



# City of San Diego Dam Maintenance Program

## Cultural Resources Technical Report

December 2022 | 00149.00032.020

*Prepared for:*

**City of San Diego**  
**Public Utilities Department**  
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*Prepared by:*

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## National Archaeological Database Information

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Firm: HELIX Environmental Planning, Inc.

Client/Project: City of San Diego Public Utilities Department / City of San Diego Dam Maintenance Program

Report Date: December 2022

Report Title: Cultural Resources Inventory for the City of San Diego Dam Maintenance Program, County of San Diego, California

Type of Study: Cultural Resources Survey

New Sites: P-37-39910 (CA-SDI-23290), P-37-39909 (CA-SDI-23289), P-37-39906 (CA-SDI-23286), P-37-39907 (CA-SDI-23287), P-37-39908 (CA-SDI-23288), P-37-39911 (CA-SDI-23291), P-37-39912 (CA-SDI-23292), P-37-39914 (CA-SDI-23293), P-37-39913

Updated Sites: P-37-005756 (CA-SDI-5756), P-37-005758 (CA-SDI-5758), P-37-006981 (CA-SDI-6981), P-37-008676 (CA-SDI-8676), P-37-011103 (CA-SDI-11103), P-37-011335 (CA-SDI-11335), P-37-011419 (CA-SDI-11419), P-37-013616 (CA-SDI-13616), P-37-013617 (CA-SDI-13617), P-37-013618 (CA-SDI-13618), P-37-013629 (CA-SDI-13629), P-37-013630 (CA-SDI-13630), P-37-016321 (CA-SDI-14794), P-37-016577, P-37-019224, P-37-024958 (CA-SDI-16514), P-37-025926 (CA-SDI-17241), P-37-026965 (CA-SDI-17650), P-37-30217 (CA-SDI-19249), P-37-036508, P-37-036511, P-37-036512, P-37-036516, P-37-038878 (CA-SDI-22878), P-37-038886, P-37-038889 (CA-SDI-22885), P-37-038945 (CA-SDI-22906)

USGS Quad: Barrett Lake, Del Mar, El Cajon Mountain, Escondido, Jamul Mountains, La Mesa, Morena Reservoir, National City, Otay Mesa, Otay Mountain, Poway, Ramona, Rancho Santa Fe, San Vicente Reservoir, and Tecate 7.5' Quadrangles

Acreage: Approximately 314 acres

Key Words: San Diego County; Township(T) 12 South (S)/Range(R) 2 East (E), T13S/R2 West (W), T14S/R1E, T14S/R1W, T14S/R2W, T15S/R2E, T17S/R2E, T17S/R3E, T17S/R4E, T18S/R1E, T18S/R1W, T18S/R2E, T18S/R3E; Mission San Diego, Otay (Dominguez), Otay (Estudillo), and San Bernardo (Snook) land grants; Barrett, Black Mountain, Chollas, El Capitan, Hodges, Miramar, Morena, Murray, Rancho Bernardo,

Key Words (cont.):

San Vicente, Savage (Lower Otoy), Sutherland, and Upper Otoy Dams;  
Dulzura Conduit; Intensive Pedestrian Survey; Dam, Water Conveyance,  
City of San Diego Source Water.

# TABLE OF CONTENTS

---

<b><u>Section</u></b>	<b><u>Page</u></b>
EXECUTIVE SUMMARY .....	ES-1
1.0 INTRODUCTION.....	1
1.1 Project Location .....	1
1.1.1 Barrett Dam .....	1
1.1.2 Dulzura Conduit .....	1
1.1.3 Black Mountain Dam.....	2
1.1.4 Chollas Dam .....	2
1.1.5 El Capitan Dam.....	2
1.1.6 Hodges Dam.....	2
1.1.7 Miramar Dam.....	2
1.1.8 Morena Dam .....	3
1.1.9 Murray Dam .....	3
1.1.10 Rancho Bernardo Dam.....	3
1.1.11 San Vicente Dam.....	3
1.1.12 Savage Dam.....	3
1.1.13 Sutherland Dam .....	4
1.1.14 Upper Otay Dam .....	4
1.2 Project Background and Description .....	4
1.2.1 Maintenance Activities .....	5
1.2.2 Frequency of Maintenance Activities .....	9
1.2.3 Area of Potential Effects .....	9
1.3 Regulatory Framework .....	9
1.3.1 Federal .....	10
1.3.2 State .....	10
1.3.3 Local .....	11
1.3.4 Native American Heritage Values .....	13
1.4 Project Personnel.....	14
2.0 PROJECT SETTING.....	14
2.1 Natural Setting .....	14
2.2 Cultural Setting .....	15
2.2.1 Prehistoric Period .....	15
2.2.2 Ethnohistory.....	20
2.2.3 Historical Background .....	21
3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM .....	26
3.1 Records Search.....	26
3.2 Other Archival Research .....	26
3.3 Native American Contact Program .....	26

# TABLE OF CONTENTS (cont.)

---

<b><u>Section</u></b>	<b><u>Page</u></b>
4.0 SURVEY METHODS .....	27
4.1 Field Survey.....	27
4.2 Documentation .....	28
5.0 STUDY RESULTS .....	28
5.1 Barrett Dam and Dulzura Conduit .....	28
5.1.1 Records Search.....	28
5.1.2 Archival Research.....	35
5.1.3 Survey Methodology.....	36
5.1.4 Survey Results - Barrett Dam .....	37
5.1.5 Survey Results - Dulzura Conduit.....	40
5.2 Black Mountain Dam.....	42
5.2.1 Records Search.....	42
5.2.2 Archival Research.....	45
5.2.3 Survey Methodology.....	45
5.2.4 Survey Results .....	46
5.3 Chollas Dam .....	47
5.3.1 Records Search.....	47
5.3.2 Archival Research.....	48
5.3.3 Survey Methodology.....	49
5.3.4 Survey Results .....	50
5.4 El Capitan Dam.....	50
5.4.1 Records Search.....	50
5.4.2 Archival Research.....	53
5.4.3 Survey Methodology.....	54
5.4.4 Survey Results .....	55
5.5 Hodges Dam.....	59
5.5.1 Records Search.....	59
5.5.2 Archival Research.....	61
5.5.3 Survey Methodology.....	62
5.5.4 Survey Results .....	63
5.6 Miramar Dam.....	63
5.6.1 Records Search.....	63
5.6.2 Archival Research.....	65
5.6.3 Survey Methodology.....	66
5.6.4 Survey Results .....	67
5.7 Morena Dam .....	67
5.7.1 Records Search.....	67
5.7.2 Archival Research.....	68
5.7.3 Survey Methodology.....	69
5.7.4 Survey Results .....	70

# TABLE OF CONTENTS (cont.)

---

<u>Section</u>	<u>Page</u>
5.8 Murray Dam .....	71
5.8.1 Records Search.....	71
5.8.2 Archival Research.....	72
5.8.3 Survey Methodology.....	73
5.8.4 Survey Results.....	74
5.9 Rancho Bernardo Dam.....	74
5.9.1 Records Search.....	74
5.9.2 Archival Research.....	76
5.9.3 Survey Methodology.....	77
5.9.4 Survey Results.....	77
5.10 San Vicente Dam.....	78
5.10.1 Records Search.....	78
5.10.2 Archival Research.....	80
5.10.3 Survey Methodology.....	81
5.10.1 Survey Results.....	81
5.11 Savage Dam.....	84
5.11.1 Records Search.....	84
5.11.2 Archival Research.....	87
5.11.3 Survey Methodology.....	87
5.11.1 Survey Results.....	88
5.12 Sutherland Dam .....	89
5.12.1 Records Search.....	89
5.12.2 Archival Research.....	90
5.12.3 Survey Methodology.....	90
5.12.4 Survey Results.....	91
5.13 Upper Otay Dam .....	91
5.13.1 Records Search.....	91
5.13.2 Archival Research.....	93
5.13.3 Survey Methodology.....	94
5.13.4 Survey Results.....	95
6.0 SUMMARY AND MANAGEMENT CONSIDERATIONS.....	96
6.1 Impact Analysis And Management Recommendations.....	96
6.1.1 Barrett Dam .....	101
6.1.2 Black Mountain Dam.....	102
6.1.3 Chollas Dam .....	102
6.1.4 El Capitan Dam.....	102
6.1.5 Hodges Dam.....	103
6.1.6 Miramar Dam.....	103
6.1.7 Morena Dam .....	103
6.1.8 Murray Dam.....	103
6.1.9 Rancho Bernardo Dam.....	103
6.1.10 San Vicente Dam.....	104

# TABLE OF CONTENTS (cont.)

---

<u>Section</u>	<u>Page</u>
6.1.11 Savage Dam.....	104
6.1.12 Sutherland Dam .....	104
6.1.13 Upper Otay Dam .....	104
6.1.14 Dulzura Conduit .....	105
6.2 Summary .....	106
7.0 REFERENCES.....	107

## LIST OF APPENDICES

A	Resumes
B	Records Search Results (Confidential, bound separately)
C	Native American Correspondence (Confidential, bound separately)
D	DPR Site Forms (Confidential, bound separately)
E	Figures (Confidential, bound separately)

## LIST OF FIGURES

<u>No.</u>	<u>Title</u>	<u>Follows Page</u>
1	Regional Location.....	2
2a	USGS Topography - Barrett Dam and Access Roads APE.....	2
3a	Existing Facilities and Maintenance Areas - Barrett Dam and Access Roads APE .....	2
2b	USGS Topography - Dulzura Conduit APE .....	2
3b	Existing Facilities and Maintenance Areas - Dulzura Conduit APE .....	2
2c	USGS Topography - Black Mountain Dam APE .....	2
3c	Existing Facilities and Maintenance Areas - Black Mountain Dam APE.....	2
2d	USGS Topography - Chollas Dam APE .....	2
3d	Existing Facilities and Maintenance Areas - Chollas Dam APE.....	2
2e	USGS Topography - El Capitan Dam APE.....	2
3e	Existing Facilities and Maintenance Areas - El Capitan Dam APE .....	2
2f	USGS Topography - Hodges Dam APE.....	2
3f	Existing Facilities and Maintenance Areas - Hodges Dam APE .....	2
2g	USGS Topography - Miramar Dam APE.....	2
3g	Existing Facilities and Maintenance Areas - Miramar Dam APE .....	2
2h	USGS Topography - Morena Dam APE.....	4
3h	Existing Facilities and Maintenance Areas - Morena Dam APE .....	4
2i	USGS Topography - Murray Dam APE.....	4
3i	Existing Facilities and Maintenance Areas - Murray Dam APE .....	4

# TABLE OF CONTENTS (cont.)

---

## LIST OF FIGURES (cont.)

<u>No.</u>	<u>Title</u>	<u>Follows Page</u>
2j	USGS Topography - Rancho Bernardo Dam APE.....	4
3j	Existing Facilities and Maintenance Areas - Rancho Bernardo Dam APE .....	4
2k	USGS Topography - San Vicente Dam APE.....	4
3k	Existing Facilities and Maintenance Areas - San Vicente Dam APE .....	4
2l	USGS Topography - Savage Dam APE .....	4
3l	Existing Facilities and Maintenance Areas - Savage Dam APE.....	4
2m	USGS Topography - Sutherland Dam APE .....	4
3m	Existing Facilities and Maintenance Areas - Sutherland Dam APE .....	4
2n	USGS Topography - Upper Otay Dam APE .....	4
3n	Existing Facilities and Maintenance Areas - Upper Otay Dam APE .....	4
4a-k	Cultural Resources Identified within the Barrett Dam APE .....	Confidential Appendix E
5a-m	Cultural Resources Identified within the Dulzura Conduit APE .....	Confidential Appendix E
6	Cultural Resources Identified within the Black Mountain Dam APE .....	Confidential Appendix E
7	Cultural Resources Identified within the Chollas Dam APE .....	Confidential Appendix E
8	Cultural Resources Identified within the El Capitan Dam APE.....	Confidential Appendix E
9	Cultural Resources Identified within the Hodges Dam APE.....	Confidential Appendix E
10	Cultural Resources Identified within the Miramar Dam APE.....	Confidential Appendix E
11	Cultural Resources Identified within the Morena Dam APE.....	Confidential Appendix E
12	Cultural Resources Identified within the San Vicente Dam APE.....	Confidential Appendix E
13	Cultural Resources Identified within the Savage Dam APE .....	Confidential Appendix E
14	Cultural Resources Identified within the Upper Otay Dam APE .....	Confidential Appendix E

## LIST OF TABLES

<u>No.</u>	<u>Title</u>	<u>Page</u>
1	Native American Contact Program Responses .....	27
2	Previous Studies within a Half-mile of the Barrett Dam and Dulzura Conduit Project Areas .....	28
3	Previously Recorded Resources within a Half-mile of the Barrett Dam and Dulzura Conduit Project Areas.....	31
4	Cultural Resources Identified within the Barrett Dam Project Area .....	38
5	Cultural Resources Identified within the Dulzura Conduit Project Area .....	40
6	Previous Studies within a Half-mile of the Black Mountain Dam Project Area .....	43
7	Previously Recorded Resources within a Half-mile of the Black Mountain Dam Project Area .....	44
8	Cultural Resources Identified within the Black Mountain Dam Project Area.....	46
9	Previous Studies Within a Half-mile of the Chollas Dam Project Area .....	47
10	Previously Recorded Resources within a Half-mile of the Chollas Dam Project Area .....	48
11	Cultural Resources Identified within the Chollas Dam Project Area .....	50
12	Previous Studies within a Half-mile of the El Capitan Dam Project Area .....	51

# TABLE OF CONTENTS (cont.)

---

## LIST OF TABLES (cont.)

<u>No.</u>	<u>Title</u>	<u>Page</u>
13	Previously Recorded Resources within a Half-mile of the El Capitan Dam Project Area .....	51
14	Cultural Resources Identified within the El Capitan Dam Project Area .....	56
15	Previous Studies within a Half-mile of the Hodges Dam Project Area .....	59
16	Previously Recorded Resources within a Half-mile of the Hodges Dam Project Area.....	61
17	Cultural Resources Identified within the Hodges Dam Project Area .....	63
18	Previous Studies within a Half-mile of the Miramar Dam Project Area .....	64
19	Previously Recorded Resources within a Half-mile of the Miramar Dam Project Area.....	65
20	Cultural Resources Identified within the Miramar Dam Project Area .....	67
21	Previous Studies within a Half-mile of the Morena Dam Project Area.....	67
22	Previously Recorded Resources within a Half-mile of the Morena Dam Project Area.....	68
23	Cultural Resources Identified within the Morena Dam Project Area .....	70
24	Previous Studies within a Half-mile of the Murray Dam Project Area .....	71
25	Previously Recorded Resources within a Half-mile of the Murray Dam Project Area.....	72
26	Previous Studies within a Half-mile of the Rancho Bernardo Dam Project Area .....	75
27	Previously Recorded Resources within a Half-mile of the Rancho Bernardo Dam Project Area .....	76
28	Previous Studies within a Half-mile of the San Vicente Dam Project Area .....	78
29	Previously Recorded Resources within a Half-mile of the San Vicente Dam Project Area.....	79
30	Cultural Resources Identified within the San Vicente Dam Project Area .....	82
31	Previous Studies within a Half-mile of the Savage Dam Project Area .....	84
32	Previously Recorded Resources within a Half-mile of the Savage Dam Project Area .....	86
33	Cultural Resources Identified within the Savage Dam Project Area.....	89
34	Previous Studies within a Half-mile of the Sutherland Dam Project Area.....	89
35	Previous Studies within a Half-mile of the Upper Otay Dam Project Area.....	91
36	Previously Recorded Resources within a Half-mile of the Upper Otay Dam Project Area .....	92
37	Cultural Resources Identified within the Upper Otay Dam Project Area .....	95
38	Cultural Resources Summary and Recommendations.....	97



# ACRONYMS AND ABBREVIATIONS

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AB	Assembly Bill
AMSL	above mean sea level
APE	Area of Potential Effects
BLM	Bureau of Land Management
BP	Before Present
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CFR	Code of Federal Regulations
CHRIS	California Historical Resources Information System
CRHR	California Register of Historical Resources
CSDSWS	City of San Diego Source Water System
DPR	Department of Parks and Recreation
DSOD	Division of Safety of Dams
ESA	environmentally sensitive area
GLO	General Land Office
HELIX	HELIX Environmental Planning, Inc.
HRB	Historic Resources Board
HRG	Historic Resources Guidelines
HRR	Historical Resources Regulations
LDM	Land Development Manual
NAHC	Native American Heritage Commission
NHPA	National Historic Preservation Act
NRHP	National Register of Historic Places
NRTSCH	Naval Radio Transmitting Station, Chollas Heights
OHP	Office of Historic Preservation
PRC	Public Resources Code
PUD	Public Utilities Department
SCIC	South Coastal Information Center
SDMC	San Diego Municipal Code
SR	State Route

## ACRONYMS AND ABBREVIATIONS (cont.)

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TCP	Traditional Cultural Properties
TCR	Tribal Cultural Resources
USEPA	U.S. Environmental Protection Agency
USGS	U.S. Geological Survey

## EXECUTIVE SUMMARY

HELIX Environmental Planning, Inc. (HELIX) was contracted by the City of San Diego (City) Public Utilities Department (PUD) to provide cultural resources services for the Dam Maintenance Program (Program; proposed project). The Program includes the oversight and routine maintenance of 13 of the City's dams, Dulzura Conduit, and associated infrastructure located throughout the County of San Diego. For the purposes of this analysis, the proposed project consists of the ongoing implementation of the Program. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the Area of Potential Effects (APE) for the proposed project, comprising a total area of approximately 314 acres. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA), as amended.

HELIX obtained a record search of the California Historical Resources Information System (CHRIS) from the South Coastal Information Center (SCIC) on June 11, 2020. The records search covered a half-mile radius around each of the proposed project areas and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. Pedestrian field surveys of the proposed project APEs occurred between June and August 2020 and in April 2021. The surveys were undertaken by HELIX archaeologist Julie Roy, HELIX architectural historian Annie McCausland, and Kumeyaay Native American monitors Anthony LaChappa and Justin Linton of Red Tail Environmental.

The study resulted in the identification of 46 cultural resources within the project APE; of these, 37 were previously recorded and 9 were newly identified during the field surveys conducted for the Program. Of the 46 resources, 21 are prehistoric and consist of 14 archaeological sites consisting of bedrock milling features, some with associated artifact scatters; a habitation site; a bedrock yoni fertility feature; three lithic scatters; and two isolates. In addition, two multi-component resources were documented, with the prehistoric components consisting of a lithic quarry and artifact scatter and a lithic scatter. The historic components of these two resources consist of historic artifact scatters. The remaining resources include one of unknown age and 22 historic resources that include 11 that are associated with the City of San Diego Source Water System (CSDSWS); four electric transmission or distribution lines; State Route (SR) 94; the remnants of Rancho del Otay, the townsite of Foster, and Lower Otay Lakes Filtration Plant; cement foundations; a refuse scatter; and an isolate.

The significance status, project impacts, and recommendations for the 11 resources that are associated with the CSDSWS (e.g., associated with the dams, reservoirs, and associated infrastructure) are discussed in the *City of San Diego Source Water System Historical Resources Assessment* (McCausland 2022) that has been prepared for the Program. As such, project impacts to these resources are not analyzed in this report.

In general, the remainder of the 35 cultural resources situated within the APE are unevaluated for listing on the CRHR and NRHP. For the purposes of the Program, the resources are recommended to be treated as significant, except for the resources determined to be destroyed or those that do not possess the characteristics necessary to be considered resources eligible for listing on the CRHR or the NRHP. The implementation of the proposed Program activities does not have the potential to cause a substantial adverse change in the significance of a historical resource; however, it is recommended that several of

the archeological sites be classified as environmentally sensitive areas (ESAs) in order to ensure that no inadvertent adverse impacts to the resources occur as a result of the Program.

In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed maintenance activities, cultural resources survey of these areas will be required.

## 1.0 INTRODUCTION

HELIX Environmental Planning, Inc. (HELIX) has completed this cultural resources technical report for the City of San Diego (City) Public Utilities Department's (PUD) proposed Dam Maintenance Program (Program; proposed project). The Program includes the oversight and routine maintenance of 13 of the City's dams, Dulzura Conduit, and associated infrastructure located throughout the County of San Diego. A cultural resources study including a records search, Sacred Lands File search, Native American outreach, a review of historic aerial photographs and maps, and a pedestrian survey was conducted for the proposed project. This report details the methods and results of the cultural resources study and has been prepared to comply with the California Environmental Quality Act (CEQA) and Section 106 of the National Historic Preservation Act (NHPA), as amended.

### 1.1 PROJECT LOCATION

The 13 City dams and associated infrastructure, and the approximately 13-mile Dulzura Conduit, are located throughout San Diego County, California (Figure 1, *Regional Location*). The locations of each of these areas are detailed below.

#### 1.1.1 Barrett Dam

Barrett Dam is located in the eastern portion of the County, in the unincorporated community of Dulzura. It lies within Section 22 of Township 17 South, Range 3 East, on the U.S. Geological Survey (USGS) 7.5-minute Barrett Lake quadrangle map (Figure 2a, *USGS Topography – Barrett Dam and Access Roads APE*). The Barrett Dam Access Road is located within Sections 7, 8, 17, 16, 21, 22, 28, and 33 of Township 17 South, Range 3 East, and Section 12 of Township 17 South, Range 2 East on the USGS 7.5-minute Barrett Lake quadrangle map. Barrett Dam is located at the outlet of Barrett Reservoir along Barrett Lake Road to the north of Campo Road (State Route [SR] 94), south of Skye Valley Road, east of Lyons Valley Road, and west of Horizon View Drive (Figure 3a, *Existing Facilities and Maintenance Areas – Barrett Dam and Access Roads APE*). The access road is located southeast of Lyons Valley Road, south and west of Barret Lake, and north of SR 94. The Barret Dam Area of Potential Effects (APE) occurs in the City's Barrett Reservoir Open Space area and Cleveland National Forest.

#### 1.1.2 Dulzura Conduit

The approximately 13-mile long Dulzura Conduit is located in the eastern portion of the County, in the unincorporated community of Dulzura. It lies within Sections 4, 5, 7, 8, 10, 11, 12, 13, 14, 22, 28, and 33 of Townships 17 and 8 South, Ranges 2 and 3 East, on the USGS 7.5-minute Barrett Lake, Otay Mountain, and Tecate quadrangle maps (Figure 2b, *USGS Topography – Dulzura Conduit APE*). The northern terminus of the Dulzura Conduit is located at Barrett Dam; the southern terminus is located at the conduit's confluence with Dulzura Creek to the west of the Community Building Road and Flume Road intersection (Figure 3b, *Existing Facilities and Maintenance Areas – Dulzura Conduit APE*). The conduit traverses from Barrett Dam southward to Campo Road (SR 94), primarily along the eastern facing slopes west of Lake Barrett Road. The conduit then travels under Campo Road and continues in a westerly direction towards Dulzura Creek with the western underground portion paralleling Flume Road.

### **1.1.3 Black Mountain Dam**

Black Mountain Dam is located in the northern portion of the City, in the community of Black Mountain Ranch. It lies within Section 6 of Township 14 South, Range 2 West, on the USGS 7.5-minute Del Mar quadrangle map (Figure 2c, *USGS Topography – Black Mountain Dam APE*). The dam is located to the south of Carmel Valley Road, east of Black Mountain Road, and north of Maler Road (Figure 3c, *Existing Facilities and Maintenance Areas – Black Mountain Dam APE*). The Black Mountain Dam APE occurs within the City's Black Mountain Open Space Park.

### **1.1.4 Chollas Dam**

Chollas Dam is located in the central portion of the City (Figure 1). It lies in an unsectioned portion (Mission San Diego land grant) of Township 16 South, Range 2 West, on the USGS 7.5-minute National City quadrangle map (Figure 2d, *USGS Topography – Chollas Dam APE*). Chollas Dam is located at the outlet of Chollas Heights Reservoir to the north of College Grove Road, south of Fauna Drive, east of Chollas Station Road, and west of College Grove Drive (Figure 3d, *Existing Facilities and Maintenance Areas – Chollas Dam APE*).

### **1.1.5 El Capitan Dam**

El Capitan Dam is located in the eastern portion of the County, in the unincorporated community of Lakeside. It lies within Sections 7 and 8 of Township 15 South, Range 2 East, on the USGS 7.5-minute El Cajon Mountain quadrangle map (Figure 2e, *USGS Topography – El Capitan Dam APE*). The dam is located at the outlet of El Capitan Reservoir along El Monte Road to the north of Interstate 8, south of Featherstone Canyon Road, east of Lake Jennings Road, and west of Peutz Valley Road (Figure 3e, *Existing Facilities and Maintenance Areas – El Capitan Dam APE*). The El Capitan Dam APE occurs in City's El Capitan Reservoir Open Space Area and Cleveland National Forest.

### **1.1.6 Hodges Dam**

Hodges Dam is located in the north portion of the City. It lies within Section 18 of Township 13 South, Range 2 West, on the USGS 7.5-minute Escondido and Rancho Santa Fe quadrangle maps (Figure 2f, *USGS Topography – Hodges Dam APE*). The dam is located at the outlet of Hodges Reservoir to the north of Camino Santa Fe, south of Del Dios Road, east of Lake Drive, and west of Calle Ambiente (Figure 3f, *Existing Facilities and Maintenance Areas – Hodges Dam APE*). The Hodges Dam APE occurs in the City's Hodges Reservoir Open Space area.

### **1.1.7 Miramar Dam**

Miramar Dam is located in the northern portion of the City. It lies within Section 32 of Township 14 South, Range 2 West, on the USGS 7.5-minute Poway quadrangle map (Figure 2g, *USGS Topography – Miramar Dam APE*). The dam is located at the outlet of Miramar Reservoir to the north of Scripps Lake Drive, south and east of Scripps Ranch Boulevard, and west of Mira Lago Terrace (Figure 3g, *Existing Facilities and Maintenance Areas – Miramar Dam APE*). The Miramar Dam APE occurs in the City's Miramar Reservoir Open Space area.

### **1.1.8 Morena Dam**

Morena Dam is located in the eastern portion of the County, in the unincorporated community of Lake Morena. It lies within Section 23 of Township 17 South, Range 4 East, on the USGS 7.5-minute Morena Reservoir quadrangle map (Figure 2h, *USGS Topography – Morena Dam APE*). The dam is at the outlet of Morena Reservoir along Morena Reservoir Road, north of Hauser Creek Road, south of Skye Valley Road, and west of Lake Morena Drive (Figure 3h, *Existing Facilities and Maintenance Areas – Morena Dam APE*). The Morena Dam APE occurs in the County’s Lake Morena Regional Park and Cleveland National Forest.

### **1.1.9 Murray Dam**

Murray Dam is located in the central portion of the City. It lies within an unsectioned portion (Mission San Diego land grant) of Township 16 South, Range 2 West, on the USGS 7.5-minute La Mesa quadrangle map (Figure 2i, *USGS Topography – Murray Dam APE*). The dam is located at the outlet of Murry Reservoir to the north of Lake Murray Boulevard, south of Jackson Drive, east of Del Cerro Boulevard, and west of Baltimore Drive (Figure 3i, *Existing Facilities and Maintenance Areas – Murray Dam APE*). The Murray Dam APE occurs in the City’s Lake Murray Open Space area.

### **1.1.10 Rancho Bernardo Dam**

Rancho Bernardo Dam is located in the northern portion of the City. It lies within an unsectioned portion (San Bernardo (Snook) land grant) of Township 13 South, Range 2 West, on the USGS 7.5-minute Escondido quadrangle map (Figure 2j, *USGS Topography – Rancho Bernardo Dam APE*). Rancho Bernardo Dam is located to the north of Sun Summit Point, south of Cloudcrest Drive, east of Lofty Trail Drive, and west of Turtleback Road (Figure 3j, *Existing Facilities and Maintenance Areas – Rancho Bernardo Dam APE*).

### **1.1.11 San Vicente Dam**

San Vicente Dam is located in the central portion of the County, in the unincorporated community of Lakeside. It lies within Sections 31 and 36 of Township 14 South, Ranges 1 West and 1 East, on the USGS 7.5-minute San Vicente Reservoir quadrangle map (Figure 2k, *USGS Topography – San Vicente Dam APE*). The dam is located at the outlet of San Vicente Reservoir to the north of Morena Avenue, south of Foster Truck Trail, east of SR-67, and west of Muth Valley Road (Figure 3k, *Existing Facilities and Maintenance Areas – San Vicente Dam APE*). The San Vicente Dam APE occurs in the City’s San Vicente Reservoir recreation area.

### **1.1.12 Savage Dam**

Savage (Lower Otay) Dam is located in the southern portion of the County, in the unincorporated community of Otay. It lies within Sections 13 and 18 and unsectioned portions (Otay [Estudillo] land grant) of Township 18 South, Ranges 1 West and 1 East, on the USGS 7.5-minute Otay Mesa quadrangle map (Figure 2l, *USGS Topography – Savage Dam APE*). The dam is located at the outlet of Lower Otay Reservoir to the north of Alta Road, south of Otay Lakes Road, east of Wueste Road and Otay Lakes County Park, and west of the Otay Open Space Preserve (Figure 3l, *Existing Facilities and Maintenance Areas – Savage Dam APE*). The Savage (Lower Otay) Dam APE occurs in the City’s Otay Lakes recreation area.

### 1.1.13 Sutherland Dam

Sutherland Dam is located in the northern portion of the County, in the unincorporated community of Ramona. It lies within Sections 20 and 21 of Township 12 South, Range 2 East, on the USGS 7.5-minute Ramona quadrangle map (Figure 2m, *USGS Topography – Sutherland Dam APE*). The dam is located at the outlet of Sutherland Reservoir along Sutherland Dam Road to the north of SR-78, south and east of Black Canyon Road, and west of Rancho Ballena Road (Figure 3m, *Existing Facilities and Maintenance Areas – Sutherland Dam APE*). The Sutherland Dam APE occurs in the City’s Sutherland Reservoir Open Space area and Cleveland National Forest.

### 1.1.14 Upper Otay Dam

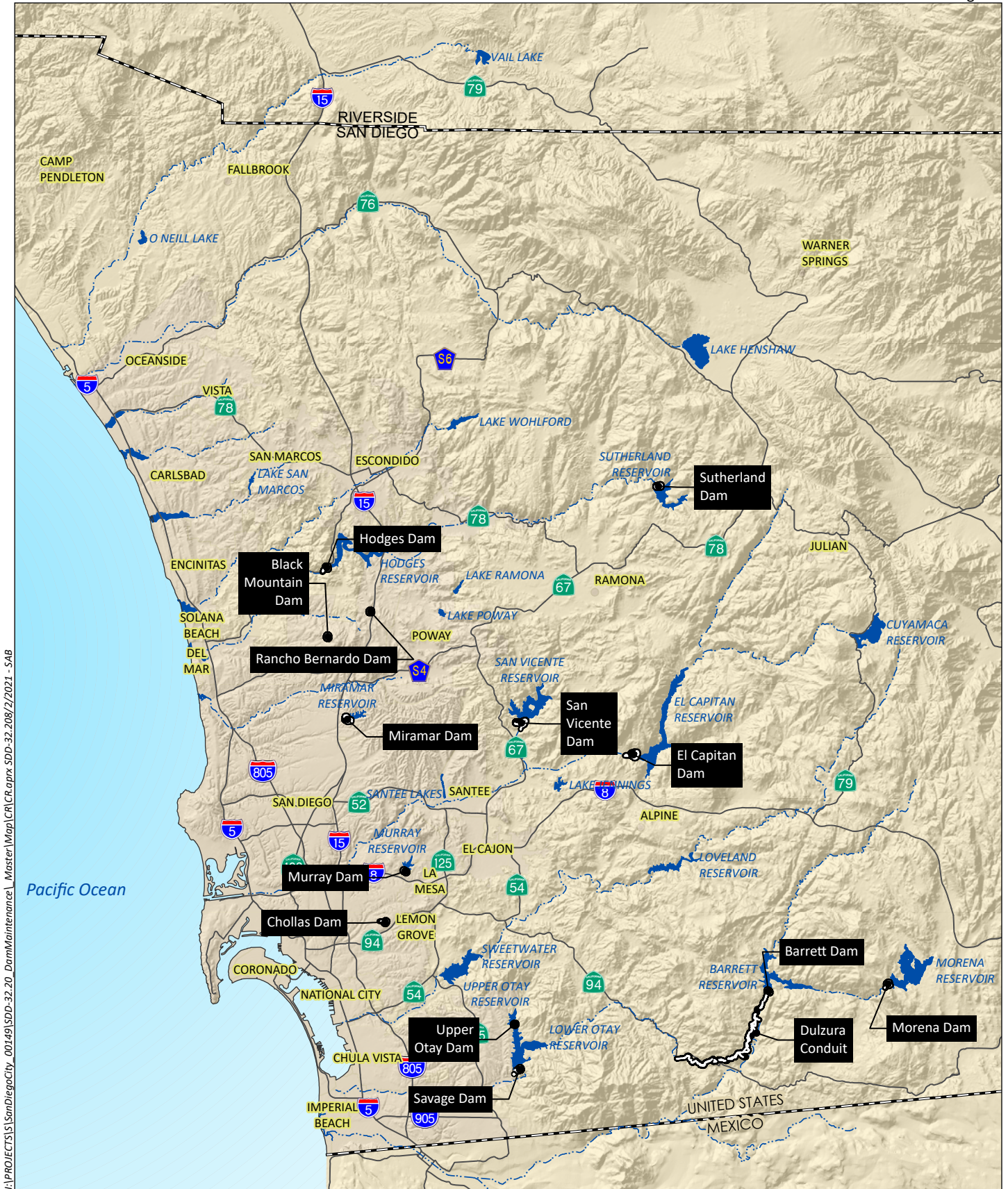
Upper Otay Dam is located in the southern portion of the County, in the unincorporated community of Otay (Figure 1). It lies within unsectioned portions (Otay [Dominguez] land grant) of Township 17 South, Range 1 West, on the USGS 7.5-minute Jamul Mountains quadrangle map (Figure 2n, *USGS Topography – Upper Otay Dam APE*). The dam is located at the outlet of Upper Otay Reservoir to the north of Otay Lakes Road, south of Proctor Valley Road, east of Centennial Trail, and west of Wueste Road (Figure 3n, *Existing Facilities and Maintenance Areas – Upper Otay Dam APE*). The Upper Otay Dam APE occurs in the City’s Otay Lakes recreation area.

