Draft Jurisdictional Wetland Delineation Report

Tule Wind Project
County of San Diego, CA

August 2010

Prepared for

Iberdrola Renewables, Inc.
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Portland, OR 97209

Prepared by

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1.0 INTRODUCTION

Pacific Wind Development LLC, a wholly owned subsidiary of Iberdrola Renewables, Inc. (IBR) is proposing to construct and operate the Tule Wind Project (proposed project) located in the eastern desert region of San Diego County, as shown on **Figure 1**, Region and Vicinity.

1.1 PROJECT DESCRIPTION

The project proposes to construct up to 134 wind turbines, an aboveground transmission line (T-line), an underground and aboveground collector cable system, one operation and maintenance (O&M) building and collector substation, and associated facilities capable of generating up to 200 megawatts (MW) of electricity, as shown in **Figure 2**, Proposed Project. The proposed project is located in eastern San Diego County, California on a combination of lands administered by the Bureau of Land Management (BLM), tribal lands of the Ewiiaapaayp Band of Kumeyaay Indians, lands of the Manzanita and Campo Indian Reservations (access only), the California State Lands Commission (CSLC), and private land under the jurisdiction of the County of San Diego (County). As part of the proposed project, Pacific Wind Development, LLC, is requesting right-of-way (ROW) for a term of at least 30 years from the BLM.

The primary components of the facility, design and operation of the proposed project include:

- Up to 134 wind turbines, between 328 and 492 feet in height, to produce 200 MW of electricity.
- Access roads between turbines, as well as improvements to existing roadways and new roadways to accommodate construction and delivery of equipment;
- A 138 kilovolt (kV) overhead transmission line will run south from the proposed substation to be interconnected with the San Diego Gas & Electric (SDG&E) proposed Rebuilt Boulevard Substation;
- A 34.5 kV overhead and underground electrical collector cable system connecting the turbines to the collector substation;
- One 5-acre collector substation site and one 5-acre operation and maintenance (O&M) site;
- A temporary batch plant for construction located on a 5-acre area;
- A 10-acre parking area;
- Nineteen 2-acre temporary laydown areas; and
- Two permanent meteorological towers and one SODAR Unit.

There are two collector substation locations proposed on BLM land, the “proposed” collector substation and the “deviant” collector substation. Both substation locations are south of McCain Valley Road, with the deviant substation located 0.6 miles southwest of the proposed substation. The deviant substation location is a potential alternate to the proposed, and as part of the proposed project is not a separate alternative. The deviant substation is included in the project to provide flexibility in the project design to minimize impacts to view sheds and natural resources due to topography. For each of the two proposed substation locations, the collector lines, transmission lines, and roadway land disturbance impacts alter slightly; however, the deviant collector substation yields a higher potential impact for the entire project, with all project components considered. Therefore, the proposed project utilizing the deviant substation is used to show the maximum impacts for the project.

Project Alternatives

Alternative designs to the proposed project have been identified and evaluated in terms of their ability to meet the basic objectives of the project, while avoiding or reducing the environmental impacts of the project. Five alternatives have been proposed and are identified below:

Alternate Transmission Line Alternative #1 (T-Line Alternative #1)

The T-line Alternative #1 would include all of the same components as the proposed project except for an alternate overhead 138 kV transmission line (T-line Alternative #1) and 152 poles to support the transmission line as shown in **Figure 3**. T-line Alternative #1 would be located parallel to, but in-lieu of, the proposed transmission line. T-line Alternative #1 would be located further west and run from either the proposed or deviant collector substation, approximately 5.5 miles south to the Rough Acres Ranch (south of turbine G19). From Rough Acres Ranch, the line would continue west to Ribbonwood Road. The line would continue south on Ribbonwood Road to Old Highway 80, and east along Old Highway 80 to the SDG&E proposed Rebuilt Boulevard Substation.

Alternate Transmission Line #2 and Collector Substation Alternative

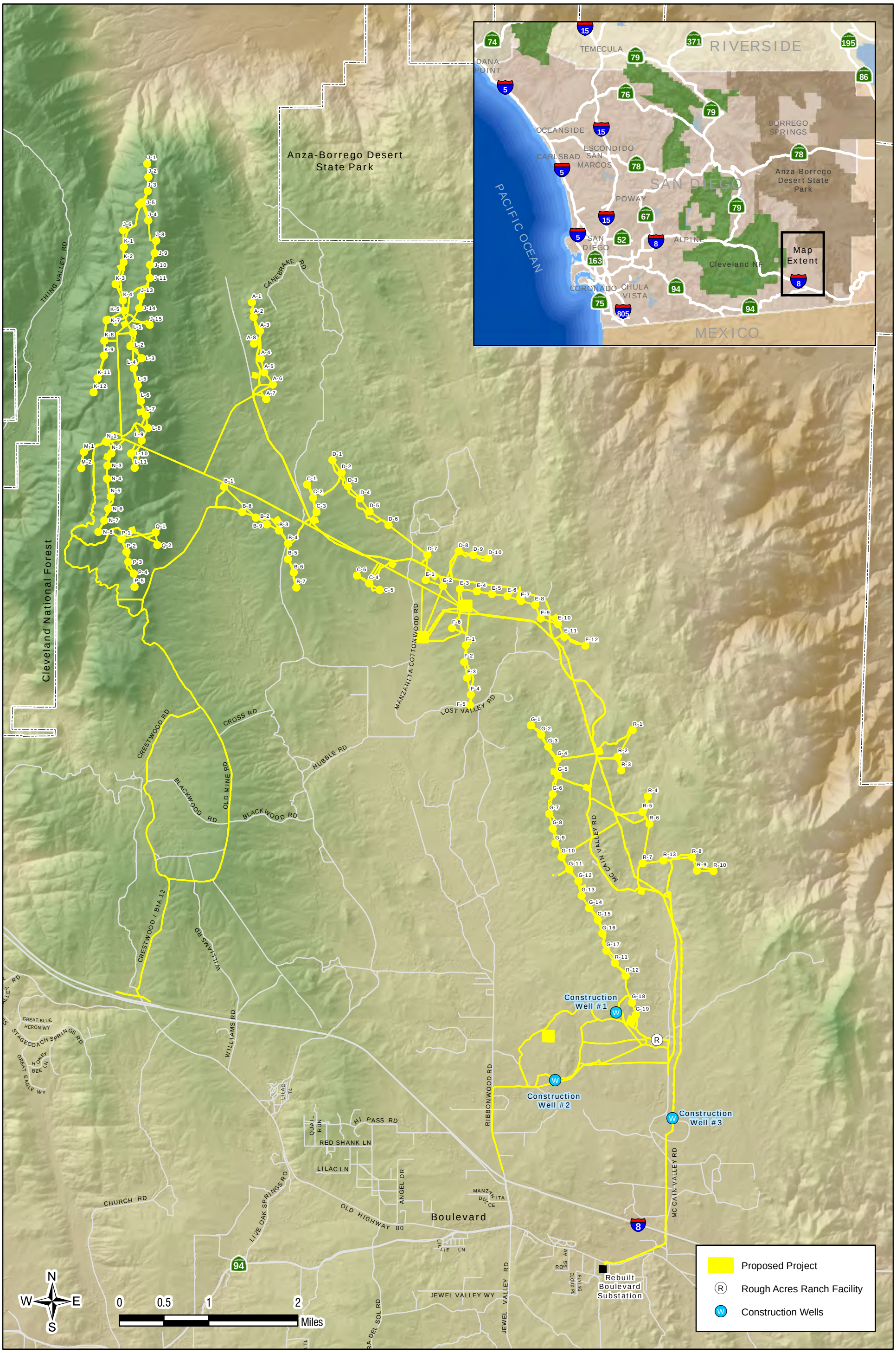
The Alternate Transmission Line #2 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #2 (138 kV), as well as an alternate overhead collector system, as shown in **Figure 4.** The Alternate Transmission Line #2 would be 3.8 miles long and would reduce the number of transmission line poles to 44. The alternate overhead collector cable system would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation location. All other elements of the project including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #2 would run from the alternate collector substation south along McCain Valley Road, and then west along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

Alternate Transmission Line #3 and Collector Substation Alternative

The Alternate Transmission Line #3 and Collector Substation Alternative would include the alternate O&M/Substation facility co-located on Rough Acres Ranch (T17S R7E Sec9), the Alternate Transmission Line #3 (138 kV), as well as an alternate overhead collector system as shown in **Figure 5**. The Alternate Transmission Line #3 would be 5.4 miles long and would reduce the amount of transmission line poles to 60, and the alternate overhead collector cable system would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation. This alternative would consist of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements including the turbine locations, parking and laydown areas, roadway upgrades, and batch plant would remain as described in the proposed project. The Alternate Transmission Line #3 would run from the alternate collector substation west to Ribbonwood Road, continue south along Ribbonwood Road, and then east along Old Highway 80 until reaching the SDG&E proposed Rebuilt Boulevard Substation.

O&M Facility Location #1 Alternative

The O&M Facility Location #1 Alternative would be located on private property (T17S R7E Sec4), north of the alternate collector substation and located west of McCain Valley Road, as shown in **Figure 4**. This alternative would consist of separating the 5-acre O&M building site from the collector substation;



Region and Vicinity

FIGURE 1

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Turbines and Met Towers
- Proposed Turbine Location
- Proposed Met Station
- Alternate Met Station
- Proposed SODAR

Project Collector System
- Proposed Overhead Collector
- Proposed Underground Collector

Project Transmission Line
- Proposed Transmission Line

O & M Building and Substation
- Proposed Substation
- Proposed O&M Building
- Rebuilt Boulevard Substation

Staging Areas
- Proposed 10-acre Parking Area
- Proposed 2-acre Laydown Area
- Proposed Batch Plant

Access Roads
- Proposed New Roads
- Existing Roads to be Improved

Ownership
- BLM Land
- Indian Reservation
- State of California (Conservation)
- State of California Lands Commission
- Rough Acres Ranch
- Rough Acres Ranch Facility
- Construction Well

Ewiiaapaayp Indian Reservation
BLM Land
State of California Lands Commission
Manzanita Indian Reservation
Deviant Substation
La Posta Indian Reservation
Campo Indian Reservation
Proposed Transmission Line
Construction Well #1
Construction Well #2
Construction Well #3
State of California (Conservation)
Rebuilt Boulevard Substation
N
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0 0.5 1 2 Miles

Proposed Project

FIGURE 2

Iberdrola | Tule Wind Project | JWDR

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Turbines and Met Towers
- Proposed Turbine Location
- Proposed Met Station
- Alternate Met Station
- Proposed SODAR

Project Collector System
- Proposed Overhead Collector
- Proposed Underground Collector

Project Transmission Line
- Alternate Transmission Line I

O & M Building and Substation
- Proposed Substation
- Proposed O&M Building
- Rebuilt Boulevard Substation

Staging Areas
- P — Proposed 10-acre Parking Area
- L — Proposed 2-acre Laydown Area
- B — Proposed Batch Plant

Access Roads
- Proposed New Roads
- Existing Roads to be Improved

Ownership
- BLM Land
- State of California (Conservation)
- State of California Lands Commission
- Rough Acres Ranch
- R — Rough Acres Ranch Facility
- W — Construction Well

Ewiiaapaayp Indian Reservation
BLM Land
State of California Lands Commission
Manzanita Indian Reservation
Deviant Substation
Alternate Transmission Line I
La Posta Indian Reservation
Campo Indian Reservation
Construction Well #1
Construction Well #2
Construction Well #3
Rebuilt Boulevard Substation
SODAR
PM-W-1
PM-W-2
PM-E-1
PM-E-2
N
W
E
S
0 0.5 1 2 Miles

T-Line Alternative #1

FIGURE 3

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Turbines and Met Towers

- Proposed Turbine Location
- Proposed Met Station
- Alternate Met Station
- Proposed SODAR

Project Collector System

- Alternate Overhead Collector
- Alternate Underground Collector

Project Transmission Line

- Alternate Transmission Line II

O & M Building and Substation

- Alternate Substation
- Alternate O&M Building
- Rebuilt Boulevard Substation

Staging Areas

- P — Proposed 10-acre Parking Area
- L — Proposed 2-acre Laydown Area
- B — Proposed Batch Plant

Access Roads

- Proposed New Roads
- Existing Roads to be Improved

Ownership

- BLM Land
- Indian Reservation
- State of California (Conservation)
- State of California Lands Commission
- Rough Acres Ranch
- R — Rough Acres Ranch Facility
- W — Construction Well

Ewiiaapaayp Indian Reservation
BLM Land
State of California Lands Commission
Manzanita Indian Reservation
La Posta Indian Reservation
Campo Indian Reservation
Campo Indian Reservation
Indian Reservation
BLM Land
BLM Land
Campo Indian Reservation
BLM Land
State of California (Conservation)
Construction Well #1
Construction Well #2
Construction Well #3
O&M #1
O&M #2
Rebuilt Boulevard Substation
Alternate Transmission Line 1-1
PM-E-1
PM-E-2
PM-W-1
PM-W-2
SODAR
CANEBRAKE RD
MANZANITA COTTONWOOD RD
LOST VALLEY RD
MC CAIN VALLEY RD
CRESTWOOD RD
CROSS RD
HUBBLE RD
BLACKWOOD RD
OLD MINE RD
CRESTWOOD / BIA 12
WILLIAMS RD
MILLER VALLEY RD
CAM TRES AVES
STAGECOACH SPRINGS RD
GREAT BLUE HERON WY
HONEY LN
BEE
GREAT EAGLE WY
HI PASS RD
QUAIL RUN
RED SHANK LN
LILAC LN
CHURCH RD
LIVE OAK SPRINGS RD
OLD HIGHWAY 80
ANGEL DR
MANZANITA DUCE
RIBBONWOOD RD
JEWEL VALLEY WY
TIERRA DEL SOL RD
SHASTA WY
SHASTA TL
SOL WOOD
WORTHINGTON RD
PINION PINE TL
ENCINA VERDE
94
8
N
W
E
S
0 0.5 1 2 Miles

T-Line Alternative #2, Collector Substation Alternative, and O&M Facility Location Alternatives

FIGURE 4

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Turbines and Met Towers
- Proposed Turbine Location
- Proposed Met Station
- Alternate Met Station
- Proposed SODAR

Project Collector System
- Alternate Overhead Collector
- Alternate Underground Collector

Project Transmission Line
- Alternate Transmission Line III

O & M Building and Substation
- Alternate Substation
- Alternate O&M Building
- Rebuilt Boulevard Substation

Staging Areas
- P — Proposed 10-acre Parking Area
- L — Proposed 2-acre Laydown Area
- B — Proposed Batch Plant

Access Roads
- Proposed New Roads
- Existing Roads to be Improved

Ownership
- BLM Land
- Indian Reservation
- State of California (Conservation)
- State of California Lands Commission
- Rough Acres Ranch
- R — Rough Acres Ranch Facility
- W — Construction Well

Ewiiaapaayp Indian Reservation
BLM Land
State of California Lands Commission
Manzanita Indian Reservation
La Posta Indian Reservation
Campo Indian Reservation
Campo Indian Reservation
Campo Indian Reservation
BLM Land
BLM Land
BLM Land
State of California (Conservation)
Indian Reservation
PM-E-1
PM-E-2
PM-W-1
PM-W-2
SODAR
Construction Well #1
Construction Well #2
Construction Well #3
Alternate Transmission Line III
Rebuilt Boulevard Substation
CANEBRAKE RD
MANZANITA COTTONWOOD RD
LOST VALLEY RD
CRESTWOOD RD
CROSS RD
HUBBLE RD
BLACKWOOD RD
OLD MINE RD
CRESTWOOD / BIA 12
WILLIAMS RD
MILLER VALLEY RD
STAGECOACH SPRINGS RD
GREAT BLUE HERON WY
HONEY BEE LN
GREAT EAGLE WY
CHURCH RD
LIVE OAK SPRINGS RD
OLD HIGHWAY 80
HI PASS RD
QUAIL RUN
RED SHANK LN
LILAC LN
ANGEL DR
MANZANITA DUCE
RIBBONWOOD RD
MC CAIN VALLEY RD
JEWEL VALLEY WY
TIERRA DEL SOL RD
SHASTA WY
SHASTA TL
SOL WOOD
WORTHINGTON RD
PINION PINE TL
94
8
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0 0.5 1 2 Miles

T-Line Alternative #3 and Collector Substation Alternative

FIGURE 5

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however, both would remain on Rough Acres Ranch property. Alternate Transmission Line #2 would be utilized under this alternative as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

O&M Facility Location #2 Alternative

The O&M Facility Location #2 Alternative would be located on private property (T17S R7E Sec 16), south of the alternate collector substation and located west of McCain Valley Road, as illustrated in **Figure 4**. This alternative would consist of separating the 5-acre O&M building site from the collector substation; however, both would remain on Rough Acres Ranch property. Alternate Transmission Line #2 would be utilized under this alternative, as well as the Alternate Overhead Collector System consisting of two 34.5 kV lines connecting the turbines to the alternate collector substation. All other elements of the project including the turbine locations, parking and laydown areas, and batch plant would remain as described in the proposed project.

1.2 PROJECT LOCATION

The proposed project is located in the eastern portion of San Diego County, approximately 50 miles east of City of San Diego, 90 miles west of Arizona and to the north of the community of Boulevard, California (Figure 1). The proposed project is accessible via Interstate 8 (I-8), State Route 94 (SR-94) and Ribbonwood Road junction, and McCain Valley Road off of Old Highway 80. The proposed project is located within Townships 15, 16 and 17 and Ranges 6 and 7 on the U.S. Geological Survey (USGS) Sombrero Peak and Live Oak Springs, California 7.5 minute quadrangles, **Appendix A**, USGS Map.

The majority of the project lies within McCain Valley Resource Conservation Area and Land Cooperative, in the In-Ko-Pah Mountains adjacent to the Tecate Divide, and south of the Cleveland National Forest. Several Indian reservations occur adjacent to and within the proposed project. Indian reservations within the proposed project include the Ewiiaapaayp Indian Reservation, Manzanita and Campo Indian Reservations, and adjacent to the proposed project is the La Posta Reservation.

1.3 PURPOSE OF THE WETLAND DELINEATION

At the request of IBR, HDR Engineering, Inc. (HDR) conducted a wetland delineation for the project. This report presents the results of a U.S. Army Corps of Engineers (USACE), Regional Water Quality Control Board (RWQCB), California Department of Fish and Game (CDFG), and County of San Diego (County) Jurisdictional Wetland Delineation conducted for the proposed project. The purpose of the delineation is to determine areas that may be subject to federal, state, and county wetland regulation and permitting.

2.0 ENVIRONMENTAL SETTING

The proposed project occurs primarily within undeveloped land. A portion of the project occurs along existing paved and unpaved roads associated with the McCain Valley Resource Conservation Area and the community of Boulevard. In general, the project runs centrally along McCain Valley Road from the south to north. In addition, numerous off-road vehicle trails occur throughout the project area.

2.1 GENERAL VEGETATION AND WILDLIFE HABITAT

The majority of the project site occurs within McCain Valley which lies within the Peninsular Mountain ranges of eastern San Diego County. The valley is characterized by chaparral hills punctuated by granitic rock outcroppings. On-site vegetation is a result of a Mediterranean-type climate characterized by long, hot, dry summers and mild winters. During the general biological reconnaissance conducted in 2009 by HDR, all accessible areas of the project site were surveyed on foot and vegetation communities were mapped in the field. The project site supports the following 20 vegetation communities:

- Mulefat scrub
- Non-vegetated channel
- Southern riparian scrub
- Dense coast live oak woodland
- Open coast live oak woodland
- Big sagebrush scrub
- Montane buckwheat scrub
- Upper Sonoran subshrub scrub
- Chamise chaparral
- Northern mixed chaparral
- Redshank chaparral
- Scrub oak chaparral
- Semi desert chaparral
- Southern north slope chaparral
- Upper Sonoran manzanita chaparral
- Developed
- Disturbed Habitat
- Field pasture/agriculture
- Landscaped
- Non-native grassland

Vegetation classification systems used in this report follow those of Holland (1996) and plant nomenclature follows that of Hickman (1993). The dominant vegetation occurring within on-site jurisdictional drainages is listed in **Appendix B**.

