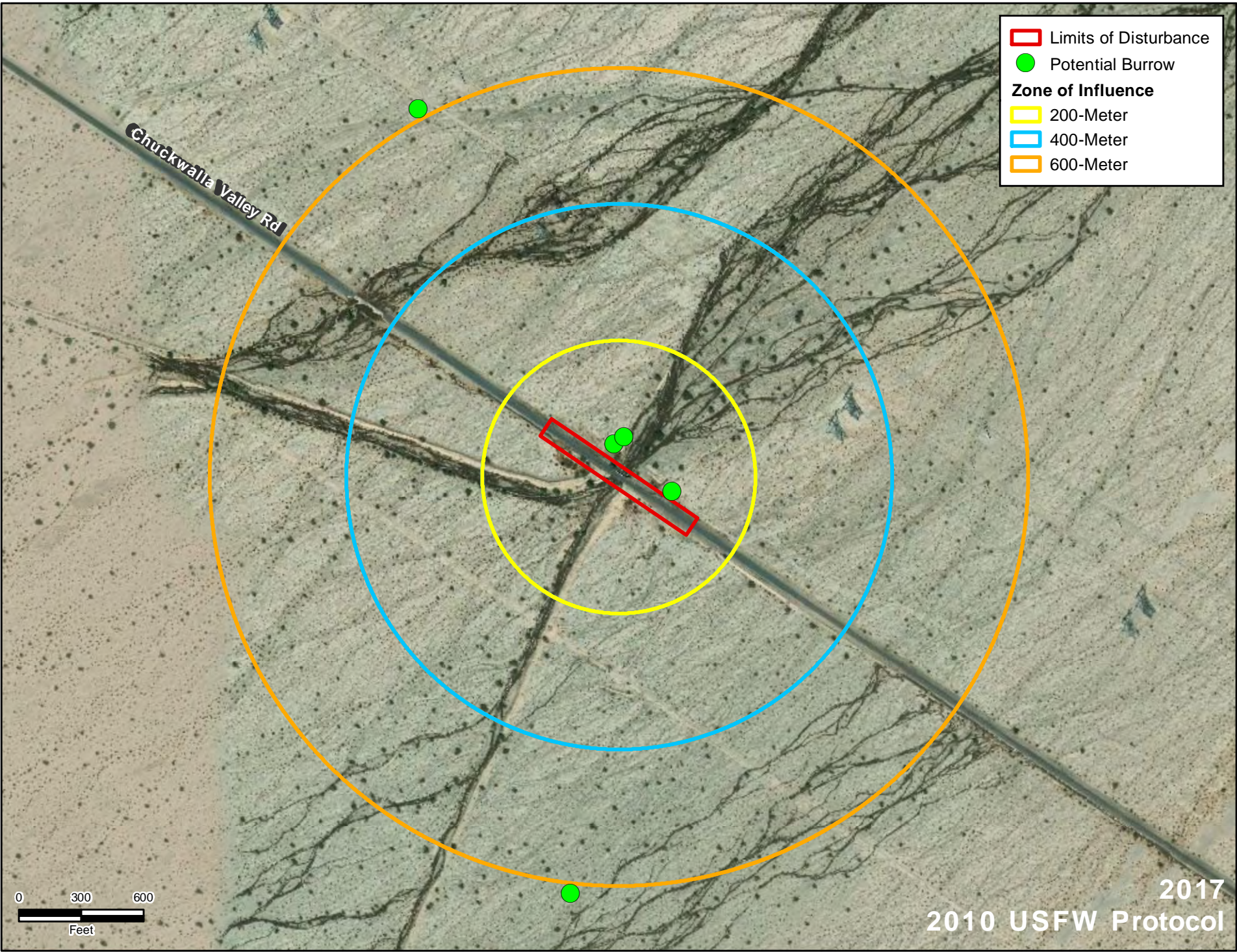


Figure 11b
2017/2019 Desert Tortoise Survey Results
Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement



Source: ESRI (2016); CVAG

Figure 11c
2017/2019 Desert Tortoise Survey Results
Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement

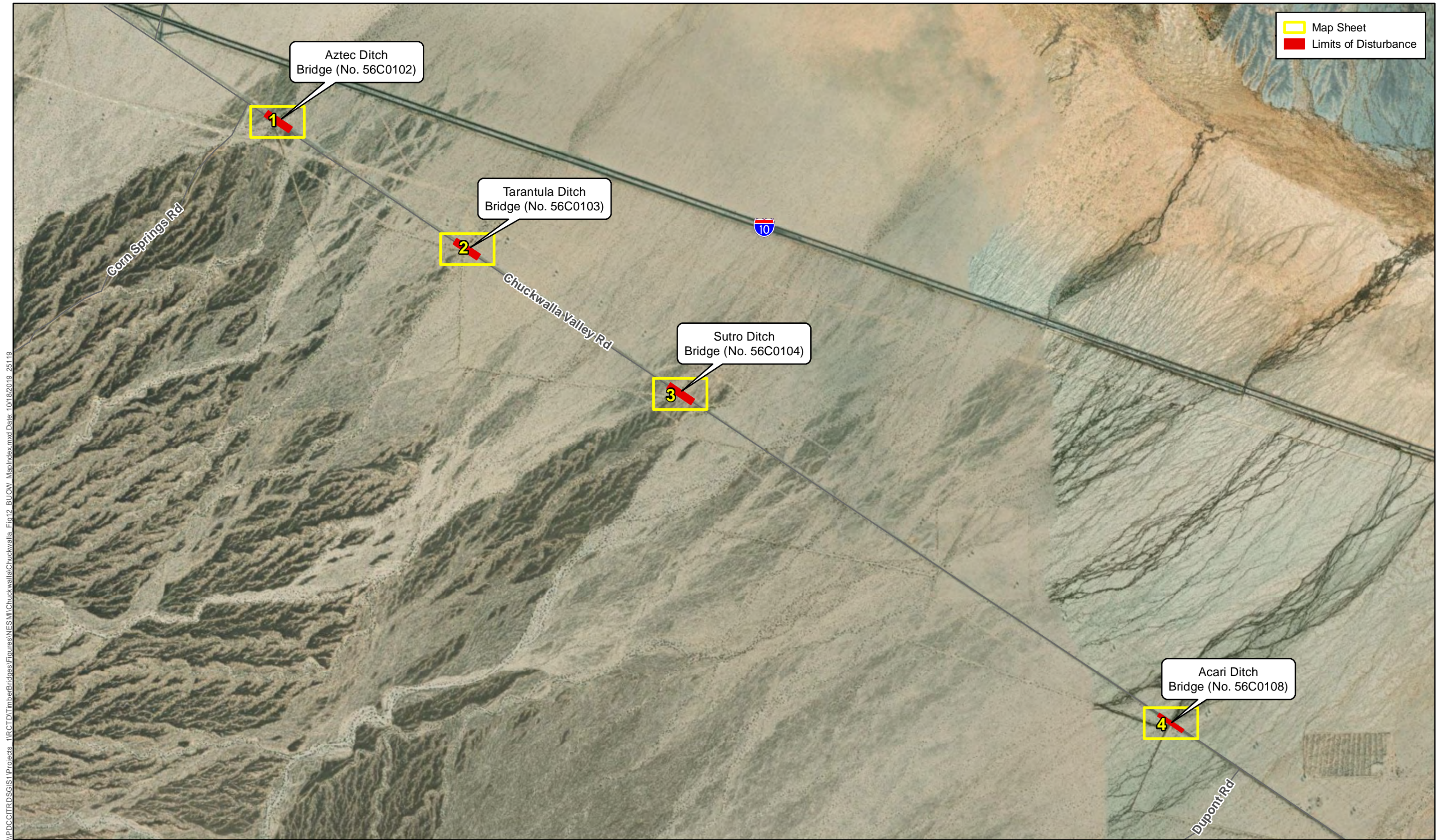


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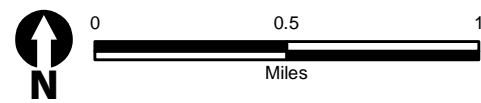


