# ATTACHMENT I: SUPPLEMENTAL PRELIMINARY JURISDICTIONAL DELINEATION REPORT

## Supplemental Preliminary Jurisdictional Delineation Report

for the

## **Eldorado-Lugo-Mohave Series Capacitor Project**

Prepared for:



Prepared by:



December 2017

#### TABLE OF CONTENTS

1 – INTRODUCTION				
2 – PROJECT DESCRIPTION	1			
2.0 Project Location and Setting	1			
2.1 Project Overview	2			
3 – REGULATORY BACKGROUND	2			
4 – METHODS	5			
4.0 Background Research	5			
4.1 Jurisdictional Delineation	5			
5 – RESULTS				
5.0 Environmental Setting	6			
5.1 Water Features Delineated	10			
6 – REFERENCES 1				

#### LIST OF FIGURES

Figure 1: Proposed Project Overview Map	3
Figure 2: Hydrologic Region Map	7

#### LIST OF ATTACHMENTS

Attachment A: Potentially Jurisdictional Water Features Delineated within the Additional BRSA Attachment B: Jurisdictional Delineation Survey Results Attachment C: Drainage Photograph Log

## 1 – INTRODUCTION

In April and May 2016, Insignia Environmental (Insignia) conducted a jurisdictional delineation of water features for Southern California Edison Company's (SCE's) Eldorado-Lugo-Mohave Series Capacitor Project (Proposed Project). These results were submitted to SCE in the form of the Preliminary Jurisdictional Delineation Report for the Proposed Project on August 5, 2016 and finalized on March 29, 2017. The original Biological Resources Survey Area (BRSA) included approximately 2,511 acres along the Proposed Project alignment in California and Nevada. After the submittal of the Preliminary Jurisdictional Delineation Report, approximately 89 acres were added to the BRSA (Additional BRSA) to accommodate Proposed Project refinements and the addition of an alternative distribution/telecommunications route to the Proposed Project. In March, April, and October 2017, Insignia biologists conducted jurisdictional delineations within the Additional BRSA to identify and map water features under the jurisdiction of the following agencies:

- The United States (U.S.) Army Corps of Engineers (USACE), pursuant to Section 404 of the Clean Water Act (CWA)
- The Regional Water Quality Control Board (RWQCB), pursuant to the Porter-Cologne Water Quality Control Act (California Water Code, Chapter 2, § 13050) or Section 401 of the CWA
- The California Department of Fish and Wildlife (CDFW), pursuant to Section 1600 of the California Fish and Game Code

This Supplemental Preliminary Jurisdictional Delineation Report (Report) presents the results of the jurisdictional delineation conducted in the Additional BRSA. This Report provides an overview of the Proposed Project, summarizes the relevant regulations, describes the survey methods utilized, and details the survey results.

## **2 – PROJECT DESCRIPTION**

#### 2.0 PROJECT LOCATION AND SETTING

The Proposed Project would be located in southern California and southern Nevada, within the Mojave Basin and Range. The Proposed Project would extend northeast from Lugo Substation (located in San Bernardino County, California) to Eldorado Substation (located in the City of Boulder City, Nevada) and to Mohave Substation (located in Clark County, Nevada), and from Mohave Substation northwest to Eldorado Substation. Portions of the Proposed Project would also cross through the City of Hesperia in California, as well as the unincorporated communities of Searchlight and Laughlin in Nevada. The majority of the Proposed Project would be constructed within existing SCE easements, fee-owned property, and public franchise areas. The Additional BRSA is composed of the footprint of the Proposed Project, plus an additional 100-foot-wide potential disturbance area, totaling approximately 89 acres. Figure 1: Proposed Project Overview Map depicts the Proposed Project location and includes the Additional BRSA.

#### 2.1 PROJECT OVERVIEW

SCE is proposing to construct two new mid-line series capacitors and make other improvements to increase capacity and power flow along three existing 500 kilovolt transmission lines. The Proposed Project would increase capacity and power flow between SCE's existing Eldorado, Lugo, and Mohave Substations to safely deliver renewable power to the Los Angeles Basin from Eldorado and Mohave Substations. Work within the Additional BRSA would include the construction of alternative distribution and telecommunications lines to connect the two mid-line series capacitors.

Construction is scheduled to begin in the third quarter of 2018 and is expected to take approximately 21 months to complete. SCE is required to comply with California Public Utilities Commission (CPUC) General Order 131-D, and is seeking a Permit to Construct from the CPUC for the Proposed Project. Federal authorizations would also be required because a majority of the land in the vicinity of the Proposed Project is under the jurisdiction of the Bureau of Land Management (BLM) and the National Park Service, with some additional lands under the jurisdiction of the Department of Defense and the Bureau of Reclamation.