## 1.2 PROJECT BACKGROUND AND DESCRIPTION

The City PUD owns and manages 13 dams, spillways, and other associated infrastructure, including the approximately 13-mile Dulzura Conduit, located throughout San Diego County as part of the City’s drinking water infrastructure. Each dam has a unique system of outlet works and spillway components to control the reservoir water levels and safely release water during severe storm events or impending dam failure. Associated dam infrastructure includes, but is not limited to, groins, toes, saddle dams, spillways and auxiliary spillways, training and parapet walls, outlet works, storm drain headwalls that are associated with the outlet works, and appurtenant structures. These facilities are subject to the regulatory jurisdiction of the Division of Safety of Dams (DSOD), part of the California Department of Water Resources. The DSOD oversees dam safety in California with the goal of avoiding dam failure which could lead to potential loss of life and destruction of property. As part of the dam safety program, the DSOD completes detailed semi-annual inspections and provides an annual report of the City’s dams to identify maintenance activities such as vegetation removal, grading, dredging, and repairs to infrastructure and may request certain maintenance work to be performed to improve dam safety.

The proposed Program would cover the long-term maintenance of these facilities and includes maintenance activities that are routinely included in the DSOD annual inspection reports. As of recent, DSOD is in the process of providing a regulatory framework that could potentially penalize an agency through monetary fines should violations occur. The proposed Program provides the City oversight to address items in DSOD’s inspection reports and avoid potential violations. The Program describes the maintenance methods and overall potential impacts that are anticipated to occur during the implementation of the Program. It also includes the protocols to address the impact of maintenance activities with respect to environmental resources.





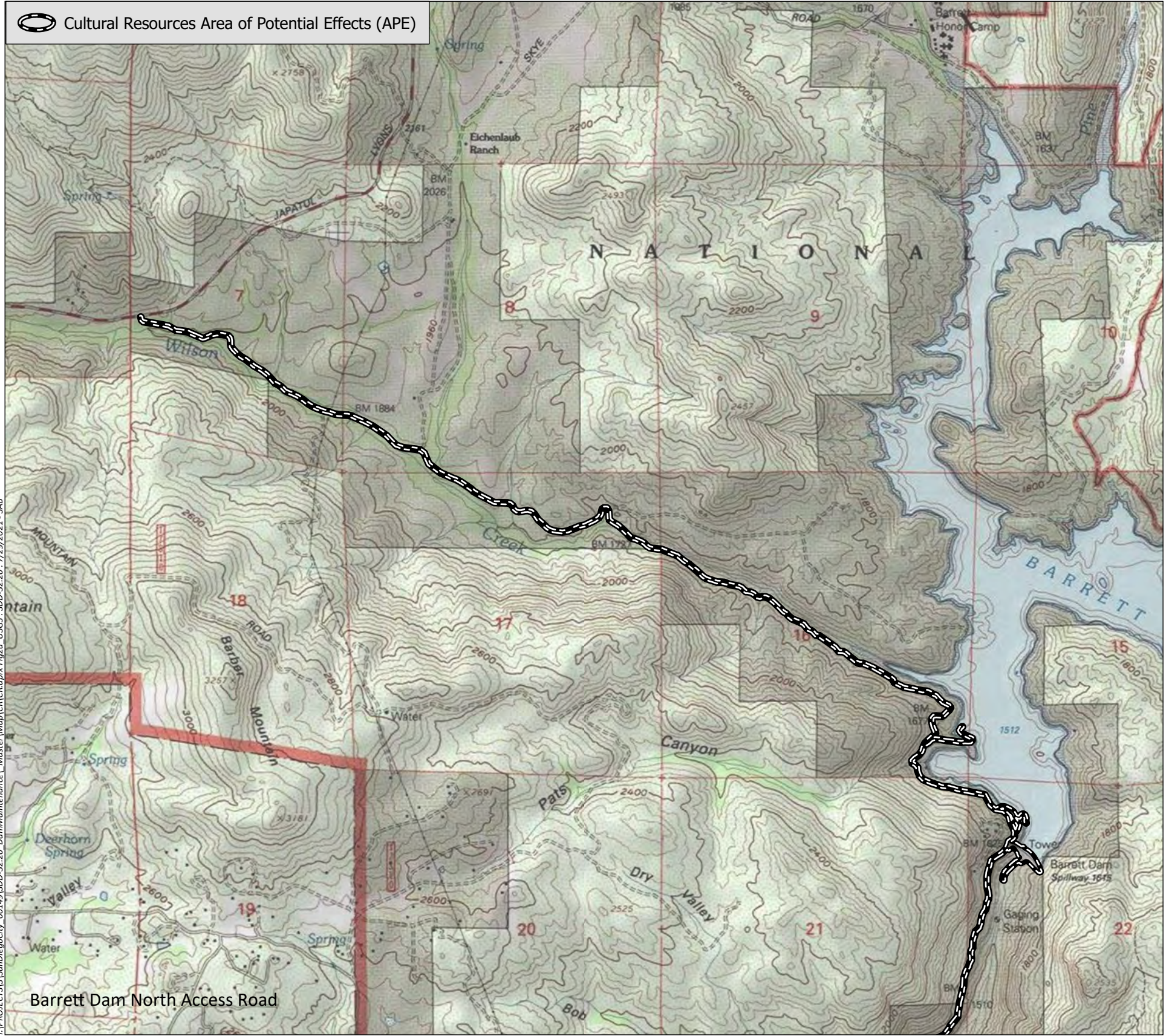
F:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\Map\CR\CR.aprx SDD-32.208\2\2021 - 548

Source: Base Map Layers (SanGIS, 2016)



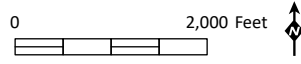


 Cultural Resources Area of Potential Effects (APE)

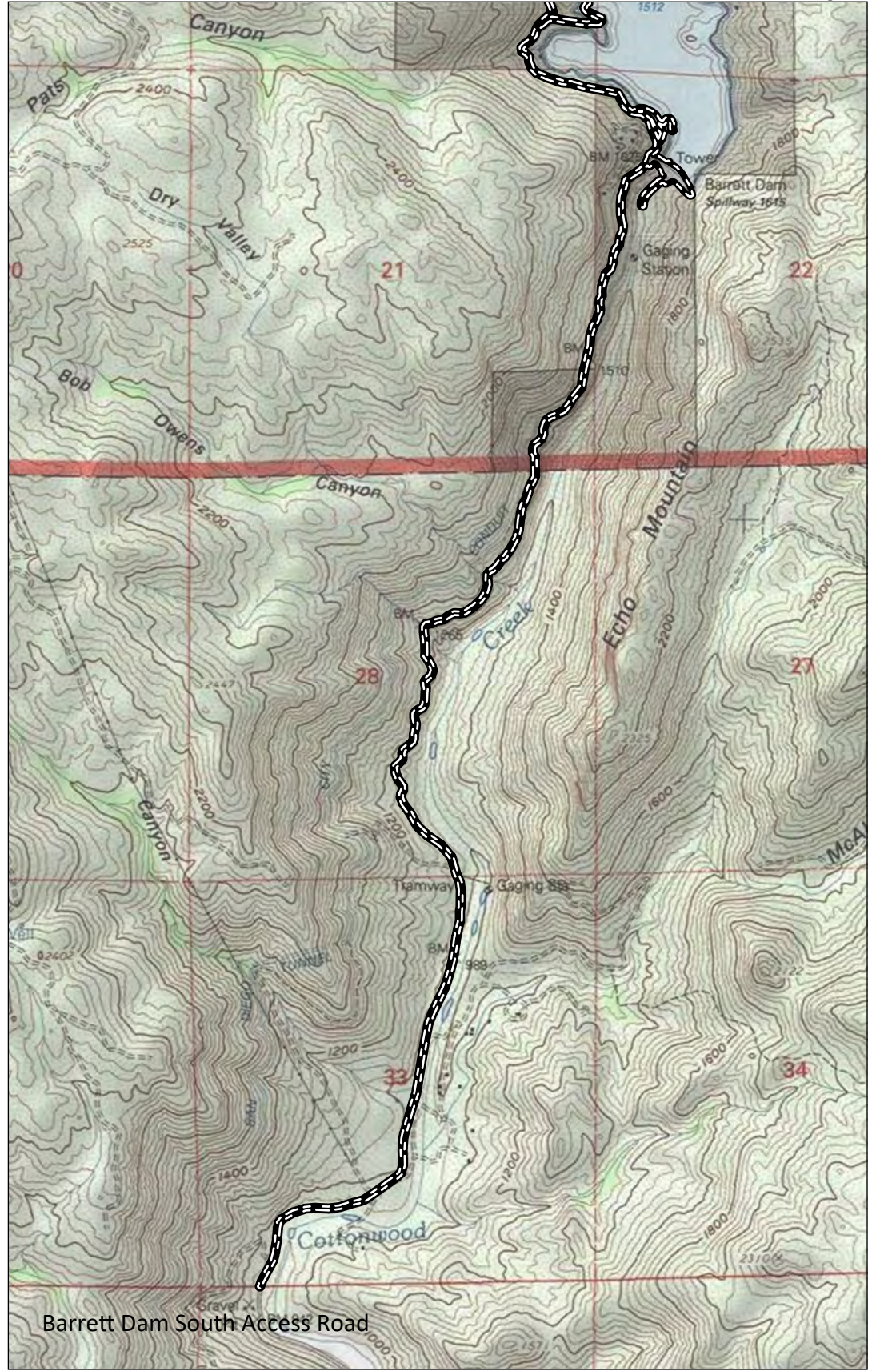


I:\PROJECTS\SanDiegoCity\_00149\SDP-32\_20\_DamMaintenance\Map\CR\CR.aprx Fig2a USGS - SDP-32\_20 : 7/29/2021 - SAB

Barrett Dam North Access Road



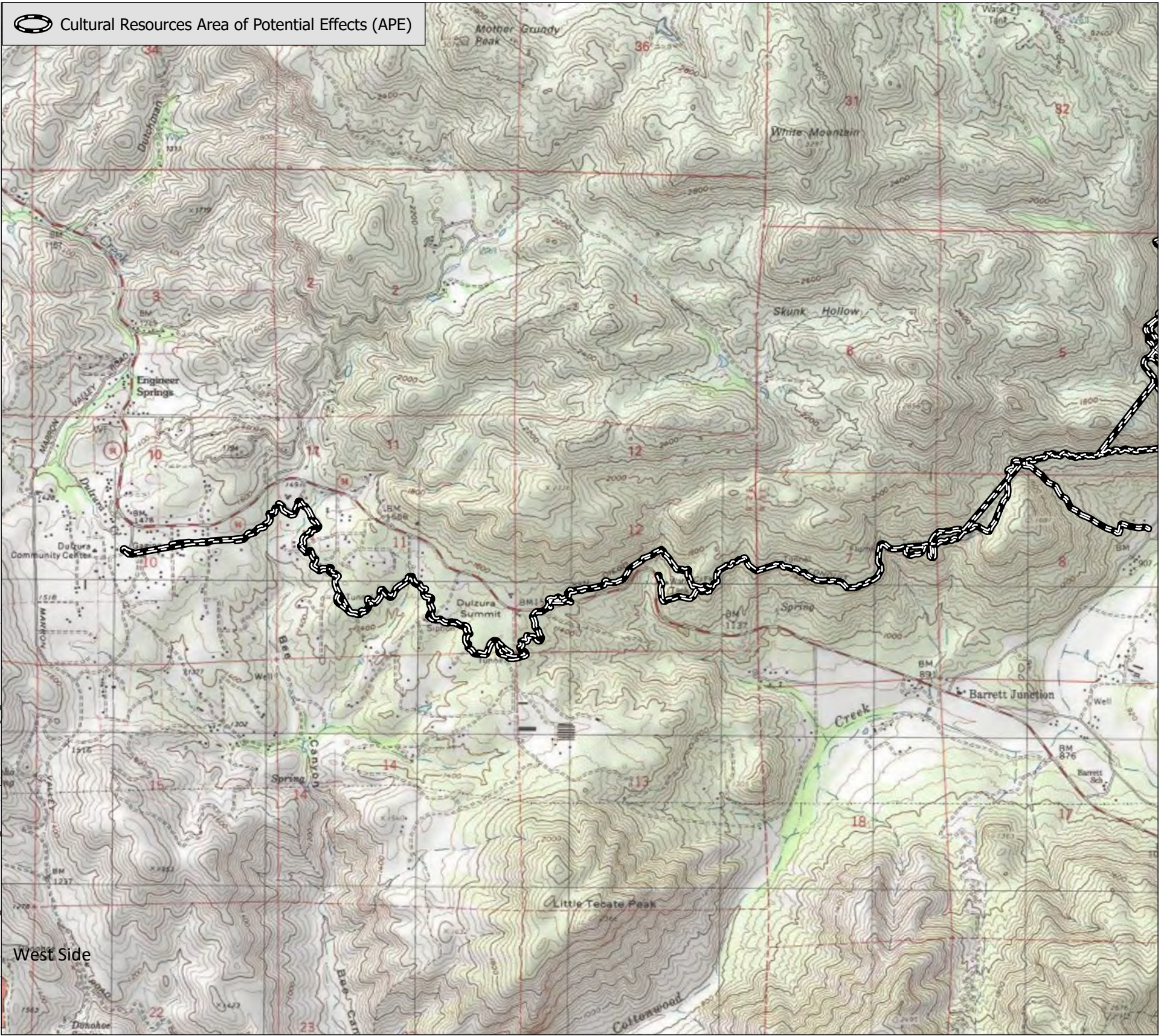
Source: BARRETT LAKE 7.5' Quad (USGS)



Barrett Dam South Access Road

Source: BARRETT LAKE & TECATE 7.5' Quad (USGS)





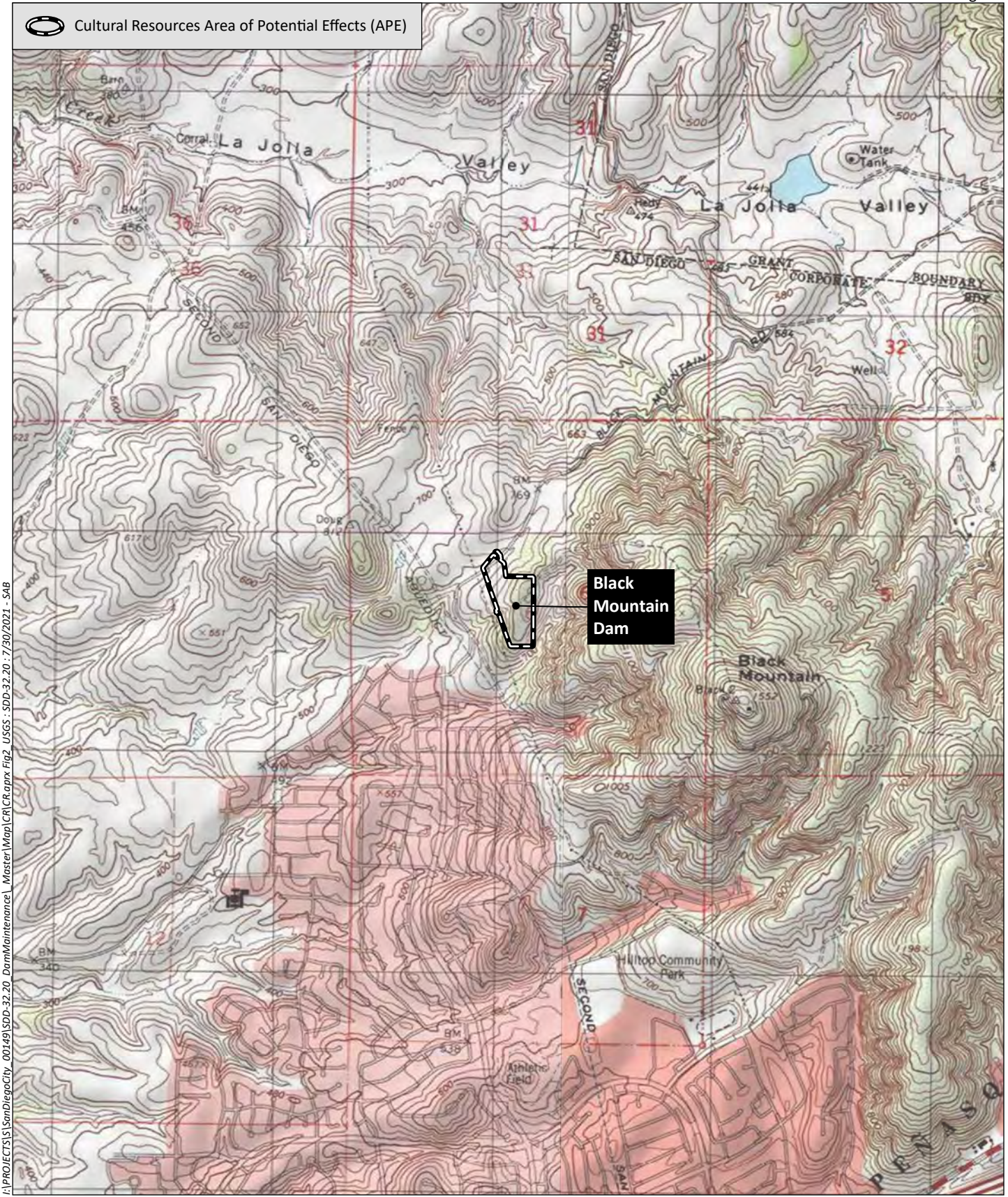
I:\PROJECTS\1518\_DamMaintenance\Master\Map\CR.aprx Fig2b USGS: SDD-32-20-4/15/2021 - SAB

0 2,500 Feet


Source: OTAY MOUNTAIN, BARRETT LAKE & TECATE 7.5' Quad (USGS)

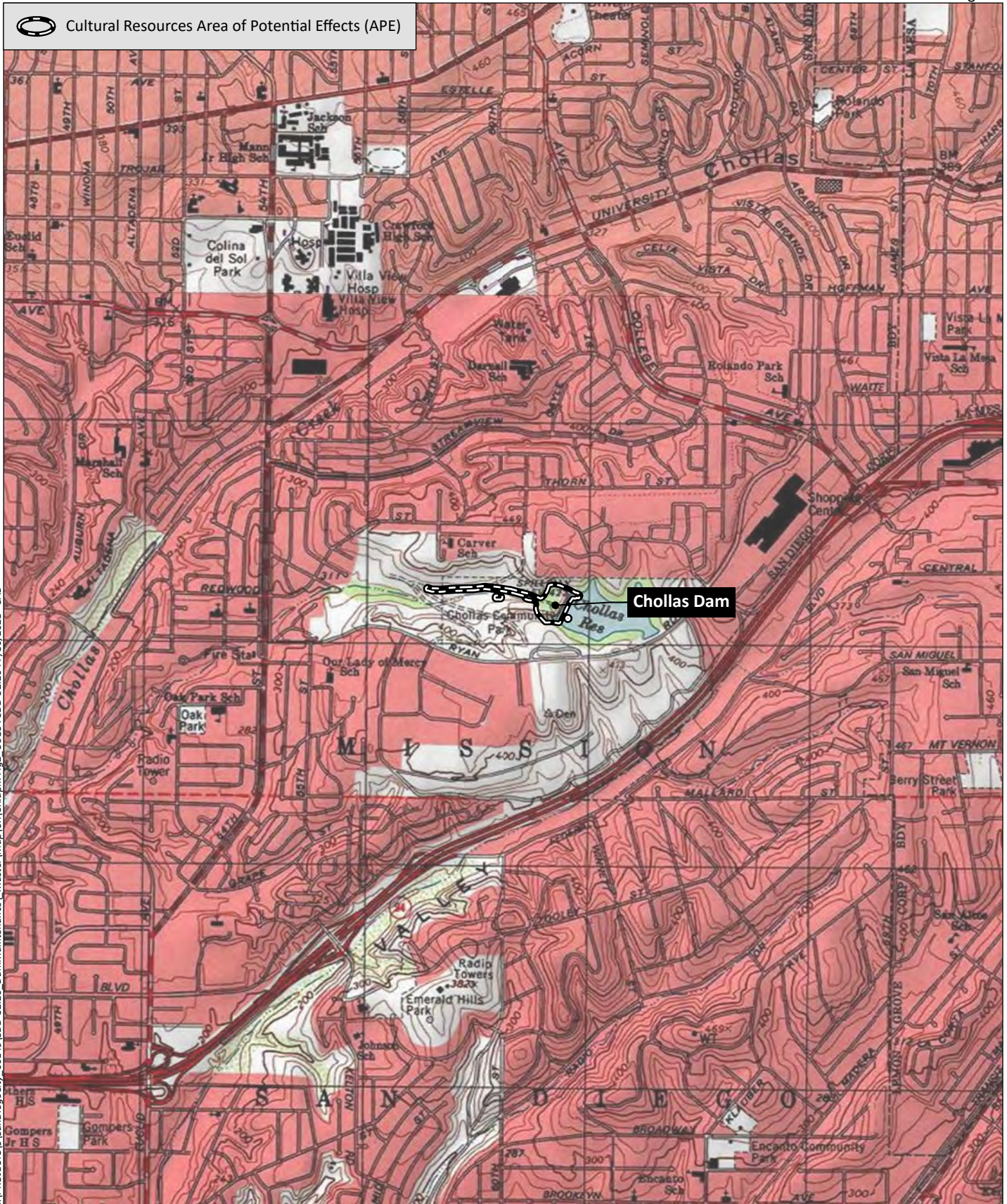
Source: BARRETT LAKE & TECATE 7.5' Quad (USGS)



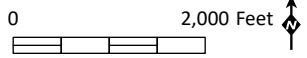




 Cultural Resources Area of Potential Effects (APE)



**Chollas Dam**

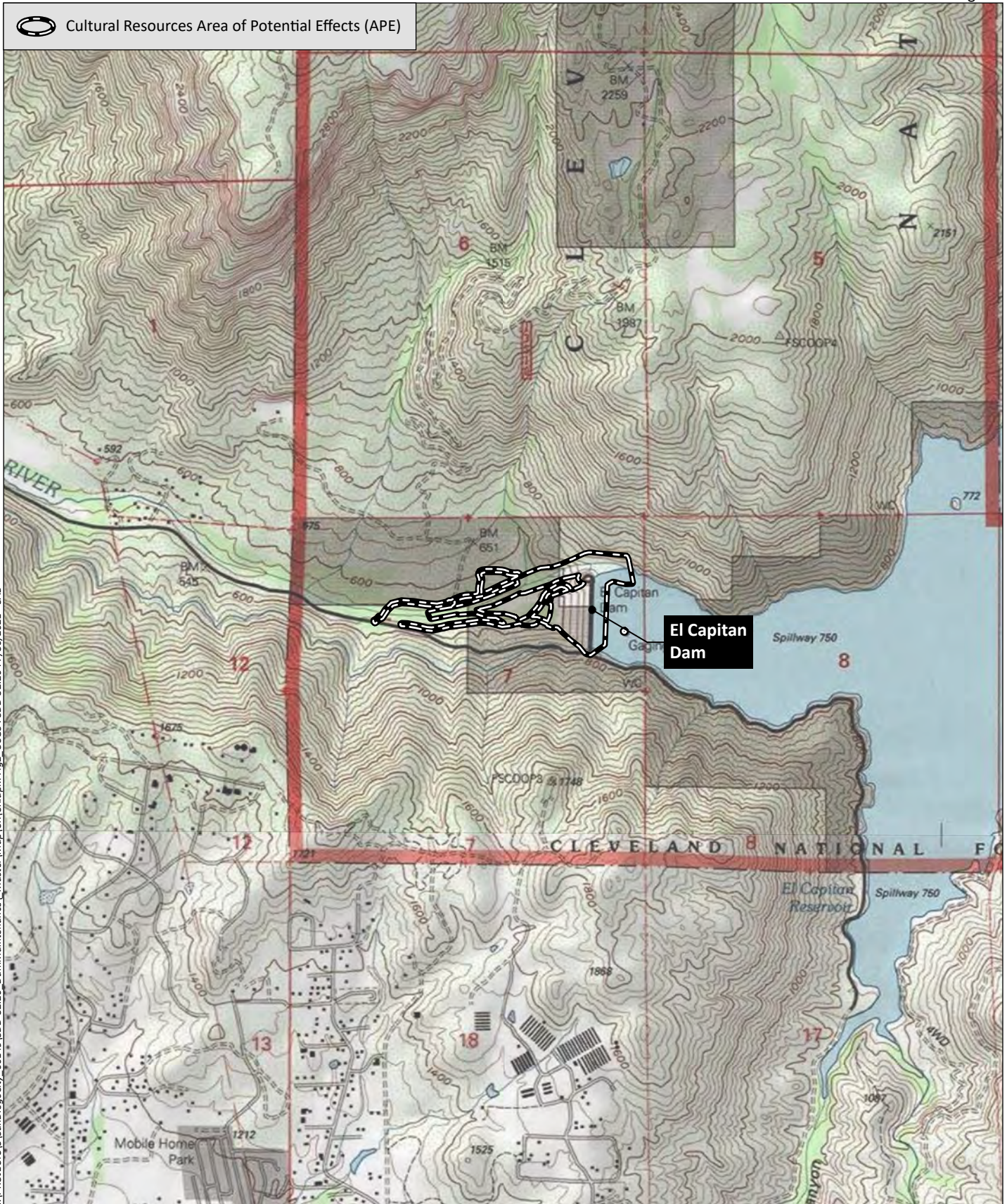


Source: LA MESA ,NATIONAL CITY 7.5' Quad (USGS)

I:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\MasterMap\CR\CR.aprx Fig2 USGS : SDD-32.20 : 7/30/2021 - SAB




 Cultural Resources Area of Potential Effects (APE)

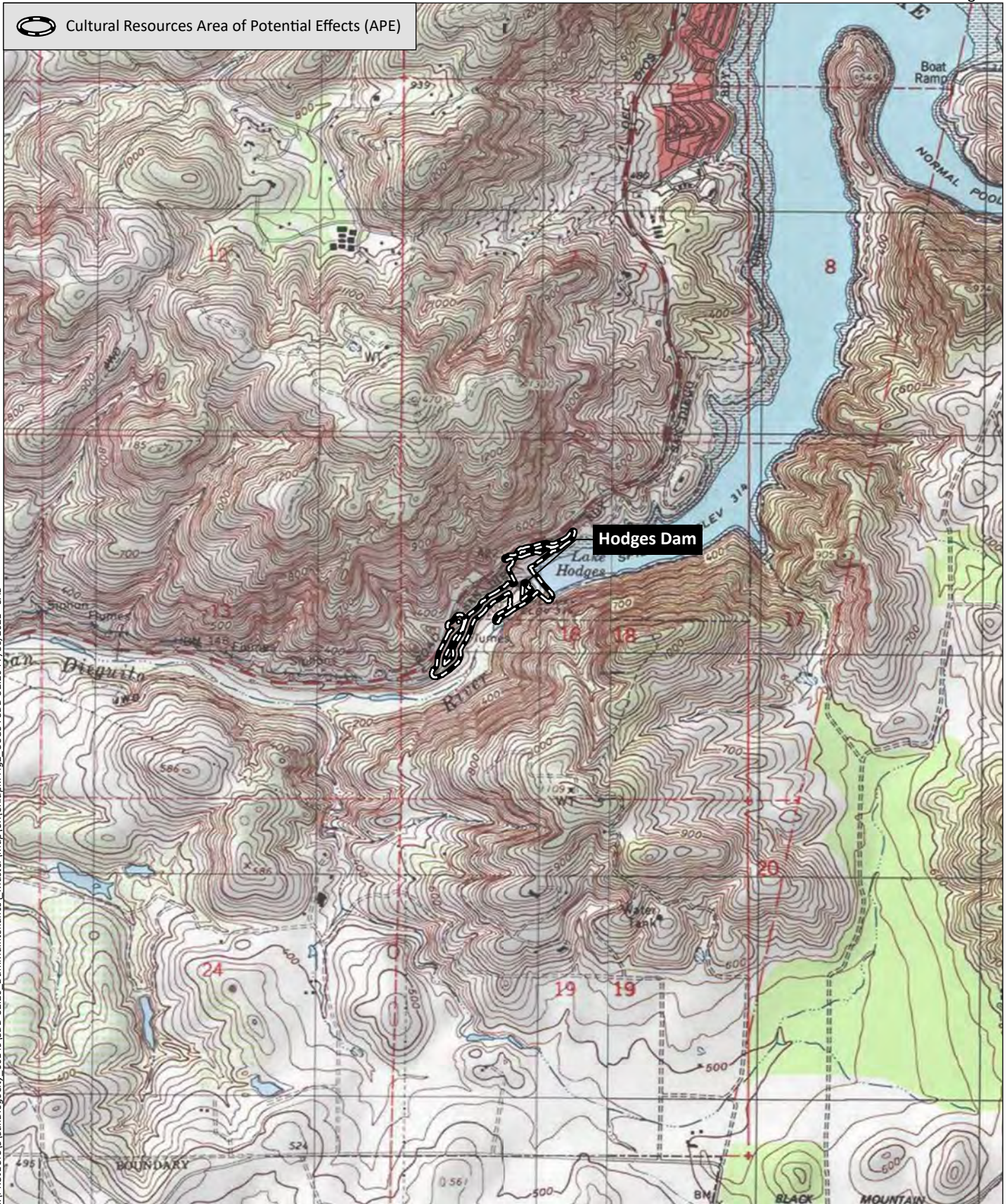


Source: EL CAJON MTN. ,ALPINE 7.5' Quad (USGS)

I:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\MasterMap\CR\CR.aprx Fig2\_USGS\_SDD-32.20-7/30/2021 -SAB



 Cultural Resources Area of Potential Effects (APE)



Source: ESCONDIDO, RANCHO SANTA FE 7.5' Quad (USGS)



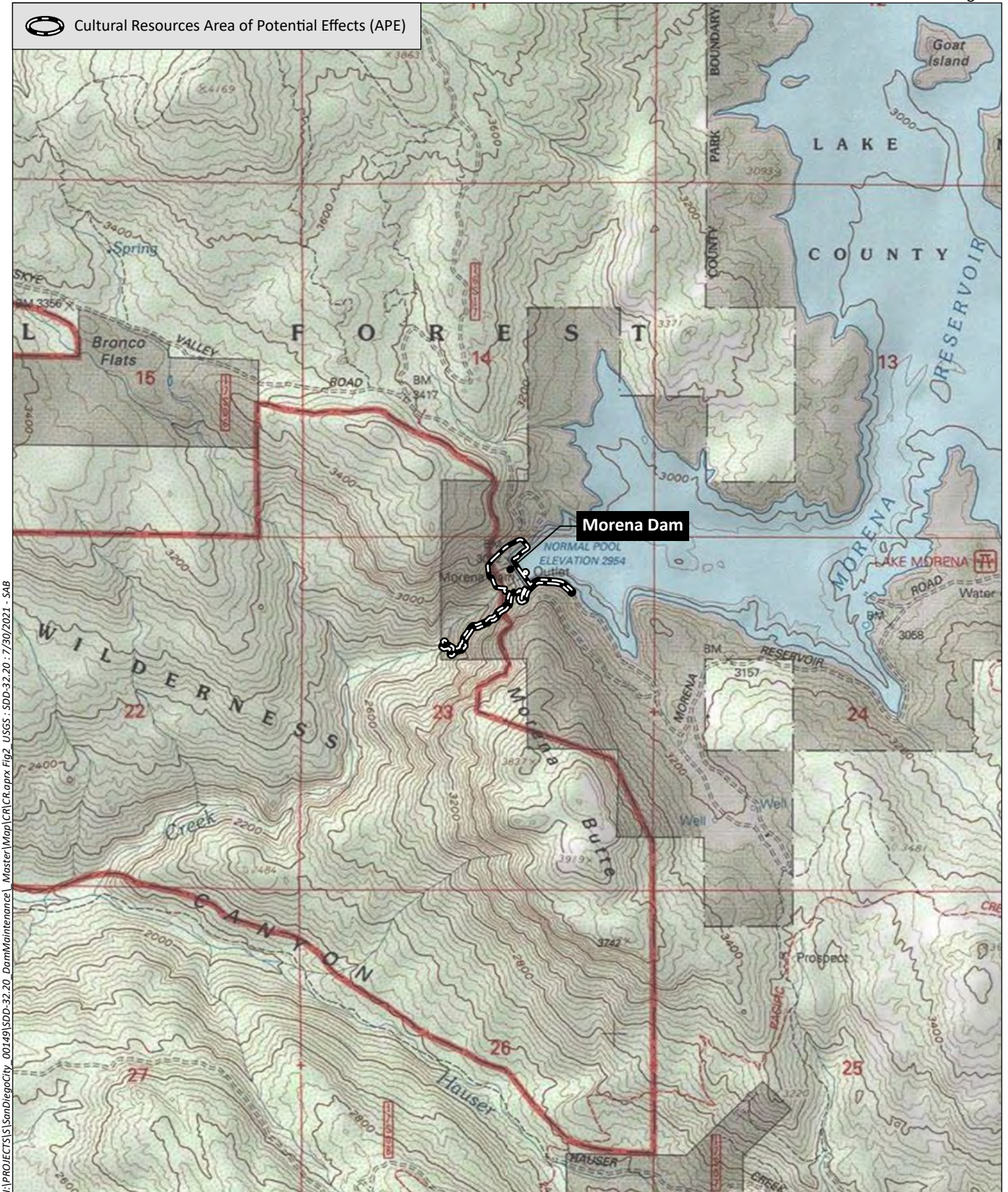
 Cultural Resources Area of Potential Effects (APE)



I:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\Master Map\CR\CR.aprx Fig2 USGS : SDD-32.20 : 7/30/2021 - SAB

Source: POWAY, DEL MAR 7.5' Quad (USGS)




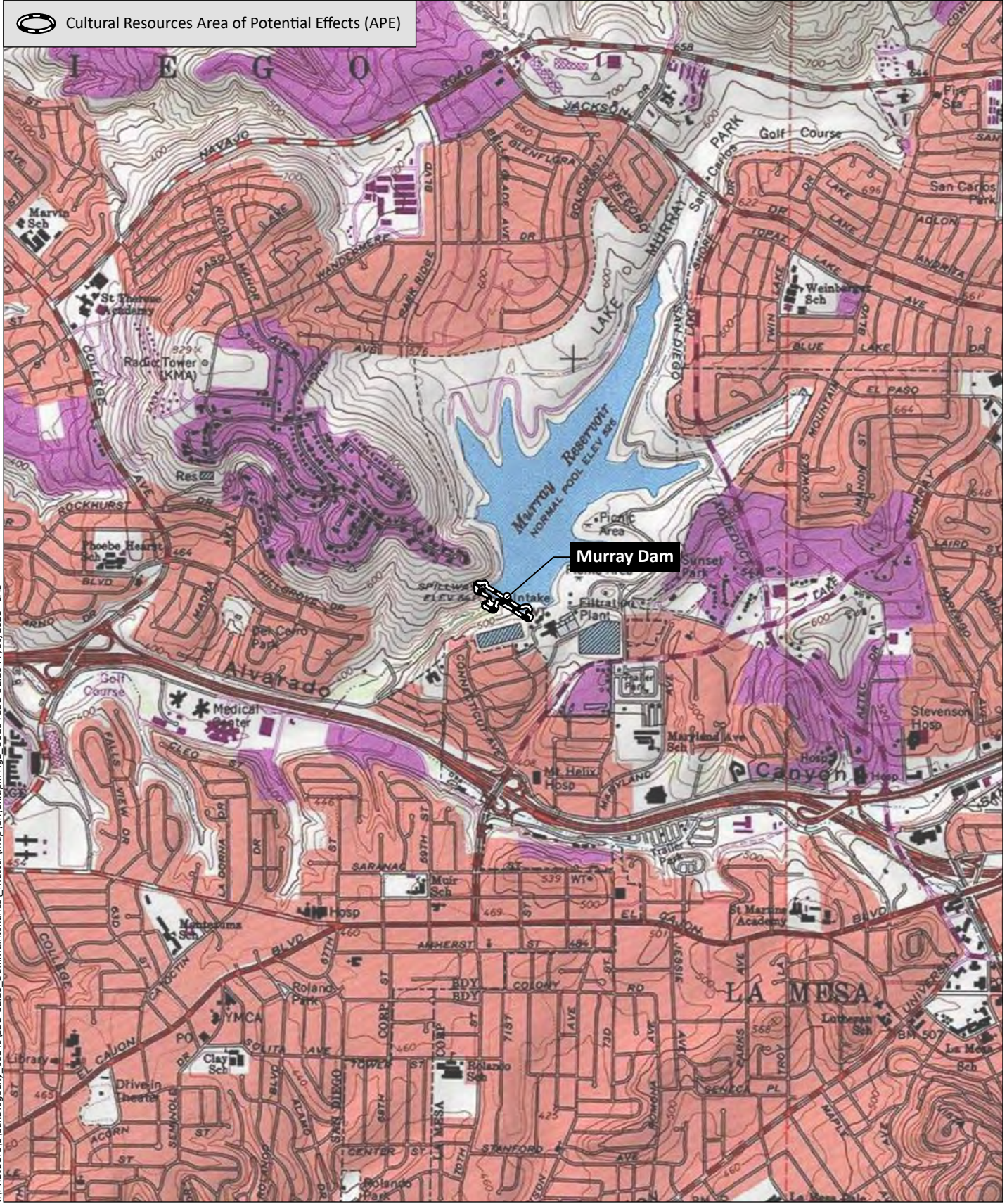


I:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\Master\Map\CR\CR.aprx Fig2\_USGS - SDD-32.20 - 7/30/2021 - SAB

Source: MORENA RESERVOIR 7.5' Quad (USGS)



 Cultural Resources Area of Potential Effects (APE)

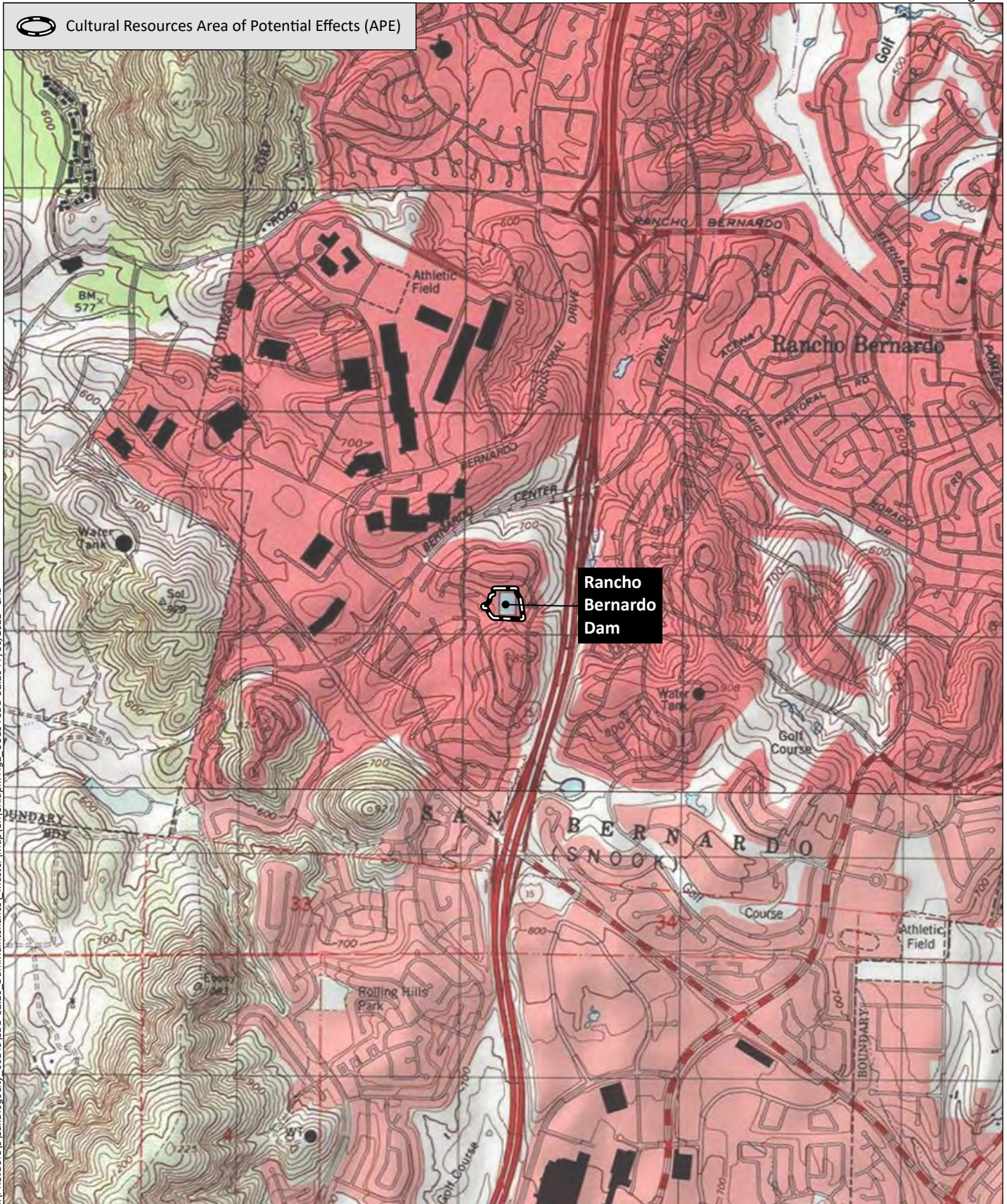


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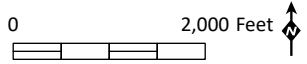
Source: LA MESA 7.5' Quad (USGS)



 Cultural Resources Area of Potential Effects (APE)



**Rancho Bernardo Dam**



Source: ESCONDIDO, POWAY 7.5' Quad (USGS)

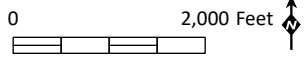


 Cultural Resources Area of Potential Effects (APE)



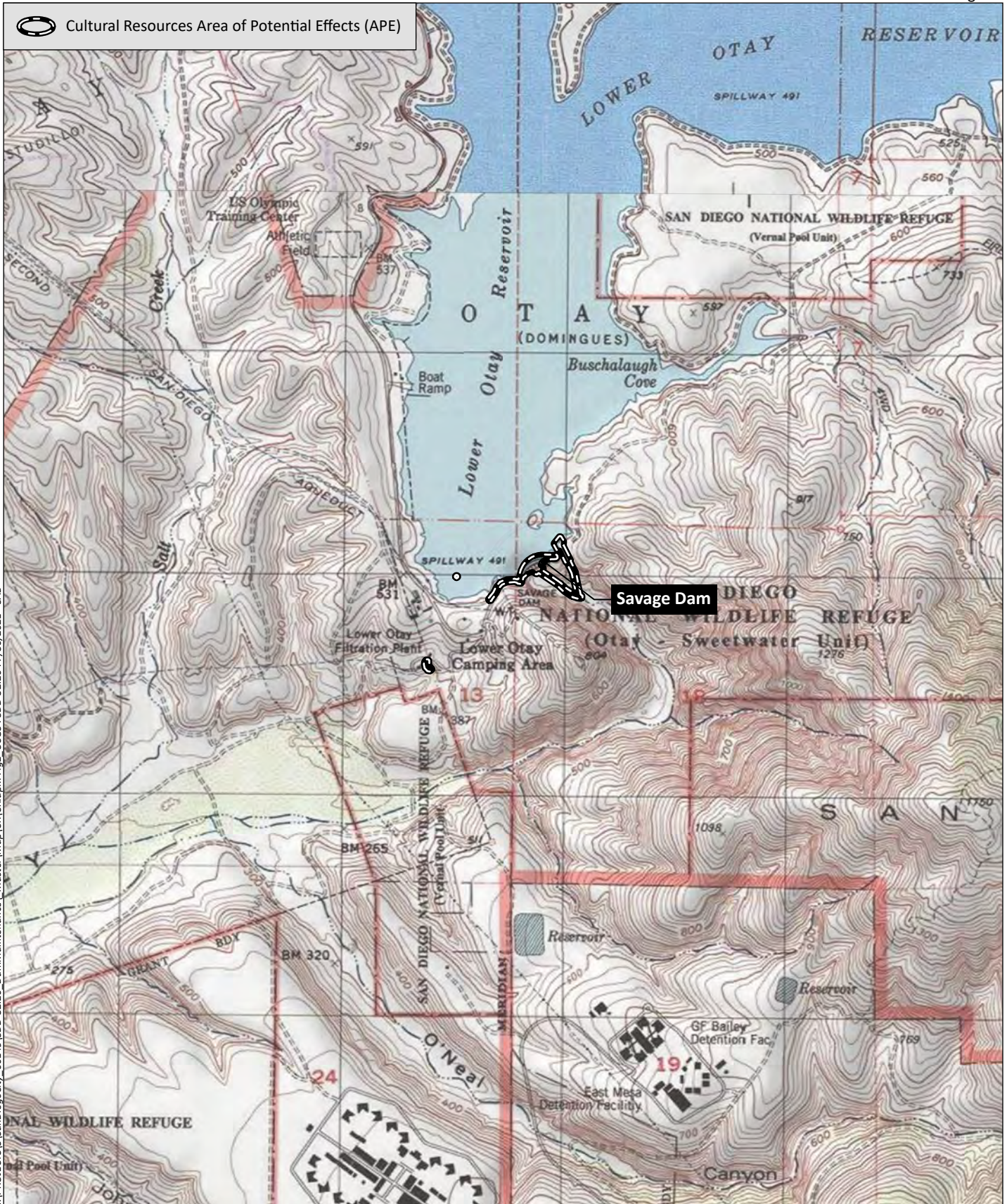
I:\PROJECTS\SanDiegoCity\_00149\SD-D-32.20 DamMaintenance\MasterMap\CR\CR.aprx Fig2\_USGS : SDD-32.20 : 7/30/2021 - SAB

Source: SAN VICENTE RESERVOIR 7.5' Quad (USGS)





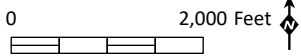
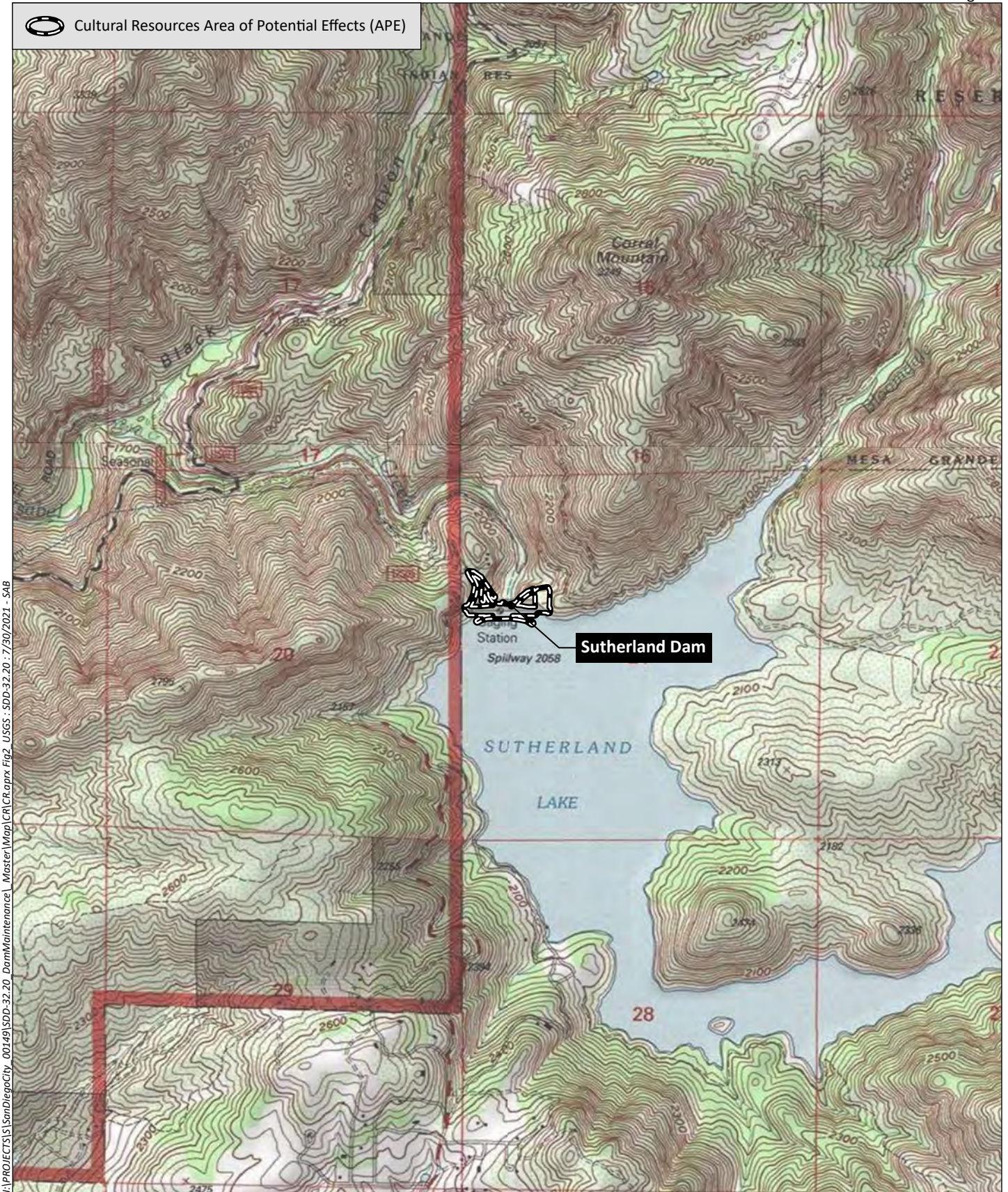
 Cultural Resources Area of Potential Effects (APE)



Source: JAMUL MOUNTAINS, OTAY MESA 7.5' Quad (USGS)

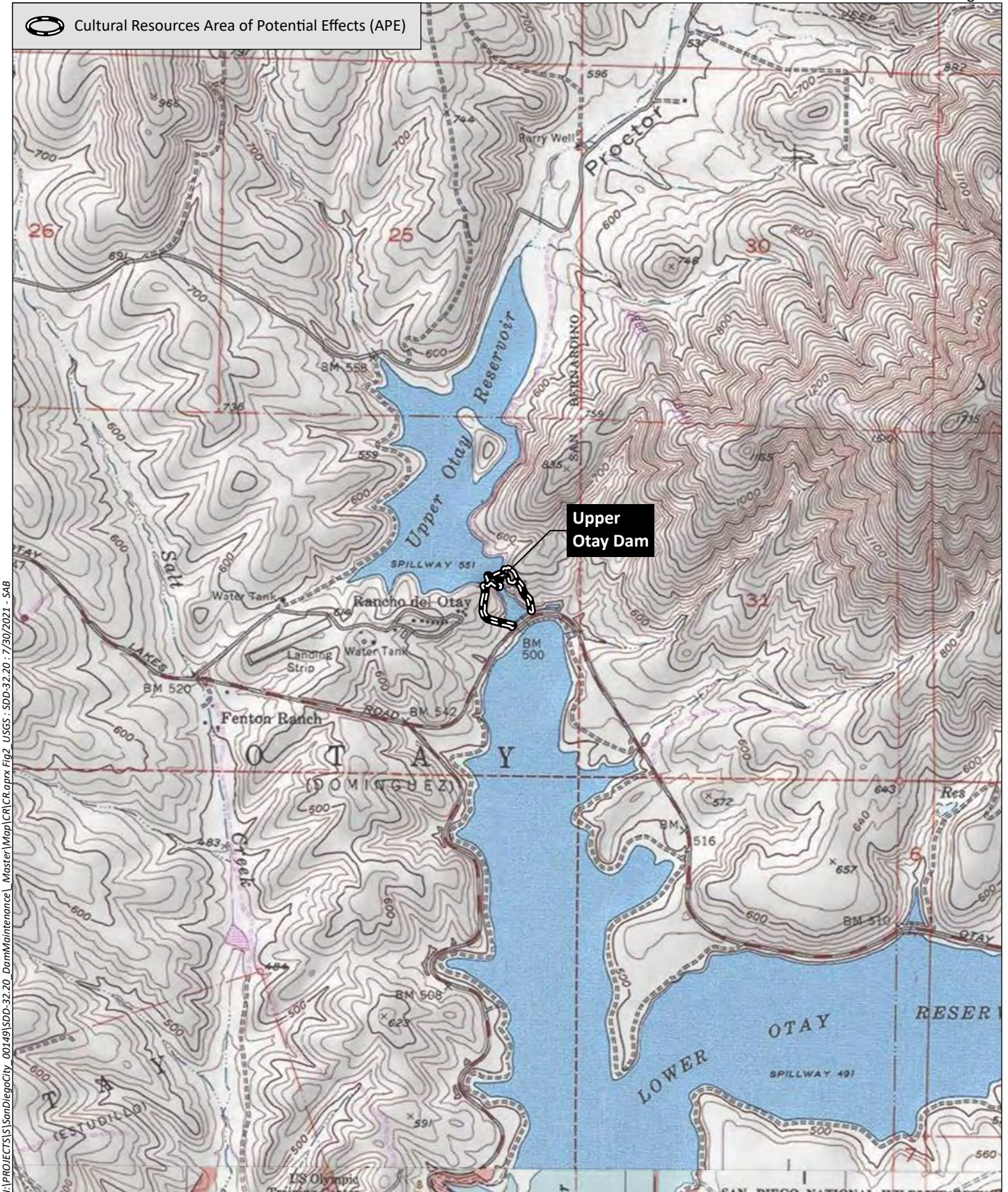
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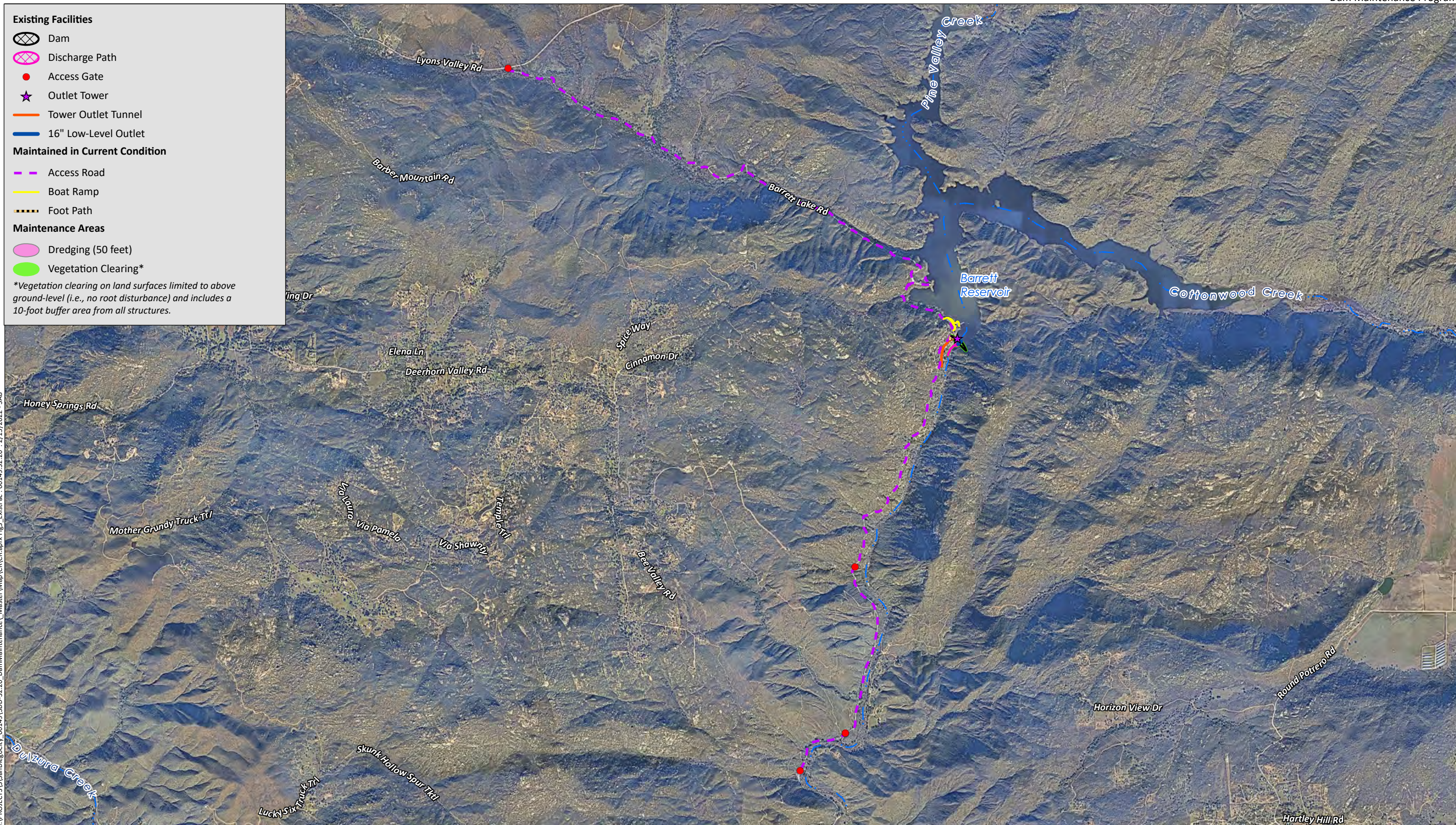


Source: MESA GRANDE ,RAMONA 7.5' Quad (USGS)

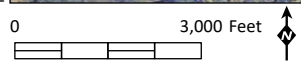






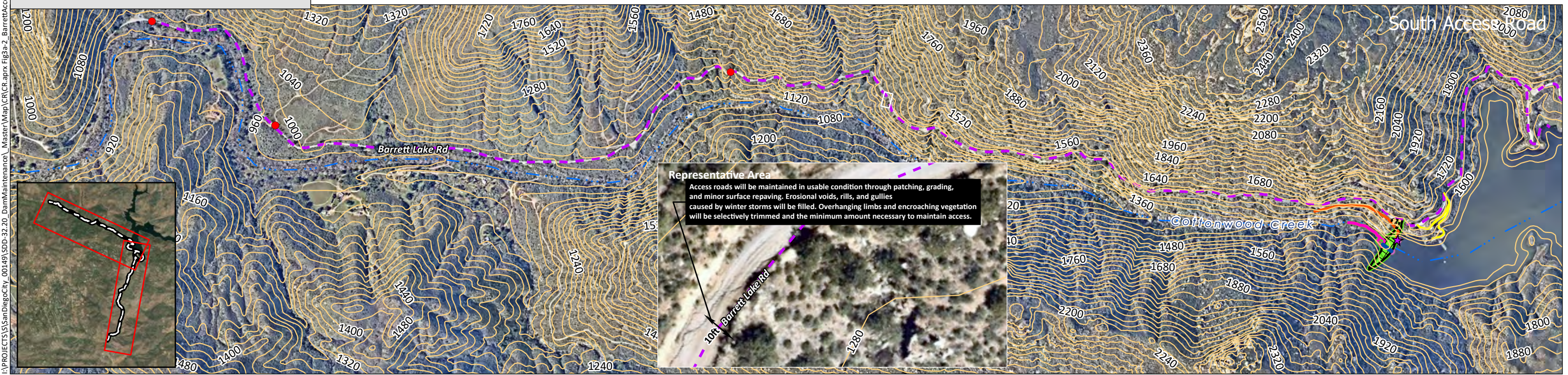
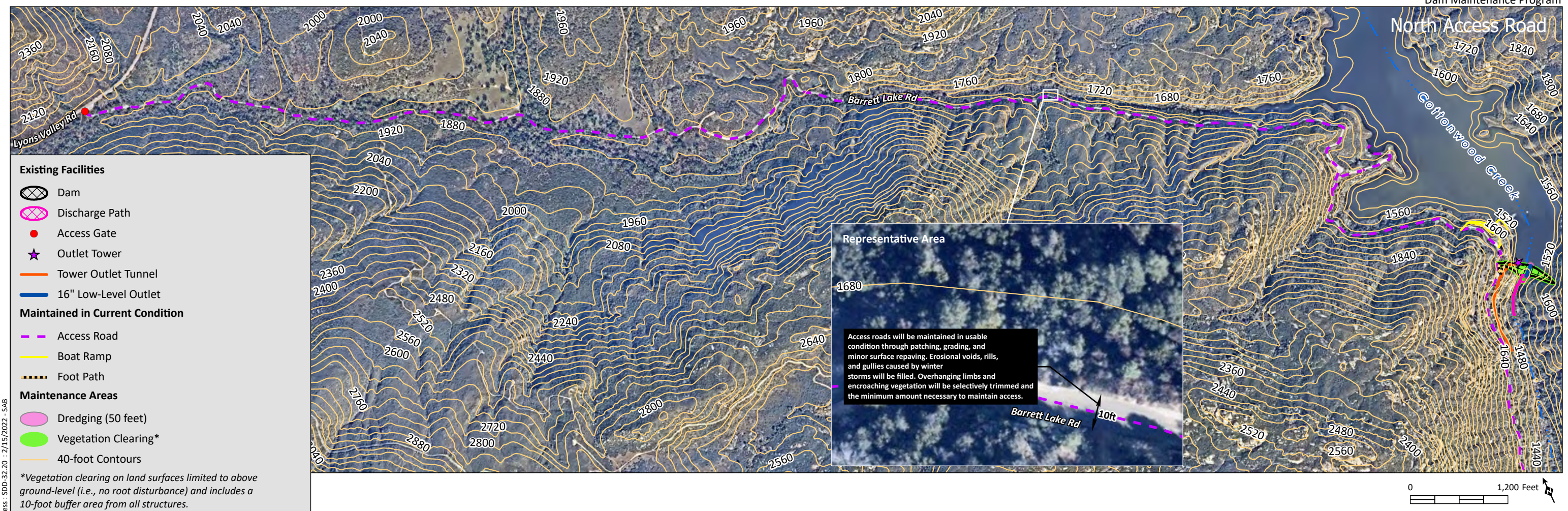


I:\PROJECTS\San Diego City\_001491\SD-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Figs\_ExistFac\_00149.32.20 - 2/15/2022 - SAB



Source: Aerial (NearMap, 2019)

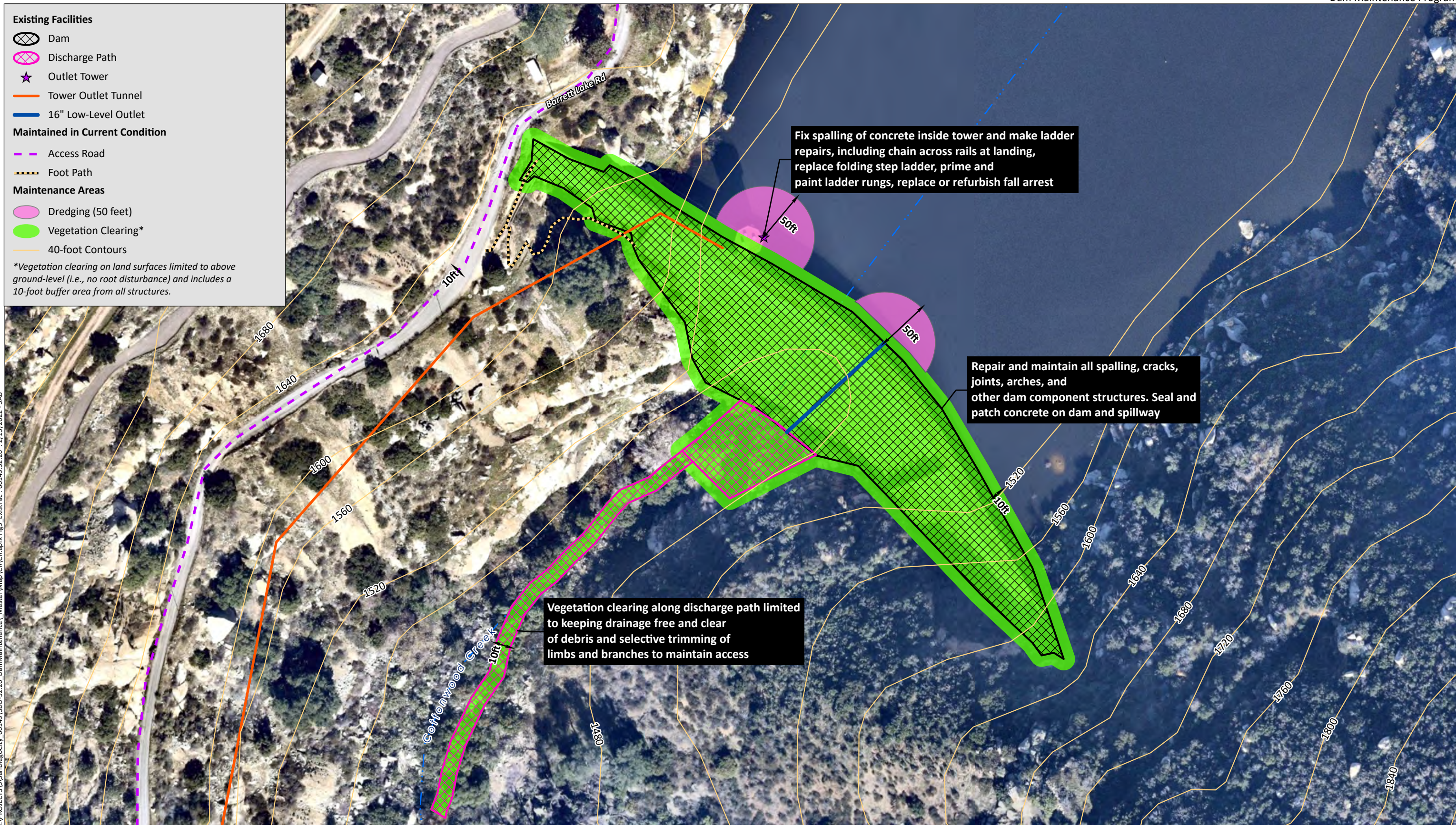




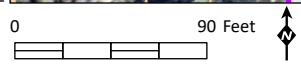
I:\PROJECTS\San Diego\City\_001491\SDD-32.20\_DamMaintenance\_Master\Map\CRCR.aprx Figa-2\_BarrettAccess\_SDD-32.20 : 2/15/2022 - SAB

Source: Aerial (NearMap, 2019)