General biological surveys for the project have been completed by HDR biologists. At this time HDR has identified no threatened or endangered species within the project. Typical wildlife found within the proposed project includes common raptors, song birds, reptiles, large and small mammals, and invertebrates. Species covered under the Endangered Species Act are not anticipated to be adversely affected by proposed actions associated with this project based on biological surveys conducted for this project. However, rare plant surveys and a final habitat assessment for the federally endangered Quino checkerspot butterfly are being conducted in the spring of 2010, during the appropriate season. These surveys may result in the identification of potential impacts to a threatened or endangered species (HDR 2010).

2.2 SOILS

On-site soils are well drained and are generally located on alluvial fans, or were formed in material weathered from granitic rock. Soils were identified using United States Department of Agriculture

Natural Resources Conservation Service (USDA NRCS) soil mapping data. The proposed project crosses 10 different soil series, shown on **Figure 6**, Soils Map, including:

- **Acid igneous rock land** exhibits rough broken terrain. The soil material is loam to loamy coarse sand in texture and is very shallow over decomposed granite or basic igneous rock.
- **Calpine series** consists of well drained, very deep coarse sandy loams that formed in granitic alluvium. These soils are on alluvial fans and have slopes of 2 to 15 percent.
- **Holland series** consists of well-drained, moderately deep and deep fine sandy loams that formed in material weathered from micaceous schist. These soils are on mountainous uplands and have slopes of 2 to 60 percent.
- **Kitchen Creek series** consists of somewhat excessively drained, deep to moderately deep loamy coarse sands. These soils formed in material derived from granodiorite. They are on smooth, broad ridges and have slopes of 5 to 15 percent.
- **La Posta series** consists of somewhat excessively drained loamy coarse sands that formed in material weathered from granodiorite. These soils are on mountainous uplands and have slopes of 5 to 50 percent.
- **Loamy alluvial land** consists of somewhat poorly drained, very deep, very dark brown to black silt loams and sandy loams. Areas of this land were formerly wet meadows that were subsequently drained by head cutting of gullies. The gullies eventually formed drainage ditches and thus lowered the water table.
- **Mottsville series** consists of excessively drained, very deep, loamy coarse sands that in some areas formed in sandy sediments transported from granitic rock, and in others in material weathered in place from granitic rock. These soils occur in valleys and alluvial fans and have slopes of 0 to 15 percent.
- **Rositas series consists** of somewhat excessively drained, very deep loamy coarse sands derived from granitic alluvium. These soils are on alluvial fans and on alluvial plains and have slopes of 0 to 15 percent.
- **Sheephead series** consists of well-drained shallow fine sandy loams that formed in material weathered from micaceous schist and gneiss. These soils are on mountainous uplands and have slopes of 9 to 65 percent.
- **Tollhouse series** consists of excessively drained, shallow to very shallow coarse sandy loams that formed in material weathered from granodiorite. These soils are in the mountains and have slopes of 5 to 65 percent.

2.3 TOPOGRAPHY

The majority of the site within and near McCain Valley exhibits gently-sloping hill and valley contours. The northwest portion of the site exhibited steeply-sloping terrain. Elevations on the site ranged between 2,760 feet above mean sea level (AMSL) at the southern portion of the proposed project and 5,825 feet AMSL on the ridge in the northwest portion of the proposed project (Appendix A).

2.4 HYDROLOGY

The project site is located within the Salton Sea and Tijuana River watersheds. A ridgeline located in the northwest portion of the site delineates the watersheds. The western half of the ridge drains into La Posta

Creek, Lake Morena, Cottonwood Creek, Barrett Lake, then back into Cottonwood Creek, the Tijuana River and then finally into the Pacific Ocean at the Tijuana estuary.

The eastern half of the ridge and the remainder of the site ultimately drain to the Salton Sea. The northern half of the ridge drains east to Bow Willow Creek, Carrizo Wash, San Felipe Creek and then into the Salton Sea. The southern half of the ridge conveys runoff into Tule Creek, Tule Lake, Tule Canyon, Carrizo Wash, San Felipe Creek and then into the Salton Sea. A small portion of the site along the southeast, in close proximity to I-8, is conveyed into Walker Creek, Carrizo Wash, San Felipe Creek and then into the Salton Sea. The Salton Sea is approximately 45 miles downstream of the proposed project. Several USGS "blue line" streams transect the site and are identified in **Appendix A.**

3.0 REGULATORY SETTING

3.1 U.S. ARMY CORPS OF ENGINEERS

The USACE regulates the discharge of dredged or fill material into Waters of the United States pursuant to Section 404 of the Clean Water Act (CWA). Of the four land ownership categories (BLM, Indian, CSLC, and County) occurring within the survey area, the USACE asserts jurisdiction over the entire survey area.

3.1.1 Waters of the U.S.

The term "Waters of the U.S." is defined in USACE regulations at 33 CFR Part 328.3(a) as:

- All waters which are currently used, or were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
- All interstate waters including interstate wetlands;
- All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, wetlands, sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds, the use, degradation or destruction of which could affect interstate or foreign commerce including any such waters:
- Which or could be used by interstate or foreign travelers for recreation or other purposes; or
- From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
- Which are used or could be used for industrial purpose by industries in interstate commerce;
- All impoundments of waters otherwise defined as waters of the United States under the definition;
- Tributaries of waters identified in paragraphs (a) (1) through (4) of this section;
- The territorial seas;
- Wetlands adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) (1) through (6) of this section; and
- Waters of the U.S. do not include prior converted cropland.

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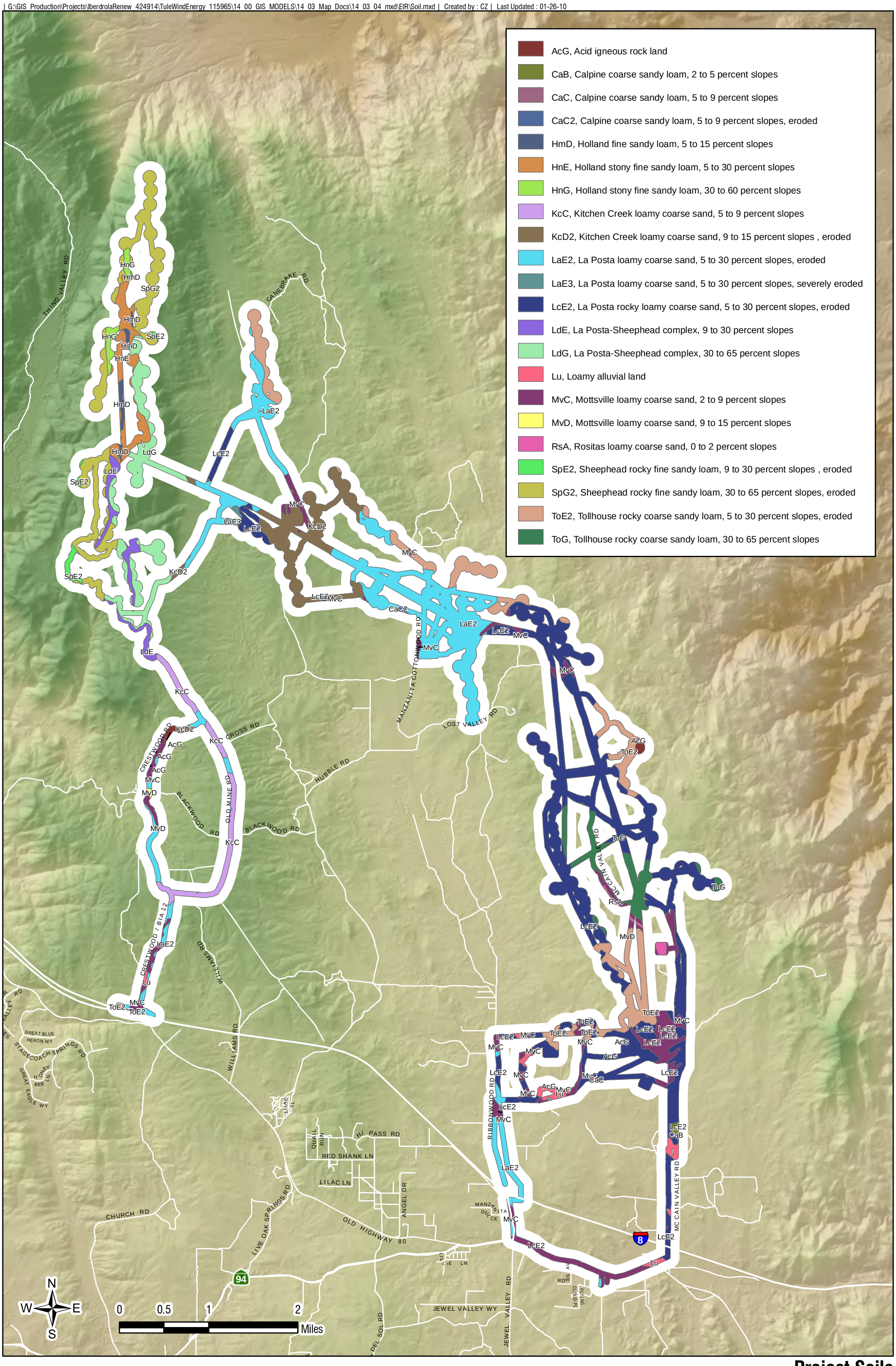

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Project Soils

FIGURE 6

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The limits of USACE jurisdiction in non-tidal waters extends to the Ordinary High Water Mark (OHWM) which is defined at 33 CFR 328.3(e) as:

> "…that line on the shore established by the fluctuations of water and indicated by physical characteristics such as clear, natural line impresses on the bank, shelving, changes in the character of soil, destruction of terrestrial vegetation, the presence of litter and debris, or other appropriate means that consider the characteristics of the surrounding areas."

3.1.2 Wetlands

Wetlands are defined at 33 C.F.R. 328.3(b) as "those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas." To be classified as a wetland, the watercourse must exhibit hydrophytic vegetation and hydric soils in addition to an OHWM.

3.1.3 Supreme Court Decisions

3.1.3.1 Solid Waste Agency of North Cook County

On January 9, 2001, the Supreme Court of the United States issued a decision on *Solid Waste Agency of Northern Cook County v. United States Army Corps of Engineers, et al.* with respect to whether the USACE could assert jurisdiction over isolated waters. The Solid Waste Agency of North Cook County (SWANCC) ruling stated that the USACE does not have jurisdiction over "non-navigable, isolated, intrastate" waters.

3.1.3.2 Rapanos/Carabell

In the Supreme Court cases of *Rapanos* v. *United States* and *Carabell* v. *United States* (herein referred to as *Rapanos*), the court attempted to clarify the extent of USACE jurisdiction under the CWA. The nine Supreme Court justices issued five separate opinions (one plurality opinion, two concurring opinions, and two dissenting opinions) with no single opinion commanding a majority of the Court. In light of the *Rapanos* decision, the USACE will assert jurisdiction over traditional navigable waters, wetlands adjacent to traditional navigable waters, non-navigable tributaries of traditional navigable waters that are relatively permanent where the tributaries typically flow year-round or have continuous flow at least seasonally (e.g., typically three months) and wetlands that directly abut such tributaries. The USACE will decide jurisdiction over the following waters based on a fact-specific analysis to determine whether they have a significant nexus with a traditional navigable water: non-navigable tributaries that are not relatively permanent, wetlands adjacent to non-navigable tributaries that are not relatively permanent, and wetlands adjacent to but that do not directly abut a relatively permanent non-navigable tributary.

Flow characteristics and functions of the tributary itself and the functions performed by all wetlands adjacent to the tributary indicate whether they significantly affect the chemical, physical and biological integrity of downstream traditional navigable waters. Analysis of potentially jurisdictional streams includes consideration of hydrologic and ecologic factors. The consideration of hydrological factors includes volume, duration, and frequency of flow, proximity to traditional navigable waters, size of watershed, average annual rainfall, and average annual winter snow pack. The consideration of ecological factors also includes the ability for tributaries to carry pollutants and flood waters to a TNW,

the ability of a tributary to provide aquatic habitat that supports a TNW, the ability of wetlands to trap and filter pollutants or store flood waters, and maintenance of water quality.

According to a USACE guidance document (USACE 2008a) the USACE generally will not assert jurisdiction over the following features: swales or erosional features (e.g., gullies, small washes characterized by low volume, infrequent, or short duration flow) and ditches (including roadside ditches) excavated wholly in and draining only uplands that generally do not carry a relatively permanent flow of water.

3.2 REGIONAL WATER QUALITY CONTROL BOARD

The RWQCB regulates activities pursuant to Section 401(a)(1) of the federal Clean Water Act (CWA). Section 401 of the CWA specifies that certification from the State is required for any applicant requesting a federal license or permit to conduct any activity including, but not limited to, the construction or operation of facilities that may result in any discharge into navigable waters. Of the four land ownership categories (BLM, Indian, CSLC, and County) occurring within the survey area, Section 401 of the CWA applies to all land ownership categories within the survey area.

3.3 CALIFORNIA DEPARTMENT OF FISH AND GAME

The State of California regulates water resources under Section 1600-1616 of the California Fish and Game Code. Section 1602 states:

> "An entity may not substantially divert or obstruct the natural flow of, or substantially change or use any material from the bed, channel, or bank of, any river, stream, or lake, or deposit or dispose of debris, waste, or other material containing crumbled, flaked, or ground pavement where it may pass into any river, stream, or lake."

CDFG jurisdiction includes ephemeral, intermittent and perennial watercourses and extends to the top of the bank of a stream or lake if unvegetated, or to the limit of the adjacent riparian habitat located contiguous to the watercourse if the stream or lake is vegetated.

According to the definition used by the CDFG, state wetlands are "lands transitional between terrestrial and aquatic systems where the water table is usually at or near the surface, or the land is covered by shallow water," and they exist where any one of the following conditions are present:

1) Predominantly undrained hydric soils (soils with low concentrations of oxygen in the upper layers during the growing season);
2) A predominance, at least periodically, of hydrophytic plants (plants that have adapted to the low availability of oxygen and others stresses in saturated soils);
3) A non-soil substrate (such as a rocky shore) that is saturated with water or covered by shallow water each year at some point during the growing season.

Of the four land ownership categories (BLM, Indian, CSLC, and County) occurring within the survey area, CDFG asserts jurisdiction over BLM, CSLC, and County lands; however, CDFG does not have authority over Indian lands.

3.4 COUNTY OF SAN DIEGO

Wetland areas under County of San Diego jurisdiction are determined based upon the County's Resource Protection Ordinance (RPO). Wetlands are defined under the RPO as lands having one or more of the following attributes:

(a) At least periodically, the land supports a predominance of hydrophytes (plants whose habitat is water or very wet places);

(b) The substratum is predominantly undrained hydric soil; or

(c) An ephemeral or perennial stream is present, whose substratum is predominately non-soil and such lands contribute substantially to the biological functions or values of wetlands in the drainage system (County of San Diego, 2007).

Of the four land ownership categories (BLM, Indian, CSLC, and County) occurring within the survey area, wetland areas under County of San Diego jurisdiction occur on private lands; however, the County of San Diego does not have jurisdiction over BLM, CSLC, or Indian lands.

4.0 METHODS

Prior to conducting delineation fieldwork, the following literature and materials were reviewed:

- Aerial photographs of the project site at a scale of 1:4800 with 25-foot elevation contours to determine the potential locations of USACE, RWQCB, CDFG, and County jurisdictional waters or wetlands;
- USGS map (Appendix A) to determine the presence of any "blue line" drainages or other mapped water features;
- United States Fish and Wildlife Service (USFWS) National Wetlands Inventory (NWI) to identify areas mapped as wetland features; and
- USDA NRCS soil mapping data (Figure 6).

Field surveys of the project site were conducted by HDR biologists Allegra Simmons, Brynne Mulrooney, and Scot Chandler over a period of six weeks between August 25, 2009 and March 22, 2010. Weather conditions during delineation fieldwork were conducive for surveying with generally clear skies. Temperatures ranged from 29 degrees to 100 degrees Fahrenheit and winds ranged from 0-30 mph. Individual survey dates, times, and conditions are located in **Appendix C**.

A "survey area" extending 400 feet from turbine center-points and 100 feet from access roads, underground cables, operation and maintenance buildings, and transmission line centerlines, was established to capture drainages within and adjacent to the project footprint. All accessible areas within the survey area were investigated on foot with the exception of private parcels with access restrictions located along Ribbonwood Road, Old Highway 80, and McCain Valley Road and the Manzanita and Campo Indian Reservations. Restricted areas were surveyed from the public right-of-way or from adjacent parcels where access was granted.

USACE Waters of the U.S. and RWQCB Waters of the State were delineated according to the methods outlined in the USACE Wetland Delineation Manual (USACE 1987), the Regional Supplement to the USACE Wetland Delineation Manual: Arid West Region (USACE 2008), and A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United

States (USACE 2008b). County of San Diego wetlands were delineated using the parameters discussed in the County of San Diego's RPO. A feature was determined to be under the jurisdiction of the County of San Diego if it exhibited hydrophytic vegetation, hydric soils, or if an ephemeral or perennial stream was present. Evaluation of CDFG jurisdiction followed guidance in the Fish and Game Code and A Field Guide to Lake and Streambed Alteration Agreements (CDFG 1994). Specifically, CDFG jurisdiction was delineated by measuring the outer width and length boundaries of on-site streambeds which consisted of either the top of bank measurement (bankfull width) or the extent of associated riparian vegetation.

When a potentially jurisdictional drainage was encountered, biologists walked the length of the drainage and recorded the centerline with a Trimble GeoXH GPS unit. The width of each drainage was determined by the OHWM and measured at locations where transitions were apparent. The drainages mapped on the site typically exhibited an OHWM due to a change in substrate from loamy sand in the upland areas to sand within jurisdictional areas. Other data recorded included bank height and morphology, substrate type, and all vegetation within the streambed and riparian vegetation adjacent to the streambed. If the streambed was unvegetated, the vegetation growing on the banks was recorded. Upon completion of fieldwork, all data collected in the field were incorporated into a Geographic Information System (GIS) along with basemap data. The GIS was then used to quantify the extent of jurisdictional areas.

There were no USACE or RWQCB wetlands existing within the survey area due to a lack of hydric soils and lack of significant hydrophytic vegetation.

5.0 RESULTS

The survey area contains Waters of the U.S. (USACE), Waters of the State (CDFG and RWQCB), and wetlands as defined by the County RPO. Although there are Waters of the U.S. in the survey area, there are no USACE jurisdictional wetlands located within the survey area due to a lack of significant hydrophytic vegetation and hydric soils. Jurisdictional boundaries are discussed below and the discussion is arranged by agency. Jurisdictional areas recorded within the survey area are listed in **Appendix D** and detailed characteristics for each drainage are included in **Appendix E**. Representative photographs of drainages located within the survey area are located in **Appendix F**.

5.1 U.S. ARMY CORPS OF ENGINEERS AND REGIONAL WATER QUALITY CONTROL BOARD JURISDICTIONAL AREAS

The on-site drainages are all ephemeral and contain water flow during and immediately following storm events. Evidence of hydrology was noted within the survey area and consisted of sediment deposits and a change in substrate. The jurisdictional portions of most of the on-site drainages were largely non-vegetated and the soils consisted of sand. There are no USACE jurisdictional wetlands located within the survey area due to a lack of hydric soils and significant hydrophytic vegetation. Waters of the U.S. occur within the survey area and are identified in **Table 1**.