The BLM would serve as the lead federal agency for the Proposed Project under the National Environmental Policy Act because the Proposed Project would require a new Right-of-Way Grant and the majority of lands where the Proposed Project is located are administered by the BLM. For any impacts to jurisdictional waters, SCE would apply for a nationwide permit from the USACE, Water Quality Certifications from the State Water Resources Control Board and the Nevada Department of Environmental Protection (NDEP),<sup>1</sup> and a Lake and Streambed Alteration Agreement from the CDFW. In addition to these permits and authorizations, SCE would obtain all required permits for the Proposed Project from federal, State, and local agencies prior to construction.

## **3 – REGULATORY BACKGROUND**

The regulatory background is discussed in Section 3 – Regulatory Background of the Preliminary Jurisdictional Delineation Report.

<sup>&</sup>lt;sup>1</sup> While portions of the Proposed Project are located within Nevada, the Additional BRSA is located wholly within California and would not be subject to regulation by the NDEP.



#### 4 – METHODS

#### 4.0 BACKGROUND RESEARCH

Before conducting the jurisdictional delineation, Insignia biologists reviewed the following resources:

- U.S. Geological Survey (USGS) National Hydrography Dataset (USGS 2017c)
- U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory maps (USFWS 2017)
- Aerial imagery of the Additional BRSA and the surrounding area
- Jurisdictional delineation results from the Preliminary Jurisdictional Delineation Report for the Eldorado-Lugo-Mohave Series Capacitor Project (Insignia 2017)
- U.S. Department of Agriculture Natural Resources Conservation Service (NRCS) soil series descriptions (NRCS 2017)

#### 4.1 JURISDICTIONAL DELINEATION

This Report has been prepared in compliance with the USACE's Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest (USACE 2001) and Final Map and Drawing Standards for the South Pacific Division Regulatory Program (USACE 2012). For this Report, all potential waters of the U.S. were assumed to have a significant nexus. After the final impact areas for the Proposed Project are identified, potential waters of the U.S. would be evaluated using aerial imagery to identify their significant nexus to on-site and off-site traditional navigable waterways (TNWs) and relatively permanent waters, as defined by the CWA.

#### 4.1.0 Water Feature Mapping

In April and October 2017, Insignia biologists Adam Hamburg, Angelina Robinson, Sarah Willbrand, Karin Edwards, Audrey Johnson, and Nick Wagner conducted the jurisdictional delineations within the Additional BRSA. To determine the boundaries of the non-wetland water features within the Additional BRSA that are potentially under the jurisdiction of the USACE and RWQCB, Insignia biologists used guidance from A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States (USACE 2008a). Physical characteristics were used to determine the lateral extent of the non-wetland waters. These characteristics included a clear, natural line impressed on the bank; changes in substrate size; shelving; destruction of terrestrial vegetation; or the presence of litter and debris. When compound channels were so heavily braided that it was difficult to delineate each channel as a separate feature, the biologists delineated the braided channel network as a single feature. Man-made features that convey water (e.g., culverts, canals, and ditches) were included in the survey.

In addition to collecting OHWM data for water features that are potentially jurisdictional under the USACE and RWQCB, the biologists collected top-of-bank (TOB) measurements for each feature to assess the areas that may be jurisdictional under Section 1602 of the California Fish and Game Code.

#### 4.1.1 Data Collection

All potentially jurisdictional water features were mapped using submeter-accurate Global Positioning System units in the World Geodetic System 1984 coordinate system. Descriptions of each data feature were recorded using electronic data forms with customized data sheets containing the information required by the USACE. Photographs were taken for each drainage feature to record downstream and upstream conditions, as well as OHWM indicators.

## 5 – RESULTS

#### 5.0 ENVIRONMENTAL SETTING

The Additional BRSA is located within the Desert Floristic Province in the Mojave Desert region, including the Desert Mountains subregion (Jepson Herbarium 2017), and is approximately 2,100 feet above mean sea level. From 1904 to 2012, the Mojave Desert received an average annual precipitation of approximately 5.9 inches with average annual temperatures ranging from 49.9 to 75.8 degrees Fahrenheit (Desert Research Institute 2017). Winter precipitation from October through April accounts for approximately 82 percent of the annual total (USGS 2017d). The topography, hydrology, soils, and vegetation communities located in the Additional BRSA are summarized in the subsections that follow.

#### 5.0.0 Topography and Hydrology

The Additional BRSA includes approximately 89 acres within San Bernardino County, California and Clark County, Nevada. The USGS Hydrologic Unit designations within the Proposed Project are broken into a hierarchy of increasing specificity and are named by a Hydrologic Unit Code. From least to most specific, the designated hierarchy is as follows:

- Hydrological Region (HR)
- Hydrological Basin (HB)
- Hydrological Watershed (HW)

As described by the USGS, HRs divide the continental U.S. into areas containing the drainage area of a major river. HBs subdivide many of the subregions into accounting units. These units are encompassed within or can be equivalent to the subregions. HWs are part of a surface drainage basin, a combination of drainage basins, or a distinct hydrologic feature. These units are the smallest division of accounting unit and subdivide the subregions and accounting units into smaller areas (USGS 2017b).