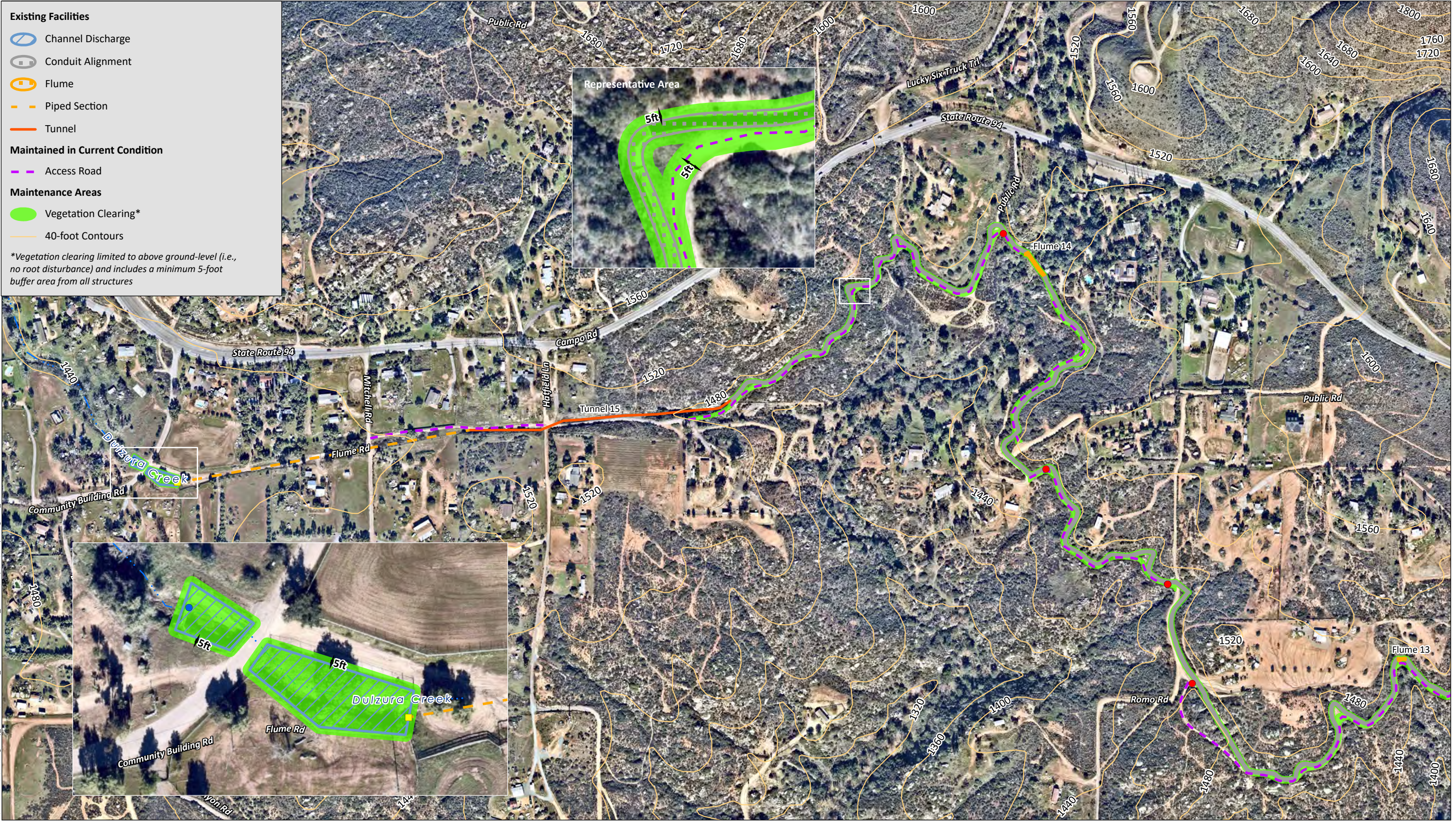


I:\PROJECTS\San Diego\City\_001491\SDD-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Figs\_ExistFac - 01.149.32.20 - 2/15/2022 - SAB

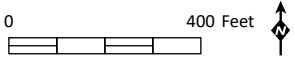


Source: Aerial (NearMap, 2019)





I:\PROJECTS\SanDiegoCity\_001491\SDB-32.20\_DamMaintenance\Master\Map\CR\CR.aprx Fig3b-1\_ExistFac : 00149.32.20 : 2/16/2022 - SAB

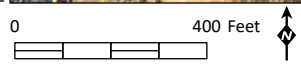


Source: Aerial (SanGIS, 2017)





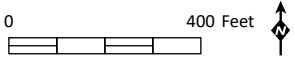
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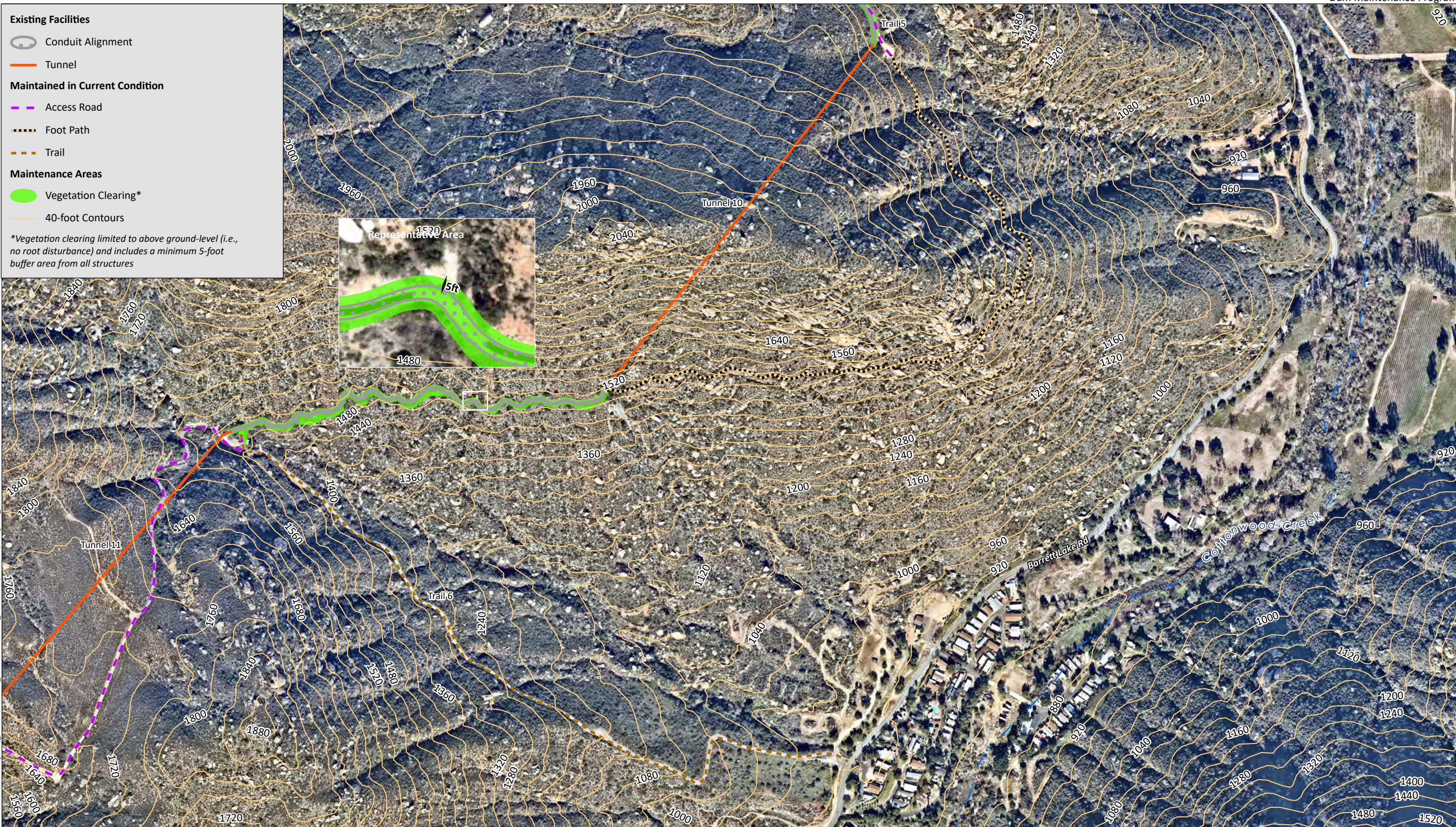


I:\PROJECTS\SanDiego\001491\SD-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Figsb-3\_Existfac: 00149.32.20 : 2/16/2022 - SAB

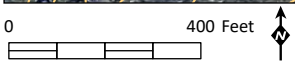


Source: Aerial (SanGIS, 2017)





I:\PROJECTS\San Diego\City\_001491\SD-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Fig3b-4\_ExistFac: 00149.32.20 - 2/16/2022 - SAB



Source: Aerial (SanGIS, 2017)



**Existing Facilities**

- Access Gate
- Conduit Alignment
- Tunnel

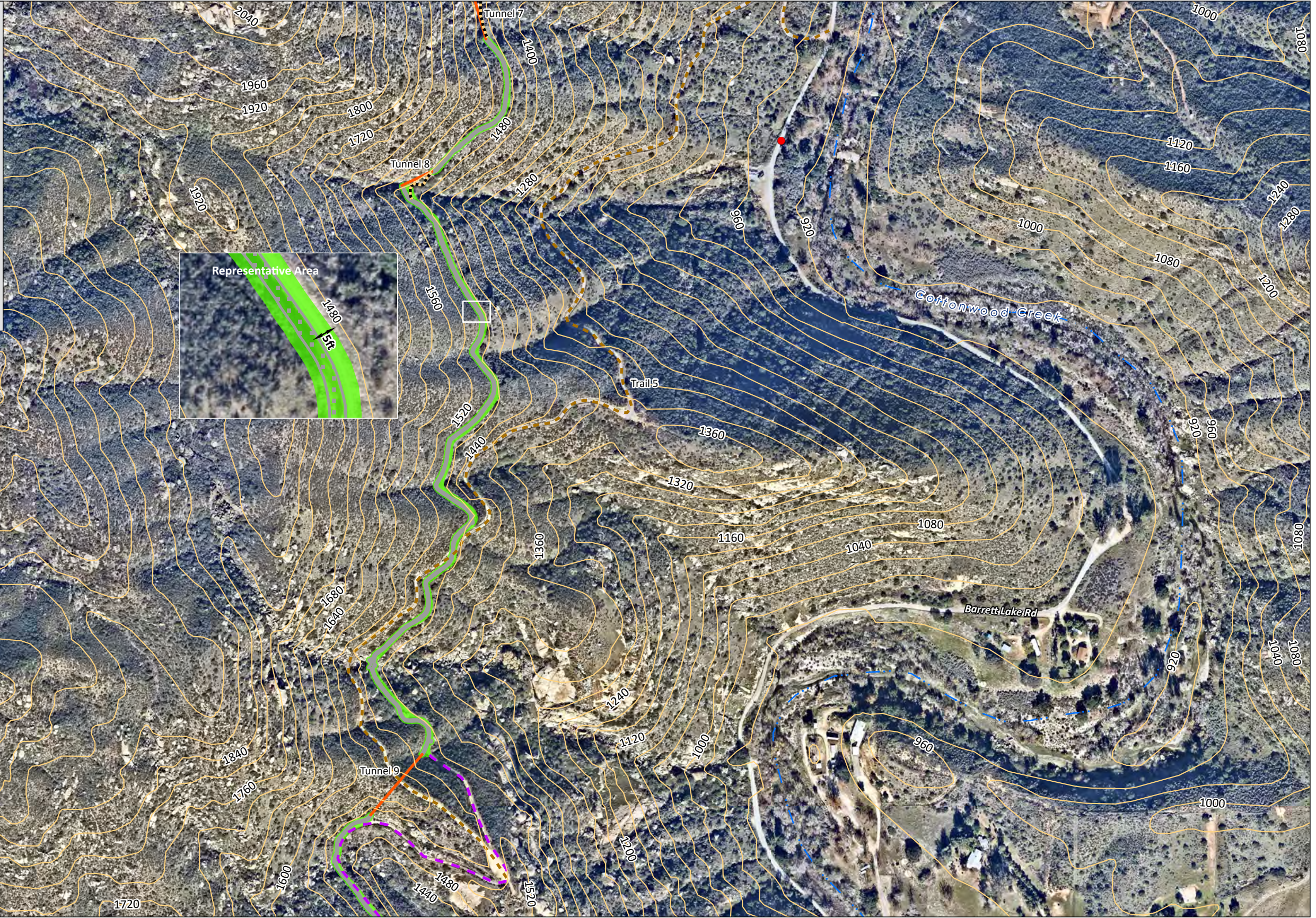
**Maintained in Current Condition**

- Access Road
- Foot Path
- Trail

**Maintenance Areas**

- Vegetation Clearing\*
- 40-foot Contours

*\*Vegetation clearing limited to above ground-level (i.e., no root disturbance) and includes a minimum 5-foot buffer area from all structures*



I:\PROJECTS\San Diego City\_001491\SDB-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Fig3b-5\_Existfac : 00149.32.20 : 2/15/2022 - SAB

Source: Aerial (SanGIS, 2017)



**Existing Facilities**

- Access Gate
- Conduit Alignment
- Flume
- Tunnel

**Maintained in Current Condition**

- Foot Path
- Trail

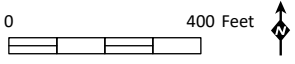
**Maintenance Areas**

- Vegetation Clearing\*
- 40-foot Contours

\*Vegetation clearing limited to above ground-level (i.e., no root disturbance) and includes a minimum 5-foot buffer area from all structures

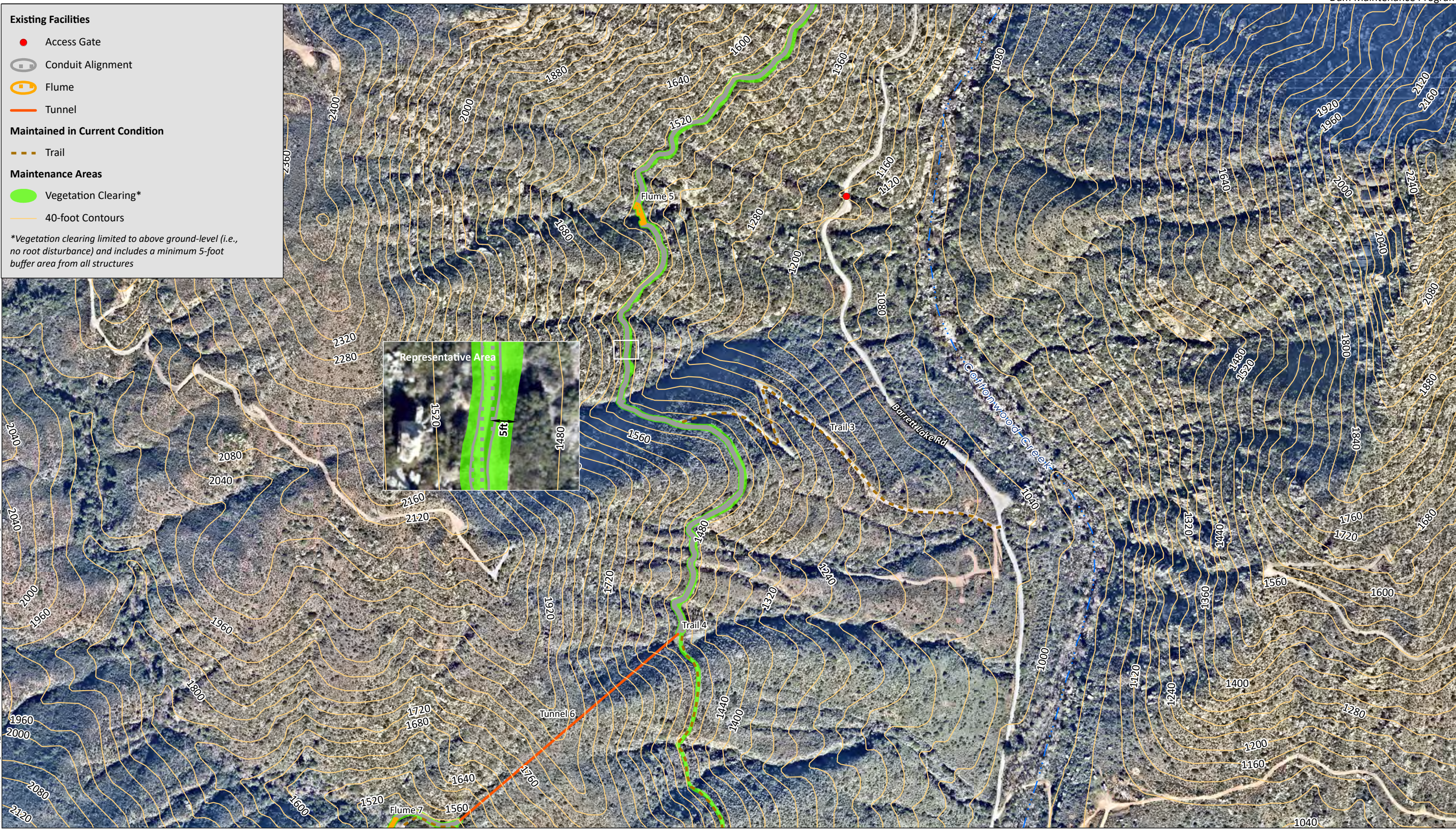


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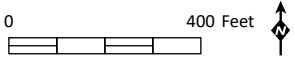


Source: Aerial (SanGIS, 2017)





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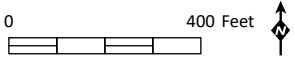


Source: Aerial (SanGIS, 2017)





I:\PROJECTS\SanDiego\City\_001491\SD-32\_20\_DamMaintenance\Master\Map\CR\CR.aprx Figs-8\_ExtFac : 00149.32.20 : 2/15/2022 - SAB

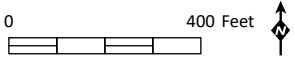


Source: Aerial (SanGIS, 2017)





I:\PROJECTS\SanDiegoCity\_001491\SDB-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Figsb-9\_Existfac : 00149.32.20 : 2/15/2022 - SAB

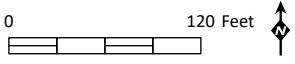


Source: Aerial (SanGIS, 2017)





I:\PROJECTS\San Diego City\_00149\SD-32.20\_DamMaintenance\_Master\Map\CR.aprx Fig3c\_ExistFacBlackMtnDam - 00149.32.20 : 2/15/2022 - SAB



Source: Aerial (NearMap, 2019)





**Existing Facilities**

- Dam
- Discharge Path
- Access Gate
- Headwall
- Outlet Tower

**Maintained in Current Condition**

- Access Road

**Maintenance Areas**

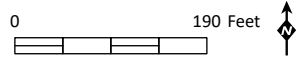
- Dredging (50 feet)
- Vegetation Clearing\*
- Eucalyptus Removal\*\*
- 40-foot Contours

\*Vegetation clearing on land surfaces limited to above ground-level (i.e., no root disturbance) and includes a 10-foot buffer area from all structures.

\*\*Removal of eucalyptus trees includes a 50 foot buffer area from all structures.

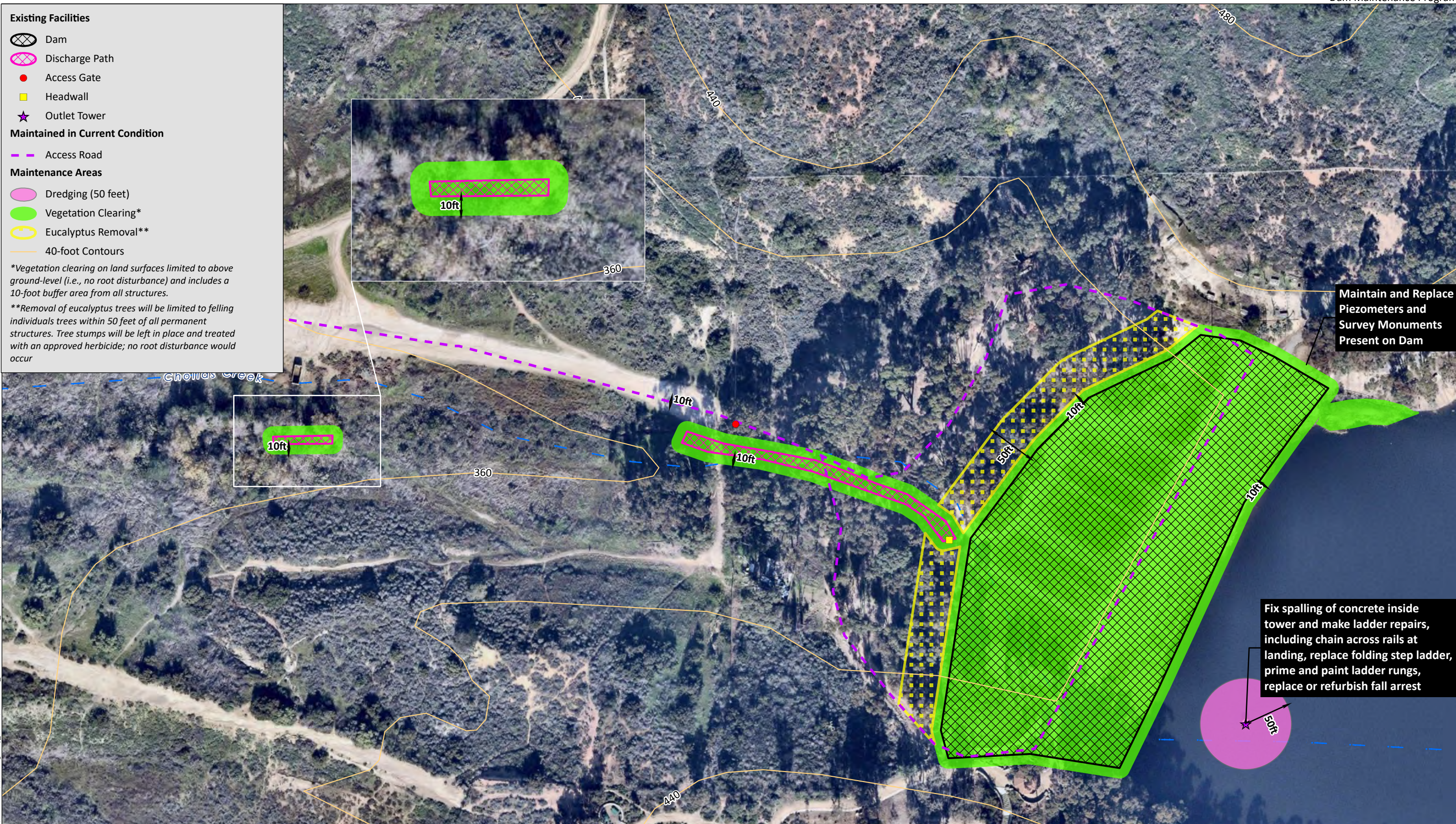
Maintain and Replace Piezometers and Survey Monuments Present on Dam

I:\PROJECTS\SanDiegoCity\_001491\SDD-32.20\_DamMaintenance\_Master\Map\CR\CR.aprx Figs\_ExistFac - 00149.32.20 - 9/14/2022 - SAB



Source: Aerial (NearMap, 2019)





I:\PROJECTS\San Diego City\_001491\SD-32.20\_DamMaintenance\Map\CR\CR.aprx Figs d-2\_ExtFacChollasDam - 00149.32.20 : 9/14/2022 - SAB



Source: Aerial (NearMap, 2019)



**El Capitan Spillway Vegetation Removal Project**

**Existing Facilities**

- Dam
- Spillway
- Lower Spillway
- Spillway Channel
- Discharge Path
- Materials Staging & Tool Shed
- Access Gate
- Blow-Off Valve
- Outlet Tower
- Weir

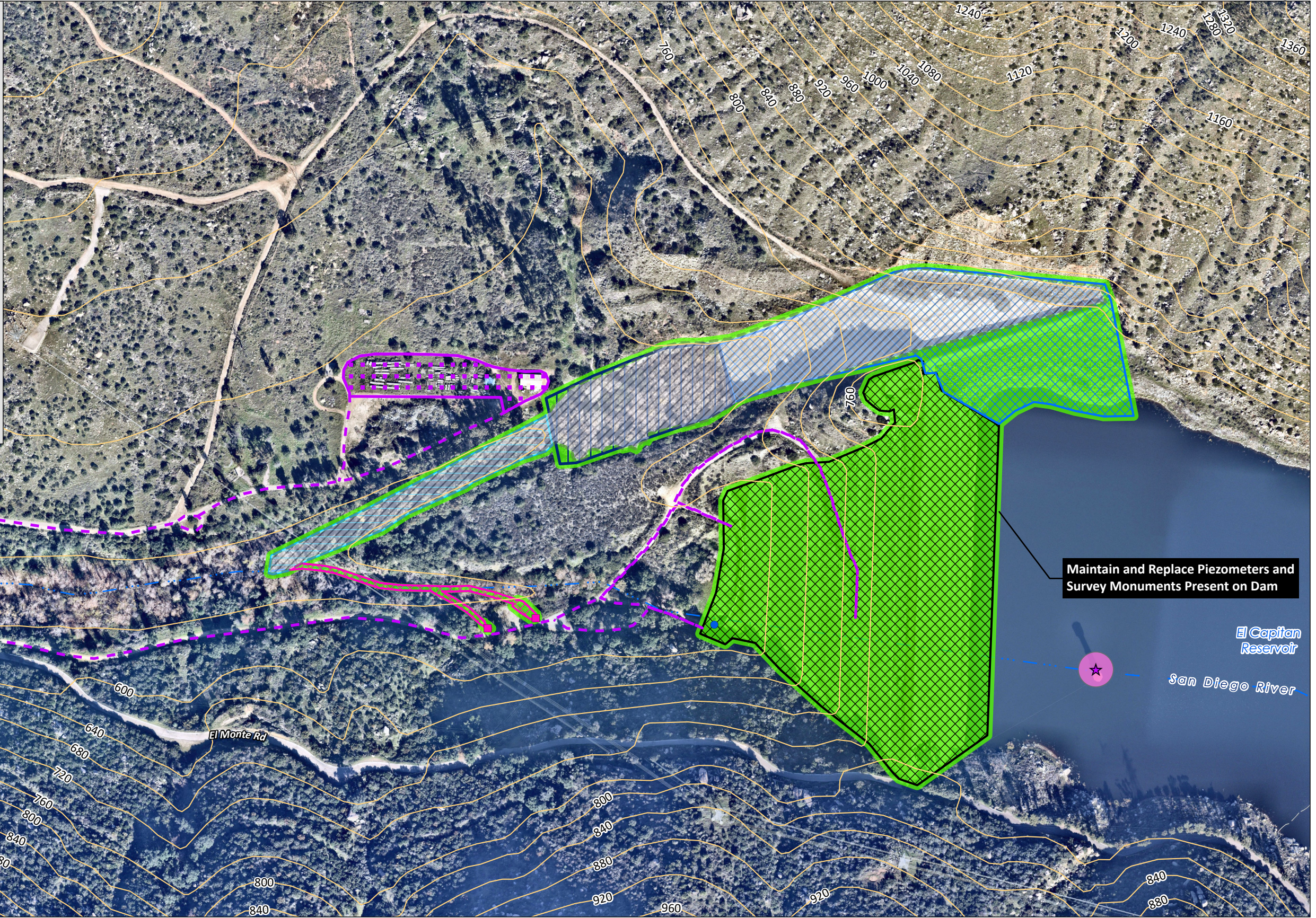
**Maintained in Current Condition**

- Access Road

**Maintenance Areas**

- Dredging (50 feet)
- Vegetation Clearing\*
- 40-foot Contours

\*Vegetation clearing on land surfaces limited to above ground-level (i.e., no root disturbance) and includes a 10-foot buffer area from all structures.

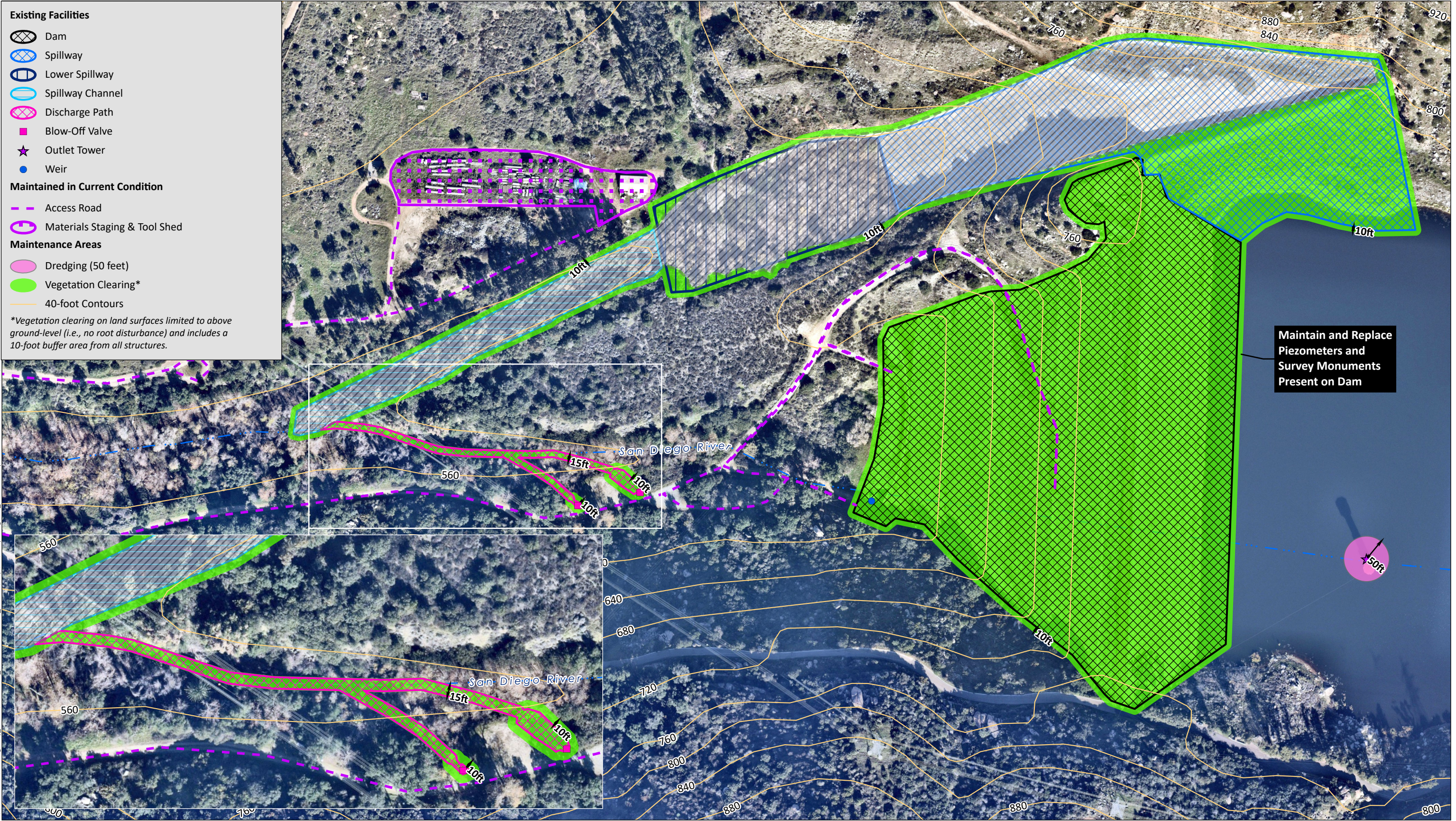


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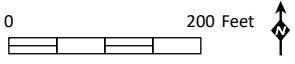


Source: Aerial (NearMap, 2019)



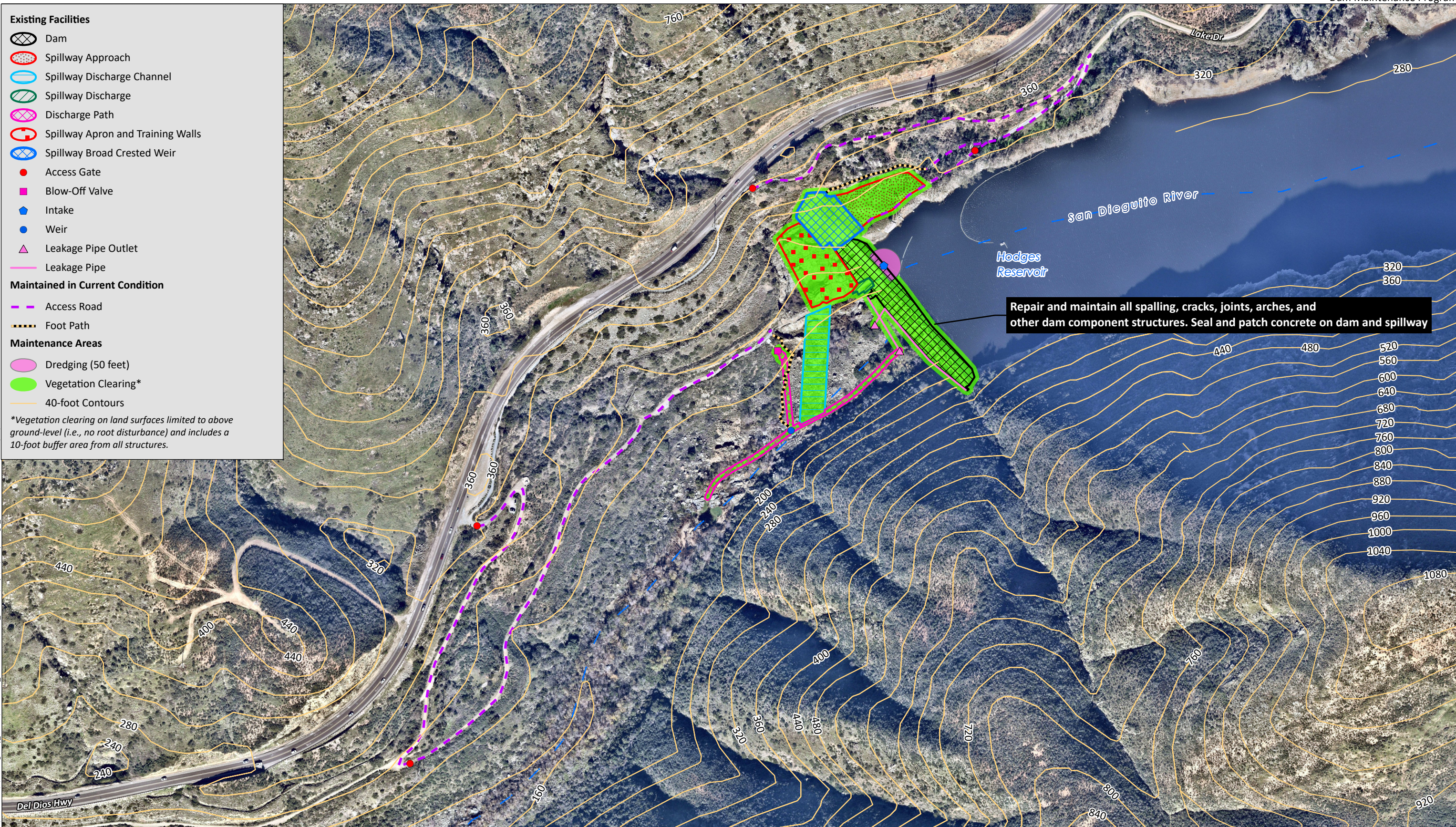


I:\PROJECTS\San Diego\City\_001491\SD-32-20\_DamMaintenance\Map\CR\CR.aprx Fig3e-2\_ExistFacElCapitanDam : 00149\_32-20 : 2/15/2022 - SAB