Source: ESRI (2018); CVAG

Figure 11d
2017/2019 Desert Tortoise Survey Results
Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement



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Source: ESRI (2016, 2018)

Figure 12 - Map Index
Burrowing Owl Survey Results
Chuckwalla Valley Road Bridge Replacement

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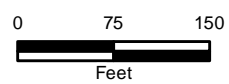


0 75 150
Feet

Source: ESRI (2016, 2018)

Figure 12 - Sheet 1
Burrowing Owl Survey Results - Aztec Ditch Bridge (No. 56C0102)
Chuckwalla Valley Road Bridge Replacement

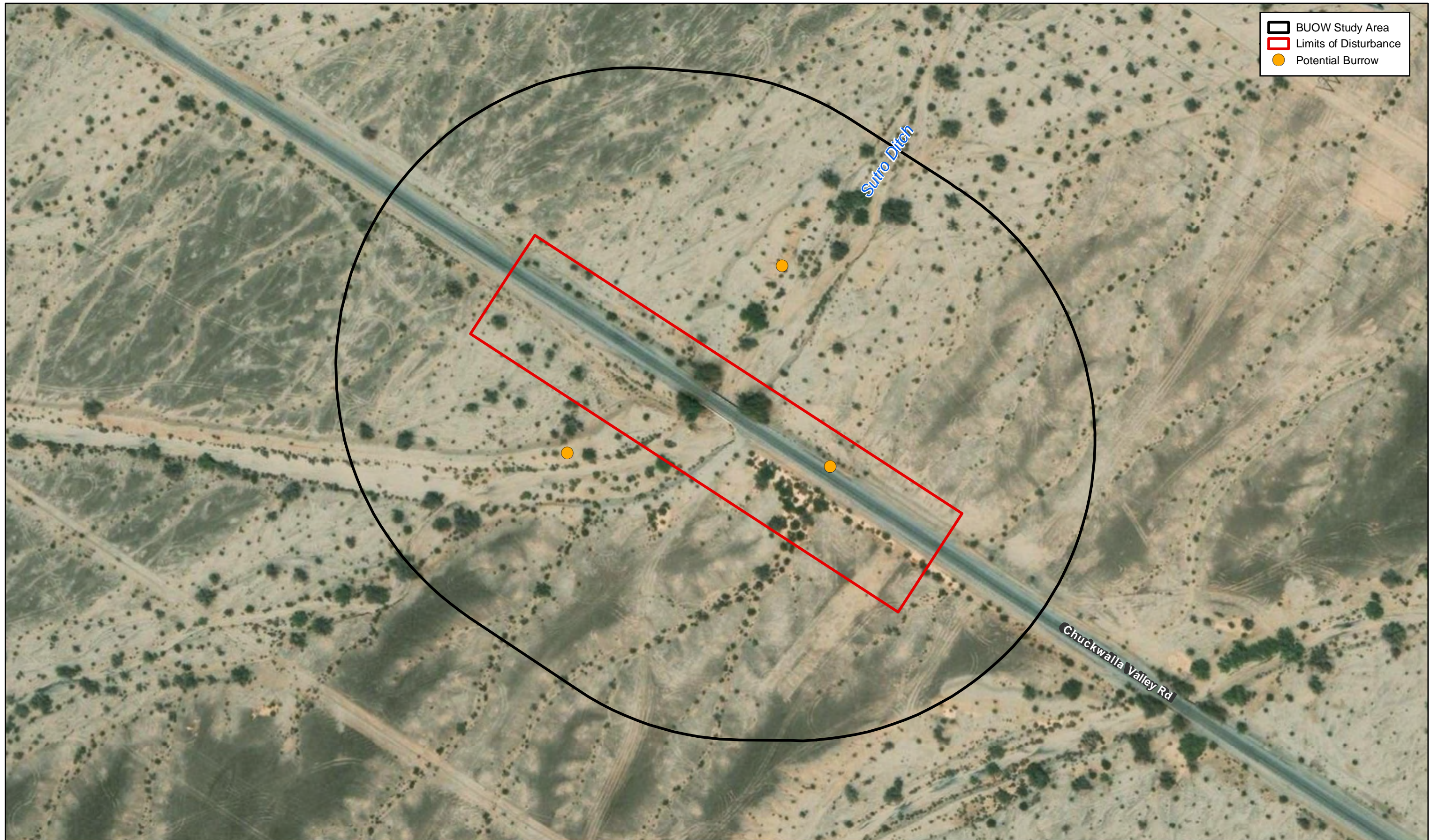
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Source: ESRI (2016, 2018)