The Additional BRSA transverses the Lower Colorado, Great Basin, and California HRs. Within the BRSA, the HRs are divided into four HBs and 18 HWs. Figure 2: Hydrologic Region Map depicts the HRs, HBs, and HWs that are within the Additional BRSA. Table 1: Hydrologic Regions, Basins, and Watersheds within the Additional BRSA lists the USGS HRs, HBs, and HWs that are within the BRSA and their corresponding Hydrologic Unit Codes.

The Additional BRSA crosses 76 unnamed water features, as described in Section 5.1 Water Features Delineated. Natural hydrologic sources within the Additional BRSA include groundwater, snowmelt, precipitation, and surface runoff from adjacent uplands.



#### Figure 2: Hydrologic Region Map

- ▲ Existing Substation
- Mid-Line Capacitor Location ٠
- Additional BRSA
- Additional Survey Area
- Eldorado Lugo 500 kV Transmission Line
  - Eldorado Mohave 500 kV Transmission Line
- ----- Lugo Mohave 500 kV Transmission Line
- --- Transmission Line not part of Proposed Project
- Hydrological Region Hydrological Basin

Eldorado-Lugo-Mohave Series Capacitor Project

- Hydrological Watershed



HRs	HBs	HWs
Lower Colorado Region (15)	Lower Colorado (150301)	Lower Piute Wash (1503010203)
		Upper Piute Wash (1503010201)
		Silver Creek Wash – Colorado River (1503010103)
Great Basin Region (16)	Central Nevada Desert Basins (160600)	McCullough Spring (1606001516)
		Ora Hanna Spring (1606001517)
California Region (18)	Southern Mojave (181001)	North Lucerne Valley (1810010001)
		Silver Creek – Rabbit Lake (1810010005)
		Ericksen Dry Lake (1810010002)
		Crystal Creek – Lucerne Lake (1810010004)
		Clipper Valley Wash (1810010032)
		Upper Watson Wash (1810010031)
	Northern Mojave (180902)	Lower Kelso Wash (1809020820)
		Crucero Hill (1809020821)
		Broadwell Lake (1809020816)
		Cronise Valley (1809020817)
		Bell Mountain Wash – Mojave River (1809020807)
		Troy Lake (1809020813)
		Upper Kelso Wash (1809020819)

Table 1: Hydrologic Regions, Basins, and Watersheds within the Additional BRSA

Source: USGS 2017d

#### 5.0.1 Soils

Soils in the Additional BRSA consist of well-drained, non-hydric soils with sandy and loamy textures. The geomorphic positions of these soils are alluvial fans, fan remnants, fan piedmonts, fan aprons, hills, and mountains (NRCS 2017). The following 20 soil types are located in the Additional BRSA:

- Arizo association
- Avawatz-Oak Glen association, gently sloping
- Burntshack-Hypoint association, 2- to 4-percent slopes
- Cajon Sand, 0- to 2-percent slopes
- Cajon Sand, 2- to 9-percent slopes
- Carrizo association

- Carrwash-Riverbend association
- Goldroad-Rock outcrop association
- Kidwell-Tenwell association
- Lanip-Kidwell association
- Mapping not complete
- Newera association
- Riverbend-Carrwash association
- Seanna-Goldroad-Rock outcrop association
- Tenwell-Crosgrain association
- Tenwell-Lanip association
- Tenwell-Shamock association
- Urban land-Riverbend-Huevi association
- Varwash association
- Wasco Sandy Loam, cool, 2- to 5-percent slopes

## 5.0.2 Vegetation Communities

The Additional BRSA is located within the Mojave Desert region of the Desert floristic province (Jepson Herbarium 2017). The predominant vegetation community observed within the Additional BRSA was *Larrea tridentata – Ambrosia dumosa* shrubland alliance (creosote bush – burrobush shrubland). The following additional vegetation communities and land cover types were observed:

- Yucca brevifolia woodland alliance
- Ambrosia salsola shrubland alliance
- Artemisia tridentata shrubland alliance
- Encelia farinosa shrubland alliance
- Ericameria nauseosa shrubland alliance
- Larrea tridentata shrubland alliance
- Yucca schidigera shrubland alliance
- Developed land

The vegetation classification system that was used conforms to A Manual of California Vegetation, Second Edition (Sawyer et al. 2009). Nomenclature used for plant names follows The Jepson Manual: Vascular Plants of California, Second Edition (Baldwin et al. 2012). Nomenclatural changes made after the publication date of The Jepson Manual follow the Jepson eFlora website (Jepson Herbarium 2017).

## 5.1 WATER FEATURES DELINEATED

Insignia biologists delineated 76 water features within the Additional BRSA. All of these features were linear and ephemeral, and they consisted of compound channels and single-thread channels. No wetlands were observed or delineated. The delineated water features are presented in Attachment A: Potentially Jurisdictional Water Features Delineated within the Additional BRSA.