Table 1. Jurisdictional Areas Located within the Survey Area

Agency	Jurisdiction (acres)
USACE Wetlands	0.00
USACE Waters of the U.S.	6.58
RWQCB Waters of the State	6.58
CDFG Jurisdictional Areas	19.10
County RPO Wetlands	1.86

The RWQCB jurisdiction follows that of the USACE since there are no isolated waters within the survey area. Waters of the State under the jurisdiction of the RWQCB occur within the survey area and are summarized in **Table 1**.

5.2 CALIFORNIA DEPARTMENT OF FISH AND GAME JURISDICTIONAL AREAS

All USACE jurisdictional drainages on the site are considered jurisdictional by the CDFG. CDFG jurisdiction is similar to that of USACE jurisdiction, but also extends to the top of the bank and encompasses riparian vegetation when present. CDFG jurisdictional areas occurring within the survey area are summarized in **Table 1**.

5.3 COUNTY OF SAN DIEGO RESOURCE PROTECTION ORDINANCE JURISDICTIONAL AREAS

County of San Diego wetlands occur throughout the survey area and directly correspond to all USACE Waters of the U.S. occurring on private lands. County of San Diego RPO jurisdictional areas occurring within the survey area are summarized in **Table 1**.

6.0 IMPACTS TO JURISDICTIONAL AREAS

Both permanent and temporary impacts to USACE, RWQCB, CDFG, and County RPO jurisdictional areas would result from project implementation (including the proposed project and all alternatives). Permanent impacts would occur from the construction of turbine pads, proposed new and improved roads, O&M and collector substation facility, overhead and underground collection cable system, overhead 138 kV transmission lines, and the parking area. Temporary impacts would result from the construction of a concrete batch plant and haul route through McCain Valley Road. Locations of impacted drainages are identified by jurisdiction in **Appendix D**. Impacts to jurisdictional areas are summarized and separated by the proposed project and alternatives in **Tables 2 through 7**.

7.0 CONCLUSIONS AND RECOMMENDATIONS

This report presents HDR's best effort at determining the jurisdictional boundaries using the most recent regulations, policy, and guidance from the regulatory agencies. However, as with any jurisdictional delineation, only the regulatory agencies can make a final determination of jurisdictional boundaries.

The proposed project may involve impacting on-site jurisdictional drainages and, therefore, authorizations from the USACE, RWQCB, and CDFG may be required.

Table 2. Impacts to Jurisdictional Areas within the Proposed Project with Proposed T-Line

Agency	Existing Jurisdiction (acres)	Proposed Project with Proposed T-Line and Proposed Substation (acres)		Proposed Project with Proposed T-Line and Deviant Substation (acres)		Total Impacts (with Proposed Substation) (acres)	Total Impacts (with Deviant Substation) (acres)
		Temporary	Permanent	Temporary	Permanent		
USACE Wetlands	0	0	0	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.22	0.19	0.22	0.19	0.41	0.41
CDFG Jurisdictional Areas	19.10	0.56	0.33	0.56	0.33	0.89	0.89
County RPO Wetlands	1.86	0.02	0.03	0.02	0.03	0.06	0.06

Table 3. Impacts to Jurisdictional Areas within the Alternate Transmission Line Alternative #1

Agency	Existing Jurisdiction (acres)	Alternate Transmission Line Alternative #1 with Proposed Substation (acres)		Alternate Transmission Line Alternative #1 with Deviant Substation (acres)		Total Impacts (with Proposed Substation) (acres)	Total Impacts (with Deviant Substation) (acres)
		Temporary	Permanent	Temporary	Permanent		
USACE Wetlands	0	0	0	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.28	0.19	0.28	0.19	0.47	0.47
CDFG Jurisdictional Areas	19.10	1.77	0.34	1.77	0.34	2.10	2.10
County RPO Wetlands	1.86	0.10	0.03	0.10	0.03	0.13	0.13

Table 4. Impacts to Jurisdictional Areas within the Alternate Transmission Line #2 and Collector Substation Alternative

Agency	Existing Jurisdiction (acres)	Alternate Transmission Line #2 and Collector Substation Alternative (acres)		Total Impacts (acres)
		Temporary	Permanent	
USACE Wetlands	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.30	0.19	0.49
CDFG Jurisdictional Areas	19.10	0.65	0.33	0.98
County RPO Wetlands	1.86	0.03	0.03	0.06

Table 5. Impacts to Jurisdictional Areas within the Alternate Transmission Line #3 and Collector Substation Alternative

Agency	Existing Jurisdiction (acres)	Alternate Transmission Line #3 and Collector Substation Alternative (acres)		Total Impacts (acres)
		Temporary	Permanent	
USACE Wetlands	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.38	0.19	0.56
CDFG Jurisdictional Areas	19.10	1.90	0.34	2.23
County RPO Wetlands	1.86	0.10	0.03	0.13

Table 6. Impacts to Jurisdictional Areas within the O&M Facility Location #1 Alternative

Agency	Existing Jurisdiction (acres)	O&M Facility Location #1 Alternative (acres)		Total Impacts (acres)
		Temporary	Permanent	
USACE Wetlands	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.31	0.20	0.51
CDFG Jurisdictional Areas	19.10	0.66	0.35	1.00
County RPO Wetlands	1.86	0.03	0.04	0.07

Table 7. Impacts to Jurisdictional Areas within the O&M Facility Location #2 Alternative

Agency	Existing Jurisdiction (acres)	O&M Facility Location #2 Alternative (acres)		Total Impacts (acres)
		Temporary	Permanent	
USACE Wetlands[1]	0	0	0	0
USACE Waters of the U.S. and RWQCB Waters of the State	6.58	0.30	0.19	0.49
CDFG Jurisdictional Areas	19.10	0.65	0.33	0.98
County RPO Wetlands	1.86	0.03	0.03	0.06

7.1 U.S. ARMY CORPS OF ENGINEERS

The USACE may issue two types of permits under Section 404 of the CWA to authorize the discharge of dredged or fill material into Waters of the US: a nation-wide permit (NWP) or an individual permit (IP). NWPs are general permits for specific categories of activities that result in minimal impacts to aquatic resources. NWP 12 authorizes impacts for the construction, maintenance, repair, and removal of utility lines and associated facilities. Impacts to Waters of the U.S. must not exceed 0.5 acre to utilize NWP 12. To qualify for NWP authorization the project must comply with the NWP General Conditions. The proposed project, and three of the alternatives **(Tables 3, 4, and 7)**, will impact less than 0.5 acre of Waters of the U.S., thus a NWP would be appropriate for the Tule Wind Project if any of these alternatives are chosen. A more detailed analysis of the proposed project's effect (including alternatives) on the general conditions is included in **Appendix G**.

For projects with impacts greater than 0.5 acre, the USACE would require an individual permit. Individual permits require detailed analysis and compliance with the USACE formal review process. This process includes preparation of an alternatives analysis as required by EPA Section 404(b)(1) Guidelines and the National Environmental Policy Act (NEPA), and requires compliance with NEPA's environmental review process. This process provides opportunities for public notice and comment. The USACE must also comply with other federal regulations, including the federal Endangered Species Act, EPA Section 404(b)(1) Guidelines, NEPA, and Section 106 of the National Historic Preservation Act. BLM will review this project under NEPA.

7.2 CALIFORNIA DEPARTMENT OF FISH AND GAME

A 1602 Streambed Alteration Agreement is required for all activities that alter streams and lakes and their associated habitat. In addition to the formal application materials and fee, a copy of the appropriate environmental impact analysis document required for compliance with CEQA must be included with the application. Processing time generally does not exceed 60 days unless there are extenuating circumstances.

7.3 REGIONAL WATER QUALITY CONTROL BOARD

The project is within the jurisdiction of the San Diego (Region 9) and Colorado River (Region 7) RWQCB districts. Under Section 401 of the CWA, the RWQCB must issue a 401 Water Quality Certification to certify that the discharge of dredged or fill material into Waters of the U.S. does not violate state water quality standards. Because the State does not have authority over Indian lands, the EPA will issue the 401 Water Quality Certification for the portion of the project on Indian lands.

8.0 REFERENCES

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APPENDIX A

USGS Map (Map Pocket)

APPENDIX B
Dominant Botanical Species Identified in Drainages

Appendix B
Dominant Botanical Species Identified in Drainages

Family Name	*Scientific Name*	Common Name
Agavaceae	*Hesperoyucca whipplei*	chaparral candle
	Yucca schidigera	Mojave yucca
Amaranthaceae	*Salsola tragus*	tumbleweed
Anacardiaceae	*Rhus ovata*	sugar bush
	Toxicodendron diversilobum	western poison-oak
Asteraceae (Compositae)	*Ambrosia acanthicarpa*	annual bur-sage
	Ambrosia psilostachya	western ragweed
	Artemisia douglasiana	Douglas mugwort
	Artemisia dracunculus	tarragon
	Artemisia tridentata	big sagebrush
	Baccharis salicifolia	mule-fat
	Baccharis sarothroides	broom baccharis
	Baccharis sergiloides	desert baccharis
	Corethrogyne filaginifolia	common sand-aster
	Deinandra floribunda	Tecate tarplant
	Encelia farinosa	brittlebush
	Ericameria brachylepis	boundary goldenbush
	Ericameria pinifolia	pine goldenbush
	Eriophyllum confertiflorum	long-stem golden-yarrow
	Gutierrezia californica	California matchweed
Boraginaceae	*Amsinckia menziesii*	rancher's fiddleneck
Brassicaceae (Cruciferae)	*Brassica geniculata*	shortpod-mustard
	Lepidium sp.	peppergrass
Cactaceae	*Cylindropuntia californica*	cane cholla
Capparaceae	*Isomeris arborea*	bladderpod
Caprifoliaceae	*Lonicera subspicata*	honeysuckle
Ericaceae	*Arctostaphylos sp.*	manzanita
Ephedraceae	*Ephedra californica*	California ephedra
Fagaceae	*Quercus agrifolia*	live oak
	Quercus berberidifolia	scrub oak
	Quercus cornelius-mulleri	desert scrub oak
Garryaceae	*Garrya sp.*	silk tassel
Heliotropaceae	*Heliotropium curassavicum*	salt heliotrope
Hydrophyllacea	*Eriodictyon trichocalyx*	shiny-leaf yerba santa
Lamiaceae (Labiatae)	*Salvia apiana*	white sage
	Salvia carduacea	thistle sage
	Salvia mellifera	black sage

Family Name	*Scientific Name*	Common Name
Liliaceae	*Dichelostemma capitatum*	blue dicks
Nolinaceae	*Nolina parryi*	Parry's bear-grass
Onagraceae	*Epilobium canum*	California fuchsia
Orobanchaceae	*Cordylanthus rigidus*	dark-tipped bird's beak
Poaceae (Gramineae)	*Avena fatua*	wild oat
	Bromus diandrus	ripgut brome
	Bromus spp.	bromes
	Distichlis spicata	saltgrass
	Muhlenbergia rigens	deergrass
	Polypogon monspeliensis	annual beard grass
Phrymaceae	*Mimulus cardinalis*	scarlet monkey flower
Polygonaceae	*Eriogonum davidsonii*	Davidson's buckwheat
	Eriogonum fasciculatum	California buckwheat
	Eriogonum gracile	slender buckwheat
	Eriogonum wrightii	foothill buckwheat
	Rumex sp.	dock
Rhamnaceae	*Ceanothus crassifolius*	thick-leaf-lilac
	Ceanothus greggii	cup-leaf-lilac
	Ceanothus leucodermis	chaparral whitethorn
Rosaceae	*Adenostoma fasciculatum*	chamise
	Adenostoma sparsifolium	red shank
	Cercocarpus betuloides	birch-leaf mountain-mahogany
	Prunus fremontii	desert apricot
	Prunus ilicifolia	holly-leaf cherry
Salicaceae	*Salix laevigata*	red willow
Solanaceae	*Datura wrightii*	western jimson weed
Tamaricaceae	*Tamarix ramosissima*	tamarisk

APPENDIX C
Survey Dates, Times, and Conditions

Appendix C
Survey Dates, Times, and Conditions

Date	Surveyors*	Times	Temp (start/end)	Cloud Cover (start/end)	Wind (start/end)	Task	Notes
8/25/2009	AS/BM/SC	Start: 0900 End: 1715	79°/ 90°	0%/ 0%	2-3 mph/ 2-4 mph	Wetland Delineation	—
8/26/2009	AS/BM/SC	Start: 0800 End: 1530	81°/ 88°	0%/ 0%	1-2 mph/ 4-5 mph	Wetland Delineation	—
8/27/2009	AS/BM/SC	Start: 0800 End: 1700	80°/ 90°	0%/ 0%	1-3 mph/ 1-3 mph	Wetland Delineation	—
8/28/2009	AS/BM/SC	Start: 0830 End: 1600	80°/ 100°	0%/ 0%	0 mph/ 0 mph	Wetland Delineation	—
9/28/2009	AS/BM	Start: 0900 End: 1630	79°/ 89°	0%/ 0%	4-5 mph/ 10-15 mph	Wetland Delineation	—
9/29/2009	AS/BM	Start: 0800 End: 1640	68°/ 84°	0%/ 75%	4-5 mph/ 15 mph	Wetland Delineation	—
9/30/2009	AS/BM	Start: 0845 End: 1700	71°/ 82°	0%/ 0%	3-4 mph/ 15-20 mph	Wetland Delineation	—
10/1/2009	AS/BM	Start: 0810 End: 1600	63°/ 70°	0%/ 0%	5-10 mph/ 8-10 mph	Wetland Delineation	—
10/19/2009	AS/BM/LA/SC	Start: 0920 End: 1700	68°/ 70°	0%/ 0%	10-15 mph/ 25-30 mph	Wetland Delineation	—
10/20/2009	AS/BM/LA	Start: 0830 End: 1600	55°/ 71°	0%/ 0%	2-3 mph/ 3-5 mph	Wetland Delineation	—
10/21/2009	AS/BM/LA/SC	Start: 0830 End: 1730	62°/69°	0%/ 0%	2-3 mph/ 2-3 mph	Wetland Delineation	—
10/22/2009	AS/BM/LA	Start: 0830 End: 1630	70°/ 70°	0%/ 0%	3-5 mph/ 3-5 mph	Wetland Delineation	—
11/2/2009	AS/BM/LA/SC	Start: 0915 End: 1630	75°/ 70°	0%/ 20%	5-7 mph/ 10-12 mph	Wetland Delineation	—
11/3/2009	AS/BM/LA	Start: 0800 End: 1500	70°/ 82°	0%/ 0%	3-5 mph/ 1-3 mph	Wetland Delineation	—
11/4/2009	AS/BM/JE/LA	Start: 0900 End: 1430	75°/ 78°	35%/ 35%	0 mph/ 0 mph	Wetland Delineation	—
11/16/2009	AS/BM	Start: 0910 End: 1630	65°/ 60°	0%/ 0%	10-12 mph/ 2-3 mph	Wetland Delineation	—
11/17/2009	AS/BM	Start: 0750 End: 1630	60°/ 60°	0%/ 0%	5 mph/ 0 mph	Wetland Delineation	—
11/18/2009	AS/BM	Start: 0800 End: 1600	68°/ 65°	0%/ 0%	5-7 mph/ 12-15 mph	Wetland Delineation	—
11/19/2009	AS/BM	Start: 0800 End: 1530	65°/ 68°	0%/ 0%	5-7 mph/ 15-20 mph	Wetland Delineation	—
11/23/2009	BM/SC	Start: 0800 End: 1600	55°/ 60°	0%/ 0%	20-25 mph/ 20-25 mph	Wetland Delineation	—
11/24/2009	BM/SC	Start: 0730 End: 1630	55°/ 60°	0%/ 0%	10-15 mph/ 15-20 mph	Wetland Delineation	—

Date	Surveyors*	Times	Temp (start/end)	Cloud Cover (start/end)	Wind (start/end)	Task	Notes
11/30/2009	AS/BM/JE/LA	Start: 0730 End: 1630	42°/ 42°	0%/ 0%	15-20 mph/ 15-20 mph	Wetland Delineation	Snow on ground
12/1/2009	AS/BM/JE/LA	Start: 0800 End: 1630	50°/ 50°	0%/ 20%	3-5 mph/ 5-10 mph	Wetland Delineation	Snow on ground
12/2/2009	AS/JE	Start: 0800 End: 1530	29°/ 62°	1%/ 0%	0 mph/ 0 mph	Wetland Delineation	Snow on ground
1/11/2010	BM/BE	Start: 0900 End: 1600	65°/ 65°	30%/ 30%	5-10 mph/ 5-10 mph	Wetland Delineation	—
1/12/2010	BM/BE	Start: 0900 End: 1600	65°/ 65°	75%/ 75%	5-10 mph/ 5-10 mph	Wetland Delineation	—
1/13/2010	AS/BM	Start: 0900 End: 1400	50°/ 50°	75%/ 75%	15-20 mph/ 15-20 mph	Wetland Delineation	Light drizzle
3/22/2010	BM/SC	Start: 1100 End: 1845	75°/ 57°	30%/100%	5-10 mph/ 25-30 mph	Wetland Delineation	—

* Surveyor acronyms: (AS) Allegra Simmons, (BM) Brynne Mulrooney, (SC) Scot Chandler, (LA) Lori Arena, (JE) Joel Engleson, (BE) Brent Eastty

APPENDIX D

Jurisdictional Delineation Results and Impact Map (Map Pocket)