Source: Aerial (NearMap, 2019)





Repair and maintain all spalling, cracks, joints, arches, and other dam component structures. Seal and patch concrete on dam and spillway

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**Existing Facilities**

- Dam
- Spillway Approach
- Spillway Discharge Channel
- Spillway Discharge
- Discharge Path
- Spillway Apron and Training Walls
- Spillway Broad Crested Weir
- Access Gate
- Blow-Off Valve
- Intake
- Weir
- Leakage Pipe Outlet
- Leakage Pipe

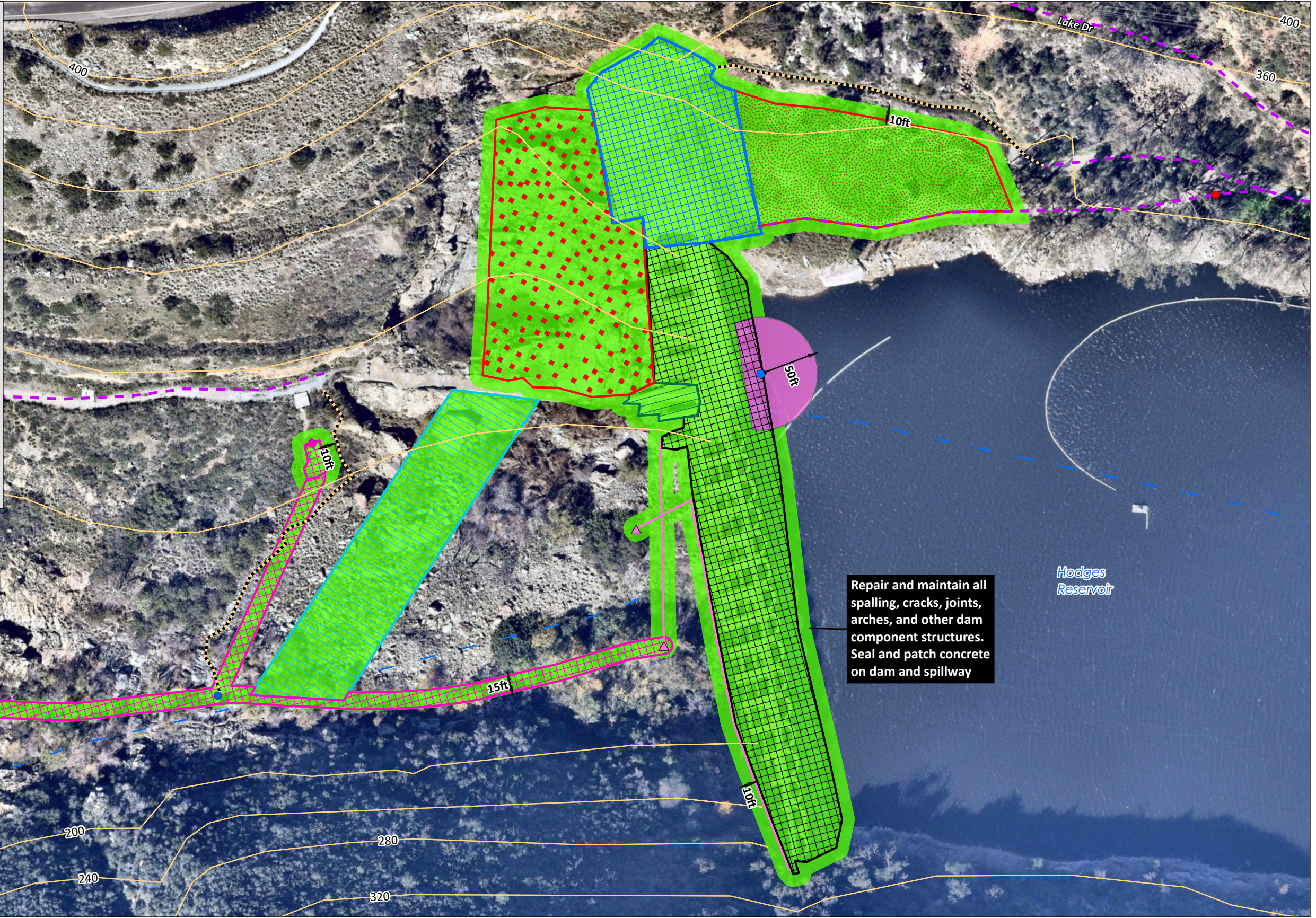
**Maintained in Current Condition**

- Access Road
- Foot Path

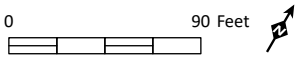
**Maintenance Areas**

- Dredging (50 feet)
- Vegetation Clearing\*
- 40-foot Contours

*\*Vegetation clearing on land surfaces limited to above ground-level (i.e., no root disturbance) and includes a 10-foot buffer area from all structures.*



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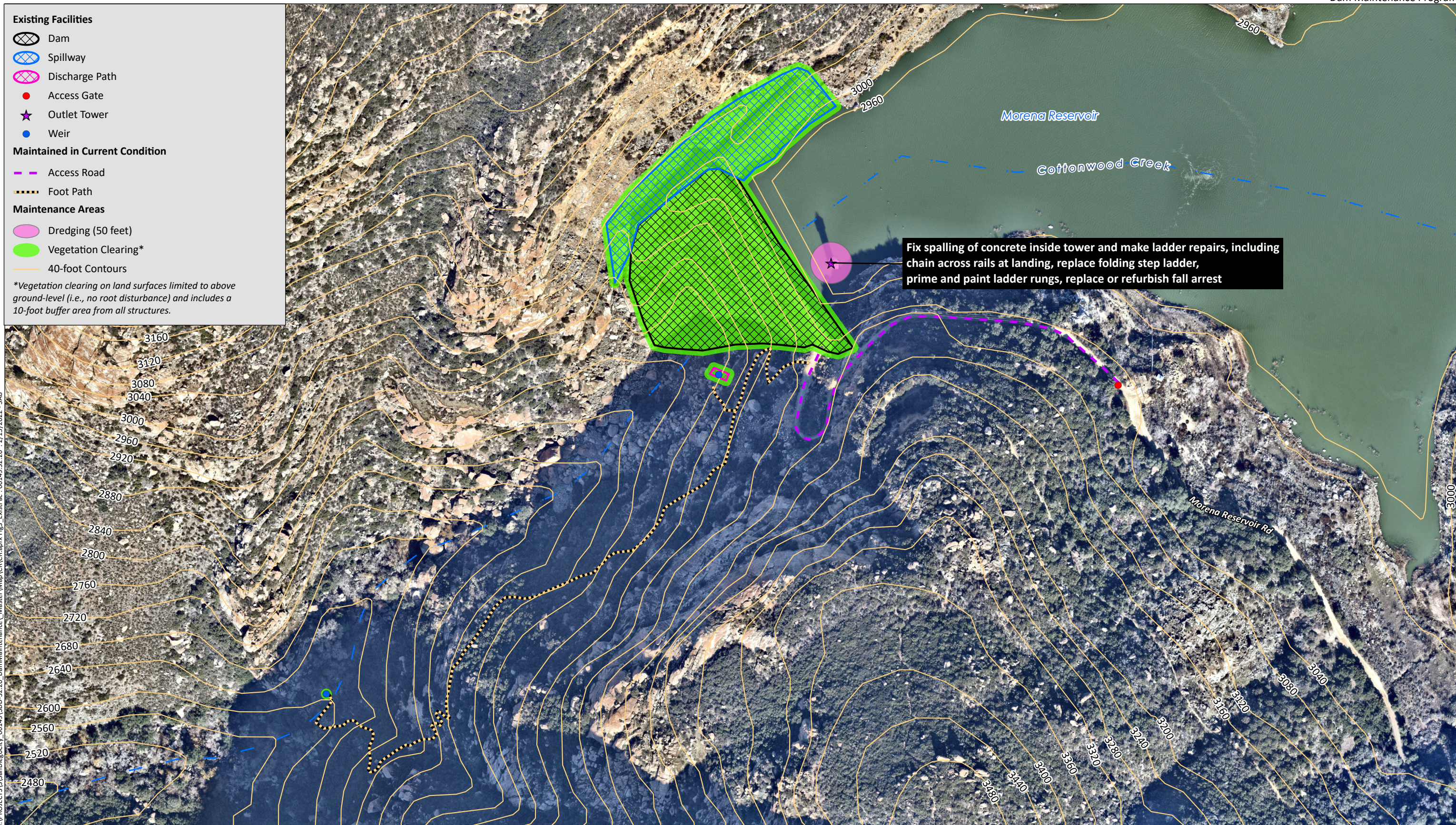
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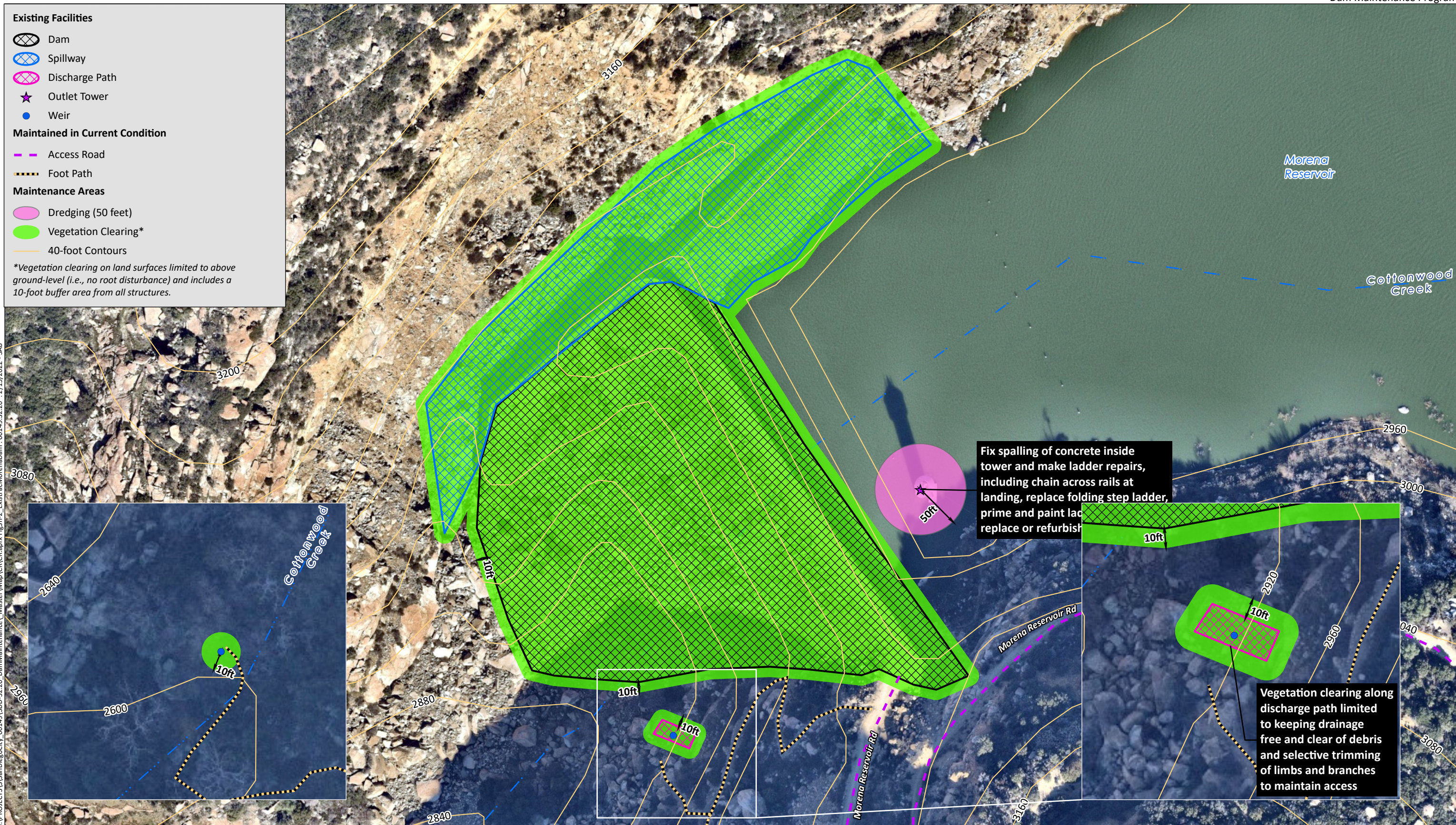
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Source: Aerial (NearMap, 2019)

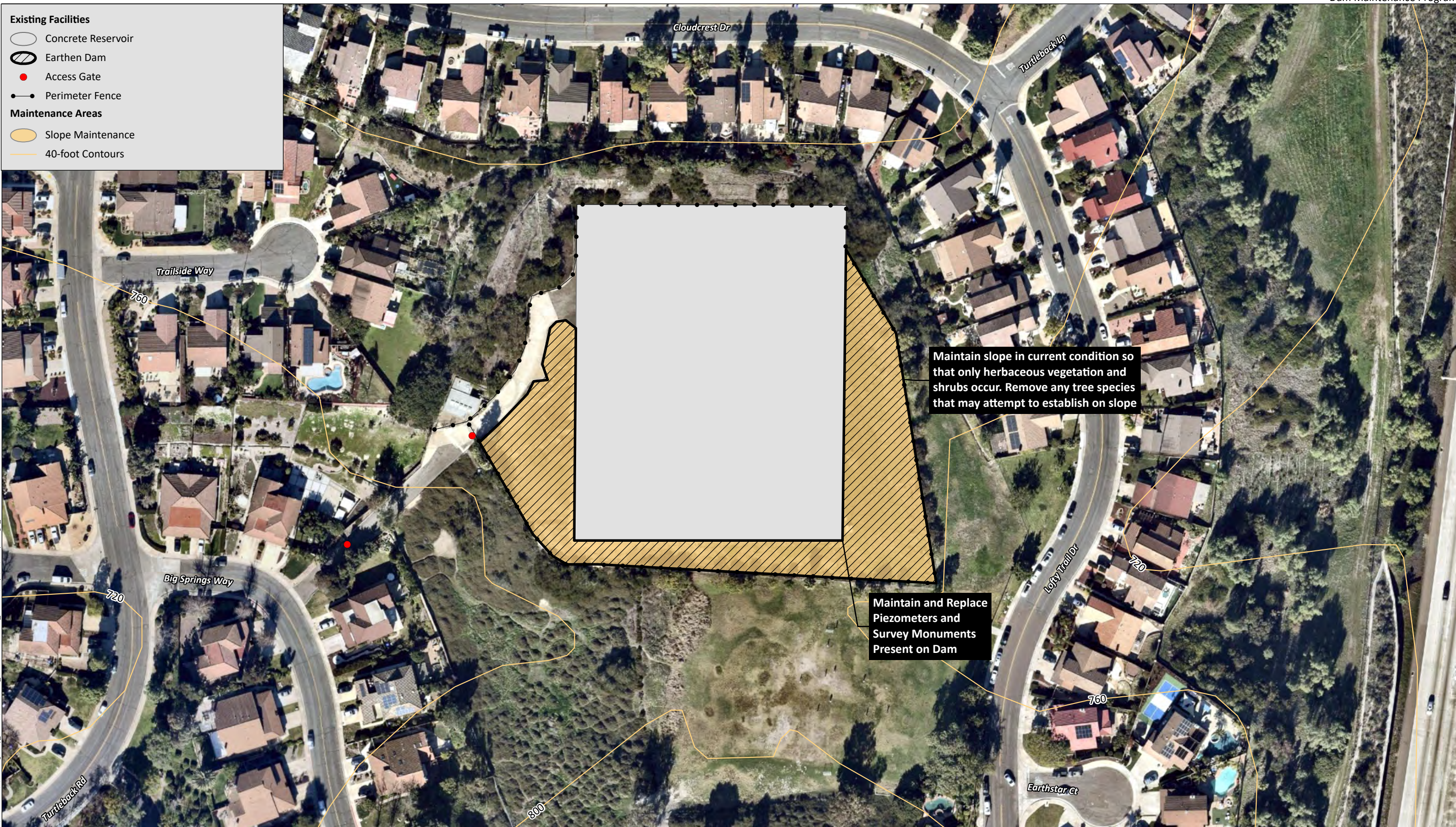




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Source: Aerial (NearMap, 2019)





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**Existing Facilities**

- Concrete Pad
- Dam
- Saddle Dam
- Spillway
- Discharge Path
- Emergency Discharge Path
- Toe of Dam
- Wier Leakage Outlet
- Vehicle Turn-Around Area
- Emergency Discharge Control Facility
- Access Gate
- Intake
- Outlet Tower
- 3' Brow Ditch

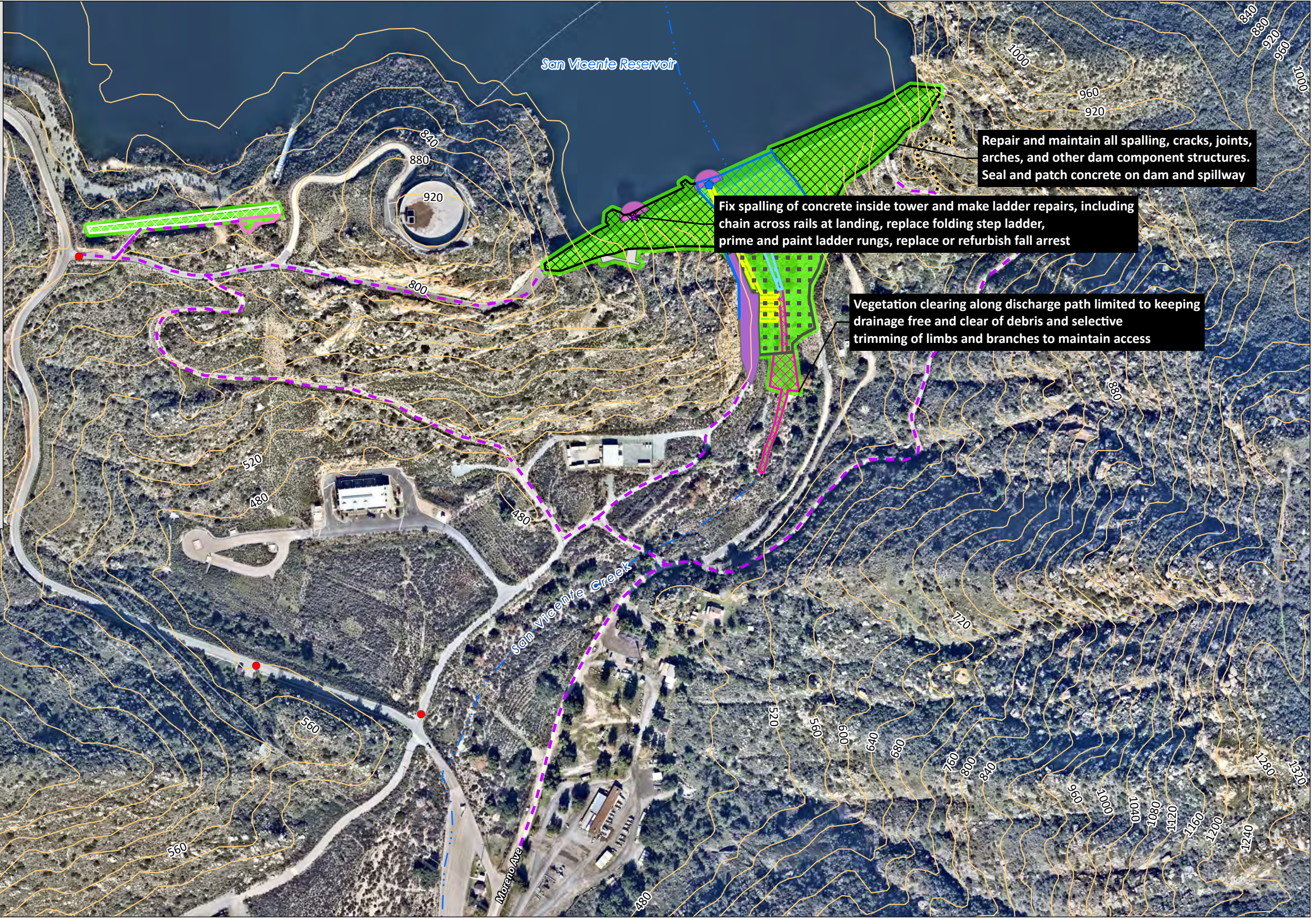
**Maintained in Current Condition**

- Access Road
- Foot Path

**Maintenance Areas**

- Dredging (50 feet)
- Vegetation Clearing\*
- 40-foot Contours

\*Vegetation clearing on land surfaces limited to above ground-level (i.e., no root disturbance) and includes a 10-foot buffer area from all structures.



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Source: Aerial (NearMap, 2019)



**Existing Facilities**

- Concrete Pad
- Dam
- Saddle Dam
- Spillway
- Discharge Path
- Emergency Discharge Path
- Toe of Dam
- Wier Leakage Outlet
- Vehicle Turn-Around Area
- Emergency Discharge Control Facility
- Intake
- Outlet Tower
- 3' Brow Ditch

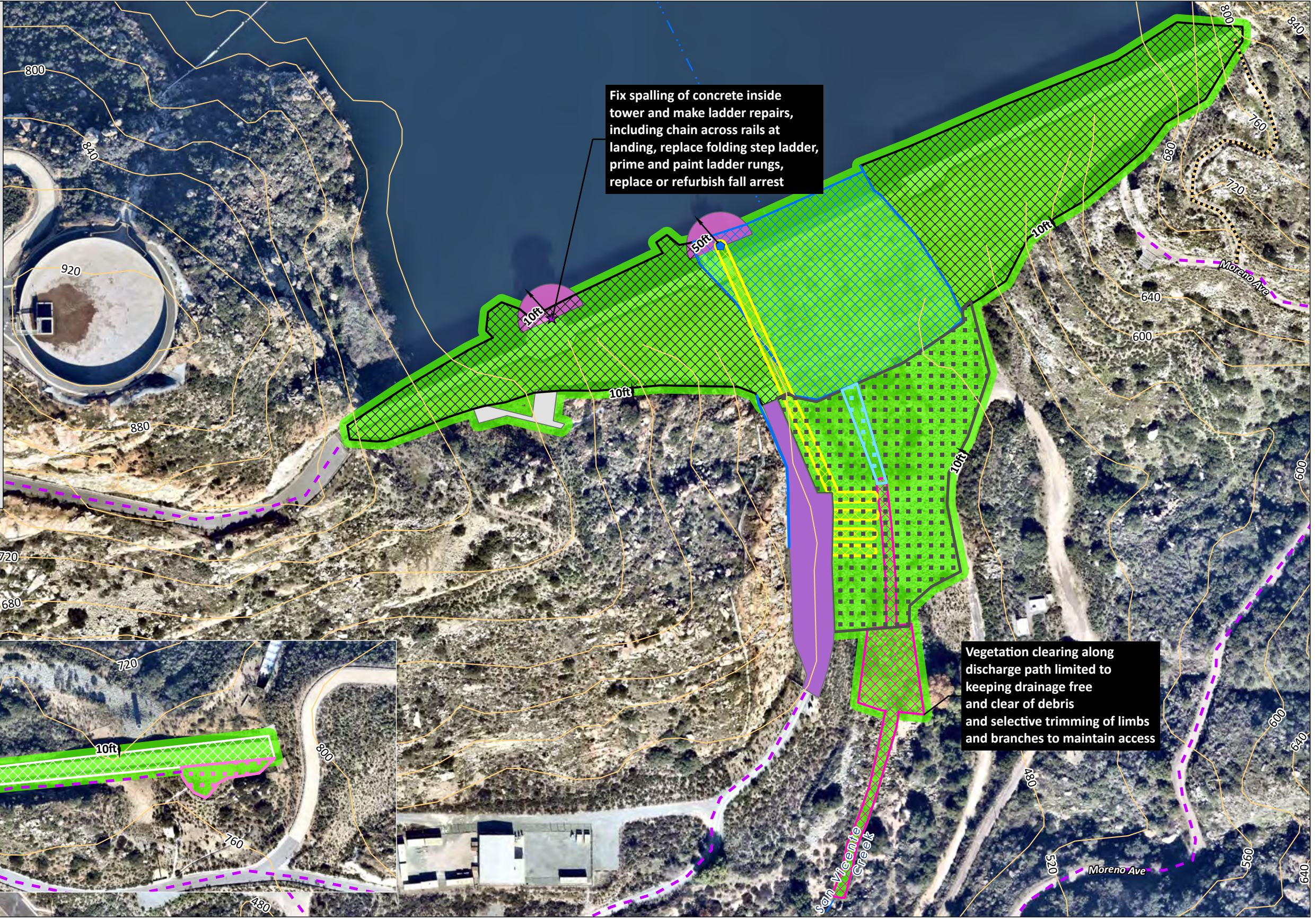
**Maintained in Current Condition**

- Access Road
- Foot Path

**Maintenance Areas**

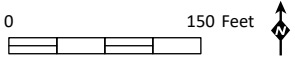
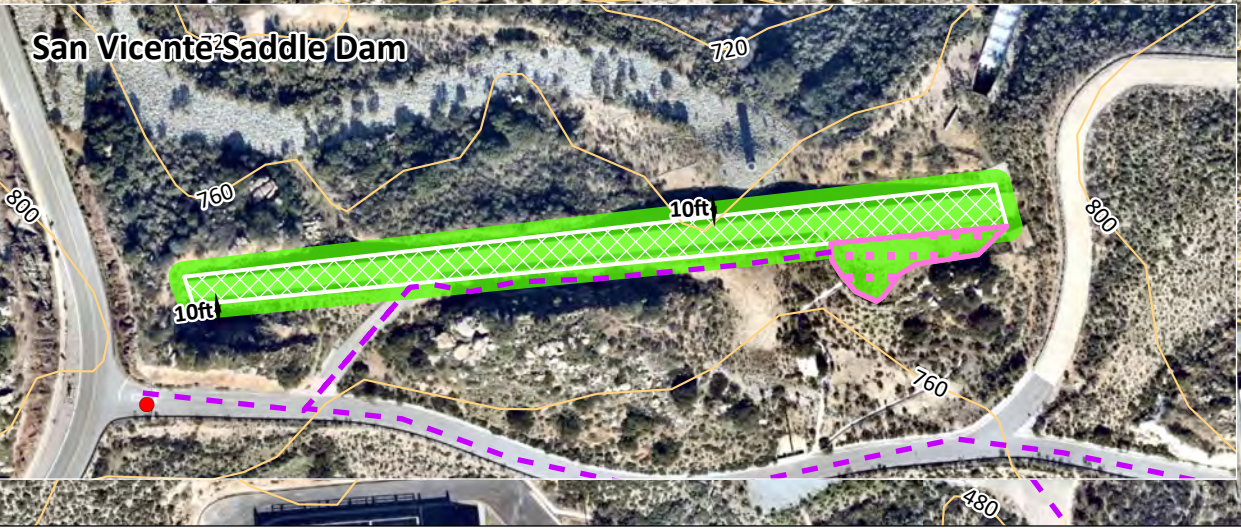
- Dredging (50 feet)
- Vegetation Clearing\*
- 40-foot Contours

*\*Vegetation clearing on land surfaces limited to above ground-level (i.e., no root disturbance) and includes a 10-foot buffer area from all structures.*



Fix spalling of concrete inside tower and make ladder repairs, including chain across rails at landing, replace folding step ladder, prime and paint ladder rungs, replace or refurbish fall arrest

Vegetation clearing along discharge path limited to keeping drainage free and clear of debris and selective trimming of limbs and branches to maintain access

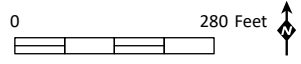


Source: Aerial (NearMap, 2019)





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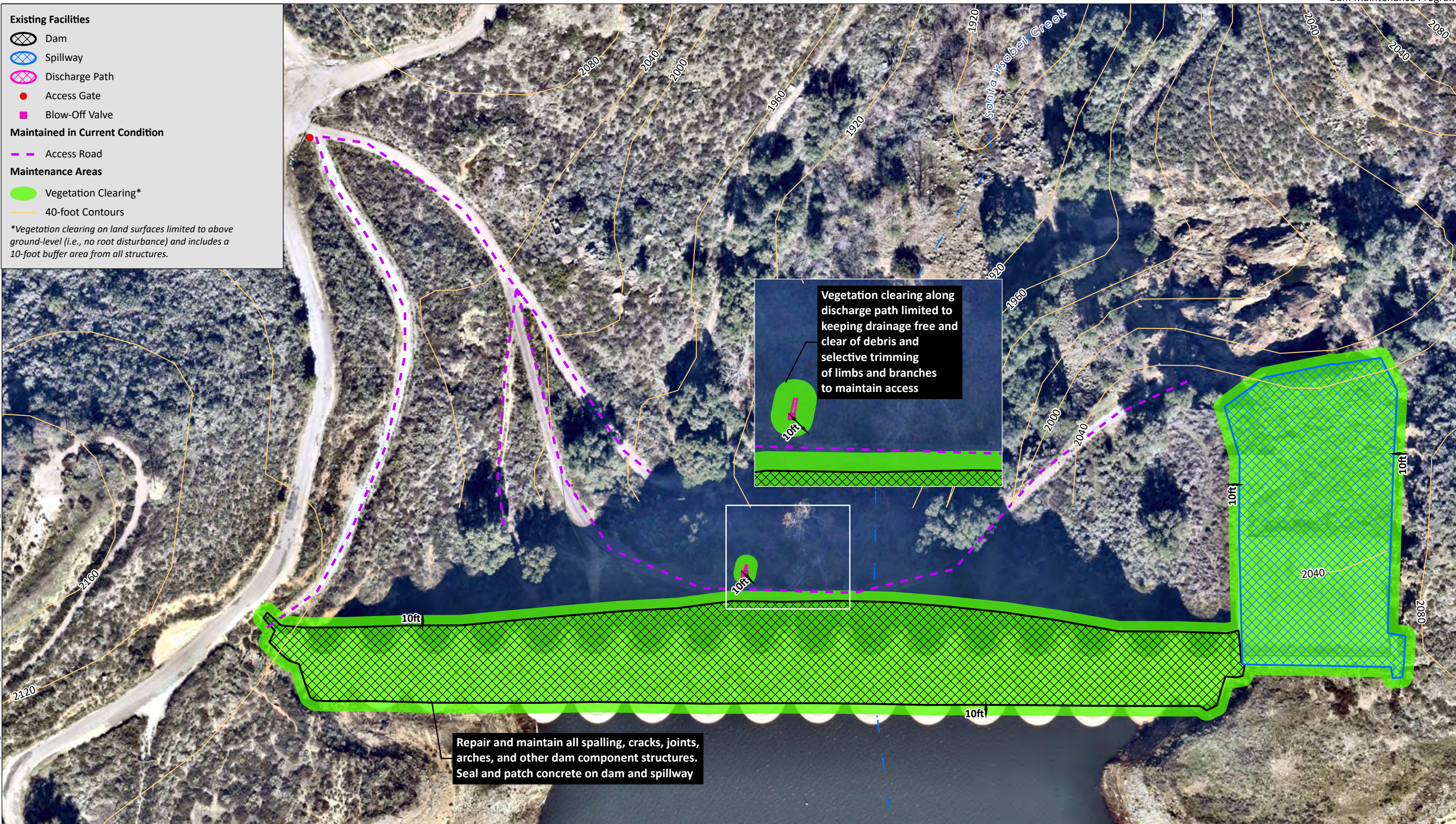
Source: Aerial (NearMap, 2019)





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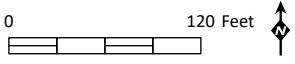


Source: Aerial (NearMap, 2019)



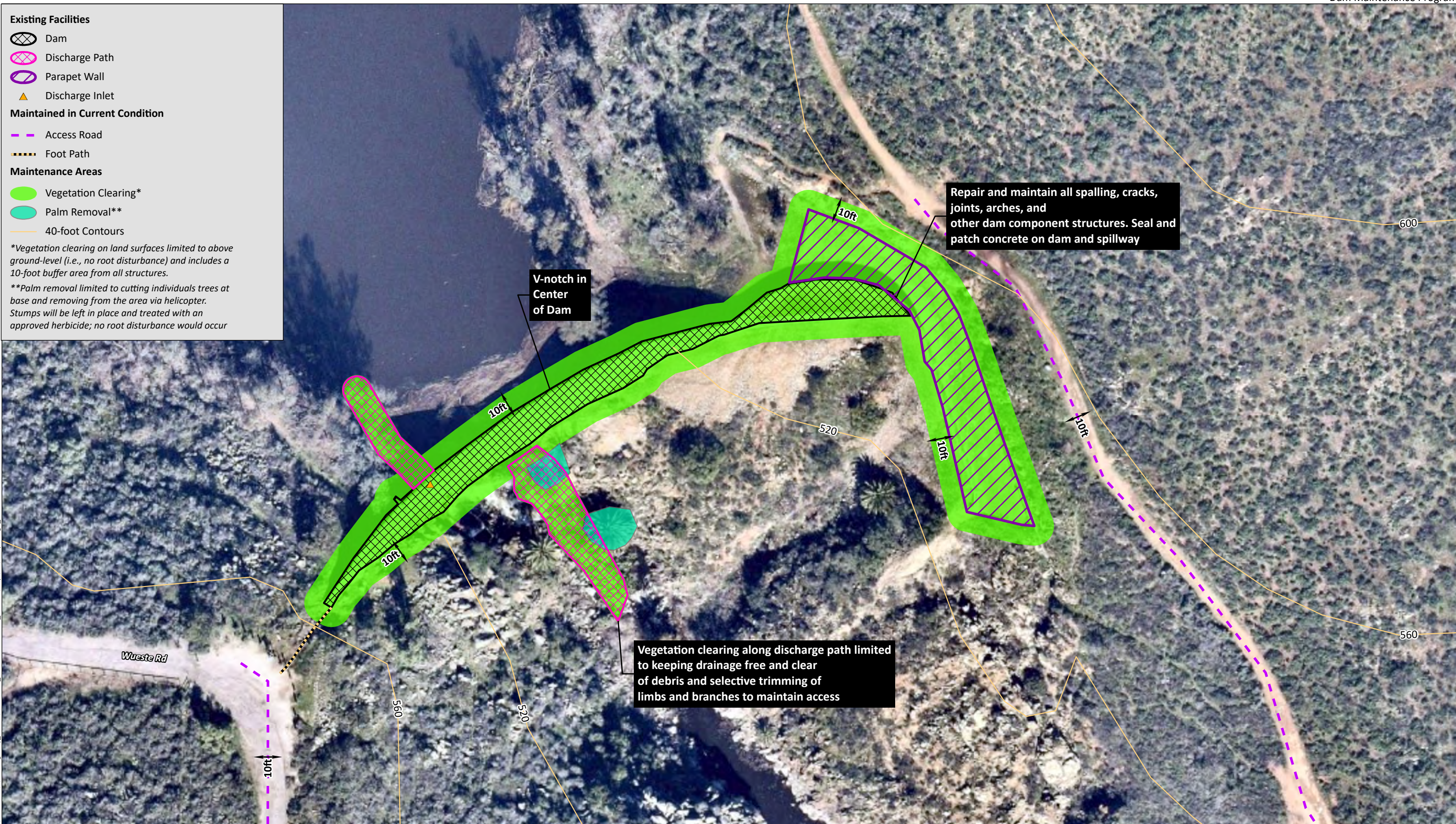


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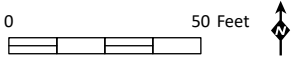


Source: Aerial (NearMap, 2019)





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Source: Aerial (NearMap, 2019)



### 1.2.1 Maintenance Activities

Maintenance activities covered under the proposed Program include the maintenance of access roads, access trails, and pedestrian footpaths, maintenance of staging and material storage areas, trimming and clearing of vegetation, dredging, maintenance of outlet/intake towers and trash racks, removal of debris along spillways and other appurtenant structures to provide a clear path and remove obstructions, maintenance and repair of the dams and appurtenant structures to prevent deterioration that could lead to dam failure, concrete maintenance and repairs, maintenance and replacement of piezometers and survey monuments, and geotechnical investigations as described further below.