#### 5.1.0 United States Army Corps of Engineers-, Regional Water Quality Control Board-, and Nevada Division of Environmental Protection-Jurisdictional Features

Approximately 7.16 acres and 17,258 linear feet of water features that are potentially under the jurisdiction of the USACE, RWQCB, and NDEP were observed within the Additional BRSA. All 76 water features observed during the surveys were ephemeral drainages. Ephemeral drainages are generally considered to be tributaries due their direct or indirect flow into a TNW. The unique feature identification number, feature type, OHWM width and depth, and the length and acreage for each drainage observed within the Additional BRSA are listed in Attachment B: Jurisdictional Delineation Survey Results. Attachment C: Drainage Photograph Log presents upstream and downstream photographs of mapped drainage features and the OHWMs.

#### 5.1.1 California Department of Fish and Wildlife-Jurisdictional Features

Approximately 8.93 acres and 17,258 linear feet of potentially CDFW-jurisdictional water features were identified within the Additional BRSA. No riparian vegetation was observed. The unique feature identification number, feature type, TOB width and depth, and the length and acreage for each feature observed within the Additional BRSA are listed in Attachment B: Jurisdictional Delineation Survey Results.

## 6 – REFERENCES

- Baldwin, B.G., D. Goldman, D. J. Keil, R. Patterson, T. J. Rosatti, and D. Wilken. 2012. *The Jepson Manual: Vascular Plants of California, Second Edition*. Berkeley, California: University of California Press.
- California Water Code. California Law. Online. <u>https://leginfo.legislature.ca.gov/faces/codesTOCSelected.xhtml?tocCode=WAT</u>. Site visited November 3, 2017.
- Castanon, David. USACE. Chief, Regulatory Division. Personal communication with S. Willbrand, Insignia. July 31, 2017. David.J.Castanon@usace.army.mil.
- Desert Research Institute. 2017. Western Regional Climate Center, Mojave, California. Online. <u>https://wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca5756</u>. Site visited October 12, 2017.
- Environmental Laboratory. 1987. *Corps of Engineers Wetlands Delineation Manual*. Technical Report Y-87-1, U.S. Army Engineer Waterways Experimental Station, Vicksburg, MS. 117 pp.
- Environmental Protection Agency (EPA). 2017. Waters of the United States Rulemaking: Current Implementation of Waters of the United States. Online. <u>https://www.epa.gov/wotus-rule/about-waters-united-states</u>. Site visited October 12, 2017.
- EPA and USACE. 2008. Clean Water Act Jurisdiction Following the U.S. Supreme Court's Decision in *Rapanos v. U.S.* and *Carabell v. USACE*.

- Insignia. 2017. Preliminary Jurisdictional Delineation Report for the Eldorado-Lugo-Mohave Series Capacitor Project.
- Jepson Herbarium. 2017. *Jepson eFlora*. <u>http://ucjeps.berkeley.edu/IJM.html</u>. Site visited July 27, 2017.
- National Archives and Records Administration. 2015. *Federal Register*. Clean Water Rule: Definition of "Waters of the United States." Online. <u>https://www.federalregister.gov/documents/2015/06/29/2015-13435/clean-water-rule-definition-of-waters-of-the-united-states</u>. Site visited October 12, 2017.
- NRCS. 2017. Soil Survey Geographic Database. Accessed October 13, 2017.
- RWQCB. 2017. Clean Water Act Section 401, Colorado River Basin Regional RWQCB. Online. <u>http://www.waterboards.ca.gov/coloradoriver/water\_issues/programs/401\_certification/in</u> <u>dex.shtml</u>. Site visited October 13, 2017.
- Sawyer, J.O., T. Keeler-Wolf, and J.M. Evens. 2009. A Manual of California Vegetation, Second *Edition*. Sacramento, California: California Native Plant Society.
- U.S. Court of Appeals. 2015. Order of Stay. On Petition for Review of a Final Rule from the United States Army Corps of Engineers and the Environmental Protection Administration. No. EPA-HQ-OW-2011; Judicial Panel on Multi-District Litigation, No. 135. Online. <u>http://www.opn.ca6.uscourts.gov/opinions.pdf/15a0246p-06.pdf</u>. Site visited July 28, 2017.
- USACE. 1986. Regulatory Program Regulations. 33 CFR Part 328: Definition of Waters of the United States. Online. <u>http://www.gpo.gov/fdsys/pkg/CFR-2011-title33-vol3/pdf/CFR-2011-title33-vol3-part328.pdf</u>. Site visited October 13, 2017.
- USACE. 2001. Final Summary Report: Guidelines for Jurisdictional Determinations for Waters of the United States in the Arid Southwest. Online. <u>https://www.azdot.gov/docs/defaultsource/environmental-planninglibrary/jd\_guidelines\_for\_jd\_arid\_southwest.pdf?sfvrsn=2</u>. Site visited July 28, 2017.
- USACE. 2008a. A Field Guide to the Identification of the Ordinary High Water Mark (OHWM) in the Arid West Region of the Western United States A Delineation Manual. Online. <u>http://www.spk.usace.army.mil/Portals/12/documents/regulatory/pdf/Ordinary\_High\_Wa</u> termark Manual Aug 2008.pdf. Site visited October 12, 2017.
- USACE. 2008b. Regulatory Guidance Letter No. 08-02, Subject: Jurisdictional Determinations. June 26, 2008.
- USACE. 2012. Final Map and Drawing Standards for the South Pacific Division Regulatory Program. Online. <u>http://www.spl.usace.army.mil/Portals/17/docs/publicnotices/SPD-RG\_map-drawing-standards\_final\_20120806v3.pdf</u>. Site visited July 28, 2017.