Figure 12 - Sheet 2
Burrowing Owl Survey Results - Tarantula Ditch Bridge (No. 56C0103)
Chuckwalla Valley Road Bridge Replacement

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0 75 150
Feet

Source: ESRI (2016, 2018)

Figure 12 - Sheet 3
Burrowing Owl Survey Results - Sutro Ditch Bridge (No. 56C0104)
Chuckwalla Valley Road Bridge Replacement

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0 75 150
Feet

Source: ESRI (2016, 2018)

Figure 12 - Sheet 4
Burrowing Owl Survey Results - Acari Ditch Bridge (No. 56C0108)
Chuckwalla Valley Road Bridge Replacement

APPENDIX B: USFWS SPECIES LIST

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United States Department of the Interior

FISH AND WILDLIFE SERVICE

Carlsbad Fish And Wildlife Office
2177 Salk Avenue - Suite 250
Carlsbad, CA 92008-7385
Phone: (760) 431-9440 Fax: (760) 431-5901
<http://www.fws.gov/carlsbad/>



In Reply Refer To:

January 16, 2020

Consultation Code: 08ECAR00-2020-SLI-0123

Event Code: 08ECAR00-2020-E-01102

Project Name: Chuckwalla Valley Road Bridge Replacement Project

Subject: Updated list of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, and proposed species, designated critical habitat, and candidate species that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2)(c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

<http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF>

Please be aware that bald and golden eagles are protected under the Bald and Golden Eagle Protection Act (16 U.S.C. 668 *et seq.*), and projects affecting these species may require development of an eagle conservation plan (http://www.fws.gov/windenergy/eagle_guidance.html). Additionally, wind energy projects should follow the wind energy guidelines (<http://www.fws.gov/windenergy/>) for minimizing impacts to migratory birds and bats.

Guidance for minimizing impacts to migratory birds for projects including communications towers (e.g., cellular, digital television, radio, and emergency broadcast) can be found at: <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/towers.htm>; <http://www.towerkill.com>; and <http://www.fws.gov/migratorybirds/CurrentBirdIssues/Hazards/towers/comtow.html>.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Tracking Number in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

Carlsbad Fish And Wildlife Office

2177 Salk Avenue - Suite 250

Carlsbad, CA 92008-7385

(760) 431-9440

Project Summary

Consultation Code: 08ECAR00-2020-SLI-0123

Event Code: 08ECAR00-2020-E-01102

Project Name: Chuckwalla Valley Road Bridge Replacement Project

Project Type: TRANSPORTATION

Project Description: Chuckwalla Valley Road Bridge Replacement project (at Aztec Ditch, Tarantula Ditch, Sutro Ditch, and Acari Ditch).

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/33.644705081495886N115.18148712249969W>



Counties: Riverside, CA

Endangered Species Act Species

There is a total of 1 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Reptiles

NAME	STATUS
Desert Tortoise <i>Gopherus agassizii</i> Population: Wherever found, except AZ south and east of Colorado R., and Mexico There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/4481	Threatened

Critical habitats

There is 1 critical habitat wholly or partially within your project area under this office's jurisdiction.

NAME	STATUS
Desert Tortoise <i>Gopherus agassizii</i> https://ecos.fws.gov/ecp/species/4481#crithab	Final

APPENDIX C: SPECIAL STATUS SPECIES LIKELIHOOD OF OCCURRENCE

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