APPENDIX E
Drainage Results Table

Appendix E. Drainage Results Table

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
1	Sand/rock	Vertically incised	Holly-leaf cherry, California buckwheat, Parry's bear-grass and birch-leaf mountain-mahogany within channel and on banks.	50.0	327	--	2.0	0.015	--	--	--	--	Indian Reservation
2a*	Sand	Gently to steeply sloping	Channel vegetated with deergrass. Banks vegetated with foothill buckwheat, oak sp., birch-leaf mountain-mahogany, manzanita sp., Rancher's fiddleneck and California buckwheat.	3.0	447	1	1.0	0.010	6.0	0.062	--	--	Federal (BLM)
2b*		Gently sloping	Channel largely unvegetated. Banks vegetated with desert scrub oak, birch-leaf mountain-mahogany, silk tassel, chamise, shiny-leaf yerba santa, California buckwheat, cup-leaf lilac and manzanita sp.	3.0	515	--	1.0	0.012	6.0	0.071	--	--	Federal (BLM)
3	Sand	Gently sloping	Channel largely unvegetated. Banks vegetated with chamise, birch-leaf mountain-mahogany, desert scrub oak, cup-leaf lilac, silk tassel, Parry's bear-grass and deergrass.	3.0	230	--	1.0	0.005	8.0	0.042	--	--	Indian Reservation/ Federal (BLM)
4a*	Coarse sand to cobble	Steeply to gently sloping	Channel sparsely vegetated with deergrass, big sagebrush, California buckwheat and foothill buckwheat. Banks vegetated with big sagebrush, chaparral yucca, chamise, sugarbush, holly-leaf cherry, birch-leaf mountain-mahogany, dock and *Scirpus* sp. Three individuals of arroyo willow within drainage.	4.0	473	--	2.0	0.022	--	--	--	--	Indian Reservation
4b*				0.5	572	--	1.0	0.013	--	--	--	--	Indian Reservation
4c*				3.0	737	2	2.0	0.034	--	--	--	--	Indian Reservation
4d				3.0	61	--	1.5	0.002	--	--	--	--	Indian Reservation
5a	Sand	Steeply to gently sloping	Channel largely unvegetated. Banks vegetated with cup-leaf lilac, chamise, birch-leaf mountain-mahogany and chaparral yucca.	0.5	567	--	1.0	0.013	2.0	0.026	--	--	Indian Reservation/ Federal (BLM)
5b			Channel sparsely vegetated with deergrass. Banks vegetated with big sagebrush, chaparral yucca, chamise, sugarbush, holly-leaf cherry, birch-leaf mountain-mahogany, shiny-leaf yerba santa and bulrush.	1.0	244	--	1.5	0.008	--	--	--	--	Indian Reservation
6	Sand	Steeply sloping	Channel vegetated with deergrass. Banks vegetated with big sagebrush and birch-leaf mountain-mahogany.	1.0	511	--	1.0	0.012	--	--	--	--	Indian Reservation
7a*	Sand	Steeply sloping	Channel vegetated with wild oat and bromes. Banks vegetated with foothill buckwheat, big sagebrush, bromes, deergrass, birch-leaf mountain-mahogany, wild oat, chamise and holly-leaf cherry.	5.0	534	3	1.0	0.012	--	--	--	--	Indian Reservation
7b*				2.0	626	--	1.5	0.022	--	--	--	--	Indian Reservation
7c*				2.0	144	--	1.0	0.003	--	--	--	--	Indian Reservation
8	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with sugarbush, chamise, birch-leaf mountain-mahogany, scrub oak, holly-leaf cherry, big sagebrush, deergrass and bromes.	1.0	1124	--	1.0	0.026	3.0	0.077	--	--	Federal (BLM)
9	Sand	Gently sloping	Channel vegetated with bromes. Banks vegetated with deergrass, big sagebrush, foothill buckwheat and bromes.	0.5	208	4	1.0	0.005	2.0	0.010	--	--	Federal (BLM)
10	Sand	Steeply sloping	Channel vegetated with bromes. Banks vegetated with deergrass, big sagebrush, foothill buckwheat and bromes.	2.0	778	--	1.0	0.018	3.0	0.054	--	--	Federal (BLM)
11	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with chamise, scrub oak, birch-leaf mountain-mahogany and manzanita spp.	1.0	492	--	1.0	0.011	3.0	0.034	--	--	Federal (BLM)
12	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with manzanita sp., birch-leaf mountain-mahogany, chamise, cup-leaf lilac, big sagebrush and scrub oak. One individual arroyo willow occurs within drainage.	1.0	1658	--	1.0	0.038	3.0	0.113	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
13	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with chaparral yucca, shiny-leaf yerba santa, cup-leaf lilac, birch-leaf mountain-mahogany and chamise.	1.0	841	5	2.0	0.039	3.0	0.058	--	--	Federal (BLM)
14*	Sand with loam	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, foothill buckwheat, birch-leaf mountain-mahogany, chaparral yucca, tarragon, scrub oak and chamise.	30.0	3700	--	2.0	0.170	6.0	0.510	--	--	Federal (BLM)
15	Sandy loam	Steeply sloping	Channel is unvegetated. Banks vegetated with chamise, California buckwheat and white sage.	4.0	353	--	2.0	0.015	10.0	0.076	--	--	State
16	Rock/cobble bed with sandy soil	Gently sloping	Channel is unvegetated. Banks vegetated with chamise, California buckwheat and holly-leaf cherry,	4.0	60	--	2.0	0.003	12.0	0.016	--	--	State
17a	Sand	Steeply sloping	Channel is sparsely vegetated with bromes. Banks vegetated with big sagebrush, ripgut brome, wild oat and live oak. Two individuals of arroyo willow occur within drainage.	6.0	206	6	1.0	0.005	10.0	0.053	--	--	State
17b			Channel is sparsely vegetated with wild oat and deergrass. Banks vegetated with wild oat, live oak, deergrass and California buckwheat.	6.0	94	--	2.0	0.004	12.0	0.026	--	--	State
17c			Channel is sparsely vegetated with deergrass. Banks vegetated with deergrass, tarragon and California buckwheat.	8.0	80	--	2.0	0.004	15.0	0.042	--	--	State
17d	Sand	Gently sloping	Channel is sparsely vegetated with bromes and wild oat. Banks vegetated with bromes, wild oat and California buckwheat.	4.0	300	--	2.0	0.005	8.0	0.021	--	--	State
18	Sandy loam	Gently sloping	Channel is unvegetated. Banks vegetated with scrub oak, holly-leaf cherry, chamise and birch-leaf mountain-mahogany.	7.0	161	--	2.0	0.007	15.0	0.055	--	--	State
19	Sandy loam	Gently sloping	Channel is unvegetated. Banks vegetated with chamise and birch-leaf mountain-mahogany.	6.0	372	--	1.5	0.013	13.0	0.108	--	--	State
20*	Sand	steeply sloping	Channel is largely unvegetated. Banks vegetated with California buckwheat, desert baccharis, birch-leaf mountain-mahogany, chamise, scrub oak, thick-leaf lilac, holly-leaf cherry and sugarbush.	1.5	340	--	1.0	0.008	3.0	0.023	--	--	Federal (BLM)
21	Coarse sand	Steeply sloping	Channel is unvegetated. Banks vegetated with broom baccharis, California fuchsia, birch-leaf mountain-mahogany, southern honeysuckle, tarragon and live oak.	3.0	348	--	3.0	0.023	8.0	0.075	--	--	Federal (BLM)
22	Sand	Steeply sloping	Channel is vegetated with wild oat and bromes. Banks vegetated with big sagebrush, California buckwheat, foothill buckwheat, sugarbush, chamise, desert baccharis, scrub oak, snake weed, deergrass and live oak. Individuals of red willow and arroyo willow occur on banks.	4.0	480	7	3.0	0.033	8.0	0.114	--	--	Federal (BLM)
23	Sand	Vertically incised to steeply sloping	Channel moderately vegetated with bromes and slender wooly buckwheat. Banks vegetated with California buckwheat, foothill buckwheat, manzanita sp., tarragon, chamise, boundary goldenbush, desert baccharis, shiny-leaf yerba santa, chaparral whitethorn and pine goldenbush.	5.0	357	--	2.0	0.016	6.0	0.049	--	--	Federal (BLM)
24	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with bromes, California buckwheat, foothill buckwheat and birch-leaf mountain-mahogany.	1.0	344	--	1.0	0.008	2.5	0.020	--	--	Federal (BLM)
25*	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with bromes, California buckwheat, foothill buckwheat and birch-leaf mountain-mahogany.	0.5	447	8	0.5	0.005	2.0	0.020	--	--	Federal (BLM)
26	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with bromes, California buckwheat and birch-leaf mountain-mahogany.	0.5	351	--	1.0	0.008	1.5	0.012	--	--	Federal (BLM)
27	Sand	Gently sloping	Banks vegetated with chamise, California buckwheat and cup-leaf lilac. Channel vegetated with bromes.	0.5	350	9	1.0	0.008	2.0	0.016	--	--	Federal (BLM)
28	Sand	Steeply sloping	Channel vegetated with bromes, annual beard grass, peppergrass and desert baccharis. Banks vegetated with live oak, desert baccharis, big sagebrush, California buckwheat, holly-leaf cherry, boundary goldenbush, cup-leaf lilac and bromes.	3.0	685	--	1.0	0.016	2.5	0.167	--	--	Federal (BLM)
29	Sand	Gently sloping to steeply sloping	Channel is unvegetated. Banks vegetated with bromes, desert baccharis, birch-leaf mountain-mahogany, scrub oak, California buckwheat, holly-leaf cherry, foothill buckwheat and western ragweed.	0.5	410	--	1.0	0.009	3.0	0.028	--	--	Federal (BLM)
30	Sand	Gently sloping to steeply sloping	Channel vegetated with bromes. Banks vegetated with birch-leaf mountain-mahogany, chamise, holly-leaf cherry, desert baccharis, California buckwheat, foothill buckwheat, shiny-leaf yerba santa and scrub oak.	1.5	366	--	1.5	0.013	3.0	0.025	--	--	Federal (BLM)

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							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
31	Sand	Steeply sloping	Channel vegetated with bromes. Banks vegetated with birch-leaf mountain-mahogany, scrub oak, foothill buckwheat, California buckwheat, chamise and shiny-leaf yerba santa.	1.0	448	10	1.0	0.010	2.0	0.021	--	--	Federal (BLM)
32a	Sand	Gently sloping	Channel sparsely vegetated with western ragweed. Banks vegetated with big sagebrush, bromes, foothill buckwheat and desert baccharis. One individual of arroyo willow occurs within drainage.	0.5	169	11	1.0	0.004	1.5	0.006	--	--	Federal (BLM)
32a-culvert				--	62	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
32b	Sand		Channel vegetated with bromes. Banks vegetated with big sagebrush, desert baccharis, tarragon, snake weed, foothill buckwheat, birch-leaf mountain-mahogany and live oak.	0.5	125	--	1.0	0.003	1.0	0.003	--	--	Federal (BLM)
33a*	Sand	Gently sloping	Channel sparsely vegetated bromes. Banks vegetated with desert baccharis, shiny-leaf yerba santa, California buckwheat, boundary goldenbush, birch-leaf mountain-mahogany, tarragon, slender wooly buckwheat, big sagebrush, scarlet monkey flower and arroyo willow.	0.5	324	--	1.0	0.007	2.0	0.015	--	--	Federal (BLM)
33b*	Sand		Channel sparsely vegetated bromes. Banks vegetated with tarragon, big sagebrush, desert baccharis, foothill buckwheat, shiny-leaf yerba santa, sugarbush and manzanita sp.	0.5	572	12	3.0	0.039	8.0	0.104	--	--	Federal (BLM)
33b-culvert*				--	119	--	2.0	0.005	2.0	0.005	--	--	Federal (BLM)
33c*	Sand		Channel sparsely vegetated bromes. Banks vegetated with desert baccharis, California buckwheat, tarragon, big sagebrush and shiny-leaf yerba santa.	0.5	100	--	1.0	0.002	1.0	0.002	--	--	Federal (BLM)
34	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with scrub oak, California buckwheat, holly-leaf cherry, California ephedra, foothill buckwheat, boundary goldenbush and Mojave yucca.	1.0	368	--	2.0	0.017	4.0	0.034	--	--	Federal (BLM)
35	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with birch-leaf mountain-mahogany, scrub oak, Mojave yucca, cane cholla, slender wooly buckwheat, California buckwheat, holly-leaf cherry, sugarbush, snake weed, chamise, desert baccharis, big sagebrush and tarragon.	0.5	421	--	1.0	0.010	2.0	0.020	--	--	Federal (BLM)
36	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with birch-leaf mountain-mahogany, scrub oak, Mojave yucca, cane cholla, slender wooly buckwheat, California buckwheat, holly-leaf cherry, sugarbush, snake weed, chamise, desert baccharis, big sagebrush and tarragon.	0.5	131	--	1.0	0.003	1.0	0.003	--	--	Federal (BLM)
37	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with birch-leaf mountain-mahogany, California buckwheat, chamise and manzanita sp.	0.5	235	13	1.0	0.005	2.0	0.011	--	--	Federal (BLM)
38	Coarse sand	Gently sloping	Channel is largely unvegetated. Banks vegetated with California buckwheat, scrub oak, cane cholla and boundary goldenbush.	1.0	556	--	1.0	0.013	3.0	0.038	--	--	Federal (BLM)
39a	Coarse sand	Gently sloping	Channel is largely unvegetated. Banks vegetated with California buckwheat, scrub oak, boundary goldenbush, holly-leaf cherry, birch-leaf mountain-mahogany and sugarbush.	1.5	260	14	4.0	0.024	6.0	0.036	--	--	Federal (BLM)
39b				1.5	349	--	8.0	0.064	10.0	0.080	--	--	Federal (BLM)
40	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, cane cholla and chamise.	0.5	73	--	0.5	0.001	1.0	0.002	--	--	Federal (BLM)
41	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with chamise, California buckwheat, and sugarbush.	0.5	972	--	1.0	0.022	2.0	0.045	--	--	Federal (BLM)
42	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with chamise, California buckwheat, holly-leaf cherry and boundary goldenbush.	0.5	355	--	1.0	0.008	1.0	0.008	--	--	Federal (BLM)
43	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with slender wooly buckwheat, California buckwheat, scrub oak, birch-leaf mountain-mahogany, cane cholla, foothill buckwheat, chamise and California ephedra.	1.0	1240	--	1.0	0.028	2.0	0.057	--	--	Federal (BLM)
44*	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with birch-leaf mountain-mahogany, scrub oak, California buckwheat, slender wooly buckwheat, holly-leaf cherry and bromes.	1.0	386	15	8.0	0.071	10.0	0.103	--	--	Federal (BLM)
45*	Sand	Steeply sloping	Channel is sparsely vegetated with desert baccharis and big sagebrush. Banks vegetated with desert baccharis and big sagebrush.	1.0	484	16	1.0	0.011	2.0	0.022	--	--	Federal (BLM)
46	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat and broom baccharis.	0.5	362	--	1.0	0.008	2.0	0.017	--	--	Federal (BLM)