- USFWS. 2017. National Wetlands Inventory. Online. <u>http://www.fws.gov/wetlands/</u>. Site visited October 3, 2017.
- USGS. 2017a. Geospatial Data Gateway. Online <u>https://gdg.sc.egov.usda.gov/</u>. Site visited July 28, 2017.
- USGS. 2017b. Hydrologic Unit Maps. Online. <u>http://water.usgs.gov/GIS/huc.html</u>. Site visited October 13, 2017.
- USGS. 2017c. National Hydrography Dataset. Online. <u>http://nhd.usgs.gov/data.html</u>. Site visited October 3, 2017.
- USGS. 2017d. Precipitation History of the Mojave Desert Region, 1893-2001. Online. <u>http://pubs.usgs.gov/fs/fs117-03/</u>. Site visited July 27, 2017.

#### ATTACHMENT A: POTENTIALLY JURISDICTIONAL WATER FEATURES DELINEATED WITHIN THE ADDITIONAL BRSA












































































































ATTACHMENT B: JURISDICTIONAL DELINEATION SURVEY RESULTS

## ATTACHMENT B: JURISDICTIONAL DELINEATION SURVEY RESULTS

Feature ID	Feature Type	Approximate Drainage Length (Feet)	Average Ordinary High Watermark (OHWM) Width (Feet)	Average OHWM Depth (Feet)	Average Top of Bank (TOB) Width (Feet)	Average TOB Depth (Feet)	United States Army Corps of Engineers-, Regional Water Quality Control Board-, and Nevada Division of Environmental Protection- Jurisdictional Areas (Acres)	California Department of Fish and Wildlife- Jurisdictional Areas (Acres)	Attachment A Map Page
8000	Ephemeral Drainage	160.20	4.41	2.00	6.81	1.50	0.01	0.02	1
7001	Ephemeral Drainage	158.79	6.76	0.10	8.76	2.00	0.02	0.02	2
7002	Ephemeral Drainage	127.04	3.77	0.30	9.77	5.00	0.01	0.03	3
7003	Ephemeral Drainage	52.27	7.81	0.30	9.81	3.00	0.01	0.01	3
7004	Ephemeral Drainage	59.38	4.88	0.20	6.88	0.60	0.01	0.01	4
8001	Ephemeral Drainage	87.50	8.09	4.25	9.49	1.00	0.02	0.02	5
8002	Ephemeral Drainage	61.68	4.27	0.20	4.87	0.50	0.01	0.01	5
8003	Ephemeral Drainage	680.78	40.12	0.10	41.12	0.20	0.06	0.08	6
8004	Ephemeral Drainage	699.36	92.57	0.10	93.57	0.20	0.10	0.12	6
8005	Ephemeral Drainage	30.39	2.62	0.10	4.22	0.90	0.00	0.00	7
8006	Ephemeral Drainage	895.40	13.54	0.25	14.64	0.80	0.12	0.14	8
8007	Ephemeral Drainage	78.49	7.41	0.20	8.41	0.60	0.01	0.01	8
7005	Ephemeral Drainage	110.95	3.83	0.10	6.83	0.40	0.01	0.02	9
7006	Ephemeral Drainage	138.36	6.36	0.10	8.36	1.00	0.01	0.02	10
7007	Ephemeral Drainage	110.26	4.82	0.10	6.82	0.50	0.01	0.02	10
7008	Ephemeral Drainage	530.91	7.49	0.10	9.49	0.30	0.07	0.09	10
7009	Ephemeral Drainage	318.49	4.02	0.10	6.02	0.50	0.04	0.05	10
7011	Ephemeral Drainage	780.82	3.63	0.10	11.63	2.00	0.08	0.23	11
9001	Ephemeral Drainage	180.10	1.50	0.50	2.50	0.80	0.01	0.01	12
9002	Ephemeral Drainage	205.64	2.00	0.20	4.00	0.40	0.01	0.02	13
9003	Ephemeral Drainage	174.46	3.50	0.40	5.00	0.70	0.01	0.02	14
9004	Ephemeral Drainage	61.40	0.50	7.00	7.50	0.80	0.01	0.01	14
9005	Ephemeral Drainage	142.41	12.00	1.00	13.00	1.50	0.04	0.04	14
7010	Ephemeral Drainage	131.38	13.32	0.30	21.32	3.00	0.04	0.06	15
7012	Ephemeral Drainage	156.22	8.24	0.10	22.24	4.00	0.03	0.07	16
7013	Ephemeral Drainage	147.44	13.54	0.10	37.54	5.00	0.02	0.11	16
7014	Ephemeral Drainage	1614.66	166.97	0.20	176.97	3.00	3.52	3.86	16
8013	Ephemeral Drainage	472.17	141.1	0.30	142.3	0.60	0.88	0.89	17