#### Access Road and Staging Area Maintenance

Under the proposed Program, existing access roads, access trails, pedestrian footpaths, and staging and material storage areas would continue to be maintained in a useable condition along the current path alignments and existing disturbed/developed footprints. No widening, expansion, relocation, or establishment of new access roads, access trails, footpaths, or staging areas are proposed as part of the Program. Routine maintenance activities include patching and minor surface repaving of paved access roads and staging areas; patching and minimal grading of gravel and dirt access roads and trails and staging areas; filling of erosional voids, rills, and gullies caused by winter storms; and minor trimming of vegetation to remove overhanging branching and other encroaching vegetation. Minor trimming of vegetation would also occur along footpaths, which are necessary to maintain pedestrian access to the toe of dams, dam leakage measuring structures, and weir and outlet work structures. Maintenance and repair activities along existing paved, gravel, and dirt access roads would be limited to the current road width, generally 10 feet wide, and established road rights-of-way, where present. Maintenance of pedestrian footpaths would be limited to minor trimming of vegetation along the path alignment; no soil disturbance or removal of vegetation would occur as part of footpath maintenance. Maintenance and repair activities within staging and material storage areas would be limited to the current disturbed and developed footprints.

Access to the dams and associated infrastructure to complete maintenance activities covered under this Program, and detailed below, would occur along established access roads, access trails, and pedestrian footpaths. Any staging of equipment or materials required to complete activities would occur within existing staging and material storage areas, within disturbed and developed portions of the dam, or within existing developed lands on nearby City property at the reservoirs. These areas are maintained as parking and operational space for dam and reservoir maintenance staff. If direct access to outlet/intake towers from the dam is not available, crews, materials, and the necessary equipment to perform maintenance and repair activities, including dredging, would be transported to the outlet/intake towers utilizing a boat or barge launched from the reservoir's boat ramp.

#### Vegetation Clearing

Vegetation growing on and adjacent to the dams and associated infrastructure has the potential to hinder site access and safety inspections, visually obstruct dam components, interfere with safe operations, damage critical infrastructure, and possibly lead to dam failure. Removal of vegetation and debris is critical to the functioning of the dams and associated infrastructure, and Dulzura Conduit, as vegetation could reduce design capacity and prevent proper inspection of infrastructure. Clearing of vegetation would continue to be conducted on a routine basis under the Program to keep the maintenance area free and clear of vegetation. This will avoid the re-establishment of upland and



wetland vegetation, as well as decrease the chances of introducing a new species into an existing maintenance area.

Vegetation clearing would be limited to the following activities and areas:

- Clearing of all vegetation located within at least five feet of Dulzura Conduit;
- Clearing of all vegetation located within 10 feet of the dams and associated infrastructure;
- Clearing of all marsh habitat (i.e., giant reed [*Arundo donax*], cattail [*Typha* spp.], bulrush [*Schoenoplectus* spp.], etc.) located within 10 feet of the dam;
- Removal of all trees located within 10 feet of the dams, saddle dams, parapet walls, and spillways;
- Removal of all eucalyptus (*Eucalyptus* spp.) trees located within 50 feet of the dam, saddle dams, parapet walls, and spillways;
- Clear and maintain all vegetation within 10 feet of all weirs; headwalls; blow-off and outlet valves; inlet and outlet pipes; discharge, leakage, and seepage pipes and associated discharge paths; and
- Maintain slopes surrounding Black Mountain and Rancho Bernardo Dams so that so that no trees are allowed to establish. The slopes will be maintained in their current condition so that only herbaceous vegetation and low-growing shrubs occur.

Clearing of vegetation on land surfaces would be limited to above ground level, and the roots of all cut vegetation would be left in place to prevent soil disturbance and reduce potential erosion. Clearing of eucalyptus and other tree species would be completed by cutting trees at the base and treating the stumps with herbicide. Aquatic vegetation, such as cattails (*Typha* spp.) and bulrushes (*Schoenoplectus* spp.), will either be cut at the water surface, removed with mechanical equipment, or treated with an herbicide approved for aquatic use by the U.S. Environmental Protection Agency by a licensed applicator. Vegetation clearing work would be conducted with hand tools such as pole saws, chain saws, and weed eaters. Felled trees and aquatic vegetation would be removed from the area with the use of mechanized equipment (such as a bobcat, backhoe, or excavator), where feasible, and transported to an appropriate waste management facility for disposal. Felled trees in areas inaccessible to mechanized equipment would be removed via helicopter.

## Dredging

Accumulated lake bottom sediment covering dam infrastructure, such as lower saucer valve ports, would be removed through dredging to maintain operational function. Dredging would occur within a 50-foot radius of the outlet/intake tower base at Barrett, Chollas, El Capitan, Miramar, Morena, Murray, San Vicente, and Savage (Lower Otay) Dams, and within a 50-foot radius at the low-level outlet intake at Barrett, Hodges, and San Vicente Dams. The depth of dredging activities would be variable depending on site conditions.

There are two main dredging methods that are anticipated to be employed under the proposed Program: mechanical and hydraulic. Mechanical dredging typically involves a stationary, bucketed



machine (such as a boom, clamshell, or backhoe) positioned on a barge that is lowered into the water to scoop up material. The dredged material is then raised above the water surface and deposited on a barge or other above-water surface. Hydraulic dredging utilizes a high-powered water pump to suction up material that is then pumped away from the dredge site. A dredging plan would be prepared and approved prior to the commencement of dredging activities at each proposed location. The dredging plan would describe the scope of work, amount of material to be removed, method of dredging, equipment, access roads and points, staging area(s), duration and schedule, and protocols to be implemented. Dredged material would be removed from the reservoir and either disposed of at an appropriate disposal facility or reused in a beneficial capacity (i.e., agricultural).

### **Outlet Tower & Trash Rack Maintenance**

Routine maintenance and minor repairs to the outlet/intake towers to maintain and improve the operational safety of the towers. These activities include filling cored holes on the operating platform; repairing the valve rack; repairing concrete spalls; applying a top seal to waterproof and protect concrete surfaces and seal hairline cracks; coating metal covers, access ladders, and handrails to prevent corrosion; repair and replacement of access ladders; replacement of access hatches (in-kind); replacement of the safety chains across rails at the landing (in-kind); replacement or refurbishment of fall arrests; coating of the roof structural steel; and strengthening the concrete roof slab with the application of a fabric reinforced matrix. Equipment required to complete these activities would be limited to the use of manual and mechanical hand tools; no heavy machinery would be required. Additionally, trash racks would be regularly cleared, maintained, and kept free of debris that may block intake and outlet valves and other critical dam infrastructure, hindering operational functionality.

### **Spillway Clearing**

Accumulated debris such as dirt, rocks, boulders, and vegetation present on the spillways, spillway channels, and auxiliary spillways would be removed as part of the Program to maintain operational function and prevent damage to infrastructure. Debris would be removed by hand, where feasible, and heavy equipment including, but not limited to, a truck-mounted crane, rubber-wheeled front-end loader, track-mounted long arm excavator, track-mounted bobcat with jackhammer attachment, and dump trucks. Small equipment (such as a bobcat) would be lowered into the spillways and other appurtenant structures with a truck-mounted crane to move the debris to a point where it can be accessed by a long arm-track mounted excavator positioned at the top of the structure. Boulders would be broken up into manageable pieces with a hydraulic jackhammer to allow for removal. A track-mounted excavator would lift the debris from the spillway and appurtenant structures and place it in a dump truck to be hauled away and disposed of at a licensed landfill or stock-piled on-site within disturbed/developed areas of the dam. Spillway clearing activities would be contained within the unvegetated spillways and appurtenant structures, existing access roads, previously disturbed workspaces and staging areas, and disturbed and developed areas adjacent to the dams.

Removal of soil, debris, and vegetation along the El Capitan Dam spillway, lower dam spillway, and spillway channel will be conducted as part of the El Capitan Dam Spillway Vegetation Removal Project (Project No. 679843; State Clearing House No. 2022050039). Long-term maintenance of these areas will be covered under the El Capitan Dam Spillway Vegetation Removal Project and is not included as part of the proposed Program.



## **Dam Maintenance and Repairs**

Routine maintenance and repair of the dams and appurtenant structures would occur to prevent deterioration and maintain the integrity and functionality of critical dam infrastructure. The 13 City-owned dams covered under this Program include four earthen dams (Chollas, El Capitan, Miramar, and Morena Dams), seven concrete dams (Barrett, Hodges, Murray, San Vicente, Savage, Sutherland, and Upper Otay Dams), and two concrete reservoirs (Black Mountain and Rancho Bernardo).

Maintenance of earthen dams includes filling of voids, gullies, and rills caused by erosion on the upstream and downstream faces of the dam, and minor grading and regular compaction of the dam face and toe of dam. Maintenance of concrete dams, reservoirs, and concreted appurtenant structures at earthen and concrete dams (i.e., saddle dams, parapet walls, spillways, etc.) includes repairs such as sealing of all joints and cracks with gaps with a flexible sealant to prevent infiltration of water and buildup of stagnation pressures; repairing all degraded concrete, spalls, and boulder impact areas within the spillway (channel floor and walls) and dam face and walls by cutting-out existing material then replacing and patching material to prevent further damage; repair of spalled concrete on all elements of the dam, especially where reinforcing steel is exposed; and smoothing vertically-displaced joints on concrete surfaces by surface grinding or other approved methods.

Additionally, auxiliary infrastructure located on or within the dams would be maintained, repaired, and or replaced, including perimeter fencing, piezometers and survey monuments, ladders, micrometers, electronic level sensors, and other instrumentation. All maintenance and repairs activities would be performed on existing structures, with work activities limited to disturbed and developed portions of the dam.

## **Dulzura Conduit**

Routine maintenance and repair of Dulzura Conduit would occur to prevent flow impairment through the conduit and maintain design capacity. The Dulzura Conduit is an approximately 13-mile-long aqueduct constructed to divert water from Barrett Dam Reservoir to Lower Otay Reservoir through a series of canals, flumes, and tunnels. Water is released into the conduit through the Barret Dam outlet tower by a 30-inch drainpipe. Upgrades to the conduit were completed in 2011 with a majority of the conduit now comprised of concrete channels and steel pipes. The average depth of the concrete trench segments is approximately four and a half feet, with a bottom width of three feet, and a top width of approximately six feet. The flume is a combination of enclosed metal flumes, measuring approximately four feet in interior diameter, and board-formed poured concrete. Existing access roads and trails are constructed of decomposed granite, gravel, or concrete. Pedestrian footpaths primarily consist of dirt paths, and in some cases, small steel catwalks.

Maintenance activities along Dulzura Conduit involve the removal of landslide debris, rocks and boulders, and vegetation within the concrete conduit and the repair of damaged or deteriorating sections of the existing conduit with in-kind materials. Repairs of the existing concrete conduit would be completed with shotcrete and include the installation of reinforcing mesh, ground wires, and compound curing. The shotcrete would be broom finished by hand. Large boulders that are found to be blocking the conduit will be broken up into manageable pieces with the use of approved expansive chemical agents and/or mechanical equipment.



All inspection, repair, and maintenance activities along Dulzura Conduit would occur within the existing developed footprint of the conduit, pedestrian footpaths, and access roads and trails. The remote location of the conduit, rugged terrain, and limited vehicle access makes typical maintenance activities challenging. Maintenance and construction personnel would access the site through existing access roads, access trails, and pedestrian footpaths. Helicopters would airlift all supplies, equipment (i.e., mini-excavator, bobcat, etc.), and debris that cannot be hand-carried to and from the repair sites or removed with maintenance vehicles. Helicopter landing, materials, and equipment staging areas would be located within existing developed lands on nearby City property at Barrett Reservoir. These areas are maintained as parking and operational space for dam and reservoir maintenance staff.

## **Geotechnical Investigations**

Subsurface geotechnical investigation of the dams, foundations, and associated infrastructure would occur as part of periodic condition assessments under the proposed Program. Geotechnical investigations shall include seismic stability analysis using modern techniques, penetration tests, and borings. The techniques used to perform the investigations shall be limited to a small footprint within existing disturbed and developed areas associated with the dams and along access roads. No vegetation would be removed as part of the geotechnical investigation activities, and no native soil would be impacted, as excavations would be conducted within disturbed soils of previously installed infrastructure (i.e., rockfill and concrete).

### **1.2.2 Frequency of Maintenance Activities**

The frequency of maintenance activities would be based upon routine inspections and recommendations identified in the DSOD annual inspection reports. Factors influencing the timing and frequency of maintenance events would include, but are not limited to, current conditions, past maintenance history, and risk assessment. In general, clearing of vegetation is anticipated to occur annually, though the extent of clearing would depend on the current conditions at each site. Other maintenance activities would occur on an as needed basis as directed by the DSOD and City PUD.

Maintenance activities may need to be conducted in the event of an emergency. “Emergency” means a sudden, unexpected occurrence, involving a clear and imminent danger, demanding immediate action to prevent or mitigate loss of, or damage to, life, health, property, or essential public services. Physical evidence, such as observation of surcharging conditions, blockages by debris/rocks/roots, or holes/cracks/offsets in dam infrastructure, or where impacts to vegetation, wetlands, and landforms have resulted from surcharging conditions (unanticipated water releases) would demonstrate emergency conditions.

### **1.2.3 Area of Potential Effects**

The APE for the project consists of the locations for maintenance activities covered under the proposed Program, described above, and a 25-foot buffer, comprising a total area of approximately 314 acres (see Figure 3).

## **1.3 REGULATORY FRAMEWORK**

Cultural resources are defined as buildings, sites, structures, or objects, each of which may have historical, architectural, archaeological, cultural, and or scientific importance. Significant resources are



those resources that have been found eligible to the California Register of Historical Resources (CRHR) or National Register of Historic Places (NRHP), as applicable.

### 1.3.1 Federal

Federal regulations that would be applicable to the proposed project if there is a federal nexus (e.g., permitting) consist of the NHPA and its implementing regulations (16 United States Code 470 et seq., 36 Code of Federal Regulations [CFR] Part 800). Section 106 of the NHPA requires Federal agencies to consider the effects of their undertakings on “historic properties”, that is, properties (either historic or archaeological) that are eligible for the NRHP. To be eligible for the NRHP, a historic property must be significant at the local, state, or national level under one or more of the following four criteria:

- (A) associated with events that have made a significant contribution to the broad patterns of our history;
- (B) associated with the lives of persons significant in our past;
- (C) embodies the distinctive characteristics of a type, period, or method of construction, or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; and/or
- (D) has yielded or may be likely to yield, information important in prehistory or history.

### 1.3.2 State

CEQA, Public Resources Code (PRC) 21084.1, and California Code of Regulations (CCR) Title 14 Section 15064.5, address determining the significance of impacts to archaeological and historic resources and discuss significant cultural resources as “historical resources,” which are defined as:

- resource(s) listed or determined eligible by the State Historical Resources Commission for listing in the CRHR (14 CCR Section 15064.5[a][1])
- resource(s) either listed in the NRHP or in a “local register of historical resources” or identified as significant in a historical resource survey meeting the requirements of Section 5024.1(g) of the PRC, unless “the preponderance of evidence demonstrates that it is not historically or culturally significant” (14 CCR Section 15064.5[a][2])
- resources determined by the Lead Agency to meet the criteria for listing on the CRHR (14 CCR Section 15064.5[a][3])

For listing in the CRHR, a historical resource must be significant at the local, state, or national level under one or more of the following four criteria:

- (A) It is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States;
- (B) It is associated with the lives of persons important to local, California, or national history;



- (C) It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values;
- (D) It has yielded or has the potential to yield information important to the prehistory or history of the local area, California, or the nation.

Under 14 CCR Section 15064.5(a)(4), a resource may also be considered a “historical resource” for the purposes of CEQA at the discretion of the lead agency.

All resources that are eligible for listing in the NRHP or CRHR must have integrity, which is the authenticity of a historical resource’s physical identity evidenced by the survival of characteristics that existed during the resource’s period of significance. Therefore, resources must retain enough of their historic character or appearance to be recognizable as historical resources and to convey the reasons for their significance. Integrity is evaluated with regard to the retention of location, design, setting, materials, workmanship, feeling, and association. In an archaeological deposit, integrity is assessed with reference to the preservation of material constituents and their culturally and historically meaningful spatial relationships. A resource must also be judged with reference to the particular criteria under which it is proposed for nomination. Under Section 106 of the NHPA, actions that alter any of the characteristics that qualify a property for eligibility for listing in the NRHP “in a manner that would diminish the integrity of the property’s location, design, setting, materials, workmanship, feeling, or association” (36 CFR 800.5[a]) constitute an adverse effect to the historic property.

### **1.3.3 Local**

#### **1.3.3.1 City’s Historical Resources Regulations**

The purpose of the City’s Historical Resources Regulations (HRR; San Diego Municipal Code [SDMC] Chapter 14, Article 3, Division 2) is to protect, preserve and, where damaged, restore the historical resources of San Diego, which include historical buildings, historical structures or historical objects, important archaeological sites, historical districts, historical landscapes, and traditional cultural properties (City 2018). These regulations are intended to assure that development occurs in a manner that protects the overall quality of historical resources. It is further the intent of these regulations to protect the educational, cultural, economic, and general welfare of the public, while employing regulations that are consistent with sound historical preservation principles and the rights of private property owners.

The regulations apply to proposed development when the following historical resources are present on the site, whether or not a Neighborhood Development Permit or Site Development Permit is required: designated historical resources; historical buildings; historical districts; historical landscapes; historical objects; historical structures; important archaeological sites; and traditional cultural properties. Where any portion of a premise contains historical resources, the regulations shall apply to the entire premises.

The property owner or applicant shall submit required documentation and obtain a construction permit, a Neighborhood Development Permit, or a Site Development Permit, as required pursuant to this division before any development activity occurs on a premise that contains historical resources. The regulations delineate which types of permits are required for a project, based on the type of development proposal and the types of historical resources that would potentially be affected by the project.



### 1.3.3.2 City of San Diego Historical Resources Guidelines

The purpose and intent of the City's Historical Resources Guidelines (HRG), located in the City's Land Development Manual (LDM; City 2001), are to protect, preserve and, where damaged, restore the historical resources of San Diego. These guidelines are designed to implement the City's HRRs in compliance with applicable local, state, and federal policies and mandates, including, but not limited to, the City's General Plan, CEQA, and Section 106 of the NHPA. The intent of the guidelines is to ensure consistency in the management of the City's historical resources, including identification, evaluation, preservation/mitigation, and development. The HRG states that if a project will potentially impact a resource, the resource's significance must be determined, even if it is not listed in or previously considered eligible for the California Register or a local register (Section II.D.5).

In order to be designated as historic and potentially listed in the City's Historical Resources Register, one or more of the following criteria must be met:

- (A) Exemplifies or reflects special elements of the City's, a community's or a neighborhood's historical, archaeological, cultural, social, economic, political, aesthetic, engineering, landscaping, or architectural development.
- (B) Is identified with persons or events significant in local, state, or national history.
- (C) Embodies distinctive characteristics of a style, type, period, or method of construction or is a valuable example of the use of indigenous materials or craftsmanship.
- (D) Is representative of the notable work of a master builder, designer, architect, engineer, landscape architect, interior designer, artist, or craftsman.
- (E) Is listed or has been determined eligible by the National Park Service for listing on the NRHP or is listed or has been determined eligible by the California Office of Historic Preservation for listing on the CRHR.
- (F) Is a finite group of resources related to one another in a clearly distinguishable way or is a geographically definable area or neighborhood containing improvements which have a special character, historical interest, or aesthetic value or which represent one or more architectural periods or styles in the history and development of the City.

Eligible resources, which may include an improvement, building, structure, sign, interior element and fixture, feature, site, place, district, area, or object, are designated to the City's Register of Designated Historical Resources by the City's Historical Resources Board (HRB) at a publicly noticed hearing.

The City's HRG also states that if a project will potentially impact a resource, the resource's significance must be determined, even if it is not listed in, or previously considered eligible for, the CRHR or a local register (Section II.D.5). The City has established baseline resource significance criteria based upon CEQA as follows:

An archaeological site must consist of at least three associated artifacts/ecofacts (within a 50-square meter area) or a single feature and must be at least 45 years of age. Archaeological sites containing only a surface component are generally considered not significant, unless demonstrated otherwise. Such site types may include isolated finds, bedrock milling stations,



sparse lithic scatters, and shellfish processing stations. All other archaeological sites are considered potentially significant. The determination of significance is based on a number of factors specific to a particular site including site size, type, and integrity; presence or absence of a subsurface deposit, soil stratigraphy, features, diagnostics, and datable material; artifact and ecofact density; assemblage complexity; cultural affiliation; association with an important person or event; and ethnic importance (City 2001:15).

Non-significant resources are addressed in Section II.D.6 as including sites with no subsurface component, such as isolates, lithic scatters, isolated bedrock milling stations, and shellfish processing stations.

### **1.3.4 Native American Heritage Values**

Federal and state laws mandate that consideration be given to the concerns of contemporary Native Americans with regard to potentially ancestral human remains, associated funerary objects, and items of cultural patrimony. Consequently, an important element in assessing the significance of the study site has been to evaluate the likelihood that these classes of items are present in areas that would be affected by the proposed project.

Potentially relevant to prehistoric archaeological sites is the category termed Traditional Cultural Properties (TCP) in discussions of cultural resource management performed under federal auspices. According to Patricia L. Parker and Thomas F. King (1998), “Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. Cultural resources can include TCPs, such as gathering areas, landmarks, and ethnographic locations, in addition to archaeological districts. Generally, a TCP may consist of a single site, or group of associated archaeological sites (district or traditional cultural landscape), or an area of cultural/ethnographic importance.

In California, the Traditional Tribal Cultural Places Bill of 2004 requires local governments to consult with Native American Tribes during the project planning process, specifically before adopting or amending a General Plan or a Specific Plan, or when designating land as open space for the purpose of protecting Native American cultural places. The intent of this legislation is to encourage consultation and assist in the preservation of Native American places of prehistoric, archaeological, cultural, spiritual, and ceremonial importance. State Assembly Bill (AB) 52, effective July 1, 2015, introduced the Tribal Cultural Resource (TCR) as a class of cultural resources and additional considerations relating to Native American consultation into CEQA. As a general concept, a TCR is similar to the federally defined TCP; however, it incorporates consideration of local and state significance and the required mitigation under CEQA. A TCR may be considered significant if included in a local or state register of historical resources; or determined by the lead agency to be significant pursuant to criteria set forth in PRC §5024.1; or is a geographically defined cultural landscape that meets one or more of these criteria; or is a historical resource described in PRC §21084.1, a unique archaeological resource described PRC §21083.2; or is a non-unique archaeological resource if it conforms with the above criteria.



## 1.4 PROJECT PERSONNEL

Stacie Wilson, M.S., RPA served as principal investigator and is the primary author of this technical report. Ms. Wilson meets the qualifications of the Secretary of Interior's Standards and Guidelines for archaeology. Theodore G. Cooley, M.A., RPA and James Turner, M.A., RPA, are report co-authors. Mary Robbins-Wade, M.A., RPA provided senior technical review. Julie Roy, B.A. and Annie McCausland, M.A. conducted the field survey and served as report contributors. Trevor Gittelhough, M.A., RPA also served as report contributor. Anthony LaChappa and Justin Linton (Kumeyaay Native American monitors) from Red Tail Environmental participated in the pedestrian survey. Resumes for key project personnel are presented in Appendix A.

## 2.0 PROJECT SETTING

### 2.1 NATURAL SETTING

The project area is situated within the near-coastal, inland foothills of the Peninsular Ranges in southwestern San Diego County, where the climate is characterized as semi-arid steppe, with warm, dry summers and cool, moist winters (Hall 2007; Pryde 2004). The 14 project activity sites occur within an area containing the mostly inland portions of seven major drainage watersheds in the southern county: Cottonwood Creek (Morena Dam, Barrett Dam, and Dulzura Conduit), the Otay River (Upper Otay Dam, Lower Otay [Savage] Dam), Chollas Creek (Chollas Dam), the San Diego River (El Capitan Dam and Lake Murray Dam), San Vicente Creek (San Vicente Dam), the San Dieguito River (Hodges Dam, Black Mountain facility, Sutherland Dam, and Rancho Bernardo facility), and Peñasquitos Creek (Miramar Dam). In general, the natural terrain in the project area is characterized by stream valleys and associated small tributary drainages, with mesas in the westernmost areas and foothill uplands with ridgelines separated by numerous steep canyons and ravines in the eastern areas. While these are the natural terrains in the project area today, the natural terrain surrounding the project locations closest to the coast has now been altered by substantial development. The elevation within the project area ranges from approximately 347 feet above mean sea level (AMSL) in the project location closest to the coast (Chollas Dam) to 2,045 feet AMSL in the location farthest from the coast (Sutherland Dam).

The project area is located within the western portion of the Peninsular Ranges geomorphic province of southern California (Hall 2007). In general, it is situated atop three distinct geologic categories of bedrock: Mesozoic metavolcanic rocks, Cretaceous granitic rocks, and Cenozoic sedimentary rocks (Strand 1962; Weber 1963). The upper elevation, easternmost project locations (Morena Dam, Barrett Dam, Dulzura Conduit, El Capitan Dam, San Vicente Dam, and Sutherland Dam) lie in areas underlain predominantly by Cretaceous granitic bedrock. The Hodges Dam and Black Mountain sites lie in an area of metavolcanic bedrock, while the nearby Rancho Bernardo site is an area containing both metavolcanic and granitic bedrock. The Upper and Lower Otay dams project sites and the Lake Murray Dam site are within areas containing both metavolcanic and sedimentary rocks, while the Chollas Dam and Miramar Dam sites are located in areas containing sedimentary geological formations (Strand 1962; Weber 1963).

Prehistorically, the natural vegetation in the upper elevation, eastern foothills of the project area likely consisted mostly of plants of the chaparral and/or coastal sage scrub communities. In the lower elevation foothills, and near-coastal project areas, plants of the coastal sage scrub community, interspersed with areas of native plants of the grassland community would have predominated. Along



the river and creek stream courses, plants of the riparian and riparian woodland communities would have been present. Plants of the chaparral community include laurel sumac (*Malosma laurina*), lemonade berry (*Rhus integrifolia*), sugarbush (*Rhus ovata*), California lilac (*Ceanothus* spp.) toyon (*Heteromeles arbutifolia*), chamise (*Adenostoma fasciculatum*), manzanita (*Arctostaphylos glauca*), coast live oak (*Quercus agrifolia*), yucca (*Yucca schidigera*), scrub oak (*Quercus dumosa*), and bush poppy (*Paeonia brownie*). Plants of the coastal sage scrub community include California sagebrush (*Artemisia californica*), white sage (*Salvia apiana*), flat-top buckwheat (*Eriogonum fasciculatum*), broom baccharis (*Baccharis sarothroides*), wild onion (*Allium haematociton*), laurel sumac (*Malosma laurina*), San Diego sunflower (*Bahiopsis laciniata*), golden-yarrow (*Eriophyllum confertiflorum*), sawtooth goldenbush (*Hazardia squarrosa*), yucca (*Yucca schidigera*, *Hesperoyucca whipplei*), prickly pear cactus (*Opuntia* sp.), and scrub oak (*Quercus dumosa*). Native grassland plants include *Stipa*, *Elymus*, *Poa*, and *Muhlenbergia*. Plants of the riparian and riparian woodland communities include western sycamore (*Platanus racemosa*), willow (*Salix* sp.), Fremont cottonwood (*Populus fremontii*), coast live oak (*Quercus agrifolia*), cattail (*Typha latifolia*), bulrush (*Scirpus* spp.), mule fat (*Baccharis* spp.), and poison oak (*Toxicodendron diversiloba*) (Beauchamp 1986; Munz 1974). Major wildlife species found in these environments, prehistorically, include mammals such as coyote (*Canis latrans*); mule deer (*Odocoileus hemionus*); grizzly bear (*Ursus arctos*); mountain lion (*Puma concolor*); desert cottontail (*Sylvilagus audubonii*); jackrabbit (*Lepus californicus*); reptiles such as western pond turtle (*Actinemys marmorata*), southern pacific diamondback rattlesnake (*Crotalus oreganus helleri*), gopher snake (*Pituophis melanoleucus catenifer*) and several lizard species; and various rodents, the most notable of which are the valley pocket gopher (*Thomomys bottae*), California ground squirrel (*Otospermophilus beecheyi*), and dusky footed woodrat (*Neotoma fuscipes*) (Burt and Grossenheider 1976; Head 1972; Stebbins 1966).

These plant communities, as well as the native plant resources supported by these habitats, would have been used by Native American populations for clothing, food, tools, decorative, and ceremonial purposes (Christenson 1990; Cuero 1970; Hedges and Beresford 1986; Luomala 1978). Many of the animal species living within these vegetation communities (such as rabbits, deer, small mammals, and pond turtles, as well as birds and fish) would have been used by native inhabitants as well. Desert cottontails, jackrabbits, and rodents were very important to the prehistoric diet; deer were somewhat less significant for food but were an important source of leather, bone, and antler (Christenson 1990; Luomala 1978).

## 2.2 CULTURAL SETTING

### 2.2.1 Prehistoric Period

The following culture history outlines and describes the known prehistoric background for the San Diego area with references to cultural traditions of potential relevance to prehistoric resources in the Preserve. The approximately 10,000 years of documented prehistory of the San Diego region has often been divided into three periods: Early Prehistoric Period (San Dieguito Tradition/complex, Fluted Point Tradition), Archaic Period (Milling Stone Horizon, Encinitas Tradition, La Jolla, and Pauma complexes), and Late Prehistoric Period (Cuyamaca and San Luis Rey complexes).

#### 2.2.1.1 Early Prehistoric Period

The Early Prehistoric Period represents the time period of the first known inhabitants in California. In some areas of California, it is referred to as the Paleo-Indian period and is associated with the Big-Game-



Hunting activities of the peoples of the last Ice Age occurring during the Terminal Pleistocene (pre-10,000 years ago) and the Early Holocene, beginning circa 12,000 years ago (Erlandson 1994, 1997; Erlandson et al. 2007). In the western United States, most evidence for the Paleo-Indian or Big-Game-Hunting peoples derives from finds of large, fluted spear and projectile points (Fluted-Point Tradition) in places such as Clovis and Folsom in the Great Basin and the Desert southwest (Moratto 1984:79–88). In California, most evidence for the Fluted-Point Tradition derives principally from areas along the margins of the Great Basin and the Desert southwest such as the Sierras, the southern Central Valley, and the deserts of southeastern California (Moratto 1984:79–88) with several, mostly isolated, occurrences of fluted spear points encountered on or near the coast of California (Dillon 2002; Rondeau et al. 2007). Three of these isolated fluted points or point fragments have occurred in San Diego County, all occurring in the mountainous or eastern areas, one approximately 7.5 miles northeast of Warner Springs (Kline and Kline 2007), one in Cuyamaca Pass (Dillon 2002; Rondeau et al. 2007), and one near Ocotillo Wells (Rondeau et al. 2007). Several others have occurred in proximity to the county including one along the coast in adjacent Orange County to the northwest (Fitzgerald and Rondeau 2012), and two in Baja California to the south (Des Lauriers 2008; Hyland and Gutierrez 1995).