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							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
47	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, sugarbush, desert baccharis, live oak and slender wooly buckwheat.	0.5	375	--	1.0	0.009	1.0	0.024	--	--	Federal (BLM)
48	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, cane cholla, bromes, sugarbush, boundary goldenbush, chamise and thick-leaf lilac.	0.5	193	--	1.0	0.004	1.0	0.004	--	--	Federal (BLM)
49	Sand	Steeply sloping to no bank	Channel vegetated with big sagebrush, salt heliotrope, foothill buckwheat, snake weed and bladderpod. Banks additionally vegetated with scrub oak and red shank.	1.0	711	--	1.5	0.024	3.0	0.048	--	--	Federal (BLM)
50	Sand	Gently sloping	Channel sparsely vegetated with bromes and deergrass. Banks vegetated with boundary goldenbush, California buckwheat, big sagebrush, cane cholla, deergrass, shiny-leaf yerba santa, scrub oak, annual bur-sage, sugarbush, foothill buckwheat and California ephedra.	0.5	995	17	1.0	0.023	2.0	0.046	1.0	0.002	Federal (BLM)/ County (Private)
51a*	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, common sand-aster, birch-leaf mountain-mahogany, tarragon, California ephedra, big sagebrush, chamise and jimsonweed.	1.0	363	--	1.0	0.008	3.0	0.025	1.0	< 0.001	Federal (BLM)/ County (Private)
51b*	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with slender wooly buckwheat, snake weed, desert baccharis, big sagebrush, California buckwheat, scrub oak and shiny-leaf yerba santa.	1.0	123	--	1.0	0.003	2.0	0.006	--	--	Federal (BLM)
51b-culvert*				--	49	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
51c*	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with slender wooly buckwheat, snake weed, desert baccharis, big sagebrush, California buckwheat, scrub oak, shiny-leaf yerba santa and tarragon.	3.0	659	--	1.0	0.014	6.0	0.091	--	--	Federal (BLM)
52	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with scrub oak, California buckwheat, California ephedra, sugarbush, shiny-leaf yerba santa and snake weed.	0.5	384	--	1.0	0.009	2.0	0.018	--	--	Federal (BLM)
52-culvert				--	13	--	2.0	0.001	2.0	0.001	--	--	Federal (BLM)
53	Sand	Vertically incised to steeply sloping	Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, California ephedra, shiny-leaf yerba santa, big sagebrush and boundary goldenbush.	4.0	99	18	1.0	0.002	3.0	0.007	--	--	Federal (BLM)
54a	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, big sagebrush, scrub oak, California buckwheat, foothill buckwheat, tarragon, cane cholla, chamise and Mojave yucca.	1.0	980	--	1.0	0.022	2.0	0.045	--	--	Federal (BLM)
54b		Gently sloping	Channel sparsely with bromes. Banks vegetated with desert baccharis, deergrass, big sagebrush, tarragon, common sand-aster and slender wooly buckwheat.	0.5	128	--	0.5	0.001	2.0	0.006	--	--	Federal (BLM)
54b-culvert				--	71	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
54c	Sand	Steeply sloping to vertically incised	Channel sparsely with shiny-leaf yerba santa and bromes. Banks vegetated with tarragon, desert baccharis, big sagebrush, deergrass, Mojave yucca and California buckwheat.	1.0	659	19	1.0	0.014	2.0	0.028	--	--	Federal (BLM)
55	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with desert baccharis, California buckwheat, scrub oak and sugarbush.	0.5	158	--	1.0	0.004	2.0	0.007	--	--	Federal (BLM)
56	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with desert baccharis, California buckwheat and foothill buckwheat.	0.5	77	--	0.5	0.001	1.0	0.002	--	--	Federal (BLM)
57a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, desert baccharis, chamise, boundary goldenbush, Mojave yucca, shiny-leaf yerba santa, cane cholla and foothill buckwheat.	1.0	1050	--	1.0	0.024	2.0	0.048	--	--	Federal (BLM)
57b		Steeply sloping	Channel sparsely vegetated with bromes and wild oat. Banks vegetated with desert baccharis, California buckwheat, scrub oak and cane cholla.	2.0	450	--	1.0	0.01	3.0	0.031	--	--	Federal (BLM)
57c		Vertically incised	Channel sparsely vegetated with annual beard grass and bromes. Banks vegetated with salt heliotrope, big sagebrush, desert baccharis and tarragon.	1.0	130	--	1.0	0.003	2.0	0.006	--	--	Federal (BLM)
57c-culvert				--	62	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
57d	Sand	Vertically incised	Channel sparsely vegetated with bromes. Banks vegetated with tarragon, desert baccharis, thistle sage, big sagebrush, foothill buckwheat, scarlet monkey flower, western poison-oak and California buckwheat.	2.0	143	--	2.0	0.007	4.0	0.013	--	--	Federal (BLM)
58	Sand	Gently sloping	Channel sparsely vegetated with bromes and dark-tipped bird's beak. Banks vegetated with desert baccharis, sugarbush, California buckwheat, red shank and birch-leaf mountain-mahogany.	1.0	178	--	1.0	0.004	3.0	0.012	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
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59	Sand	Steeply sloping	Channel vegetated with bromes and annual beard grass. Banks vegetated with desert baccharis, holly-leaf cherry, scrub oak, boundary goldenbush, California buckwheat, annual beard grass and bromes.	2.0	406	20	1.0	0.009	3.0	0.028	--	--	Federal (BLM)
60a	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with California buckwheat and cane cholla.	0.5	90	--	3.0	0.006	3.0	0.006	--	--	Federal (BLM)
60a-culvert				--	36	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
60b	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with California buckwheat and cane cholla.	0.5	83	--	3.0	0.006	3.0	0.006	--	--	Federal (BLM)
60c	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, desert baccharis, cane cholla, big sagebrush, scrub oak, snake weed and tarragon.	0.5	190	--	2.0	0.009	3.0	0.013	--	--	Federal (BLM)
60c-culvert				--	112	--	2.0	0.005	2.0	0.005	--	--	Federal (BLM)
60d		Steeply sloping	Channel is unvegetated. Banks vegetated with snake weed, California buckwheat, foothill buckwheat, desert baccharis, sugarbush and big sagebrush.	1.0	176	--	1.0	0.004	3.0	0.012	--	--	Federal (BLM)
61	Sand	Gently sloping	Channel is sparsely vegetated with bromes. Banks vegetated with desert baccharis, California buckwheat, cane cholla and desert apricot.	0.5	135	21	1.0	0.003	2.0	0.006	--	--	Federal (BLM)
62	Loamy sand	Steeply sloping	Channel is sparsely vegetated with bromes. Banks vegetated with tarragon, California buckwheat, foothill buckwheat, big sagebrush, shiny-leaf yerba santa, boundary goldenbush, desert baccharis and cane cholla.	2.0	474	--	1.0	0.011	3.0	0.032	--	--	Federal (BLM)
63	Sand	Gently sloping	Channel vegetated with shiny-leaf yerba santa, salt heliotrope, bromes and dock. Banks vegetated with California buckwheat, foothill buckwheat, snake weed, scrub oak, boundary goldenbush, deergrass, shiny-leaf yerba santa and tarragon.	0.5	636	--	0.5	0.007	1.0	0.015	--	--	Federal (BLM)
64	Sand	Steeply sloping	Channel vegetated with bromes. Banks vegetated with California buckwheat, scrub oak, sugarbush, boundary goldenbush, chamise, shiny-leaf yerba santa, chaparral yucca, holly-leaf cherry, foothill buckwheat, desert baccharis and red shank.	1.0	809	--	1.0	0.019	2.0	0.037	--	--	Federal (BLM)
65	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with red shank, chamise, holly-leaf cherry and manzanita.	1.0	504	22	1.0	0.012	2.0	0.023	--	--	Federal (BLM)
66	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with red shank and chamise on banks.	1.0	110	--	1.0	0.002	2.0	0.005	--	--	Federal (BLM)
67	Sand	Gently sloping	Channel vegetated with bromes. Banks vegetated with foothill buckwheat, California buckwheat, chamise, scrub oak, boundary goldenbush, desert baccharis, bromes and cane cholla.	0.5	587	--	1.0	0.013	2.0	0.027	--	--	Federal (BLM)
68	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with boundary goldenbush, California buckwheat, common sand-aster, shiny-leaf yerba santa, cane cholla, foothill buckwheat and scrub oak.	0.5	226	23	1.0	0.005	2.0	0.010	--	--	Federal (BLM)
69	Sand	Gently sloping	Channel sparsely vegetated with wild oat and bromes. Banks vegetated with desert baccharis, California buckwheat, foothill buckwheat, shiny-leaf yerba santa, cane cholla, snake weed, wild oat, California ephedra, bromes, desert scrub oak, birch-leaf mountain-mahogany and sugarbush.	0.5	466	--	1.0	0.011	5.0	0.053	--	--	Federal (BLM)
70a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, California buckwheat, tarragon, slender wooly buckwheat, sugarbush, bromes, scrub oak, holly-leaf cherry, cane cholla, big sagebrush, red shank, Mojave yucca, chamise, shiny-leaf yerba santa and thistle sage.	0.5	211	--	1.0	0.005	2.5	0.012	--	--	Federal (BLM)
70a-culvert				--	44	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
70b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, California buckwheat, tarragon, slender wooly buckwheat, sugarbush, bromes, scrub oak, holly-leaf cherry, cane cholla, big sagebrush, red shank, Mojave yucca and chamise.	0.5	221	--	1.0	0.005	2.0	0.010	--	--	Federal (BLM)
70c			Channel vegetated with bromes. Banks vegetated with desert baccharis, snake weed, big sagebrush, deergrass and bromes.	2.0	480	--	1.0	0.011	4.0	0.044	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
71	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, California buckwheat, tarragon, slender wooly buckwheat, sugarbush, bromes, scrub oak, holly-leaf cherry, cane cholla, big sagebrush, red shank, Mojave yucca, chamise, shiny-leaf yerba santa and thistle sage.	0.5	70	24	1.0	0.002	2.0	0.003	--	--	Federal (BLM)
72a*	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with boundary goldenbush, scrub oak, California buckwheat, bromes, snake weed, cane cholla, birch-leaf mountain-mahogany, thistle sage, chamise and Mojave yucca.	0.5	213	--	1.0	0.005	2.0	0.010	--	--	Federal (BLM)
72b*			Channel vegetated with bromes and California ephedra. Banks vegetated with big sagebrush, California buckwheat, birch-leaf mountain-mahogany, scrub oak, snake weed, sugarbush, desert baccharis and tarragon.	1.0	467	25	2.0	0.021	4.0	0.043	--	--	Federal (BLM)
72c*		Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with California ephedra, big sagebrush, desert baccharis, desert apricot, California buckwheat, birch-leaf mountain-mahogany, shiny-leaf yerba santa, boundary goldenbush, snake weed, tarragon, live oak and dark-tipped bird's beak.	1.0	185	--	2.0	0.008	4.0	0.175	2.0	0.008	County (Private)
73*	Sand	Steeply sloping	Channel vegetated with wild oat. Banks vegetated with big sagebrush, desert baccharis, slender wooly buckwheat, California buckwheat, foothill buckwheat, Douglas mugwort, deergrass, manzanita sp., jimsonweed, live oak, boundary goldenbush, dock, sugarbush, birch-leaf mountain-mahogany, scarlet monkey flower and shiny-leaf yerba santa.	1.0	616	--	1.0	0.014	3.0	0.158	1.0	0.014	County (Private)
74	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with boundary goldenbush, scrub oak, California buckwheat, snake weed, cane cholla, birch-leaf mountain-mahogany, thistle sage, chamise and Mojave yucca.	0.5	61	--	0.5	0.001	1.5	0.002	--	--	Federal (BLM)
75	Sand	Vertically incised	Channel sparsely vegetated with bromes. Banks vegetated with boundary goldenbush, scrub oak, California buckwheat, snake weed, cane cholla, birch-leaf mountain-mahogany and thistle sage.	1.0	113	26	1.0	0.003	3.0	0.008	--	--	Federal (BLM)
75-culvert				--	63	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
76	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with boundary goldenbush, scrub oak, California buckwheat, snake weed, cane cholla, birch-leaf mountain-mahogany, thistle sage, chamise and Mojave yucca.	0.5	112	--	0.5	0.001	1.5	0.004	--	--	Federal (BLM)
77a	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, California buckwheat, red shank, holly-leaf cherry, scrub oak, birch-leaf mountain-mahogany, chamise, snake weed, slender wooly buckwheat, desert baccharis, Mojave yucca, mule-fat and common sand-aster.	1.0	230	27	0.5	0.003	2.0	0.011	--	--	Federal (BLM)
77a-culvert				--	63	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
77b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, California buckwheat, red shank, holly-leaf cherry, scrub oak, birch-leaf mountain-mahogany, chamise, snake weed, slender wooly buckwheat, desert baccharis and Mojave yucca.	1.0	324	--	1.0	0.007	3.0	0.022	--	--	Federal (BLM)
77c			Channel sparsely vegetated with bromes and dock. Banks vegetated with red shank, deergrass, slender wooly buckwheat, desert baccharis, scrub oak, big sagebrush, cane cholla, tarragon, snake weed, California buckwheat, California ephedra and dark-tipped bird's beak.	0.5	551	--	1.0	0.013	2.0	0.025	--	--	Federal (BLM)
78a	Sand	Gently sloping	Channel sparsely vegetated with bromes and dock. Banks vegetated with red shank, deergrass, slender wooly buckwheat, desert baccharis, scrub oak, big sagebrush, cane cholla, tarragon, snake weed, California buckwheat, California ephedra and dark-tipped bird's beak.	0.5	148	--	1.0	0.003	2.0	0.007	--	--	Federal (BLM)
78a-culvert				--	33	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
78b	Sand	Vertically incised	Channel sparsely vegetated with bromes and dock. Banks vegetated with red shank, deergrass, slender wooly buckwheat, desert baccharis, scrub oak, big sagebrush, cane cholla, tarragon, snake weed, California buckwheat, California ephedra and dark-tipped bird's beak.	1.0	164	--	1.0	0.004	3.0	0.011	--	--	Federal (BLM)
79	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with live oak, desert baccharis, foothill buckwheat, boundary goldenbush, manzanita sp., California buckwheat, big sagebrush and holly-leaf cherry.	1.0	361	--	1.0	0.008	2.0	0.125	1.0	0.008	County (Private)
80	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, desert baccharis, California ephedra, scrub oak, shiny-leaf yerba santa, foothill buckwheat and California buckwheat.	0.5	505	--	1.0	0.012	2.0	0.023	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
81	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, foothill buckwheat, big sagebrush, cane cholla, boundary goldenbush, holly-leaf cherry and California ephedra.	0.5	115	--	0.5	0.001	2.0	0.005	0.5	0.001	County (Private)
82a*	Sand	Gently sloping	Channel vegetated with big sagebrush, desert baccharis, tarragon, snake weed, deergrass and birch-leaf mountain-mahogany. Banks vegetated with scrub oak and red shank.	6.0	112	--	1.0	0.003	10.0	0.026	--	--	Federal (BLM)
82b*				8.0	122	--	10.0	0.028	75.0	0.203	--	--	Federal (BLM)
83a*	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis and red shank.	7.0	190	--	1.0	0.004	20.0	0.086	--	--	Federal (BLM)
83b*		Gently sloping	Channel vegetated with big sagebrush, desert baccharis, tarragon, snake weed, deergrass and birch-leaf mountain-mahogany. Banks vegetated with scrub oak and red shank.	8.0	126	28	10.0	0.029	75.0	0.217	--	--	Federal (BLM)
83c*			Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	6.0	411	--	13.0	0.122	25.0	0.235	--	--	Federal (BLM)
83d*	Concrete covered with sand	Gently sloping	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	0.2	38	--	3.0	0.003	3.0	0.003	--	--	Federal (BLM)
83e*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	3.0	206	--	4.0	0.019	20.0	0.243	--	--	Federal (BLM)
83e-culvert*				--	101	--	2.0	0.005	2.0	0.005	--	--	Federal (BLM)
83f*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	3.0	283	--	8.0	0.052	20.0	0.155	--	--	Federal (BLM)
83g*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	5.0	352	--	10.0	0.081	30.0	0.243	--	--	Federal (BLM)
83h*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	4.0	612	--	20.0	0.281	40.0	0.562	--	--	Federal (BLM)
83i*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	2.0	389	--	8.0	0.072	12.0	0.107	--	--	Federal (BLM)
83j*	Sand	Vertically incised	Channel and banks vegetated with big sagebrush, desert baccharis, tarragon, California buckwheat, common sand-aster and bromes.	0.5	344	--	20.0	0.158	40.0	0.316	--	--	Federal (BLM)
83k*	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with red shank, big sagebrush and scrub oak.	0.5	530	--	80.0	0.852	80.0	0.852	--	--	Federal (BLM)
83l*	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with big sagebrush, tarragon and live oak.	0.5	664	--	1.0	0.015	2.0	0.030	1.0	0.015	County (Private)
84a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, red shank, boundary goldenbush, holly-leaf cherry, bromes, California buckwheat and Mojave yucca.	1.0	394	--	1.0	0.009	3.0	0.027	--	--	Federal (BLM)
84b				1.0	594	--	0.5	0.007	2.5	0.034	--	--	Federal (BLM)
85a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with red shank, big sagebrush and California buckwheat.	2.0	104	--	1.0	0.002	5.0	0.012	--	--	Federal (BLM)
85a-culvert				--	37	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
85b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, red shank, boundary goldenbush, holly-leaf cherry, California buckwheat and Mojave yucca.	1.0	52	--	3.0	0.004	5.0	0.006	--	--	Federal (BLM)
86a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, red shank, cane cholla and boundary goldenbush.	0.5	46	--	0.5	0.001	1.5	0.002	--	--	Federal (BLM)
86a-culvert				--	39	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
86b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, red shank, boundary goldenbush, holly-leaf cherry and California buckwheat.	1.0	87	--	0.5	0.001	2.5	0.005	--	--	Federal (BLM)
87a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with Tecate tarplant, holly-leaf cherry, foothill buckwheat, big sagebrush, desert baccharis, deergrass and slender wooly buckwheat.	1.0	274	--	1.0	0.006	3.0	0.019	--	--	Federal (BLM)
87a-culvert				--	41	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
87b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, big sagebrush, tarragon, salt heliotrope, red shank, dock, shiny-leaf yerba santa, slender wooly buckwheat, California buckwheat, scrub oak, live oak, Tecate tarplant and foothill buckwheat.	1.0	111	--	1.0	0.003	3.0	0.008	--	--	Federal (BLM)
87b-culvert				--	42	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
87c	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with desert baccharis, big sagebrush, tarragon, salt heliotrope, red shank, dock, shiny-leaf yerba santa, slender wooly buckwheat, California buckwheat, scrub oak and live oak.	1.0	113	29	2.0	0.005	5.0	0.013	--	--	Federal (BLM)
88	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with Tecate tarplant, foothill buckwheat, big sagebrush, desert baccharis and tarragon.	2.0	20	--	3.0	0.001	6.0	0.003	--	--	Federal (BLM)
88-culvert				--	160	--	2.0	0.007	2.0	0.007	--	--	Federal (BLM)
89	Sand	Gently sloping	Channel sparsely vegetated with bromes and dock. Banks vegetated with desert baccharis, big sagebrush, tarragon and red shank.	1.0	154	--	1.0	0.004	3.0	0.011	--	--	Federal (BLM)
90	Sand	Gently sloping	Channel sparsely vegetated with bromes and western ragweed. Banks vegetated with big sagebrush, California buckwheat, tarragon, live oak, bromes and western ragweed.	7.0	156	--	7.0	0.025	20.0	0.142	--	--	Federal (BLM)
91a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with tarragon, big sagebrush, California buckwheat and California ephedra.	1.5	135	--	1.0	0.003	4.0	0.012	--	--	Federal (BLM)
91a-culvert				--	43	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
91b	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with tarragon, big sagebrush, California buckwheat and California ephedra.	4.0	189	--	4.0	0.017	12.0	0.052	--	--	Federal (BLM)
91c			Channel is unvegetated. Banks vegetated with California buckwheat, desert apricot, and scrub oak.	1.0	637	--	1	0.015	2	0.029	--	--	Federal (BLM)
92a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with cane cholla, chamise, California buckwheat and sugarbush.	3.0	136	--	3.0	0.009	10.0	0.031	--	--	Federal (BLM)
92a-culvert				--	35	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
92b	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, holly-leaf cherry, big sagebrush, and cane cholla.	2.0	719	30	2.0	0.033	6.0	0.099	--	--	Federal (BLM)
93a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat and big sagebrush.	1.0	144	--	2.0	0.007	5.0	0.017	--	--	Federal (BLM)
93b	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, cane cholla, California ephedra and bromes.	1.0	31	--	1.5	0.001	2.0	0.001	--	--	Federal (BLM)
94a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, foothill buckwheat, California buckwheat and holly-leaf cherry.	2.0	931	--	1.0	0.021	4.0	0.085	--	--	Federal (BLM)
94a-culvert				--	38	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
94b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, boundary goldenbush, cane cholla and California buckwheat.	3.0	311	--	6.0	0.043	15.0	0.107	--	--	Federal (BLM)
94c	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with cane cholla, California buckwheat, desert apricot, shiny-leaf yerba santa, scrub oak, holly-leaf cherry, slender wooly buckwheat and birch-leaf mountain mahogany.	1.0	307	--	1.0	0.011	3.0	0.014	--	--	Federal (BLM)
95a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with shiny-leaf yerba santa, chamise, California buckwheat, desert baccharis, tarragon, sugarbush, holly-leaf cherry and cane cholla.	2.0	424	--	1.0	0.010	4.0	0.039	1.0	0.010	County (Private)
95b			Channel is unvegetated. Banks vegetated with California buckwheat, desert baccharis and scrub oak.	6.0	269	--	3.0	0.019	15.0	0.092	--	--	Federal (BLM)
95b-culvert				--	68	--	2.0	0.003	2.0	0.003	--	--	Federal (BLM)
95c	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with big sagebrush, tarragon and desert baccharis.	3.0	153	31	1.0	0.004	6.0	0.021	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
96	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, desert apricot, chamise, cane cholla, manzanita, desert baccharis and snake weed.	1.0	172	--	1.0	0.004	3.0	0.012	1.0	0.004	County (Private)
97	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, desert apricot, chamise, cane cholla, manzanita, desert baccharis and snake weed.	1.0	447	--	1.0	0.010	4.0	0.041	1.0	0.010	County (Private)
98	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, desert apricot, chamise, cane cholla, manzanita, desert baccharis and snake weed.	0.5	119	--	0.5	0.001	2.0	0.005	0.5	0.001	County (Private)
99	Sand	Gently sloping	Channel sparsely vegetated with bromes and deergrass. Banks vegetated with big sagebrush, desert baccharis, California buckwheat and deergrass.	0.5	155	--	1.0	0.004	2.0	0.007	1.0	0.004	County (Private)
100	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with snake weed, California buckwheat and big sagebrush.	3.0	644	32	2.0	0.029	7.0	0.102	2.0	0.004	Federal (BLM)/ County (Private)
101a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with big sagebrush, shiny-leaf yerba santa, California ephedra, scrub oak, live oak, chamise and thistle sage.	2.0	165	--	1.0	0.004	4.0	0.015	--	--	Federal (BLM)
101a-culvert				--	52	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
101b	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, California buckwheat, foothill buckwheat, boundary goldenbush and big sagebrush.	2.0	486	33	2.0	0.022	6.0	0.067	2.0	0.013	Federal (BLM)/ County (Private)
102a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, California buckwheat and foothill buckwheat.	2.0	152	--	1.0	0.003	6.0	0.021	--	--	Federal (BLM)
102a-culvert				--	39	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
102b	Sand	Gently sloping		2.0	319	--	1.0	0.007	5.0	0.037	1.0	0.001	Federal (BLM)/ County (Private)
103	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with sugarbush, California ephedra, shiny-leaf yerba santa and California buckwheat.	1.0	155	--	1.0	0.004	3.0	0.011	--	--	Federal (BLM)
104a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, cane cholla and boundary goldenbush.	1.0	176	--	1.0	0.004	3.0	0.012	--	--	Federal (BLM)
104a-culvert				--	47	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
104b	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, cane cholla, boundary goldenbush, red shank, chamise, Mojave yucca and scrub oak.	1.0	226	--	1.0	0.005	3.0	0.016	--	--	Federal (BLM)
105a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with manzanita sp., holly-leaf cherry, Mojave yucca, thistle sage, red shank, cane cholla, scrub oak, big sagebrush, California buckwheat and boundary goldenbush.	1.0	176	--	1.0	0.004	2.0	0.008	--	--	Federal (BLM)
105a-culvert				--	40	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
105b	Sand	Gently sloping		2.0	714	34	1.0	0.016	4.0	0.066	1.0	0.005	Federal (BLM)/ County (Private)
106a	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with red shank and California buckwheat.	3.0	218	--	2.0	0.010	8.0	0.040	--	--	Federal (BLM)
106b			Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, red shank, scrub oak, big sagebrush, California buckwheat and cane cholla.	2.0	255	--	2.0	0.012	5.0	0.029	--	--	Federal (BLM)
106b-culvert				--	45	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
106c	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, red shank, scrub oak, big sagebrush, California buckwheat, cane cholla, and California ephedra.	3.0	149	--	8.0	0.027	15.0	0.051	--	--	Federal (BLM)
107a*	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with big sagebrush and tumbleweed.	5.0	22	--	3.0	0.001	12.0	0.006	3.0	0.001	County (Private)
107b*		Gently sloping	Channel is vegetated with bromes and shortpod mustard. Banks vegetated with big sagebrush and tumbleweed.	1.0	28	35	1.0	0.001	2.0	0.001	1.0	0.133	County (Private)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
108a	Sand	Vertically incised to no bank	Channel is unvegetated. Banks vegetated with shortpod mustard, salt heliotrope, tarragon and big sagebrush.	1.0	966	--	6.0	0.133	12.0	0.266	6.0	0.008	County (Private)
108b	Coarse Sand	Gently sloping to no bank	Channel sparsely vegetated with bromes and shortpod mustard. Banks sparsely vegetated with big sagebrush and desert baccharis.	0.5	165	--	2.0	0.008	6.0	0.023	2.0	0.017	County (Private)
108c				0.5	123	--	6.0	0.017	6.0	0.017	6.0	0.027	County (Private)
108d				0.5	58	--	20.0	0.027	20.0	0.027	20.0	0.019	County (Private)
108e	Sand	Gently sloping	Channel vegetated with shortpod mustard, tarragon, salt heliotrope and bromes.	0.5	422	--	2.0	0.019	6.0	0.058	2.0	0.001	County (Private)
109	Coarse Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, snake weed, chamise, red shank, bromes, big sagebrush, California buckwheat and slender wooly buckwheat.	0.5	1349	--	1.0	0.031	2.0	0.062	--	--	Federal (BLM)
110	Coarse Sand	Gently sloping	Channel is unvegetated. Banks vegetated with California buckwheat, snake weed, chamise, red shank, bromes, big sagebrush, California buckwheat, slender wooly buckwheat	2.0	882	36	1.0	0.020	3.0	0.061	--	--	Federal (BLM)
111a	Sand	Steeply sloping	Channel is unvegetated. Banks vegetated with snake weed, big sagebrush and mule-fat.	2.0	937	--	2.0	0.043	6.0	0.138	2.0	0.043	County (Private)
111b			Channel sparsely vegetated with bromes. Banks vegetated with snake weed, big sagebrush, tarragon, live oak and red shank.	1.0	509	--	3.0	0.035	6.0	0.201	3.0	0.035	County (Private)
112	Sand	Steeply sloping	Channel and banks vegetated with shiny-leaf yerba santa, California buckwheat and Davidson buckwheat.	4.0	136	--	1.0	0.003	3.0	0.009	--	--	Federal (BLM)
113a	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with big sagebrush and live oak.	6.0	508	37	2.0	0.023	3.0	0.143	2.0	0.023	County (Private)
113b			Channel is unvegetated. Banks vegetated with shiny-leaf yerba santa, Davidson buckwheat, snake weed, big sagebrush and chamise.	1.5	1910	--	1.0	0.044	3.0	0.130	1.0	0.004	Federal (BLM)/ County (Private)
114	NO DATA	No bank	Forested wetland vegetated with live oak, arroyo willow and big sagebrush.	N/A		--	N/A	N/A	32.0	0.250	--	--	County (Private)
115a	Sand	Gently sloping	Channel sparsely vegetated with bromes and shortpod mustard. Banks vegetated with California ephedra, California buckwheat, big sagebrush, red shank, shortpod mustard and bromes.	3.0	248	--	2.0	0.011	2.0	0.028	--	--	Federal (BLM)
115b	Sand	Gently sloping		4.0	92	--	2.0	0.004	2.0	0.017	--	--	Federal (BLM)
115c	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, California buckwheat, chamise, big sagebrush, scrub oak, bromes, shiny-leaf yerba santa and snake weed.	1.0	247	--	1.0	0.006	3.0	0.267	--	--	Federal (BLM)
115c-culvert				--	41	--	2.0	0.002	2.0	0.002	--	--	Federal (BLM)
115d	Sand	Steeply sloping to gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, California buckwheat, chamise, big sagebrush, scrub oak, bromes, shiny-leaf yerba santa, snake weed, cane cholla and California ephedra.	0.5	155	--	2.0	0.007	5.0	0.018	--	--	Federal (BLM)
116	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with thistle sage, California buckwheat, chamise, big sagebrush, scrub oak, bromes, shiny-leaf yerba santa, snake weed, cane cholla, California ephedra and birch-leaf mountain-mahogany.	0.5	251	--	3.0	0.017	5.0	0.029	--	--	Federal (BLM)
117a	Sandy Loam	Gently sloping	Channel and banks are unvegetated.	0.0	552	38	8.0	0.101	18.0	0.227	8.0	0.101	County (Private)
117a-culvert				--	70	--	2.0	0.003	2.0	0.003	2.0	0.003	County (Private)
117b	Clay-Loam	Gently sloping to vertically incised	Channel sparsely vegetated with shortpod mustard. Banks vegetated with big sagebrush, California buckwheat, shiny-leaf yerba santa, shortpod mustard and tarragon.	7.0	64	--	3.0	0.004	18.0	0.026	3.0	0.004	County (Private)
117c				7.0	1154	--	30.0	0.333	30.0	0.333	30.0	0.333	County (Private)
117c-culvert				--	29	--	2.0	0.001	2.0	0.001	2.0	0.001	County (Private)
117d	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, snake weed and bromes.	0.5	345	--	1.0	0.008	3.0	0.024	--	--	State
117e		Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, tarragon, snake weed and bromes.	0.5	320	--	1.0	0.007	3.0	0.022	--	--	State
117f	Sand	Vertically incised	Channel vegetated with big sagebrush, shiny-leaf yerba santa and tarragon. Banks vegetated with live oak.	7.0	1268	--	2.0	0.058	20	0.582	2.0	0.058	County (Private)
118a	Sand	Gently sloping	Channel sparsely vegetated with bladderpod. Banks vegetated with California buckwheat, bladderpod, snake weed and big sagebrush.	1.5	334	--	1.0	0.008	0.3	0.002	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
118a-culvert				--	24	--	2.0	0.001	2.0	0.001	--	--	Federal (BLM)
118b	Sand	Gently sloping	Channel sparsely vegetated with bladderpod. Banks vegetated with California buckwheat, bladderpod, snake weed and big sagebrush.	5.0	130	--	3.0	0.009	6.0	0.018	3.0	0.008	Federal (BLM)/ County (Private)
119	Sand	None	Channel is unvegetated. Banks vegetated with big sagebrush and shortpod mustard.	0.0	366	--	4.0	0.034	4.0	0.034	4.0	0.034	County (Private)
120	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with scrub oak, chamise, California buckwheat, bladderpod, snake weed, big sagebrush and shiny-leaf yerba santa.	1.5	988	39	1.0	0.023	2.0	0.045	1.0	0.023	County (Private)
121	Sand	Gently sloping	Channel is unvegetated. Banks vegetated with snake weed, California buckwheat and slender wooly buckwheat.	1.5	279	--	1.0	0.006	3.0	0.019	1.0	0.006	County (Private)
122	Sand	Gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with common sand-aster, salt heliotrope, big sagebrush, salt grass, arroyo willow and ripgut brome.	0.5	402	--	3.0	0.028	8.0	0.073	--	--	State
123a*	Sand	Gently sloping	Channel vegetated with bromes and shortpod mustard. Banks vegetated with big sagebrush, scrub oak and live oak. Five individuals of arroyo willow occur within drainage.	NO DATA	176	--	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	NO DATA	County (Private)
123a-culvert*				--	42	--	2.0	0.002	2.0	0.002	2.0	0.002	County (Private)
123b*	Sand	Vertically incised	Channel vegetated with bromes and shortpod mustard. Banks vegetated with California buckwheat, live oak, big sagebrush, arroyo willow, desert baccharis, bromes and shortpod mustard.	4.0	372	--	2.0	0.017	10.0	0.085	2.0	0.001	County (Private)
123b-culvert*				--	72	--	2.0	0.003	2.0	0.003	2.0	0.003	County (Private)
123c*	Sand	Vertically incised	Channel vegetated with bromes and shortpod mustard. Banks vegetated with California buckwheat, live oak, big sagebrush, arroyo willow, desert baccharis, bromes and shortpod mustard.	2.0	287	--	2.0	0.013	5.0	0.033	2.0	0.013	County (Private)
123c-culvert*				--	35	--	2.0	0.002	2.0	0.002	2.0	0.002	County (Private)
124a	Sand	Vertically incised	Channel is unvegetated.	1.0	9	--	3.0	0.001	3.0	0.001	--	--	County (Private)
124a-culvert				--	126	--	2.0	0.006	2.0	0.006	--	--	County (Private)
124b	Sand	Steeply sloping	Channel is vegetated with seven individuals of arroyo willow. Banks vegetated with California buckwheat, big sagebrush and live oak.	6.0	3820	40	3.0	0.263	12.0	4.779	3.0	0.188	County (Private)
125a	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, annual bur-sage, birch-leaf mountain-mahogany and red shank.	1.0	171	--	1.0	0.004	3.0	0.012	1.0	0.003	County (Private)
125a-culvert				--	62	--	2.0	0.003	2.0	0.003	2.0	0.003	County (Private)
125b	Sand	Steeply sloping	Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, annual bur-sage, birch-leaf mountain-mahogany and red shank.	1.0	551	--	2.0	0.025	5.0	0.063	2.0	0.024	County (Private)
126a	Sand	Steeply sloping	Channel sparsely vegetated with shortpod mustard and tumbleweed. Banks vegetated with big sagebrush, California buckwheat, foothill buckwheat, snake weed, shortpod mustard, tumbleweed, arroyo willow and scrub oak.	6.0	279	--	2.0	0.013	10.0	0.064	2.0	0.009	County (Private)
126b				1.0	293	--	1.0	0.007	3.0	0.020			County (Private)
126c				4.0	2655	--	2.0	0.122	10.0	0.609	2.0	0.040	County (Private)
127	Sand	Vertically incised to gently sloping	Channel is unvegetated. Banks vegetated with big sagebrush and California buckwheat.	1.0	329	--	1.0	0.008	1.0	0.008	--	--	Federal (BLM)
128	Sand	Gently sloping to vertically incised	Channel is unvegetated. Banks vegetated with chamise, big sagebrush and California buckwheat.	6.0	634	--	1.0	0.015	2.0	0.029	1.0	0.014	Federal (BLM)/ County (Private)
129	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with chamise, California buckwheat and scrub oak.	2.0	424	--	1.0	0.01	2.0	0.019	--	--	Federal (BLM)
130	Sand	Vertically incised	Channel is unvegetated. Banks vegetated with big sagebrush, California buckwheat and scrub oak.	6.0	487	--	2.0	0.022	15.0	0.167	--	--	Federal (BLM)