Southern California Edison Eldorado-Lugo-Mohave Series Capacitor Project

Feature ID	Feature Type	Approximate Drainage Length (Feet)	Average Ordinary High Watermark (OHWM) Width (Feet)	Average OHWM Depth (Feet)	Average Top of Bank (TOB) Width (Feet)	Average TOB Depth (Feet)	United States Army Corps of Engineers-, Regional Water Quality Control Board-, and Nevada Division of Environmental Protection- Jurisdictional Areas (Acres)	California Department of Fish and Wildlife- Jurisdictional Areas (Acres)	Attachment A Map Page
8008	Ephemeral Drainage	62.69	6.27	0.10	7.27	0.50	0.01	0.01	18
8009	Ephemeral Drainage	44.44	2.19	0.30	3.79	0.80	0.00	0.00	18
8010	Ephemeral Drainage	39.27	1.69	0.10	4.09	0.30	0.00	0.00	18
8011	Ephemeral Drainage	66.21	3.92	0.20	5.12	0.60	0.00	0.00	18
8012	Ephemeral Drainage	269.98	10.53	0.10	19.73	0.20	0.03	0.09	18
7037	Ephemeral Drainage	281.83	20.21	0.20	28.21	3.00	0.05	0.10	19
7038	Ephemeral Drainage	146.64	5.55	0.10	7.55	1.00	0.02	0.02	19
7039	Ephemeral Drainage	157.09	19.3	0.20	25.3	2.50	0.06	0.09	20
7040	Ephemeral Drainage	162.76	2.56	0.10	11.56	2.50	0.01	0.05	20
7041	Ephemeral Drainage	108.18	2.79	0.10	4.79	0.60	0.01	0.01	21
7042	Ephemeral Drainage	165.52	3.61	0.10	5.61	0.80	0.01	0.02	21
8026	Ephemeral Drainage	203.37	3.48	0.10	4.48	0.20	0.02	0.02	21
8027	Ephemeral Drainage	831.90	216.1	0.20	217.1	0.70	0.60	0.62	21
8028	Ephemeral Drainage	237.34	49.28	0.20	51.28	0.30	0.09	0.10	21
8020	Ephemeral Drainage	39.30	8.14	0.20	10.74	0.60	0.01	0.01	22
8023	Ephemeral Drainage	95.45	2.68	0.15	3.68	0.35	0.01	0.01	22
8021	Ephemeral Drainage	17.05	2.25	0.30	3.85	2.50	0.00	0.00	23
8022	Ephemeral Drainage	40.61	4.53	0.15	4.83	0.50	0.00	0.00	24
8024	Ephemeral Drainage	158.82	18.31	0.10	18.71	0.30	0.04	0.04	25
8025	Ephemeral Drainage	47.46	5.05	0.10	5.45	0.30	0.00	0.00	25
7036	Ephemeral Drainage	665.98	2.12	0.10	4.12	2.00	0.06	0.09	26
7043	Ephemeral Drainage	233.64	8.05	0.10	12.05	0.80	0.03	0.05	27
7022	Ephemeral Drainage	303.87	4.92	0.10	6.92	1.00	0.04	0.05	28
7024	Ephemeral Drainage	65.15	3.07	0.10	10.07	2.00	0.00	0.01	28
7016	Ephemeral Drainage	49.86	10.35	0.30	14.35	1.00	0.01	0.01	29
7017	Ephemeral Drainage	107.16	29.71	0.20	35.71	0.70	0.07	0.09	29
7018	Ephemeral Drainage	363.39	9.3	0.20	11.3	1.00	0.05	0.07	29, 30
7021	Ephemeral Drainage	104.72	4.12	0.20	6.12	1.00	0.01	0.02	29, 30
7015	Ephemeral Drainage	273.25	3.68	0.10	15.68	5.00	0.02	0.10	30
7019	Ephemeral Drainage	141.25	9.5	0.20	15.5	2.00	0.02	0.04	30