Results from recent archaeological investigations on the northern Channel Islands west of Santa Barbara have revealed that humans that were not Big Game hunters (i.e., no fluted points have been found on the islands, to date) were occupying the islands as early as the terminal Pleistocene, roughly 12,000 years ago (Erlandson et al. 2007:57). These results, instead, document a fully maritime-adapted population on the islands at this early date that was exploiting shellfish and using seaworthy boats to navigate the channel waters. Fishing has also been documented in the islands as early as 10,000 years ago by the presence of bone-gorge fishhooks (Erlandson et al. 2007:57). Such early dates, however, for a similar cultural pattern are still lacking for the adjacent southern California mainland. This absence on the mainland may be due to the rise in sea level brought about by post-Pleistocene deglaciation that possibly inundated sites located along this lower elevation, late Pleistocene/early Holocene coastline. At this time in San Diego County, the shoreline stood 2 to 6 kilometers (km) farther seaward than today's coast (Masters and Aiello 2007).

Despite the occurrence of isolated fluted points in the San Diego area and vicinity, the earliest archaeological sites documented to be at least 10,000 years old belong to the San Dieguito Tradition (Warren et al. 1998; Warren and Ore 2011). The San Dieguito Tradition, with an artifact assemblage distinct from that of the Fluted Point Tradition, has been documented mostly in the coastal and near coastal areas in San Diego County (Carrico et al. 1993; Rogers 1966; True and Bouey 1990; Warren 1966; Warren and True 1961), as well as in the southeastern California deserts (Rogers 1939, 1966; Warren 1967), but with some evidence for it recently proposed in the eastern Mountains of San Diego County (Pigniolo 2005) and in the coastal area north of San Diego County (Sutton and Grenda 2012). This tradition shares a similarity to Fluted Point Tradition, in that it is characterized by an artifact inventory suggestive of an emphasis on hunting but lacks the distinctive fluted points associated with the Fluted Point Tradition. Diagnostic artifact types and categories associated with the San Dieguito Tradition include elongated bifacial knives; large leaf-shaped projectile points; scraping tools; crescentics; and in the desert, Silver Lake and Lake Mojave projectile points (Knell and Becker 2017; Rogers 1939; Vaughan 1982; Warren 1966, 1967). The content of the earliest component of the C.W. Harris Site (CA-SDI-149/316/4935B), located along the San Dieguito River and approximately 2.4 miles to the southwest of Lake Hodges, formed the basis upon which Warren and others (Rogers 1966; Warren 1966, 1967; Warren and True 1961) originally identified the “San Dieguito complex,” and which Warren later reclassified as the San Dieguito Tradition (1968).



The subsistence system or emphasis of the San Dieguito Tradition, while not as yet entirely agreed upon, has, as previously noted, been suggested by Warren (1967) as having an orientation towards a hunting rather than a gathering economy. This characterization is based on an artifact assemblage of primarily hunting associated tools, in contrast to the more gathering-oriented complexes that were to follow in the Archaic Period (Warren 1967, 1968, 1987; Warren et al. 1998). Other researchers, however, have interpreted the San Dieguito subsistence system to be possibly ancestral to, or a developmental stage for, the predominantly gathering-oriented “La Jolla/Pauma complex” of the subsequent Archaic Period (e.g., Bull 1983; Ezell 1987; Gallegos 1985, 1987, 1991; Koerper et al. 1991). Based on uncalibrated radiocarbon dates, Warren originally indicated the San Dieguito Tradition to have begun sometime prior to 9000 years before present (BP) and to have ended sometime between 8500 and 7500 BP (1967; 1968:4). Recent calibrations of these dates, however, have indicated that some are significantly earlier, i.e., exceeding 10,000 BP (Warren et al. 1998; Warren and Ore 2011).

### **2.2.1.2 Archaic Period**

In the southern coastal region, the subsequent Archaic Period dates from circa 8600 BP to circa 1300 BP (Warren et al. 1998). A large number of archaeological site assemblages dating to this period have been identified at a range of coastal and inland sites. This appears to indicate that a relatively stable, sedentary hunting and gathering complex, possibly associated with one people, was present in the coastal and immediately inland areas of what is now San Diego County for more than 7000 years. These assemblages, designated as the La Jolla/Pauma complexes, are considered part of Warren’s (1968) “Encinitas Tradition” and Wallace’s (1955) “Milling Stone Horizon.” In general, the content of these site assemblages includes manos and metates; shell middens; terrestrial and marine mammal remains; burials; rock features; bone tools; doughnut stones; discoidals; stone balls; plummets; biface points/knives; beads made of stone, bone, or shell; cobble-based tools at coastal sites; and increased hunting equipment and quarry-based tools at inland sites. As defined by True (1958), the “Pauma complex” aspect of this culture is associated with sites located in inland areas that lack shellfish remains but are otherwise similar in content to the La Jolla complex. The Pauma complex may, therefore, simply represent a non-coastal expression of the La Jolla complex (True 1980; True and Beemer 1982). During the latter half of the Archaic Period, artifacts such as dart points and mortars and pestles, which are essentially absent during the Early Archaic Period, begin to occur in site assemblages dating after circa 5500 BP. Also noted by Warren (2012) was an increase in the presence of larger mammal remains in the La Jolla complex, faunal assemblages during the latter part of the Archaic Period. This new, and subsequently increasing, use of these resources represents a significant shift in the Encinitas/La Jolla/Pauma complex subsistence system in the southern coastal region (Warren et al. 1998; Warren 2012).

Most of the project locations are situated in the inland, western foothill area of San Diego County, where archaeological sites dating to the Archaic Period are generally less numerous than along the coast (Gross and Robbins-Wade 2010: 26; Warren et al. 1998; McDonald 1995: 14). While less common, archaeological sites in the inland county areas, attributable to the Early Milling Stone Horizon, Encinitas Tradition, and or the La Jolla/Pauma complex, are not unknown (e.g., Chace and Sutton 1990; Cooley and Barrie 2004; Gross and Robbins-Wade 1992; 2010; Raven-Jennings and Smith 1999; True 1980; Warren et al. 1961:10). However, similar to the Early Period San Dieguito Tradition, most of the substantiating archaeological evidence for the Archaic Period Encinitas Tradition/La Jolla/Pauma complex (Milling Stone Horizon) in present-day San Diego County is derived from sites in near-coastal valleys, estuaries, and or embayments that are present along the San Diego coast south of the San Luis



Rey River (e.g., Cooley et al. 2000; Cooley and Mitchell 1996; Gallegos 1995:200; Pigniolo et al. 1991; Shumway et al. 1961; Smith and Moriarty 1985).

While not plentiful, sites in inland foothill circumstances with evidence for exclusively Archaic Period occupation are rare. Instead, many inland sites with evidence for Archaic Period occupation also have evidence for subsequent Late prehistoric occupation as well. One such site located along the Diego River in Mission Gorge area, approximately 14 miles from the ocean, CA-SDI-9243, has produced radiocarbon dates of circa 5400 and 5700 BP and Elko-eared style projectile points (Cooley 1995). The artifact assemblage and the radiocarbon results from the site also appear to indicate that it was repeatedly occupied over a period of nearly 6,000 years, with the last occupation occurring during the Late Prehistoric Period (Carrico et al. 1994; McDonald et al. 1994). Sites in the foothills along Santa Maria Creek, near Ramona, have produced an Elko-eared style projectile point and a radiocarbon date of circa 2000 BP documenting an occupation during the Late Archaic Period, but with subsequent occupation occurring during the Late Prehistoric Period (Cooley and Barrie 2004). In the foothill Alpine area, radiocarbon dates of 2550 BP and 2900 BP, from two of the sites, also suggested a late Archaic Period occupation of these sites with subsequent occupation occurring during the Late Prehistoric Period (Gross and Robbins-Wade 2010). Similar to the long and repeated occupation at site CA-SDI-9243, the Scripps Poway Parkway Site (CA-SDI-4608), located along the Beeler Canyon drainage, and situated approximately 15.3 miles from the ocean, has been radiocarbon dated to as early as 5800 BP, and is described as associated with the “transitional periods between the San Dieguito and La Jolla complexes and the later Archaic/Late Prehistoric transition” (Raven-Jennings and Smith 1999:3.0-5). La Jolla complex artifacts recovered from the site included doughnut stones; discoidals; and Pinto, Elko, and large side-notched points. Also, in the Poway area, archaeological investigations along Poway/Peñasquitos Creek, have produced both radiocarbon dates and projectile points (Elko, Gypsum Cave, large side-notched, and Pinto points) that indicate there was an Archaic occupation with subsequent occupation occurring during the Late Prehistoric Period (Gross and Robbins-Wade 1992).

### **2.2.1.3 Late Prehistoric Period**

While there has been considerable debate about whether San Dieguito and La Jolla traditions might represent the same people using different environments and subsistence techniques, or whether they are separate cultural patterns (e.g., Bull 1983; Ezell 1987; Gallegos 1987; Warren et al. 1998), abrupt shifts in subsistence practices and the use of new tool technologies are documented in the archaeological record to have occurred at the onset of the Late Prehistoric Period (ca. 1500 to 1300 BP). The Late Prehistoric Period (ca 1500 BP to AD 1769) is also characterized by higher population densities and intensification of social, political, and technological systems. The technological changes observed include a shift from the use of atlatl and dart to the bow and arrow; subsistence shifts that include a reduction in shellfish gathering in some areas (possibly due to silting of the coastal lagoons); and the storage of crops, such as acorns. New traits such as the production of pottery and cremation of the dead, were also introduced during the Late Prehistoric Period.

Movements of people during the last 2,000 years can account for at least some of these changes. Yuman-speaking people had occupied the Gila/Colorado River drainages of what is now western Arizona 2,000 years ago (Moriarty 1968) and then continued to migrate westward. An analysis by Moriarty (1966, 1967) of the materials recovered from the Spindrift site in La Jolla indicated a preceramic Yuman phase. Based on this analysis and a limited number of radiocarbon samples, Moriarty concluded that Yumans, lacking ceramic technology, penetrated into and occupied what is now the San Diego coastline circa 2000 BP. Subsequently, approximately 1,200 to 1300 BP, ceramic technology diffused into the



coastal area from the eastern deserts. Although these Yuman speakers may have shared cultural traits with the people occupying what is now eastern San Diego County before 2000 BP, their influence is better documented throughout present-day San Diego County after 1300 BP with the introduction of small points, ceramics, Obsidian Butte obsidian, and the practice of cremation of the dead.

Based on early research by Meighan (1954) and True (1970), two distinct archaeological complexes have been proposed for the Late Prehistoric Period in what is now San Diego County. The Cuyamaca complex is based on analysis by True of archaeological excavations within Cuyamaca Rancho State Park and of San Diego Museum of Man collections. Based on the results of this analysis, True (1970) defined a Late Prehistoric Period complex for southern San Diego County that was distinct from Meighan's (1954) San Luis Rey complex in the northern county area. The presence or absence, or differences in the relative occurrence, of certain diagnostic artifacts in site assemblages, provide the principal distinctions between these archaeological complexes. Cuyamaca complex sites, for example, generally contain both Cottonwood Triangular-style points and Desert Side-notched arrow points, while Desert Side-notched points less common in San Luis Rey complex sites (Pignuolo 2004). Other examples include Obsidian Butte obsidian, which is far more common in Cuyamaca complex sites than in San Luis Rey complex sites, and ceramics. While ceramics are present during the Late Prehistoric Period throughout what is now San Diego County, they are more common in the southern or Cuyamaca complex portions of San Diego County, where they occur earlier in time and appear to be somewhat more specialized in form. Both complexes have produced a variety of ceramic vessel types, along with straight and bow-shaped ceramic pipes and effigies. Interment of the dead at Cuyamaca complex sites is almost exclusively by cremation, often in special burial urns for interment, while archaeological evidence from San Luis Rey complex sites indicates both inhumation and cremation. Based on ethnographic data, including the areas defined for the Hokan-based Yuman-speaking peoples (Diegueño/Kumeyaay) and the Takic-speaking peoples (Luiseño) at the time of contact, it is generally accepted that the Cuyamaca complex is associated with the Diegueño/Kumeyaay people and the San Luis Rey complex with the Luiseño people (True 1970; True and Waugh 1982).

The project area lies within the area currently defined for the Cuyamaca complex (True 1970:58). A Cuyamaca complex artifact assemblage commonly contains Tizon Brown Ware pottery, various cobble-based tools (e.g., scrapers, choppers, and hammerstones), arrow shaft straighteners, pendants, manos and metates, and mortars and pestles. The arrow point assemblage often includes Desert Side-notched and Cottonwood Triangular points with the Dos Cabezas Serrated type also sometimes occurring (McDonald and Eighmey 1998:III-21 - III-23).

As noted above, it has been previously observed in San Diego County, that during the Late Prehistoric Period sites attributable to the San Luis Rey or Cuyamaca complexes occur in greater frequency in inland areas of the county. McDonald (1995:14), for example, has stated that "most sites in the Laguna Mountains can be expected to date from late prehistoric or ethnohistoric occupation of the region, and Archaic Period remains, while not unknown, are relatively rare", and Gallegos (1995:200) states that "for San Diego County, there is temporal patterning, as the earliest sites are situated in coastal valleys and around coastal lagoons. Late Prehistoric Period sites are also found in coastal settings but are more common along river valleys and interior locations." It is also possible now to observe that while a number of examples of Late Prehistoric Period sites, which appear to be attributable exclusively to the San Luis Rey or Cuyamaca complexes, have been identified for the near-coastal inland foothill areas of the county through diagnostic artifacts and/or radiocarbon dating, (e.g., Chace and Hightower 1979:48; McCown 1945), a number of sites containing evidence for both Late Prehistoric Period and Archaic Period occupations have also been documented (Carrico and Cooley 2005; Carrico et al. 1994; Cooley



and Barrie 2004; Gross and Robbins-Wade 1992; 2010; McDonald et al. 1994; Raven-Jennings and Smith 1999; Willey and Dolan 2004). Therefore, it appears possible that, as more archaeological data accumulates, this geographic dichotomy of site locations between the Archaic and Late prehistoric periods within the county may be found to not be completely valid.

In addition to the point of view discussed in the cultural history above, it is recognized that other perspectives exist to explain the presence of Native Americans in the region. The Native American perspective is that they have been here from the beginning, as described by their creation stories. Similarly, they do not necessarily agree with the distinction that is made between different archaeological cultures or periods, such as “La Jolla” and “San Dieguito.” They instead believe that there is a continuum of ancestry from the first people to the present Native American populations of San Diego.

### **2.2.2 Ethnohistory**

The Ethnohistoric Period, sometimes referred to as the ethnographic present, commenced with the earliest European arrival in what is now San Diego, and continued through the Spanish and Mexican periods and into the American period. Based on early ethnographic data, two linguistically distinct indigenous peoples inhabited the San Diego County area at the time of first European contact; the Hokan-based Yuman-speaking Kumeyaay or Diegueño in the southern part of the county, and the Takic-speaking Luiseño in the north. The project area in the southern area of the county lies within the traditional territory of the Kumeyaay people. The Kumeyaay people are also known as Ipai, Tipai, or Diegueño (named for Mission San Diego de Alcalá), while the term Luiseño derives from Mission San Luis Rey de Francia, as they were originally associated by the Spaniards with that mission. Agua Hedionda Creek is often described as the division between the territories of the Kumeyaay people and the Luiseño (Bean and Shipek 1978; Luomala 1978), although various archaeologists and ethnographers use slightly different boundaries. Traditional stories and songs of the Native people also describe the extent of traditional use areas. The founding of Mission San Diego de Alcalá in 1769 brought about profound changes in the lives of the Kumeyaay. The coastal Kumeyaay died from introduced diseases or were brought into the mission system. The earliest accounts of Native American life in what is now San Diego were recorded as a means to salvage scientific knowledge of native lifeways. These accounts were often based on limited interviews or biased data collection techniques. Later researchers and local Native Americans began to uncover and make public significant contributions in the understanding of native culture and language. These studies have continued to the present day and involve archaeologists and ethnographers working in conjunction with Native Americans to address the continued cultural significance of sites and landscapes across San Diego County.

The population of the Kumeyaay people in San Diego in 1770 was estimated by Kroeber (1925:883) to be 3,000, but Luomala (1978:596) believes it was likely double or triple that estimate. At the time of Spanish contact, Yuman-speaking Kumeyaay bands occupied southern San Diego County as well as southwestern Imperial County and northern Baja California. The Kumeyaay were territorial with bands that lived in semi-sedentary, politically autonomous villages or rancherías (Carrico 1998). Each village was comprised of many households, and groups of villages were part of a larger social kinship system. The basic unit of the system “appears to have been kin groups referred to by a variety of names including sib, shimulls, cimuls, gens, and gentes. These clans were organized into exogamous groups based on patrilineal (male) descent” (Carrico 2017:9). Most rancherías were the seat of a clan, although it is thought that, aboriginally, some clans had more than one ranchería and some rancherías contained more than one clan, often depending on the season within the year (Luomala 1978). Villages and larger



campsites were generally chosen based on proximity to water, boulder outcrops, environmental protection, and availability of plants and animals (Luomala 1978; True 1990). Consequently, many of the Kumeyaay villages or rancherías were located in river valleys and along the shoreline of coastal estuaries (Luomala 1978; Carrico 1998; Kroeber 1925). They subsisted on a hunting and foraging economy, exploiting San Diego’s diverse ecology throughout the year; coastal bands exploited marine resources while inland bands might move from the desert, ripe with agave and small game, to the acorn and pine nut rich mountains in the fall (Cline 1984; Kroeber 1925; Luomala 1978).

Four ethnographically documented Kumeyaay villages were located in the vicinities of four of the proposed project locations, i.e., within a radius distance of approximately two miles or less. Three of these villages likely have, or have possibly been, all or partially inundated by the existing reservoirs behind the dams at these locations. In the vicinity of the El Capitan Dam project was the village of *Kwellyemak* (Capitan Grande) (Trafzer and Carrico 1992:53). Recent research by Richard Carrico indicates that this village was located along the portion of the San Diego River now inundated by the El Capitan Reservoir, approximately a mile east of the dam (Richard Carrico, personal communication 2020). Archaeological site CA-SDI-139, originally recorded in the reservoir area prior to the dam construction, probably in the 1930s (Treganza n.d.), likely represents a cultural deposit and features associated with this village (Fink 1979). In the vicinity of the San Vicente Dam project location was the village of *Canapui*. Recent research by Richard Carrico indicates that this village was located along the portion of the San Vicente Creek inundated by the San Vicente Reservoir, approximately a mile northeast of the dam (Richard Carrico, personal communication 2020). Archaeological site CA-SDI-122, originally recorded prior to the dam construction in the 1940s (McCown 1945), likely represents the cultural deposit and features associated with this village. In the vicinity of the Upper Otay Dam project location was the village of *Janat*. Recent research by Richard Carrico indicates that this village was located near the confluence of the Proctor Valley drainage and the Otay River (Richard Carrico, personal communication 2020). While the exact location of this village remains uncertain, this general location places it in an area where it may have possibly been inundated by the Upper Otay Reservoir. Situated in the vicinity of the west end of the Dulzura Conduit project location was the village of *Hapeewahl*, on the upper reaches of Dulzura Creek (Trafzer and Carrico 1992:53). While not certain, archaeological sites CA-SDI-8774 (Heuett 1981) and or CA-SDI-8792 (McCorkle Apple and Price 1981) located in that area may represent cultural deposits and features associated with this village.

## **2.2.3 Historical Background**

### **2.2.3.1 Spanish Period (1769 to 1821)**

While Juan Rodriguez Cabrillo visited San Diego briefly in 1542, the beginning of the historic period in the San Diego area is generally given as 1769. In the mid-eighteenth century, Spain had escalated its involvement in California from exploration to colonization (Weber 1992); during this time, a Spanish expedition headed by Gaspar de Portolá and Junípero Serra established the Royal Presidio of San Diego. Portolá then traveled north from San Diego seeking suitable locations to establish military presidios and religious missions in order to extend the Spanish Empire into Alta California.

Initially, both a mission and a military presidio were located on Presidio Hill overlooking the San Diego River. A small pueblo, now known as Old Town San Diego, developed below the presidio. The Mission San Diego de Alcalá was constructed in its current location in 1769, and in the northern portion of the county, Mission San Luis Rey de Francia was established in 1798. The missions and presidios stood, literally and figuratively, as symbols of Spanish colonialism, importing new systems of labor,



demographics, settlement, and economies to the area. Animal husbandry and agriculture were the main pursuits of the missions, utilizing large swaths of land. Animals raised included cattle, horses, pigs, sheep, and goats (Wade et al. 2009).

### **2.2.3.2 Mexican Period (1821 to 1848)**

Although Mexico gained its independence from Spain in 1821, Spanish patterns of culture and influence remained for a time. The missions continued to operate as they had in the past and the laws governing the distribution of land were also retained throughout the 1820s. Following the secularization of the missions in 1834, large ranchos were granted to prominent and well-connected individuals, ushering in the Rancho Era, with the society making a transition from one dominated by the church and the military to a more civilian population, with people living on ranchos or in pueblos. With the numerous new ranchos in private hands, cattle ranching expanded and prevailed over agricultural activities, remaining the base economy of California until the 1840s (Wade et al. 2009).

Rancho Santa Maria de Los Peñasquitos, located in Peñasquitos Canyon, was the first rancho granted by the Mexican government in San Diego County. This rancho included 8,486 acres granted to Captain Francisco María Ruíz. During the Mexican Period, land was also granted to pueblos with locally elected town councils. In 1833, San Diego submitted a petition to Governor Figueroa asking for formal recognition as a pueblo, and in 1834 it was granted permission to establish a municipal government. However, partially due to the establishment of the ranchos in the back-county areas and the subsequent population shift to the ranchos, San Diego's population shrunk from nearly 500 people in 1834 to 150 in 1841 (Crane 1991). Consequently, the town council was replaced by a justice of the peace in 1838. A few years later, in 1845, the town was allowed a governor-appointed sub-prefect, Santiago Arguello, who commissioned a survey of the pueblo lands; the resulting map was signed by Governor Pio Pico in 1846, establishing the pueblo as over 48,000 acres of land.

### **2.2.3.3 American Period (1848 to Present)**

On May 13, 1846, the United States of America declared war on Mexico. General Stephen Watts Kearny's "Army of the West" engaged with General Andres Pico and his Mexican-Californian army in a bloody battle at the Valley of San Pasqual, near present-day Escondido. The battle was victorious for the Mexican Californios; however, in the end, they lost the Mexican-American War. American governance began in 1848, when Mexico signed the Treaty of Guadalupe Hidalgo, ceding California to the United States at the conclusion of the war. The following years saw a great influx of settlers to California and the San Diego region. The increase in population resulted from several factors, including the discovery of gold in the state in 1848, the end of the Civil War, the availability of free land through the passage of the Homestead Act, and later, the importance of San Diego County as an agricultural area supported by roads, irrigation systems, and connecting railways.

On September 9, 1850, California was granted statehood by the United States of America, with San Diego County established as one of the original 27 counties within California. The original county boundaries included much of the Colorado and Mojave deserts, extending from the Pacific Ocean to the Colorado River, and all present-day Imperial County and much of San Bernardino, Riverside, and Inyo counties. San Diego County then had more than 37,000 square miles of area. In 1851, Los Angeles County was given the north half of San Diego County, thereby leaving it with 14,800 of its original 37,000 square miles. In 1872, Riverside County was formed, reducing San Diego County to 8,400 square miles (Moore 1955).



While the American system required surveys of the newly acquired land prior to settlement, the Treaty of Guadalupe Hidalgo bound the United States to honor the land claims of Mexican citizens who were granted ownership of ranchos by the Mexican government. The Land Act of 1851 established a board of commissioners to review land grant claims, and land patents for the land grants were issued throughout the following years. Eventually, more than 30 land grants covering almost 1,000 square miles were established within San Diego County. In 1874, San Diego received a land patent for 47,323 acres, which was slightly less than the size of the original pueblo lands, due to 1,233 acres within Point Loma being assigned as a military reservation (Crane 1991).

Many farms and ranches were established within many of the former ranchos; large tracts such as Jamul, Santa Maria (Ramona), San Vicente, San Jose (Warner's), San Felipe, Laguna, and Cuyamaca, continued as large cattle enterprises into the twentieth century (Wade et al. 2009). The confirmation of ranchos' boundaries in the late 1860s and early 1870s also drew additional settlers as land became officially conveyable. Under the Homestead Act of 1862, settlers could claim up to 160 acres of public land for the cost of a filing fee of \$10, on condition that the land was occupied for at least five years and that certain improvements were made. The increase of land claims significantly reduced the remaining lands within the county which sustained the Native American populations as settlers marked, surveyed, and fenced property. The increase of land claims contributed to the push for Native American reservations to be established, often in lands of poorer subsistence (Carrico 2008).

In the early years of the American Period, Old Town had remained the center of civic life in the area; however, the San Diego River was prone to major floods, and in the 1870s, downtown San Diego, then known as Horton's Addition, became the urban center (AECOM 2015). In San Diego County, the 1880s were characterized by "boom and bust" cycles that brought thousands of additional people to the region. In 1885, the Transcontinental Railroad reached San Diego, making the journey of American settlers from the east and Midwest easier. By the end of the decade, many of the new settlers had left after the development bust; however, some remained to form the foundations of small communities based on dry farming, orchards, dairies, and livestock ranching. During the late nineteenth and early twentieth centuries, rural areas of San Diego County developed small agricultural communities centered on one-room schoolhouses. Such rural farming communities consisted of individuals and families tied together through geographical boundaries, a common schoolhouse, and a church.

As with the rural portions of the county, by the 1890s, the City of San Diego had also entered a time of steady growth, and subdivisions such as Golden Hill, Sherman Heights, Logan Heights, Banker's Hill, and University Heights were developed. As the City continued to grow in the early twentieth century, the downtown's residential character changed. Streetcars and the introduction of the automobile allowed people to live farther from their downtown jobs, and new suburbs were developed. By 1900, the population of the City of San Diego was 17,700 and San Diego County was 35,090 (San Diego History Center 2020).

The influence of military development, beginning in 1916 and 1917 during World War I, and the need to fight a two-ocean war during World War II resulted in a substantial development in infrastructure and industry to support the military and accommodate soldiers, sailors, and defense industry workers. In 1917, the U.S. Army established Camp Kearny on the site of what is now MCAS Miramar, located in the central portion of the County. San Diego Bay became the home of the United States Navy Pacific Fleet in 1919. Marine Corps Base Camp Pendleton was established within Rancho Santa Margarita y Las Flores in 1942, which became the largest Marine Corps base in the United States. Many military bases and



military-industrial operations were established across San Diego County due to World War II, resulting in an economic shift away from agricultural industries in San Diego County.

After World War II, San Diego County experienced massive development. San Diego State University, established in the 1920s, spurred the development of the eastern portion of the City of San Diego and new roadways, freeways, infrastructure, tract housing and multi-family housing developments, commercial and recreational developments were constructed in the 1950s, 1960s, and 1970s. In 1954 the University of San Diego was founded in Linda Vista, and in 1964 the University of California established a 1,000-acre San Diego campus in La Jolla. San Diego Stadium opened in Mission Valley as home to the San Diego Chargers in 1967 and San Diego–Coronado Bay Bridge opened in 1969, replacing ferry service across San Diego Bay. By 1970, San Diego became California’s second-largest city, with a population of 696,474, with the overall county population being greater than 1.3 million by this time (San Diego History Center 2020). San Diego County continued to grow in population and development into the last decades of the twentieth century.

#### **2.2.3.4 City of San Diego Source Water System**

Water has had an instrumental role and acted as a limiting factor in the growth and development of San Diego. Because the region receives relatively little rainfall, the limited supply provided by the local mountain streams and groundwater was in danger of being overextended (Murray et al. 2020). Franciscan missionaries dug wells and constructed water conveyance ditches, dams, and cisterns near the San Diego River to obtain an adequate water supply for irrigating crops and watering cattle. The Old Mission Dam, also known as the Old Padre Dam, is a remnant of this work; the dam was constructed between 1803 and 1816 by Kumeyaay neophytes and laborers (Murray et al. 2020). The end of the Mexican Period and beginning of the American Period saw a considerable strain on the freshwater supply. Ranching practices, hydraulic gold mining, and American homesteaders throughout the state created a dramatic increase in the water needs of the state.

As a response to this, the San Diego region began to develop dams and water storage reservoirs. Those who owned property along water began acquiring riparian rights to the water. One of the earliest examples of this is Frank A. Kimball, who acquired rights to water on the lower reaches of the Sweetwater River in 1869 (Murray et al. 2020). Kimball purchased close to 27,000 acres of Rancho de la Nación and surveyed a site for a dam and reservoir. Later, he organized the Kimball Brothers Water Company, which would ultimately fail to produce water for the City (Murray et al. 2020).

In 1873, the San Diego Water Company was formed, and in 1874 began drilling a well near B and Eleventh Streets; unfortunately, the groundwater was poor in both quality and supply. Further drilling in 1875 was insufficient for the growing City, which was soon forced to turn to private water companies (Fowler 1953; Murray et al. 2020; Smythe 1908). Nearly 50 such companies were formed in the 1880s—each of these sought to be the first to provide the region with a reliable water supply. Of these, ten had plans to develop water for the City, six reached construction, and only four managed to deliver water: the San Diego Flume Company (1886), the San Diego Land and Town Company (1881), the Otay Water Company (1886), and the Volcan Land and Water Company (1885) (Fowler 1953; Hill 2002; Meixner 1951; Murray et al. 2020).

In 1887, the Wright Act was passed. This Act provided for the organization of irrigation districts and the acquisition and distribution of water for them (Murray et al. 2020). The Act also gave irrigation districts the power to settle water rights issues by giving them the right of eminent domain and power to



condemn riparian rights. After the passage of the Act, 49 districts were incorporated across the state; six of these were formed in the County of San Diego, though only one, the Escondido Irrigation District, was able to deliver water. All the districts eventually succumbed to debt. In 1897, the California legislature repealed and replaced the Wright Act with the Irrigation District Act (Murray et al. 2020).

The following decades saw the construction of the Sweetwater, Cuyamaca, and the Lower and Upper Otay Dams. Construction of the Morena Dam began in 1896, though it was halted in 1898 due to construction concerns. City Engineer Edwin M. Capps concluded that the faulty work was due to a rushed schedule and the overconfidence of Elisha Spurr Babcock Jr., an industrialist and entrepreneur (Murray et al. 2020).

The county experienced an 11-year drought between 1895 and 1905. During these years, the Chollas Heights Reservoir was constructed to serve as terminal storage for the pipeline extending from the Lower Otay Reservoir. Shortly after the end of the drought, construction of the Dulzura Conduit began. Overseen by Michael Maurice O'Shaughnessy and starting in 1907, the roughly 13-mile conduit was ultimately completed in 1909. O'Shaughnessy would then be assigned to oversee the completion of the Morena Dam; construction was completed in 1912 after O'Shaughnessy altered the design of the dam to prevent failure (Murray et al. 2020).

Another drought hit the region between 1912 and 1915, and because the region's water stored in the dams was obtained from captured rainfall, the reserves quickly diminished. The City turned to Charles Hatfield, a self-proclaimed "moisture accelerator." Hatfield was hired by the City for \$10,000 to halt the severe drought and fill the Morena Dam. Several storms hit the region in January 1916, resulting in the loss of the Sweetwater and Lower Otay Dams. Because of the damage wrought by the storms, the City refused to compensate Hatfield for his services (Crawford 2011; McGlashan and Ebert 1918; Patterson 1970; Tuthill 1954).

The following years saw a number of new water infrastructure projects that were completed throughout the city to replace what was destroyed during the January storms and to accommodate increasing water needs. The next decade saw the construction of the Murray, Hodges, San Dieguito, Savage, and Barrett Dams, as well as the reconstruction and enlargement of the Sweetwater Dam (Murray et al. 2020).

Spurred by the St. Francis Dam Disaster of 1928, the State Engineer inspected each of the Dams in the City, and a number of improvements were completed, such as the spillway enlargement and new pipeline and filtration system installation at the Lower Otay Dam, the enlargement of the Chollas Dam capacity, and the monitoring of cracks within the Hodges Dam (Murray et al. 2020).

The population of the City continued to grow at an alarming rate, roughly doubling between 1921 and 1930. To accommodate the growing population, construction of the El Capitan Dam began in 1932 and was completed in 1935. The Indians of the Capitan Grande Reservation opposed the dam's construction, as they would be forced to disinter their graveyard that was established at the dam's proposed location. Ultimately, the Bureau of Indian Affairs stepped in and moved both the reservation and the graveyard to the Viejas Valley (City of San Diego 1935; Crawford 2011; Meixner 1951; San Diego Union 1935; Western Construction News 1932).

Due to the increased population growth in the City brought on by the start of World War II, the City constructed two additional dams. The San Vicente Dam was built from 1941 to 1943, and the Loveland Dam was built from 1943 to 1945. The San Diego County Water Authority was organized in June 1944 and a year later construction began on the San Diego Aqueduct, which would bring water from the



Colorado River Aqueduct to the San Vicente Reservoir. The Aqueduct was delayed by a worker's strike in 1946 and 1947 but was ultimately dedicated in December 1947 (Murray et al. 2020).