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
131	Sand	Gently sloping	Channel is unvegetated. Banks sparsely vegetated with big sagebrush, foothill buckwheat and California buckwheat.	0.5	775	--	15.0	0.267	15.0	0.267	15.0	0.267	County (Private)
132	*Sand*	*Steeply sloping*	*Channel is unvegetated. Banks sparsely vegetated with California buckwheat, boundary goldenbush, scrub oak, holly-leaf cherry, California ephedra, slender wooly buckwheat and bromes.*	*1.0*	*318*	--	*1.5*	*0.015*	*2.0*	*0.011*	--	--	*Federal (BLM)*
133a	*Sand*	*Gently sloping to steeply sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with holly-leaf cherry, chamise, California buckwheat and big sagebrush.*	*1.0*	*1493*	--	*1.0*	*0.068*	*2.0*	*0.051*	--	--	*Federal (BLM)*
133b	*Sand*	*Ponded area*	*Bromes and deergrass in pond. Edge of pond vegetated with black sage, desert baccharis, California buckwheat and big sagebrush.*	*0.0*	*36*	--	*17.0*	*0.013*	*17.0*	*0.013*	--	--	*Federal (BLM)*
134	*Sand*	*Steeply sloping*	*Channel is unvegetated. Banks vegetated with scrub oak, California buckwheat, slender wooly buckwheat, boundary goldenbush and snake weed.*	*1.0*	*182*	--	*1.0*	*0.006*	*2.0*	*0.008*	--	--	*Federal (BLM)*
135	*Sand*	*Steeply sloping*	*Channel is unvegetated. Banks vegetated with manzanita sp. and bromes.*	*0.5*	*163*	--	*0.5*	*0.006*	*2.0*	*0.008*	--	--	*Federal (BLM)*
136	*Sand*	*Steeply sloping*	*Channel is unvegetated. Banks vegetated with scrub oak, California buckwheat, sugarbush, chamise and snake weed.*	*1.0*	*162*	--	*1.0*	*0.006*	*3.0*	*0.007*	--	--	*Federal (BLM)*
137	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with chamise, manzanita sp, California buckwheat, sugarbush, snake weed and scrub oak.*	*0.5*	*250*	--	*2.0*	*0.009*	*2.0*	*0.011*	--	--	*Federal (BLM)*
137-culvert				--	*41*	--	*2.0*	*0.002*	*2.0*	*0.002*	--	--	*Federal (BLM)*
138	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with boundary goldenbush, California buckwheat, scrub oak, sugarbush, snake weed and bromes.*	*0.5*	*114*	--	*0.5*	*0.004*	*1.0*	*0.005*	--	--	*Federal (BLM)*
139	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, slender wooly buckwheat, California buckwheat, live oak, desert apricot and bromes.*	*1.0*	*151*	--	*1.0*	*0.005*	*3.0*	*0.007*	--	--	*Federal (BLM)*
140	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with boundary goldenbush, big sagebrush, slender wooly buckwheat, California buckwheat, shiny-leaf yerba santa and desert apricot.*	*1.0*	*209*	--	*1.0*	*0.007*	*3.0*	*0.010*	--	--	*Federal (BLM)*
141	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, big sagebrush, California ephedra, desert apricot and bromes.*	*1.0*	*292*	--	*1.0*	*0.010*	*3.0*	*0.013*	--	--	*Federal (BLM)*
142	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, desert apricot, chamise, cane cholla and manzanita sp.*	*0.5*	*176*	--	*1.0*	*0.006*	*2.0*	*0.008*	*1.0*	*0.006*	*County (Private)*
143	*Sand*	*Gently sloping*	*Channel sparsely vegetated with deergrass and annual beard grass. Banks vegetated with live oak, deergrass, chamise and annual beard grass.*	*1.0*	*506*	--	*1.0*	*0.017*	*3.0*	*0.023*	*1.0*	*0.017*	*County (Private)*
144	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, scrub oak, desert apricot, chamise, cane cholla, desert baccharis, snake weed and manzanita sp.*	*1.0*	*290*	--	*1.0*	*0.010*	*3.0*	*0.013*	*1.0*	*0.010*	*County (Private)*
145	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with cane cholla, snake weed, big sagebrush, California buckwheat, chamise, sugarbush and California ephedra.*	*0.5*	*925*	--	*1.0*	*0.030*	*2.0*	*0.039*	*1.0*	*0.030*	*County (Private)*
146	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with thistle sage, boundary goldenbush, California buckwheat and holy-leaf cherry.*	*0.5*	*330*	--	*1.0*	*0.011*	*2.0*	*0.015*	--	--	*Federal (BLM)*
147	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, boundary goldenbush and bromes.*	*0.0*	*439*	--	*0.5*	*0.015*	*1.5*	*0.020*	--	--	*Federal (BLM)*
148	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with cane cholla, bromes, California buckwheat, holly-leaf cherry and scrub oak.*	*2.0*	*387*	--	*2.0*	*0.013*	*6.0*	*0.018*	--	--	*Federal (BLM)*
149	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, big sagebrush, California ephedra, cane cholla and manzanita sp.*	*2.0*	*56*	--	*1.0*	*0.002*	*4.0*	*0.003*	--	--	*Federal (BLM)*
150a	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, California ephedra, cane cholla, scrub oak, chamise, thistle sage, shiny-leaf yerba santa and slender wooly buckwheat.*	*0.5*	*171*	--	*1.0*	*0.006*	*2.0*	*0.008*	--	--	*Federal (BLM)*

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
150a-culvert				--	*49*	--	*2.0*	*0.002*	*2.0*	*0.002*	--	--	*Federal (BLM)*
150b	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, California ephedra, cane cholla, scrub oak, chamise, thistle sage, shiny-leaf yerba santa and slender wooly buckwheat.*	*0.5*	*126*	--	*1.0*	*0.004*	*2.0*	*0.008*	--	--	*Federal (BLM)*
151	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with big sagebrush, California buckwheat, birch-leaf mountain-mahogany, snake weed, scrub oak, shiny-leaf yerba santa, cane cholla, slender wooly buckwheat and sugarbush.*	*0.5*	*148*	--	*1.0*	*0.005*	*2.0*	*0.007*	--	--	*Federal (BLM)*
152a	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, cane cholla, chamise, sugarbush, scrub oak, birch-leaf mountain-mahogany and holly-leaf cherry.*	*0.5*	*182*	--	*1.0*	*0.006*	*2.0*	*0.008*	--	--	*Federal (BLM)*
152a-culvert				--	*39*	--	*2.0*	*0.001*	*2.0*	*0.001*	--	--	*Federal (BLM)*
152b	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, cane cholla, chamise, sugarbush, scrub oak, birch-leaf mountain-mahogany and holly-leaf cherry.*	*0.5*	*121*	--	*1.0*	*0.004*	*2.0*	*0.006*	--	--	*Federal (BLM)*
153	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, birch-leaf mountain-mahogany, cane cholla, boundary goldenbush, holly-leaf cherry, shiny-leaf yerba santa, big sagebrush and scrub oak.*	*0.5*	*141*	--	*1.0*	*0.005*	*2.0*	*0.006*	--	--	*Federal (BLM)*
154	*Sand*	*Vertically incised to gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with desert scrub oak, cane cholla, sugarbush, California buckwheat and snake weed.*	*1.0*	*191*	--	*1.0*	*0.007*	*3.0*	*0.009*	--	--	*Federal (BLM)*
155	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with California buckwheat, shiny-leaf yerba santa, California ephedra, snake weed, thistle sage, cane cholla, sugarbush, Mojave yucca, desert scrub oak and slender wooly buckwheat.*	*0.5*	*202*	--	*2.0*	*0.007*	*4.0*	*0.009*	--	--	*Federal (BLM)*
156	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with scrub oak and chamise.*	*2.0*	*348*	--	*1.0*	*0.012*	*2.0*	*0.016*	--	--	*Federal (BLM)*
157	*Sand*	*Vertically incised to no bank*	*Channel is unvegetated. Banks vegetated with California buckwheat, snake weed, scrub oak and cane cholla.*	*6.0*	*1027*	--	*3.0*	*0.035*	*3.0*	*0.047*	--	--	*Federal (BLM)*
158	*Sand*	*Vertically incised to steeply sloping*	*Channel is unvegetated. Banks vegetated with bromes and big sagebrush.*	*4.0*	*118*	--	*1.0*	*0.004*	*3.0*	*0.005*	*1.0*	*0.004*	*County (Private)*
159	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California buckwheat, western ragweed and snake weed.*	*0.5*	*478*	--	*1.0*	*0.015*	*2.0*	*0.020*	*1.0*	*0.004*	*County (Private)*
160	*Clay-loam*	*Ponded area*	*Pond is sparsely vegetated with bromes and saltgrass.*	*0.5*	*43*	--	*18.0*	*0.015*	*18.0*	*0.015*	--	--	*State*
161	*Sand*	*Gently sloping to steeply sloping*	*Channel is vegetated with bromes and shortpod mustard. Banks vegetated with chamise, scrub oak, California buckwheat and big sagebrush.*	*3.0*	*63*	--	*1.0*	*0.002*	*7.0*	*0.003*	*1.0*	*0.002*	*County (Private)*
162	*Sand*	*Gently sloping to steeply sloping*	*Channel is vegetated with bromes and shortpod mustard. Banks vegetated with chamise, scrub oak, California buckwheat, and big sagebrush.*	*2.0*	*35*	--	*1.0*	*0.001*	*10.0*	*0.002*	*1.0*	*0.001*	*County (Private)*
163	*Clay-loam*	*Ponded area*	*Pond is sparsely vegetated with bromes.*	*0.5*	*13*	--	*9.0*	*0.002*	*9.0*	*0.002*	--	--	*State*
164	*Clay-loam*	*Ponded area*	*Pond is sparsely vegetated with bromes and saltgrass.*	*0.5*	*89*	--	*58.0*	*0.084*	*58.0*	*0.084*	--	--	*State*
165	*Clay-loam*	*Ponded area*	*Pond is sparsely vegetated with bromes, shortpod mustard and salt heliotrope.*	*0.5*	*131*	--	*77.0*	*0.140*	*77.0*	*0.140*	--	--	*State*
166	*Sand*	*Gently sloping*	*Channel sparsely vegetated with bromes. Banks vegetated with shiny-leaf yerba santa, cane cholla, California ephedra, snake weed, California buckwheat, sugarbush, live oak and thistle sage.*	*0.5*	*136*	--	*2.0*	*0.005*	*4.0*	*0.006*	--	--	*Federal (BLM)*
167	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California matchweed, cane cholla and California buckwheat.*	*0.5*	*157*	--	*1.0*	*0.004*	*1.0*	*0.004*	--	--	*Federal (BLM)*
167-culvert				--	*25*	--	*2.0*	*0.001*	*2.0*	*0.001*	--	--	*Federal (BLM)*
168	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, chaparral yucca, cane cholla, chamise, shiny-leaf yerba santa and California matchweed.*	*0.5*	*68*	--	*1.0*	*0.002*	*1.0*	*0.002*	--	--	*Federal (BLM)*
169a	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, chaparral yucca, cane cholla, chamise, shiny-leaf yerba santa and California matchweed.*	*0.5*	*891*	--	*1.0*	*0.020*	*1.0*	*0.020*	--	--	*Federal (BLM)*
169a-culvert				--	*33*	--	*2.0*	*0.002*	*2.0*	*0.002*	--	--	*Federal (BLM)*