December 2017

## **REVISED DRAFT**

Southern California Edison Eldorado-Lugo-Mohave Series Capacitor Project

Feature ID	Feature Type	Approximate Drainage Length (Feet)	Average Ordinary High Watermark (OHWM) Width (Feet)	Average OHWM Depth (Feet)	Average Top of Bank (TOB) Width (Feet)	Average TOB Depth (Feet)	United States Army Corps of Engineers-, Regional Water Quality Control Board-, and Nevada Division of Environmental Protection- Jurisdictional Areas (Acres)	California Department of Fish and Wildlife- Jurisdictional Areas (Acres)	Attachment A Map Page
7020	Ephemeral Drainage	41.72	6.62	0.10	12.62	0.40	0.00	0.01	30
7035	Ephemeral Drainage	120.22	4.82	0.10	6.82	0.40	0.01	0.02	31
8019	Ephemeral Drainage	87.25	1.97	0.10	2.97	0.40	0.01	0.01	32
7033	Ephemeral Drainage	84.51	3.16	0.10	13.16	2.50	0.01	0.02	33
7034	Ephemeral Drainage	134.69	1.65	0.10	5.65	1.00	0.01	0.02	33
2017	Ephemeral Drainage	120.88	1.49	0.10	2.09	0.25	0.00	0.01	34
2018	Ephemeral Drainage	184.33	8.54	0.10	12.14	0.20	0.01	0.03	34
8016	Ephemeral Drainage	193.98	8.47	0.20	10.07	0.80	0.02	0.03	34
7032	Ephemeral Drainage	207.56	3.93	0.20	12.93	1.50	0.02	0.06	35
7031	Ephemeral Drainage	198.32	6.51	0.20	10.51	0.50	0.02	0.04	36
8015	Ephemeral Drainage	190.47	8.75	0.35	10.75	0.90	0.05	0.05	37
8014	Ephemeral Drainage	203.11	22.07	0.20	23.67	0.55	0.04	0.05	38
7025	Ephemeral Drainage	210.76	9.32	0.20	15.32	2.50	0.02	0.05	39
7026	Ephemeral Drainage	278.03	8.12	0.30	18.12	2.00	0.05	0.12	39
7027	Ephemeral Drainage	284.48	52.51	0.20	56.51	0.50	0.27	0.30	39
7028	Ephemeral Drainage	324.30	29.96	0.20	39.96	0.40	0.08	0.15	39
7029	Ephemeral Drainage	248.22	8.55	0.20	22.55	2.50	0.05	0.14	39
7030	Ephemeral Drainage	294.60	14.36	0.10	22.36	1.00	0.04	0.10	39
Total	Not Applicable (N/A)	17,258.56	N/A	N/A	N/A	N/A	7.16	8.93	N/A

ATTACHMENT C: DRAINAGE PHOTOGRAPH LOG





Photograph 1: Feature 7001, looking downstream.



Photograph 2: Feature 7001, view of OHWM.





Photograph 1: Feature 7002, looking downstream.



Photograph 2: Feature 7002, view of OHWM.




Photograph 1: Feature 7003, looking downstream.



Photograph 2: Feature 7003, view of OHWM.





Photograph 1: Feature 7004, looking downstream.



Photograph 2: Feature 7004, view of OHWM.





Photograph 1: Feature 7005, looking downstream.



Photograph 2: Feature 7005, view of OHWM.





Photograph 1: Feature 7006, looking upstream.



Photograph 2: Feature 7006, view of OHWM.





Photograph 1: Feature 7007, looking downstream.



Photograph 2: Feature 7007, view of OHWM.





Photograph 1: Feature 7008, looking downstream.



Photograph 2: Feature 7008, view of OHWM.





Photograph 1: Feature 7009, looking upstream.



Photograph 2: Feature 7009, view of OHWM.





Photograph 1: Feature 7010, looking upstream.



Photograph 2: Feature 7010, view of OHWM.





Photograph 1: Feature 7011, looking downstream.



Photograph 2: Feature 7011, view of OHWM.





Photograph 1: Feature 7012, looking downstream.



Photograph 2: Feature 7012, view of OHWM.





Photograph 1: Feature 7013, looking upstream.



Photograph 2: Feature 7013, view of OHWM.





Photograph 1: Feature 7014, looking downstream.



Photograph 2: Feature 7014, view of OHWM.





Photograph 1: Feature 7015, looking downstream.



Photograph 2: Feature 7015, view of OHWM.





Photograph 1: Feature 7016, looking downstream.



Photograph 2: Feature 7016, view of OHWM.





Photograph 1: Feature 7017, looking upstream.



Photograph 2: Feature 7017, view of OHWM.





Photograph 1: Feature 7018, looking upstream.



Photograph 2: Feature 7018, view of OHWM.





Photograph 1: Feature 7019, looking upstream.



Photograph 2: Feature 7019, view of OHWM.





Photograph 1: Feature 7020, looking downstream.



Photograph 2: Feature 7020, looking upstream.





Photograph 1: Feature 7021, looking downstream.



Photograph 2: Feature 7021, view of OHWM.





Photograph 1: Feature 7022, looking downstream.



Photograph 2: Feature 7022, view of OHWM.





Photograph 1: Feature 7023, looking downstream.



Photograph 2: Feature 7023, view of OHWM.





Photograph 1: Feature 7024, looking downstream.



Photograph 2: Feature 7024, looking upstream.





Photograph 1: Feature 7025, looking downstream.



Photograph 2: Feature 7025, looking upstream.





Photograph 1: Feature 7026, looking upstream.



Photograph 2: Feature 7026, view of OHWM.





Photograph 1: Feature 7027, looking downstream.



Photograph 2: Feature 7027, view of OHWM.





Photograph 1: Feature 7028, looking downstream.



Photograph 2: Feature 7028, view of OHWM.





Photograph 1: Feature 7029, looking downstream.



Photograph 2: Feature 7029, view of OHWM.





Photograph 1: Feature 7030, looking downstream.



Photograph 2: Feature 7030, view of OHWM.





Photograph 1: Feature 7031, looking downstream.



Photograph 2: Feature 7031, view of OHWM.





Photograph 1: Feature 7032, looking downstream.



Photograph 2: Feature 7032, looking upstream.





Photograph 1: Feature 7033, looking downstream.



Photograph 2: Feature 7033, view of OHWM.





Photograph 1: Feature 7034, looking downstream.



Photograph 2: Feature 7034, looking upstream.





Photograph 1: Feature 7035, looking downstream.



Photograph 2: Feature 7035, view of OHWM.





Photograph 1: Feature 7036, looking downstream.



Photograph 2: Feature 7036, view of OHWM.





Photograph 1: Feature 7037, looking upstream.



Photograph 2: Feature 7037, view of OHWM.





Photograph 1: Feature 7038, looking upstream.



Photograph 2: Feature 7038, view of OHWM.




Photograph 1: Feature 7039, looking upstream.



Photograph 2: Feature 7039, view of OHWM.





Photograph 1: Feature 7040, looking downstream.



Photograph 2: Feature 7040, view of OHWM.





Photograph 1: Feature 7041, looking downstream.



Photograph 2: Feature 7041, view of OHWM.





Photograph 1: Feature 7042, looking upstream.



Photograph 2: Feature 7042, view of OHWM.





Photograph 1: Feature 8000, looking downstream.



Photograph 2: Feature 8000, view of OHWM.





Photograph 1: Feature 8001, looking downstream.



Photograph 2: Feature 8001, looking upstream.





Photograph 1: Feature 8002, looking downstream.



Photograph 2: Feature 8002, looking upstream.





Photograph 1: Feature 8003, looking downstream.



Photograph 2: Feature 8003, looking upstream.





Photograph 1: Feature 8004, looking upstream.



Photograph 2: Feature 8004, view of OHWM.





Photograph 1: Feature 8005, looking downstream.



Photograph 2: Feature 8005, view of OHWM.





Photograph 1: Feature 8006, looking upstream.



Photograph 2: Feature 8006, view of OHWM.





Photograph 1: Feature 8007, looking downstream.



Photograph 2: Feature 8007, view of OHWM.





Photograph 1: Feature 8008, looking downstream.



Photograph 2: Feature 8008, view of OHWM.





Photograph 1: Feature 8009, looking downstream.



Photograph 2: Feature 8009, view of OHWM.





Photograph 1: Feature 8010, looking downstream.



Photograph 2: Feature 8010, looking upstream.





Photograph 1: Feature 8011, looking downstream.



Photograph 2: Feature 8011, looking upstream.





Photograph 1: Feature 8012, looking downstream.



Photograph 2: Feature 8012, view of OHWM.





Photograph 1: Feature 8013, looking upstream.



Photograph 2: Feature 8013, view of OHWM.





Photograph 1: Feature 8014, looking downstream.



Photograph 2: Feature 8014, looking upstream.





Photograph 1: Feature 8015, looking downstream.



Photograph 2: Feature 8015, view of OHWM.





Photograph 1: Feature 8016, looking downstream.



Photograph 2: Feature 8016, view of OHWM.





Photograph 1: Feature 8017, looking downstream.



Photograph 2: Feature 8017, view of OHWM.





Photograph 1: Feature 8018, looking downstream.



Photograph 2: Feature 8018, view of OHWM.





Photograph 1: Feature 8019, looking upstream.



Photograph 2: Feature 8019, view of OHWM.





Photograph 1: Feature 8020, looking downstream.



Photograph 2: Feature 8020, looking upstream.





Photograph 1: Feature 8021, looking downstream.



Photograph 2: Feature 8021, view of OHWM.





Photograph 1: Feature 8022, looking downstream.



Photograph 2: Feature 8022, view of OHWM.





Photograph 1: Feature 8023, looking downstream.



Photograph 2: Feature 8023, looking upstream.





Photograph 1: Feature 8024, looking downstream.



Photograph 2: Feature 8024, looking upstream.





Photograph 1: Feature 8025, looking downstream.



Photograph 2: Feature 8025, view of OHWM.





Photograph 1: Feature 8026, looking downstream.



Photograph 2: Feature 8026, view of OHWM.





Photograph 1: Feature 8027, looking downstream.



Photograph 2: Feature 8027, view of OHWM.





Photograph 1: Feature 8028, looking downstream.



Photograph 2: Feature 8028, looking upstream.





Photograph 1: Feature 9001, looking upstream.



Photograph 2: Feature 9001, looking downstream





Photograph 1: Feature 9002, looking upstream.



Photograph 2: Feature 9002, view of OHWM.





Photograph 1: Feature 9003, looking upstream.



Photograph 2: Feature 9003, looking downstream.




Photograph 1: Feature 9004, looking upstream.



Photograph 2: Feature 9004, view of OHWM.





Photograph 1: Feature 9005, looking upstream.



Photograph 2: Feature 9005, view of OHWM.