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
169b	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, chaparral yucca, cane cholla, chamise, shiny-leaf yerba santa and California matchweed.*	*0.5*	*233*	*--*	*1.0*	*0.005*	*1.0*	*0.005*	*--*	*--*	*Federal (BLM)*
170	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, chaparral yucca, cane cholla, chamise, shiny-leaf yerba santa and California matchweed.*	*0.5*	*106*	*--*	*1.0*	*0.002*	*1.0*	*0.002*	*--*	*--*	*Federal (BLM)*
171	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, California buckwheat, cane cholla and scrub oak.*	*0.5*	*427*	*--*	*1.0*	*0.010*	*1.0*	*0.010*	*--*	*--*	*Federal (BLM)*
171-culvert				*--*	*18*	*--*	*2.0*	*0.001*	*2.0*	*0.001*	*--*	*--*	*Federal (BLM)*
172	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, shiny-leaf yerba santa, slender wooly buckwheat and blue dicks.*	*0.5*	*76*	*--*	*1.0*	*0.002*	*1.0*	*0.002*	*--*	*--*	*Federal (BLM)*
173a	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, slender wooly buckwheat, tarragon and California buckwheat.*	*0.5*	*231*	*--*	*1.0*	*0.005*	*1.0*	*0.005*	*--*	*--*	*Federal (BLM)*
173a-culvert				*--*	*35*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
173b	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, slender wooly buckwheat, tarragon and California buckwheat.*	*0.5*	*787*	*--*	*1.0*	*0.018*	*1.0*	*0.018*	*--*	*--*	*Federal (BLM)*
174	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, slender wooly buckwheat and California buckwheat.*	*0.5*	*570*	*--*	*1.0*	*0.013*	*1.0*	*0.013*	*--*	*--*	*Federal (BLM)*
175a	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, tarragon and California buckwheat.*	*0.5*	*184*	*--*	*1.0*	*0.004*	*1.0*	*0.004*	*--*	*--*	*Federal (BLM)*
175a-culvert				*--*	*30*	*--*	*2.0*	*0.001*	*2.0*	*0.001*	*--*	*--*	*Federal (BLM)*
175b	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, tarragon and California buckwheat.*	*0.5*	*167*	*--*	*1.0*	*0.004*	*1.0*	*0.004*	*--*	*--*	*Federal (BLM)*
176	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with California ephedra, cane cholla, golden yarrow and California buckwheat.*	*0.5*	*157*	*--*	*1.0*	*0.004*	*1.0*	*0.004*	*--*	*--*	*Federal (BLM)*
176-culvert				*--*	*35*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
177	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California ephedra, cane cholla, golden yarrow, pine goldenbush and California buckwheat.*	*0.5*	*349*	*--*	*1.0*	*0.008*	*1.0*	*0.008*	*--*	*--*	*Federal (BLM)*
177-culvert				*--*	*35*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
178	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat and pine goldenbush.*	*1.0*	*70*	*--*	*1.0*	*0.002*	*2.0*	*0.003*	*--*	*--*	*Federal (BLM)*
179	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush, sugarbush and chamise.*	*0.5*	*756*	*--*	*1.0*	*0.017*	*1.0*	*0.017*	*--*	*--*	*Federal (BLM)*
180	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush and California matchweed.*	*0.5*	*101*	*--*	*1.0*	*0.002*	*1.0*	*0.002*	*--*	*--*	*Federal (BLM)*
181	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, chamise and scrub oak.*	*0.5*	*152*	*--*	*1.0*	*0.003*	*1.0*	*0.003*	*--*	*--*	*Federal (BLM)*
181-culvert				*--*	*34*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
182	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with golden yarrow, California buckwheat and California matchweed.*	*0.5*	*940*	*--*	*3.0*	*0.065*	*3.0*	*0.065*	*--*	*--*	*Federal (BLM)*
183	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with chamise, scrub oak and sugarbush.*	*0.5*	*122*	*--*	*1.0*	*0.003*	*1.0*	*0.003*	*--*	*--*	*Federal (BLM)*
183-culvert				*--*	*33*	*--*	*2.0*	*0.001*	*2.0*	*0.001*	*--*	*--*	*Federal (BLM)*
184	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat, sugarbush and chamise.*	*0.5*	*151*	*--*	*1.0*	*0.003*	*1.0*	*0.003*	*--*	*--*	*Federal (BLM)*
185	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush, California buckwheat and chamise.*	*0.5*	*190*	*--*	*1.0*	*0.004*	*1.0*	*0.004*	*--*	*--*	*Federal (BLM)*
185-culvert				*--*	*33*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
186	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with sugarbush and chamise.*	*0.5*	*168*	*--*	*1.0*	*0.004*	*1.0*	*0.004*	*--*	*--*	*Federal (BLM)*
186-culvert				*--*	*33*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*
187	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush, California buckwheat and California ephedra.*	*2.0*	*285*	*--*	*1.0*	*0.007*	*3.0*	*0.020*	*--*	*--*	*Federal (BLM)*
187-culvert				*--*	*35*	*--*	*2.0*	*0.002*	*2.0*	*0.002*	*--*	*--*	*Federal (BLM)*

Drainage*	Substrate	Slope Type	Dominant Vegetation	Bank Height	Length (feet)	Photo Number	USACE Waters of the U.S.		CDFG Jurisdictional Areas		RPO Jurisdictional Areas		Land Ownership
							Width (feet)	Area (acres)	Width (feet)	Area (acres)	Width (feet)	Area (acres)	
188	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush, sugarbush, California buckwheat and California ephedra.*	*0.5*	*313*	--	*1.0*	*0.007*	*1.0*	*0.007*	--	--	*Federal (BLM)*
189	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with pine goldenbush, California buckwheat and chamise.*	*0.5*	*289*	--	*1.0*	*0.007*	*1.0*	*0.007*	--	--	*Federal (BLM)*
190	*Sand*	*Vertically incised*	*Channel is unvegetated. Banks vegetated with California buckwheat and scrub oak.*	*0.5*	*134*	--	*1.0*	*0.003*	*1.0*	*0.003*	--	--	*Federal (BLM)*
190-culvert				--	*33*	--	*2.0*	*0.002*	*2.0*	*0.002*	--	--	*Federal (BLM)*
191	*Sand*	*Gently sloping*	*Channel is unvegetated. Banks vegetated with desert baccharis, California matchweed and big sagebrush.*	*0.5*	*94*	--	*3.0*	*0.006*	*4.0*	*0.009*	--	--	*Federal (BLM)*
192	Sand	Vertically incised to gently sloping	Channel sparsely vegetated with bromes. Banks vegetated with birch-leaf mountain-mahogany, scrub oak, chamise and big sagebrush.	2.0	843	--	2.0	0.039	2.0	0.039	--	--	Federal (BLM)

Notes: *USGS designated blue line stream.
Drainages in **bold** occur in the Restricted Survey Area.
Drainages in *italics* are isolated and show no connectivity to navigable waters.

APPENDIX F
Representative Photographs of Delineated Drainages

Photograph 1. Downstream view of Drainage 2a

Photograph 2. Upstream of Drainage 4c

Photograph 3. Upstream view of Drainage 7a

Photograph 4. Upstream view of Drainage 9

Photograph 5. Downstream view of Drainage 13

Photograph 6. Upstream view of Drainage 17a

Photograph 7. Downstream view of Drainage 22

Photograph 8. Upstream view of Drainage 25

Photograph 9. Upstream view of Drainage 27

Photograph 10. Upstream view of Drainage 31

Photograph 11. Upstream view of Drainage 32a

Photograph 12. Upstream view of Drainage 33b

Photograph 13. Upstream view of Drainage 37

Photograph 14. Downstream view of Drainage 39a

Photograph 15. Upstream view of Drainage 44

Photograph 16. Downstream view of Drainage 45

Photograph 17. Downstream view of Drainage 50

Photograph 18. Upstream view of Drainage 53

Photograph 19. Downstream view of Drainage 54c

Photograph 20. Downstream view of Drainage 59

Photograph 21. Downstream view of Drainage 61

Photograph 22. Downstream view of Drainage 65

Photograph 23. Upstream view of Drainage 68

Photograph 24. Upstream view of Drainage 71

Photograph 25. Upstream view of Drainage 75

Photograph 26. Upstream view of Drainage 72b

Photograph 27. Upstream view of Drainage 77a

Photograph 28. Downstream view of Drainage 83b

Photograph 29. Upstream view of Drainage 87c

Photograph 30. Downstream view of Drainage 92b

Photograph 31. Upstream view of Drainage 95c

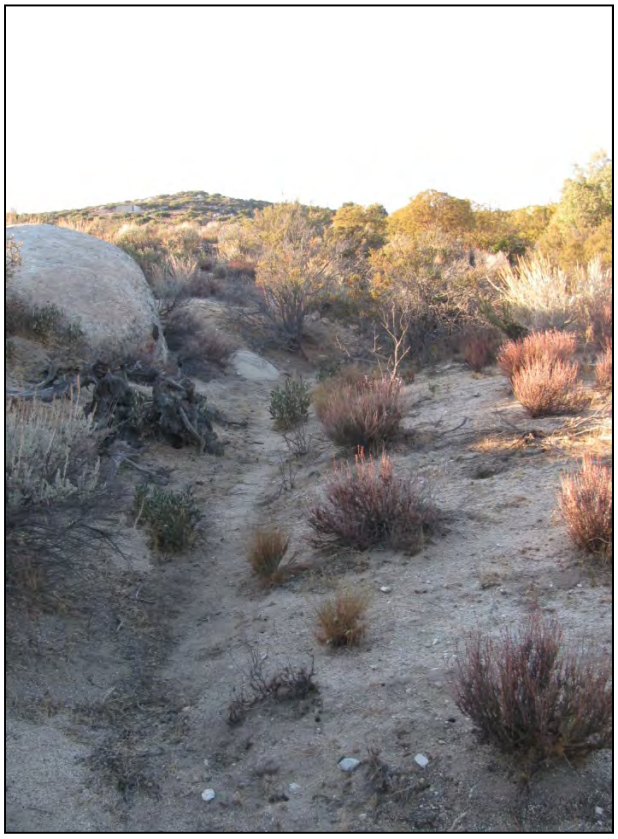
Photograph 32. Downstream view of Drainage 100

Photograph 33. Downstream view of Drainage 101b

Photograph 34. Upstream view of Drainage 105b

Photograph 35. Downstream view of Drainage 107b

Photograph 36. Upstream view of Drainage 110



Photograph 37. Upstream view of Drainage 113

Photograph 38. Upstream view of Drainage 117a

Photograph 39. Upstream view of Drainage 120

Photograph 40. Downstream view of Drainage 124b

APPENDIX G
Nationwide Permit General Conditions

Nationwide Permit General Conditions
General conditions fulfilled by the proposed project can be found below in red

Note: To qualify for NWP authorization, the prospective permittee must comply with the following general conditions, as appropriate, in addition to any regional or case-specific conditions imposed by the division engineer or district engineer. Prospective permittees should contact the appropriate Corps district office to determine if regional conditions have been imposed on an NWP. Prospective permittees should also contact the appropriate Corps district office to determine the status of Clean Water Act Section 401 water quality certification and/or Coastal Zone Management Act consistency for an NWP.

1. Navigation.

(a) No activity may cause more than a minimal adverse effect on navigation.

(b) Any safety lights and signals prescribed by the U.S. Coast Guard, through regulations or otherwise, must be installed and maintained at the permittee's expense on authorized facilities in navigable waters of the United States.

(c) The permittee understands and agrees that, if future operations by the United States require the removal, relocation, or other alteration, of the structure or work herein authorized, or if, in the opinion of the Secretary of the Army or his authorized representative, said structure or work shall cause unreasonable obstruction to the free navigation of the navigable waters, the permittee will be required, upon due notice from the Corps of Engineers, to remove, relocate, or alter the structural work or obstructions caused thereby, without expense to the United States. No claim shall be made against the United States on account of any such removal or alteration. No effect. All impacted drainages are considered ephemeral washes and do not support navigation. Therefore, project implementation would not affect navigation within waters of the US.

2. Aquatic Life Movements. No activity may substantially disrupt the necessary life cycle movements of those species of aquatic life indigenous to the waterbody, including those species that normally migrate through the area, unless the activity's primary purpose is to impound water. Culverts placed in streams must be installed to maintain low flow conditions. No effect. Drainages impacted by project implementation are ephemeral and do not support aquatic life movement. Therefore, the proposed project would not affect aquatic life movement.

3. Spawning Areas. Activities in spawning areas during spawning seasons must be avoided to the maximum extent practicable. Activities that result in the physical destruction (e.g., through excavation, fill, or downstream smothering by substantial turbidity) of an important spawning area are not authorized. No effect. Drainages impacted by project implementation are ephemeral and do not support spawning areas for aquatic species. Therefore, the proposed project would not affect spawning areas.

4. Migratory Bird Breeding Areas. Activities in waters of the United States that serve as breeding areas for migratory birds must be avoided to the maximum extent practicable. No effect. The proposed project would impact mostly unvegetated narrow ephemeral drainages that

do not provide nesting habitat. Pre-construction nest surveys will be conducted to avoid impacting any nesting birds which may be in the area.

5. Shellfish Beds. No activity may occur in areas of concentrated shellfish populations, unless the activity is directly related to a shellfish harvesting activity authorized by NWPs 4 and 48. No effect. Shellfish beds do not occur within the project site.

6. Suitable Material. No activity may use unsuitable material (e.g., trash, debris, car bodies, asphalt, etc.). Material used for construction or discharged must be free from toxic pollutants in toxic amounts (see Section 307 of the Clean Water Act). No effect. The proposed project would not discharge unsuitable and/or toxic debris into impacted drainages.

7. Water Supply Intakes. No activity may occur in the proximity of a public water supply intake, except where the activity is for the repair or improvement of public water supply intake structures or adjacent bank stabilization. No effect. Effected drainages are ephemeral washes and are not located in the proximity or are tributaries to a public water supply intake.

8. Adverse Effects From Impoundments. If the activity creates an impoundment of water, adverse effects to the aquatic system due to accelerating the passage of water, and/or restricting its flow must be minimized to the maximum extent practicable. No effect. Through the installation of culvert/bridges (TBD), the proposed project would not permanently restrict/accelerate the flow of water.

9. Management of Water Flows. To the maximum extent practicable, the pre-construction course, condition, capacity, and location of open waters must be maintained for each activity, including stream channelization and storm water management activities, except as provided below. The activity must be constructed to withstand expected high flows. The activity must not restrict or impede the passage of normal or high flows, unless the primary purpose of the activity is to impound water or manage high flows. The activity may alter the pre-construction course, condition, capacity, and location of open waters if it benefits the aquatic environment (e.g., stream restoration or relocation activities). No effect. The proposed project would maintain water flow through the installation of bottomless culverts of sufficient size to prevent restriction of flow and channel scouring.

10. Fills Within 100-Year Floodplains. The activity must comply with applicable FEMA approved state or local floodplain management requirements. No effect. The proposed project is not located within a FEMA mapped regulatory floodplain.

11. Equipment. Heavy equipment working in wetlands or mudflats must be placed on mats, or other measures must be taken to minimize soil disturbance. No effect. Construction activities would not occur within wetlands or mudflats.

12. Soil Erosion and Sediment Controls. Appropriate soil erosion and sediment controls must be used and maintained in effective operating condition during construction, and all exposed soil and other fills, as well as any work below the ordinary high water mark or high tide line, must be

permanently stabilized at the earliest practicable date. Permittees are encouraged to perform work within waters of the United States during periods of low-flow or no-flow. No effect. Construction activities would not occur within the ephemeral drainages when water is present.

13. Removal of Temporary Fills. Temporary fills must be removed in their entirety and the affected areas returned to pre-construction elevations. The affected areas must be revegetated, as appropriate. No effect. Temporarily impacted drainages would be returned to their pre-construction condition.

14. Proper Maintenance. Any authorized structure or fill shall be properly maintained, including maintenance to ensure public safety. No effect. The proposed project would maintain all structures and/or fill placed within affected drainages.

15. Wild and Scenic Rivers. No activity may occur in a component of the National Wild and Scenic River System, or in a river officially designated by Congress as a "study river" for possible inclusion in the system while the river is in an official study status, unless the appropriate Federal agency with direct management responsibility for such river, has determined in writing that the proposed activity will not adversely affect the Wild and Scenic River designation or study status. Information on Wild and Scenic Rivers may be obtained from the appropriate Federal land management agency in the area (e.g., National Park Service, U.S. Forest Service, Bureau of Land Management, U.S. Fish and Wildlife Service). No effect. Wild and scenic rivers do not occur within the project site and/or impacted jurisdictional areas.

16. Tribal Rights. No activity or its operation may impair reserved tribal rights, including, but not limited to, reserved water rights and treaty fishing and hunting rights. No effect. Although the proposed project would affect ephemeral drainages located on tribal ands, it would not interfere with tribal water rights, treaty fishing, or hunting rights.

17. Endangered Species.

(a) No activity is authorized under any NWP which is likely to jeopardize the continued existence of a threatened or endangered species or a species proposed for such designation, as identified under the Federal Endangered Species Act (ESA), or which will destroy or adversely modify the critical habitat of such species. No activity is authorized under any NWP which "may affect" a listed species or critical habitat, unless Section 7 consultation addressing the effects of the proposed activity has been completed.

(b) Federal agencies should follow their own procedures for complying with the requirements of the ESA. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees shall notify the district engineer if any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, and shall not begin work on the activity until notified by the district engineer that the requirements of the ESA have been satisfied and that the activity is authorized. For activities that might affect Federally-listed endangered or threatened species or

designated critical habitat, the pre-construction notification must include the name(s) of the endangered or threatened species that may be affected by the proposed work or that utilize the designated critical habitat that may be affected by the proposed work. The district engineer will determine whether the proposed activity "may affect" or will have "no effect" to listed species and designated critical habitat and will notify the non-Federal applicant of the Corps' determination within 45 days of receipt of a complete pre-construction notification. In cases where the non-Federal applicant has identified listed species or critical habitat that might be affected or is in the vicinity of the project, and has so notified the Corps, the applicant shall not begin work until the Corps has provided notification the proposed activities will have "no effect" on listed species or critical habitat, or until Section 7 consultation has been completed.

(d) As a result of formal or informal consultation with the FWS or NMFS the district engineer may add species-specific regional endangered species conditions to the NWPs.

(e) Authorization of an activity by a NWP does not authorize the "take" of a threatened or endangered species as defined under the ESA. In the absence of separate authorization (e.g., an ESA Section 10 Permit, a Biological Opinion with "incidental take" provisions, etc.) from the U.S. FWS or the NMFS, both lethal and non-lethal "takes" of protected species are in violation of the ESA. Information on the location of threatened and endangered species and their critical habitat can be obtained directly from the offices of the U.S. FWS and NMFS or their world wide Web pages at http://www.fws.gov/ and http://www.noaa.gov/fisheries.html respectively. No effect. Implementation of the proposed project would not impact waters of the US that are known to support any federal or state listed endangered species.

18. Historic Properties.

(a) In cases where the district engineer determines that the activity may affect properties listed, or eligible for listing, in the National Register of Historic Places, the activity is not authorized, until the requirements of Section 106 of the National Historic Preservation Act (NHPA) have been satisfied.

(b) Federal permittees should follow their own procedures for complying with the requirements of Section 106 of the National Historic Preservation Act. Federal permittees must provide the district engineer with the appropriate documentation to demonstrate compliance with those requirements.

(c) Non-federal permittees must submit a pre-construction notification to the district engineer if the authorized activity may have the potential to cause effects to any historic properties listed, determined to be eligible for listing on, or potentially eligible for listing on the National Register of Historic Places, including previously unidentified properties. For such activities, the pre-construction notification must state which historic properties may be affected by the proposed work or include a vicinity map indicating the location of the historic properties or the potential for the presence of historic properties. Assistance regarding information on the location of or potential for the presence of historic resources can be sought from the State Historic Preservation Officer or Tribal Historic Preservation Officer, as appropriate, and the National Register of Historic Places (see 33 CFR 330.4(g)). The district engineer shall make a

reasonable and good faith effort to carry out appropriate identification efforts, which may include background research, consultation, oral history interviews, sample field investigation, and field survey. Based on the information submitted and these efforts, the district engineer shall determine whether the proposed activity has the potential to cause an effect on the historic properties. Where the non-Federal applicant has identified historic properties which the activity may have the potential to cause effects and so notified the Corps, the non-Federal applicant shall not begin the activity until notified by the district engineer either that the activity has no potential to cause effects or that consultation under Section 106 of the NHPA has been completed.

(d) The district engineer will notify the prospective permittee within 45 days of receipt of a complete pre-construction notification whether NHPA Section 106 consultation is required. Section 106 consultation is not required when the Corps determines that the activity does not have the potential to cause effects on historic properties (see 36 CFR 800.3(a)). If NHPA Section 106 consultation is required and will occur, the district engineer will notify the non-Federal applicant that he or she cannot begin work until Section 106 consultation is completed.

(e) Prospective permittees should be aware that section 110k of the NHPA (16 U.S.C. 470h-2(k)) prevents the Corps from granting a permit or other assistance to an applicant who, with intent to avoid the requirements of Section 106 of the NHPA, has intentionally significantly adversely affected a historic property to which the permit would relate, or having legal power to prevent it, allowed such significant adverse effect to occur, unless the Corps, after consultation with the Advisory Council on Historic Preservation (ACHP), determines that circumstances justify granting such assistance despite the adverse effect created or permitted by the applicant. If circumstances justify granting the assistance, the Corps is required to notify the ACHP and provide documentation specifying the circumstances, explaining the degree of damage to the integrity of any historic properties affected, and proposed mitigation. This documentation must include any views obtained from the applicant, SHPO/THPO, appropriate Indian tribes if the undertaking occurs on or affects historic properties on tribal lands or affects properties of interest to those tribes, and other parties known to have a legitimate interest in the impacts to the permitted activity on historic properties. No effect. A cultural literature search and field survey were conducted for the project. The project does not propose the demolition of any existing buildings or structures that may have historical significance.

19. Designated Critical Resource Waters. Critical resource waters include, NOAA designated marine sanctuaries, National Estuarine Research Reserves, state natural heritage sites, and outstanding national resource waters or other waters officially designated by a state as having particular environmental or ecological significance and identified by the district engineer after notice and opportunity for public comment. The district engineer may also designate additional critical resource waters after notice and opportunity for comment.

(a) Discharges of dredged or fill material into waters of the United States are not authorized by NWPs 7, 12, 14, 16, 17, 21, 29, 31, 35, 39, 40, 42, 43, 44, 49, and 50 for any activity within, or directly affecting, critical resource waters, including wetlands adjacent to such waters.

(b) For NWPs 3, 8, 10, 13, 15, 18, 19, 22, 23, 25, 27, 28, 30, 33, 34, 36, 37, and 38, notification is required in accordance with general condition 27, for any activity proposed in the designated critical resource waters including wetlands adjacent to those waters. The district engineer may authorize activities under these NWPs only after it is determined that the impacts to the critical resource waters will be no more than minimal. No effect. All impacted drainages are ephemeral and are not designated as NOAA marine sanctuaries, National Estuarine Research Reserve, state natural heritage sites, or as environmentally or ecologically significant waters.

20. Mitigation. The district engineer will consider the following factors when determining appropriate and practicable mitigation necessary to ensure that adverse effects on the aquatic environment are minimal:

(a) The activity must be designed and constructed to avoid and minimize adverse effects, both temporary and permanent, to waters of the United States to the maximum extent practicable at the project site (i.e., on site).

(b) Mitigation in all its forms (avoiding, minimizing, rectifying, reducing, or compensating) will be required to the extent necessary to ensure that the adverse effects to the aquatic environment are minimal.

(c) Compensatory mitigation at a minimum one-for-one ratio will be required for all wetland losses that exceed 1/10 acre and require pre-construction notification, unless the district engineer determines in writing that some other form of mitigation would be more environmentally appropriate and provides a project-specific waiver of this requirement. For wetland losses of 1/10 acre or less that require pre-construction notification, the district engineer may determine on a case-by-case basis that compensatory mitigation is required to ensure that the activity results in minimal adverse effects on the aquatic environment. Since the likelihood of success is greater and the impacts to potentially valuable uplands are reduced, wetland restoration should be the first compensatory mitigation option considered.

(d) For losses of streams or other open waters that require pre-construction notification, the district engineer may require compensatory mitigation, such as stream restoration, to ensure that the activity results in minimal adverse effects on the aquatic environment.

(e) Compensatory mitigation will not be used to increase the acreage losses allowed by the acreage limits of the NWPs. For example, if an NWP has an acreage limit of 1/2 acre, it cannot be used to authorize any project resulting in the loss of greater than 1/2 acre of waters of the United States, even if compensatory mitigation is provided that replaces or restores some of the lost waters. However, compensatory mitigation can and should be used, as necessary, to ensure that a project already meeting the established acreage limits also satisfies the minimal impact requirement associated with the NWPs.

(f) Compensatory mitigation plans for projects in or near streams or other open waters will normally include a requirement for the establishment, maintenance, and legal protection (e.g., conservation easements) of riparian areas next to open waters. In some cases, riparian areas

may be the only compensatory mitigation required. Riparian areas should consist of native species. The width of the required riparian area will address documented water quality or aquatic habitat loss concerns. Normally, the riparian area will be 25 to 50 feet wide on each side of the stream, but the district engineer may require slightly wider riparian areas to address documented water quality or habitat loss concerns. Where both wetlands and open waters exist on the project site, the district engineer will determine the appropriate compensatory mitigation (e.g., riparian areas and/or wetlands compensation) based on what is best for the aquatic environment on a watershed basis. In cases where riparian areas are determined to be the most appropriate form of compensatory mitigation, the district engineer may waive or reduce the requirement to provide wetland compensatory mitigation for wetland losses.

g) Permittees may propose the use of mitigation banks, in-lieu fee arrangements or separate activity-specific compensatory mitigation. In all cases, the mitigation provisions will specify the party responsible for accomplishing and/or complying with the mitigation plan.

(h) Where certain functions and services of waters of the United States are permanently adversely affected, such as the conversion of a forested or scrub-shrub wetland to a herbaceous wetland in a permanently maintained utility line right-of-way, mitigation may be required to reduce the adverse effects of the project to the minimal level. No effect. Mitigation for impacts to onsite drainages would be satisfied through compliance with the conditions set forth in this requirement 20(a)-(h).

21. Water Quality. Where States and authorized Tribes, or EPA where applicable, have not previously certified compliance of an NWP with CWA Section 401, individual 401 Water Quality Certification must be obtained or waived (see 33 CFR 330.4(c)). The district engineer or State or Tribe may require additional water quality management measures to ensure that the authorized activity does not result in more than minimal degradation of water quality. No effect. Compliance with CWA Section 401 will be satisfied by the submittal of a 401 certification to the Regional Water Quality Control Board.

22. Coastal Zone Management. In coastal states where an NWP has not previously received a state coastal zone management consistency concurrence, an individual state coastal zone management consistency concurrence must be obtained, or a presumption of concurrence must occur (see 33 CFR 330.4(d)). The district engineer or a State may require additional measures to ensure that the authorized activity is consistent with state coastal zone management requirements. No effect. The proposed project is not located within a coastal zone management area.

23. Regional and Case-By-Case Conditions. The activity must comply with any regional conditions that may have been added by the Division Engineer (see 33 CFR 330.4(e)) and with any case specific conditions added by the Corps or by the state, Indian Tribe, or U.S. EPA in its Section 401 Water Quality Certification, or by the state in its Coastal Zone Management Act consistency determination. The project would be compliant with all regional conditions.

24. Use of Multiple Nationwide Permits. The use of more than one NWP for a single and complete project is prohibited, except when the acreage loss of waters of the United States authorized by the NWPs does not exceed the acreage limit of the NWP with the highest specified acreage limit. For example, if a road crossing over tidal waters is constructed under NWP 14, with associated bank stabilization authorized by NWP 13, the maximum acreage loss of waters of the United States for the total project cannot exceed 1/3-acre. Each crossing would be considered a separate and distinct project under NWP 12 and have its own NWP authorization issued. Cumulatively, the impacts expected are less then 1/2 acre.

25. Transfer of Nationwide Permit Verifications. If the permittee sells the property associated with a nationwide permit verification, the permittee may transfer the nationwide permit verification to the new owner by submitting a letter to the appropriate Corps district office to validate the transfer. A copy of the nationwide permit verification must be attached to the letter, and the letter must contain the following statement and signature: "When the structures or work authorized by this nationwide permit are still in existence at the time the property is transferred, the terms and conditions of this nationwide permit, including any special conditions, will continue to be binding on the new owner(s) of the property. To validate the transfer of this nationwide permit and the associated liabilities associated with compliance with its terms and conditions, have the transferee sign and date below."
(Transferee)
(Date)
The project would not conflict with these conditions.

26. Compliance Certification. Each permittee who received an NWP verification from the Corps must submit a signed certification regarding the completed work and any required mitigation. The certification form must be forwarded by the Corps with the NWP verification letter and will include:

(a) A statement that the authorized work was done in accordance with the NWP authorization, including any general or specific conditions;

(b) A statement that any required mitigation was completed in accordance with the permit conditions; and

(c) The signature of the permittee certifying the completion of the work and mitigation.

The project would not conflict with conditions 26(a)-(c).

27. Pre-Construction Notification.

(a) Timing. Where required by the terms of the NWP, the prospective permittee must notify the district engineer by submitting a pre-construction notification (PCN) as early as possible. The district engineer must determine if the PCN is complete within 30 calendar days of the date of receipt and, as a general rule, will request additional information necessary to make the PCN complete only once. However, if the prospective permittee does not provide all of the requested information, then the district engineer will notify the prospective permittee that the PCN is still incomplete and the PCN review process will not commence until all of the requested

information has been received by the district engineer. The prospective permittee shall not begin the activity until either:

(1) He or she is notified in writing by the district engineer that the activity may proceed under the NWP with any special conditions imposed by the district or division engineer; or
(2) Forty-five calendar days have passed from the district engineer's receipt of the complete PCN and the prospective permittee has not received written notice from the district or division engineer. However, if the permittee was required to notify the Corps pursuant to general condition 17 that listed species or critical habitat might affected or in the vicinity of the project, or to notify the Corps pursuant to general condition 18 that the activity may have the potential to cause effects to historic properties, the permittee cannot begin the activity until receiving written notification from the Corps that is "no effect" on listed species or "no potential to cause effects" on historic properties, or that any consultation required under Section 7 of the Endangered Species Act (see 33 CFR 330.4(f)) and/or Section 106 of the National Historic Preservation (see 33 CFR 330.4(g)) is completed. Also, work cannot begin under NWPs 21, 49, or 50 until the permittee has received written approval from the Corps. If the proposed activity requires a written waiver to exceed specified limits of an NWP, the permittee cannot begin the activity until the district engineer issues the waiver. If the district or division engineer notifies the permittee in writing that an individual permit is required within 45 calendar days of receipt of a complete PCN, the permittee cannot begin the activity until an individual permit has been obtained. Subsequently, the permittee's right to proceed under the NWP may be modified, suspended, or revoked only in accordance with the procedure set forth in 33 CFR 330.5(d)(2).

(b) Contents of Pre-Construction Notification: The PCN must be in writing and include the following information:

(1) Name, address and telephone numbers of the prospective permittee;
(2) Location of the proposed project;
(3) A description of the proposed project; the project's purpose; direct and indirect adverse environmental effects the project would cause; any other NWP(s), regional general permit(s), or individual permit(s) used or intended to be used to authorize any part of the proposed project or any related activity. The description should be sufficiently detailed to allow the district engineer to determine that the adverse effects of the project will be minimal and to determine the need for compensatory mitigation. Sketches should be provided when necessary to show that the activity complies with the terms of the NWP. (Sketches usually clarify the project and when provided result in a quicker decision.);
(4) The PCN must include a delineation of special aquatic sites and other waters of the United States on the project site. Wetland delineations must be prepared in accordance with the current method required by the Corps. The permittee may ask the Corps to delineate the special aquatic sites and other waters of the United States, but there may be a delay if the Corps does the delineation, especially if the project site is large or contains many waters of the United States. Furthermore, the 45 day period will not start until the delineation has been submitted to or completed by the Corps, where appropriate;
(5) If the proposed activity will result in the loss of greater than 1/10 acre of wetlands and a PCN is required, the prospective permittee must submit a statement describing how the mitigation

requirement will be satisfied. As an alternative, the prospective permittee may submit a conceptual or detailed mitigation plan.
(6) If any listed species or designated critical habitat might be affected or is in the vicinity of the project, or if the project is located in designated critical habitat, for non-Federal applicants the PCN must include the name(s) of those endangered or threatened species that might be affected by the proposed work or utilize the designated critical habitat that may be affected by the proposed work. Federal applicants must provide documentation demonstrating compliance with the Endangered Species Act; and
(7) For an activity that may affect a historic property listed on, determined to be eligible for listing on, or potentially eligible for listing on, the National Register of Historic Places, for non-Federal applicants the PCN must state which historic property may be affected by the proposed work or include a vicinity map indicating the location of the historic property. Federal applicants must provide documentation demonstrating compliance with Section 106 of the National Historic Preservation Act.

(c) Form of Pre-Construction Notification: The standard individual permit application form (Form ENG 4345) may be used, but the completed application form must clearly indicate that it is a PCN and must include all of the information required in paragraphs (b)(1) through (7) of this general condition. A letter containing the required information may also be used.

(d) Agency Coordination: (1) The district engineer will consider any comments from Federal and state agencies concerning the proposed activity's compliance with the terms and conditions of the NWPs and the need for mitigation to reduce the project's adverse environmental effects to a minimal level.

(2) For all NWP 48 activities requiring pre-construction notification and for other NWP activities requiring pre-construction notification to the district engineer that result in the loss of greater than 1/2-acre of waters of the United States, the district engineer will immediately provide (e.g., via facsimile transmission, overnight mail, or other expeditious manner) a copy of the PCN to the appropriate Federal or state offices (U.S. FWS, state natural resource or water quality agency, EPA, State Historic Preservation Officer (SHPO) or Tribal Historic Preservation Office (THPO), and, if appropriate, the NMFS). With the exception of NWP 37, these agencies will then have 10 calendar days from the date the material is transmitted to telephone or fax the district engineer notice that they intend to provide substantive, site-specific comments. If so contacted by an agency, the district engineer will wait an additional 15 calendar days before making a decision on the pre-construction notification. The district engineer will fully consider agency comments received within the specified time frame, but will provide no response to the resource agency, except as provided below. The district engineer will indicate in the administrative record associated with each pre-construction notification that the resource agencies' concerns were considered. For NWP 37, the emergency watershed protection and rehabilitation activity may proceed immediately in cases where there is an unacceptable hazard to life or a significant loss of property or economic hardship will occur. The district engineer will consider any comments received to decide whether the NWP 37 authorization should be modified, suspended, or revoked in accordance with the procedures at 33 CFR 330.5.
(3) In cases of where the prospective permittee is not a Federal agency, the district engineer will provide a response to NMFS within 30 calendar days of receipt of any Essential Fish Habitat

conservation recommendations, as required by Section 305(b)(4)(B) of the Magnuson-Stevens Fishery Conservation and Management Act.
(4) Applicants are encouraged to provide the Corps multiple copies of pre-construction notifications to expedite agency coordination.
(5) For NWP 48 activities that require reporting, the district engineer will provide a copy of each report within 10 calendar days of receipt to the appropriate regional office of the NMFS.

(e) District Engineer's Decision: In reviewing the PCN for the proposed activity, the district engineer will determine whether the activity authorized by the NWP will result in more than minimal individual or cumulative adverse environmental effects or may be contrary to the public interest. If the proposed activity requires a PCN and will result in a loss of greater than 1/10 acre of wetlands, the prospective permittee should submit a mitigation proposal with the PCN. Applicants may also propose compensatory mitigation for projects with smaller impacts. The district engineer will consider any proposed compensatory mitigation the applicant has included in the proposal in determining whether the net adverse environmental effects to the aquatic environment of the proposed work are minimal. The compensatory mitigation proposal may be either conceptual or detailed. If the district engineer determines that the activity complies with the terms and conditions of the NWP and that the adverse effects on the aquatic environment are minimal, after considering mitigation, the district engineer will notify the permittee and include any conditions the district engineer deems necessary. The district engineer must approve any compensatory mitigation proposal before the permittee commences work. If the prospective permittee elects to submit a compensatory mitigation plan with the PCN, the district engineer will expeditiously review the proposed compensatory mitigation plan. The district engineer must review the plan within 45 calendar days of receiving a complete PCN and determine whether the proposed mitigation would ensure no more than minimal adverse effects on the aquatic environment. If the net adverse effects of the project on the aquatic environment (after consideration of the compensatory mitigation proposal) are determined by the district engineer to be minimal, the district engineer will provide a timely written response to the applicant. The response will state that the project can proceed under the terms and conditions of the NWP.

If the district engineer determines that the adverse effects of the proposed work are more than minimal, then the district engineer will notify the applicant either: (1) That the project does not qualify for authorization under the NWP and instruct the applicant on the procedures to seek authorization under an individual permit; (2) that the project is authorized under the NWP subject to the applicant's submission of a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level; or (3) that the project is authorized under the NWP with specific modifications or conditions. Where the district engineer determines that mitigation is required to ensure no more than minimal adverse effects occur to the aquatic environment, the activity will be authorized within the 45-day PCN period. The authorization will include the necessary conceptual or specific mitigation or a requirement that the applicant submit a mitigation plan that would reduce the adverse effects on the aquatic environment to the minimal level. When mitigation is required, no work in waters of the United States may occur until the district engineer has approved a specific mitigation plan.
The proposed project will submit a pre-construction notification form if required. The PCN will be compliant with conditions listed in 27(a)-(e).

28. Single and Complete Project. The activity must be a single and complete project. The same NWP cannot be used more than once for the same single and complete project.
The proposed project will consider each crossing as a separate project, and complies with General Condition 24.