The 1950s saw the City expand its water supply again. The City purchased the Murray Reservoir from the Cuyamaca Water Company in 1950, commissioned the Alvarado Filtration plant in 1951, added a second barrel to the San Diego Aqueduct in 1954, and began construction on the Miramar Dam and Treatment Plant in 1958. The Miramar Dam and Filtration Plant were finished and dedicated in 1960 (Murray et al. 2020).

As the decades went on, both the City's population and water use swelled. By the 1990s, 95 percent of the City's water supply was imported – a severe drought from 1991 to 1992 forced the Metropolitan Water District to cut water sent to San Diego and other member cities. Because of this, the City legislature passed a multi-decade plan to diversify the water supply and reduce reliance on water sourced from the Metropolitan Water District (Murray et al. 2020).

## **3.0 ARCHIVAL RESEARCH AND CONTACT PROGRAM**

### **3.1 RECORDS SEARCH**

HELIX obtained a record search of the California Historical Resources Information System (CHRIS) from the South Coastal Information Center (SCIC) on June 11, 2020. The records search covered a half-mile radius around each of the proposed project areas and included the identification of previously recorded cultural resources and locations and citations for previous cultural resources studies. A review of the California Historical Resources and the state Office of Historic Preservation (OHP) historic properties directories was also conducted. The records search summary and map are included as Appendix B (Confidential Appendices, bound separately). The results of the records search are provided according to dam location in Section 5.0, Study Results.

### **3.2 OTHER ARCHIVAL RESEARCH**

Various archival sources were also consulted, including historic topographic maps, aerial imagery (NETR Online 2021 and UCSB Digital Library 2021), and the Bureau of Land Management (BLM) General Land Office (GLO) Records. The purpose of this research was to identify historic structures and land use in the area.

The results of the archival research efforts are provided according to dam location in Section 5.0.

### **3.3 NATIVE AMERICAN CONTACT PROGRAM**

HELIX contacted the Native American Heritage Commission (NAHC) on May 5, 2020, for a Sacred Lands File search and a list of Native American contacts for the project area. The NAHC indicated in a response, dated May 13, 2020, that the results of the search were positive. Letters were sent on July 16, 2020, to Native American representatives and interested parties identified by the NAHC. Two responses were received from the Campo Band of Mission Indians and the San Pasqual Band of Mission Indians, which are summarized in Table 1, *Native American Contact Program Responses*. Native American correspondence is included as Appendix C (Confidential Appendices, bound separately).



**Table 1**  
**NATIVE AMERICAN CONTACT PROGRAM RESPONSES**

Contact/Tribe	Response
San Pasqual Band of Mission Indians	Responded on July 23, 2020; determined that the project is not located within the boundaries of the recognized San Pasqual Indian Reservation but is within the boundaries of the territory that the tribe considers its Traditional Use Area (TUA). They indicated: “Therefore, we request to be kept in the information loop as the project progresses and would appreciate being maintained on the receiving list for project updates, reports of investigations, and/or any documentation that might be generated regarding previously reported or newly discovered sites. Further, we may recommend archaeological monitoring pending the results of site surveys and records searches associated with the project. If the project boundaries are modified to extend beyond the currently proposed limits, we request updated information and the opportunity to respond to your changes.”
Campo Band of Mission Indians	Responded on August 11, 2020 and requested consultation under the provisions of CEQA (Public Resources Code 21080.3.1 subdivisions (b), (d), and (e) for mitigation of potential impacts to tribal and cultural resources for the project.

Per AB 52, a CEQA lead agency must consult with any California Native American tribe that has requested to be notified by lead agencies through formal notification of proposed projects and that is traditionally and culturally affiliated with the geographic area of a proposed project to identify resources of cultural or spiritual value to the tribe, even if such resources are already eligible as historical resources as a result of cultural resources studies.

In accordance with the requirements of Assembly Bill (AB) 52, The City of San Diego sent notification letters to the Native American Tribes traditionally and culturally affiliated with the project area on September 16, 2022, including San Pasqual Band of Mission Indians, Jamul Indian Tribe and the Lipay Nation of Santa Ysabel. Both the Jamul Indian Tribe and The Lipay Nation of Santa Ysabel did not respond to the notification and consultation request. A request for consultation was received by the San Pasqual Band on September 26, 2022. Tribal consultation in accordance with AB 52 was initiated by the City of San Diego with representatives of the San Pasqual Band and a consultation meeting occurred on October 6, 2022. This report, as well as confidential data, was provided to the tribal representatives to assist with their review. The San Pasqual Band concurred with the cultural resource findings and recommendations presented here within and consultation was concluded.

## 4.0 SURVEY METHODS

### 4.1 FIELD SURVEY

Pedestrian field surveys of the proposed project APEs occurred between June and August 2020 and in April 2021. The surveys were undertaken by HELIX archaeologist Julie Roy, HELIX architectural historian Annie McCausland, and Kumeyaay Native American monitors Anthony LaChappa and Justin Linton of Red Tail Environmental. The specific dates, personnel, and survey methods for each of the proposed project locations are described in Section 5.0.



## 4.2 DOCUMENTATION

Cultural resources identified during the records search or survey that are included within complexes relating to the dams and reservoirs are addressed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

The remaining cultural resources identified during the records search or survey are documented within this report and were updated on appropriate Department of Parks and Recreation (DPR) 523 forms, as required. All completed DPR site forms were submitted to the SCIC. Copies of the DPR forms for the cultural resources are included in Appendix D (Confidential Appendices, bound separately).

## 5.0 STUDY RESULTS

### 5.1 BARRETT DAM AND DULZURA CONDUIT

Due to the overlap in the records search radii and survey areas between the Barrett Dam and Dulzura Conduit project areas, which also include the access routes extending west and south from Barrett Reservoir, the study results for these two project areas are discussed together.

#### 5.1.1 Records Search

The records search results identified 47 previous cultural resource studies within a half-mile radius of the Barrett Dam and Dulzura Conduit project areas (Table 2, *Previous Studies within a Half-mile of the Barrett Dam and Dulzura Conduit Project Areas*). Twenty-nine of the studies were cultural resource surveys, record searches, or site visits; the remaining studies include three inventories, three monitoring reports, four assessments, two testing reports, an overview, a management plan, a study, and a mitigated negative declaration. Two studies did not have any bibliographic information.

**Table 2**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE BARRETT DAM AND**  
**DULZURA CONDUIT PROJECT AREAS**

Report Number (SD-)	Author, Year	Report Title
00018	DeCosta, 1983	Realignment and Grading on Route 94 Between P.M. 32.2 and 32.6, 11-SD-94, 11-359-193380
00023	Dominici and Rosen, 1986	Survey Report Route 94 Cut Slope Widening 11-SD-94 P.M. 30.6-30.7 11209-910024-5957094
00058	Advance Planning & Research Associates, 1980	Rancho L'Abri Resort Archaeology and Biology Survey Reports P79-26, EAD Log #79-19-23, Dulzura, California.
00810	Laylander, 1984	Archaeological Survey Report of Dulzura Summit Shoulder Widening and Right-of-Way Enlargement 11-SD-94 32.0-33.2 11207-193290.
00873	Fink, 1978	Barrett Lake Road: A Cultural Resource Assessment, Barrett Junction, California Project No.: UJ0171
01300	Pettus, 1980	An Archaeological Survey for Proposed Utility Pole Relocation and Minor Roadway Realignment at Six Locations on Highway 94 in South San Diego County, California (11-SD-94 P.M. 20.85 to 54.25).



Report Number (SD-)	Author, Year	Report Title
01588	Wirth Associates, Inc., 1981	Miguel to Mountain Springs Grade (Jade) Archaeological Survey Report
01809	Molnar, 1987	Archaeological Reconnaissance Report for the Schnell Land Exchange
02031	Advance Planning & Research Associates, 1980	Rancho L'Abri Resort Archaeology and Biology Survey Reports; P79-26; EAD LOG #79-19-23; Dulzura California
02255	Van Wormer, 1990	Historic and Architectural Assessment of Six Timber Box Flumes on the Dulzura Conduit Dep No. 88-0179
02256	Cook, 1990	An Archaeological Investigation of the Dulzura Conduit Renovation Project San Diego County California
02335	City of San Diego, 1991	Draft Mitigated Negative Declaration Dulzura Conduit
02562	Dominici, 1992	Phase 11 Archaeological Test Excavation at Prehistoric Site CA-SDI-10454, Marron Valley, Dulzura
02831	Dominici, 1991	Archaeological Survey Report and Extended Phase I Investigations at CA-SDI-10454 Marron Valley Curve Realignment Project San Diego County
03219	Dominici, 1981	Archaeology Survey for Report for the Proposed Sand Hills Interchange Project
04463	Dominici, 1993	First Supplemental Historic Property Survey Report for the Marren Valley Curve Re Alignment Project on State Route 94, San Diego County, California
04908	Dominici, 1991	Archaeological Survey Report and Extended Phase I Investigations at CA-SDI-10454 Marron Valley Curve Realignment Project, San Diego, County
05175	Dominici, 1997	Second Addendum Archaeological Survey Report for the Route 94 Passing Lanes Project, San Diego County, California
05250	Dominici, 1996	Historic Property Survey Report for The Route 94 Passing Lanes Project, San Diego County, California
05876	Dominici, 1996	First Addendum Archaeological Survey Report for The Route 94 Passing Lanes Project, San Diego, California 11-SD-94 P.M. 24.8-39.0 11289-165740
05939	Dominici, 1992	Phase II Archaeological Test Excavation at Prehistoric Site CA-SDI-10454 Near the Marron Valley-Dulzura Area, San Diego County, California
05941	Dominici, 1992	Historic Property Survey Report for the Marron Valley Curve Realignment Project on State Route 94 San Diego County, California
07167	Wade, 1994	Archaeological Mitigation: TPM-20037-Rpc
08322	Mason, 2002	Cultural Resources Records Search and Field Survey Report for a Verizon Telecommunications Facility: Barrett Junction in the City of Dulzura
08334	Mason, 2002	Cultural Resources Record Search and Field Survey Report for a Verizon Telecommunications Facility: Warner Springs in the City of Warner Springs, San Diego County, California
09741	McGinnis, 2005	Cultural Resource Survey Report for the Cottonwood Creek Invasive Species Removal Project County of San Diego, California
10079	de Barros, 2005	Cultural Resources Inventory of an 8-Acre Parcel Adjacent to Barrett Lake for a Proposed Boat Ramp Project by the City of San Diego Water Dept. San Diego County, CA, Project No. 48172



Report Number (SD-)	Author, Year	Report Title
10754	Van Wormer, 1989	Historical and Architectural Assessment of Six Timber Box Flumes on the Dulzura Conduit
10997	Carrico, Cooley, and Barrie, 2003	Final Archaeological Overview for the Cleveland National Forest California
12169	Garcia-Herbst, Laylander, and Potter	Inventory of The Cultural Resources Along San Diego Gas & Electric Tie Line 625 on Non-Federal Property for the Wood to Steel Pole Replacement Project, San Diego County, California
12186	Cooley and Craft, 2009	Final Archaeological Survey Report (ASR) for the SR 94 Operational Improvement Project San Diego County, California
12711	Garcia-Herbst, Iversen, Laylander and Williams, 2010	Final Inventory Report of the Cultural Resources within the Approved San Diego Gas & Electric Sunrise Powerlink Final Environmentally Superior Southern Route, San Diego and Imperial Counties, California
13750	Bowden-Renna, 2011	Letter Report: ETS 20580- Cultural Resources Survey for Pole Replacements and New Anchor Sets, Barrett Lake, San Diego County, California- IO7011102
14513	Droessler, 2013	Letter Report: ETS 25511.01- Cultural Resources Monitoring Report for Pole Z571488 Anchor Installation, Community of Dulzura, San Diego, California- IO 7011101
15309	Whitaker, 2014	ETS #27844, Cultural Resources Survey P177574 Pole Change Out, Dulzura, San Diego County, California
15368	Hector, 2015	Archaeological Survey for the Pole Replacement of P177584, Dulzura, San Diego County, California
15369	Hector, 2015	Archaeological Survey for the Pole Replacement of P177579, Dulzura, San Diego County, California
15370	Hector, 2015	Archaeological Survey for the Pole Replacement for P177585, Dulzura, San Diego County, California
15385	Hector, 2015	Archaeological Monitoring for the Installation of New Pole P172078, Jamul, San Diego County, California
15386	Hector, 2015	Archaeological Survey for Pole Replacement, P172078, Jamul, San Diego County, California
15387	Hector, 2015	Archaeological Survey for Pole Replacements, P74796 and P476085, Jamul, San Diego County, California
17442	Wade, 2018	Harmony Grove Major Use Permit Wireless Telecommunication Facility (P08-011; Log No. 08-08-006; APN 232-511-13): Cultural Resource Survey-Negative Findings
18124	Williams and Manchen, 2018	Archaeological Survey and Job Walk for the SDG&E 2017 C157 Firm Project, Section M, Dulzura And Jamul, San Diego County, California
18290	Hector and Williams, 2016	Historic Properties Management Plan/Historic Properties Treatment Plan for the Cleveland National Forest Master Special Use Permit and Permit to Construct Powerline Replacement Projects, Final Version
18454	Manchen, 2020	Cultural Resources Survey and Job Walk for the SDG&E C157 Firm Project, Section K, Dulzura, San Diego County, California
18546	Unknown, n.d.	No information given
18550	Unknown, n.d.	No information given



The SCIC has a record of 46 previously recorded cultural resources within a half-mile radius of the Barrett Dam and Dulzura Conduit project areas, 10 of which are located within the project site (Table 3, *Previously Recorded Resources within a Half-mile of the Barrett Dam and Dulzura Conduit Project Areas*). The resources that have been documented within the Dulzura Conduit APE include P-37-005756, -005758, -006981, -011103, -011605, -025926, -036508, -036512, -036516, and -038945; these resources are described in further detail in section 5.1.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of bedrock milling features, artifact scatters, and isolated artifacts. Two multi-component sites are recorded within the search limit—these include a site that consists of bedrock milling features and a stucco outbuilding and a site that consists of both a prehistoric and historic artifact scatter. The historic resources consist of artifact scatters, utility lines, a mining site, the remains of several structures, the Dulzura Conduit, the lower Barrett Dam, and a historic isolate.

**Table 3**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE BARRETT DAM**  
**AND DULZURA CONDUIT PROJECT AREAS**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
005698	5698	Prehistoric Site	Site consists of numerous grinding basins.	Fink and Hightower, 1978
005756*	5756	Prehistoric Site	Site consists of at least four milling features and other stone artifacts.	Fink, 1978; Williams, 2009
005757	5757	Prehistoric Site	Site consists of milling surfaces, stone artifacts, and ceramic artifacts.	Fink, 1978; Williams 2009
005758*	5758	Prehistoric Site	Small bedrock milling station consisting of 10 basins, a mortar, and five slicks.	Fink, 1978
006975	6975H	Historic Site	Trash pile contains pre-WWI cans, glass, and miscellaneous other artifacts.	Burkenroad, 1978
006976	6976	Prehistoric Site	Site consists of a bedrock milling station and two milling slicks.	Burkenroad and Moore, 1978; Craft and Moreno, 2007
006977	6977H	Historic Site	Site consists of historic sheds, a covered well, a concrete and rock dam, and other structures.	Burkenroad, 1978; Craft and Moreno, 2007
006989	6978	Prehistoric Site	Site consists of a flaked stone tool and debitage scatter.	Dominici, 1978
006979	6979	Prehistoric Site	Site consists of flaked artifacts and debitage scatter.	Crotteau, 1978
006981*	6981H	Historic Road	Resource consists of portions of SR 94 and a historic road built in 1870 as an alternative to the Smith-Groom County Road.	Burkenroad, 1978; Bholat and Lauko, 2007; Dominici and Tsunoda, 2010; Supernowicz, 2011



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
010454	10454/H	Multi-component Site	Site consists of several bedrock milling features and both surface and subsurface lithic artifacts. Nearby stucco outbuilding and concrete foundation dates to the 1940s	Dominici, 1986; Dominici, 1991; Patterson and Tsunoda, 2007; Craft, 2009; Crawford, 2015; Piek 2018
011103*	11103	Prehistoric Site	Site consists of four milling features, a surface and subsurface scatter of flaked stone, ground stone, and ceramic artifacts.	Cook, 1989; Taylor, 2019
011605*	11605H	Historic Structure	The Dulzura Conduit, a historic concrete water channel built in the early 1900s that runs approximately eight miles north-south.	Van Wormer, 1989; Robbins-Wade, 2002; Tsunoda and DeGiovine, 2007; Iverson, 2002; Droessler, 2013; Gunderman, 2010
025926*	17241H	Historic Site	Five historic trash scatters associated with the former location of at least five married employees' cottages within the Barrett Dam construction camp. Artifacts date between 1918-1929 and include cans, bottles, and ceramic sherds.	de Barros, 2004
027053	--	Prehistoric Isolate	Isolate contains a single bifacial mano fashioned from a granitic cobble.	Jordan and McGinnis, 2005
027054	--	Prehistoric Isolate	Isolate contains a single brown ware sherd fragment broken into two pieces.	Way and McGinnis, 2005
029423	18831	Prehistoric Site	Four bedrock outcrops with six milling slicks, one mano, one metate fragment, and three lithic flakes.	Bholat and Lauko, 2007
029424	18832H	Historic Site	Historic period mining site situated at the edge of a small ridge. Site is comprised of one possible prospecting pit, one mine shaft/adit, and an associated dirt spoil pile.	Bholat and Lauko, 2007
030010	19132H	Historic Site	The remains of a single-family residence. Site consists of one collapsed structure, two portions of a rock and mortar wall, a septic tank, a rock and concrete cistern, and landscaping of pine and pepper trees.	Craft and Moreno, 2007
030011	19133H	Historic Site	The remains of a structure built prior to 1960. Consists of rock walls, a cistern, a green corrugated metal pipe, and landscaping consisting of eucalyptus and pepper trees.	Sanchez-Moreno and Craft, 2007



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
030014	--	Prehistoric Isolate	Isolate consists of a metavolcanic flake and a shell fragment.	DeGiovine and Tsunoda, 2008
030015	19136H	Historic Site	Trash scatter consists of metal cans, glass fragments, and ceramic fragments.	DeGiovine and Tsunoda, 2008
030016	19137H	Historic Site	Trash scatter consists of metal cans and a glass jar.	DeGiovine and Tsunoda, 2008
030021	--	Prehistoric Isolate	Isolate consists of flaked metavolcanic tool with unifacial modifications present all around the dorsal side.	Wilson and DeGiovine, 2008
030022	19142	Prehistoric Isolate	Isolate consists of a chert flake, three obsidian flakes, and one possible obsidian core. Two of the flakes appear to have modified edges.	Wilson and DeGiovine, 2008
030042	19156H	Historic Site	Circular concrete casting and three-inch diameter pipe. Feature is the foundation for a water tank present in 1960.	DeGiovine and Tsunoda, 2007
030043	19157H	Historic Site	Trash scatter consists of glass, ceramic, cans, and metal fragments. One ceramic doll arm was also present.	DeGiovine and Tsunoda, 2007
030053	19161H	Historic Site	Trash scatter consisting of cans mixed with modern trash.	Tsunoda and Patterson, 2007
030054	19162	Prehistoric Site	Bedrock milling station consisting of one bedrock milling feature with one heavily deteriorated milling slick.	Tsunoda and Patterson, 2007
030055	--	Historic Structure	Structure consists of a rock and mortar retaining wall with an 11-foot diameter circular pad that has a concrete top.	Tsunoda and Patterson, 2007
030230	--	Prehistoric Isolate	Isolate consists of a ground stone fragment with one ground surface.	Piek, 2008
030436	--	Historic Site	Site consists of four stacked rock retaining walls and a historic road. The road is approximately 268 yards in length and likely served as an entrance road.	Thomson, 2009
030437	19339	Prehistoric Site	Site includes a single milling feature that has one ephemeral slick.	Thomson, 2009
031209	19782	Prehistoric Site	Site includes a milling feature and associated lithic artifacts.	Parada, Taylor, Papp, Iversen, Mengers, and Elliot, 2010; Roland, 2017
031218	19790	Prehistoric Site	Site consists of a bedrock milling station with associated cultural materials and midden deposits.	Williams, Mengers, Reed, Justus, Parada, and Largo, 2009
031222	19794	Prehistoric Site	Site consists of a bedrock milling feature and one biface.	Iversen, Parada, Taylor, Papp, Iversen, Mengers, and Elliot, 2009



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
031392	19930H	Historic Site	Site consists of two rock cairns	Burkenroad and Townsend, 1978
034209	--	Prehistoric Site	Site consists of two milling slick elements on two granitic outcrop features.	Tift and Hennessey, 2013
036508*	--	Historic Structure	Circuit 157 (C157) is an approximately 52-mile distribution line with several branches that stretch from Hollenback Canyon to Dulzura, Tecate, Potrero and Potrero County Park. The utility poles in the line were constructed as early as 1949 with some replacement poles constructed as recently as 1986.	Gorman, 2014
036512*	--	Historic Structure	Tie Line 625 (TL625) is an approximately 22-mile-long transmission line that has three branch lines that meet in the center. The northwest branch is approximately 6-miles long and begins north of the Loveland Reservoir and travels east. The north fork travels due north and ends in the Descanso Valley. The south fork travels approximately two miles west of Barrett Lake. The utility poles in this line were constructed as early as 1947 with some replacement poles constructed as recently as 1984.	Gorman, 2014
036516*	--	Historic Structure	Tie Line 6923 (TL6923) is an approximately 13-mile transmission line that begins approximately 1.5 miles southwest of Barrett Lake and travels east and ends 1.5 miles southeast of Morena Village.	Gorman, 2014
038716	--	Historic Isolate	Isolate consists of a metal axle with possible cast train wheels welded on. "WELLS & FRENCH CO/CHICAGO FEB 24, 1891" and "GTD 4 YRS 800 LINE DM 30582" embossed on one wheel.	Price, Zepeda-Herman, and Yerka, 2018
038717	--	Historic Object	The lower Barrett Dam, used for storage, is located approximately 1,000 feet downstream from the current Barrett Dam. The foundation for the storage dam was completed in 1898.	Yerka and Shultz, 2018
038718	22802H	Historic Site	Trash scatter that consists of at least 30 cans, one clear glass bottle base, and clear glass fragments.	Yerka and Shultz, 2018



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
038937	22904/H	Multi-component Site	Site consists of three bedrock milling features with a single slick each, two hand stone fragments, at least eight pieces of debitage, and a deposit of historic glass bottles and glass fragments. The site has likely been disturbed due to house construction and road grading.	Taylor and Buxton, 2019
038945*	22906	Prehistoric Site	Site consists of two bedrock milling features with a total of three slicks and a basin, and a lithic and ceramic scatter. Lithic artifacts include a projectile point, two hammerstones, a possible core fragment, and multiple pieces of debitage.	Hamilton, 2020

\* Within project area/APE

### 5.1.2 Archival Research

Archival sources consulted include historic aerials from 1953 and 1963 (UCSB Digital Library 2021) and several historic USGS topographic maps, including the 1903 Cuyamaca (1:125,000), 1942 Potrero (1:62,500), and the 1960, 1982, and 1988 Barret Lake (1:24,000) topographic maps. Four plat maps from GLO surveys in 1880 and 1881 were also reviewed.

The 1903 topographic map shows the historic route of Barret Lake Road, running along Wilson Creek to the Barrett reservoir with a short dirt road to a structure south of it. Several houses are marked along the road, along with two near the dam, which is also marked although the reservoir is not. Other identifiable historic features are visible along the Dulzura Conduit, except at its southern end, where there are several roads connecting homes of a small spread-out settlement. Historic plat maps from 1880 and 1881 show the region as a mountainous region, with the only historic features represented on them being the roads that are recorded on the 1903 topographic map.

By 1942, Barret Lake Road now runs all the way from Lyons Valley Road to Barret Junction (labeled as Eisencke on the 1903 map), with several more houses recorded along the route. A small concentration of structures is visible to the northwest of Barret Dam, along the shore to the reservoir and within the project area. On the 1942 topographic map, there are no changes along the Dulzura Conduit route, though the settlement at its end has expanded to include additional homes, a schoolhouse, gaging station, and what seems to be the conduit itself. This area had been named Dulzura in this map. By 1960, the Dulzura Conduit (labeled the San Diego City Conduit) is recorded, along with several dirt access roads to the conduit. As of the 1960 topographic map, there are no longer any structures along Barret Lake Road; however, the structures in the northwest of the project area are still present. No changes are visible on the 1982 or 1988 maps.

The earliest available aerials from 1953 identify numerous dirt roads along Barret Lake Road, but the only visible structures consist of those within the northwest of the project area (UCSB Digital Library 2021). The remains of agricultural fields are visible at the north end of Lake Barret Drive, but any homes associated with them are not visible. The conduit and associated access routes are also visible, running



from Barret Dam to Dulzura (UCSB Digital Library 2021). The only other historical aerials are from 1963 and show no observable changes along Barret Lake Road or the conduit from the previous aerial (UCSB Digital Library 2021).

### 5.1.3 Survey Methodology

The Barrett Dam project area, including the access road heading west from the dam, was surveyed by Ms. Roy, Ms. McCausland, and Mr. LaChappa on July 28, 2020. The survey area boundaries are along Barrett Lake Road, between Lyons Valley Road and Barrett Dam. The dam is constructed of concrete with a step design on the dry side (south). Barrett Lake is on the north side of the Dam (Plate 1).

Both parallel transects and reconnaissance methods were used to survey in the Barrett Dam APE. Transects were approximately five meters apart along linear alignments and within open areas. The road was paved or concreted along sections, with dirt roads along other sections. Open areas to both sides of the road were transect surveyed; however, dense vegetation on either side of Barrett Lake Road made visibility less than five percent. Steep slopes with thick vegetation were observed with reconnaissance survey along a portion of the road that had been cut along the mountainside. The soils in the APE consisted of both native soils and fill material comprised of decomposing granitic sand, gravel, and cobbles of various sizes.



Plate 1. Overview of the Barrett Dam and vicinity. View to the southeast.

The Dulzura Conduit project area and the access road heading south from the dam were surveyed by Ms. Roy and Mr. LaChappa on July 29, 2020. The survey area consisted of two sections; the first along a dirt access road between Community Building Road and SR 94, and the second between Highway 94 and Barrett Dam along dirt access roads, the conduit on the south side of the mountain range above Barrett Lake Road and along Barrett Lake Road, which was either paved or graded and covered with gravel.



The Dulzura Conduit construction consists of an above-ground flume, tunnels, and subsurface concrete conveyance systems with valves and other associated structures (Plate 2). Parallel transects and reconnaissance survey methods were both utilized for this survey, with transects generally spaced up to 5 meters apart. In areas of dense vegetation and steep slopes, a reconnaissance survey was used for safety reasons. Most of the roads west of SR 94 were dirt access roads and were 100 percent surveyed. However, portions of the conduit route were not surveyed due to safety issues (e.g., very steep cliffs). The outer sides of paved roads were walked on both sides within the APE, with dirt access roads and other areas surveyed using transects along the sides of the roads. Natural vegetation in most areas of the APE consisted of chaparral and sage scrub communities; native and non-native flowering plants, trees, grasses, and weeds were also present in some of the areas. The soils throughout the project consisted of decomposing granitic sand and gravel, with cobbles and boulders of various sizes. Disturbances noted include human and vehicle activity, animal activity, and construction and maintenance activities, as well as natural weathering and erosion. Visibility within the APE ranged from less than 5 percent in heavily vegetated areas to 100 percent within the access roads.



Plate 2. Overview of concrete Conduit section and tunnel entrance. View to the northeast.

#### 5.1.4 Survey Results - Barrett Dam

A total of seven cultural resources were identified within the Barrett Dam APE during the record search. These include three prehistoric archaeological sites, one historic archaeological site, and three historic structures (Table 4, *Cultural Resources Identified within the Barrett Dam Project Area*). No additional resources were identified during the field survey of the APE. Maps of the Barrett Dam APE and cultural resource locations are provided on Figures 4a-k, *Cultural Resources Identified within the Barrett Dam APE* (Confidential Appendix E).



**Table 4**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE BARRETT DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-005756 (CA-SDI-5756)	Prehistoric Site	Four bedrock milling features and artifact scatter	Reidentified (along access road); one bedrock milling feature within the APE.
P-37-005758 (CA-SDI-5758)	Prehistoric Site	Bedrock milling feature	Not reidentified. May be obscured by dense vegetation.
P-37-025926 (CA-SDI-17241)	Historic Site	Refuse scatters associated with former location of employees' cottages	Reidentified, but only a few fragments of ceramics remain.
P-37-036508*	Historic Structure	Circuit 157 transmission distribution line, approximately 52 miles long and constructed in 1949	C157 line within the APE was observed to be in the same condition as when it was originally recorded in 2014.
P-37-036512	Historic Structure	Tie Line 625 transmission line, approximately 22 miles long and constructed in 1947	TL625 crosses APE along access road, observed to be in the same condition as when it was originally recorded in 2014.
P-37-036516*	Historic structure	Tie Line 6923 transmission line, approximately 13 miles long and constructed in 1957	TL6923 crosses APE along access road, observed to be in the same condition as when it was originally recorded in 2014.
P-37-038945 (CA-SDI-22906)	Prehistoric Site	Two bedrock milling features and artifact scatter	Reidentified; site determined to be located outside of APE.

\* Also located within Dulzura Conduit APE

#### 5.1.4.1 P-37-005756 (CA-SDI-5756)

This site was previously initially recorded in 1978 as consisting of four bedrock milling features, midden deposits, and artifacts (Fink 1978a; Williams 2009). The resource is located along Barrett Lake Road near the intersection with Lyons Valley Road. During the current survey, one bedrock milling feature was identified in the APE. Vegetation, including poison oak, was dense during the survey. No artifacts were observed within the APE.

#### 5.1.4.2 P-37-005758 (CA-SDI-5758)

This resource consists of a bedrock milling feature located along the access road south of Barrett Dam. The site is located adjacent to Cottonwood Creek. The milling station was noted as containing 10 basins, a mortar, and five slicks (Fink 1978b). No artifacts were recorded associated with the feature; however, it was observed during the initial recordation that the floodplain may have buried artifacts.

Resource P-37-005758 was not reidentified within the APE during the current survey, possibly due to dense vegetation or mis-mapping of the site. The site is recorded as being located on the floodplain and partially in the right-of-way on the east side of Barrett Lake Road. The area of the recorded site location was situated under a canopy of dense tree cover, thick leaf debris, and poison oak with a hard cut down-slope to the creek. An intensive survey to the north and south of the site location did not result in the reidentification of the milling feature.



#### **5.1.4.3 P-37-025926 (CA-SDI-17241)**

This resource was initially recorded as consisting of five historic trash scatters associated with the former location of at least five married employees' cottages within the Barrett Dam construction camp (de Barros 2004). Artifacts dated between 1918 and 1929 and include cans, bottles, and ceramic sherds.

During the current survey, the site location was reidentified, but the recorded features were not visible along the graded dirt roads within the APE. Only a few fragments of ceramics were found in push piles left from grading. No other associated artifacts were identified during the survey within the APE.

#### **5.1.4.4 P-37-036508**

Circuit 157 (C157) is an approximately 52-mile distribution line with several branches that stretch from Hollenback Canyon to Dulzura, Tecate, Potrero, and Potrero County Park, located north, east, and south of Barrett Lake (Gorman 2014a). According to pole cards, the utility poles in the line were constructed as early as 1949, with some replacement poles constructed as recently as 1986.

Portions of C157 parallel or extend across the APE throughout much of the Barrett Dam and Dulzura Conduit project areas. The current survey of the area surrounding the Barrett Lake Dam observed the line to be in the same condition as when it was recorded in 2014.

#### **5.1.4.5 P-37-036512**

Tie Line 625 (TL625) is an approximately 22-mile-long transmission line that has three branch lines that meet in the center (Gorman 2014c). The northwest branch is approximately six miles long and begins north of the Loveland Reservoir and travels east. The north fork travels due north and ends in the Descanso Valley. The south fork travels approximately two miles west of Barrett Lake. The utility poles in this line were constructed as early as 1947, with some replacement poles constructed as recently as 1984 (Gorman 2014c).

The south fork of the transmission line extends across the APE along Barrett Lake Road west of Barrett Dam. The current survey observed the line to be in the same condition as when it was recorded in 2014.

#### **5.1.4.6 P-37-036516**

Tie Line 6923 (TL6923) is an approximately 13-mile transmission line that begins approximately 1.5 miles southwest of Barrett Lake and travels east and ends 1.5 miles southeast of Morena Village (Gorman 2010d). A total of 140 poles have been documented within the transmission line, some of which were constructed as early as 1957, with some replacement poles constructed as recently as 1985 (Gorman 2010d).

The transmission line extends across the APE south of Barrett Dam, along the Dulzura Conduit and Barrett Lake Road. The current survey observed the line to be in the same condition as when it was recorded in 2014.

#### **5.1.4.7 P-37-038945 (CA-SDI-22906)**

This resource was initially recorded in 2020 as consisting of two bedrock milling features and an artifact scatter with lithic and ceramic artifacts present (Hamilton 2020).



During the current survey, the resource was reidentified along Barrett Lake Road south of Barrett Dam. While the site boundary on file at the SCIC places the northern portion of the site within the roadway and the APE, the sketch map provided in the site form shows the northern edge of the boundary south of the road, at the edge of the APE. No artifacts were observed on the surface within the APE. Both milling features were reidentified and verified as being located outside of the APE.

### 5.1.5 Survey Results - Dulzura Conduit

A total of five cultural resources were identified within the Dulzura Conduit APE during the record search. These include one prehistoric archaeological site and four historic structures (one that is also considered a District). In addition, two prehistoric archaeological sites were identified during the field survey, for a total of seven cultural resources within the APE (Table 5, *Cultural Resources Identified within the Dulzura Conduit Project Area*). Maps of the Dulzura Conduit APE and cultural resource locations are provided on Figures 5a-m, *Cultural Resources Identified within the Dulzura Conduit APE* (Confidential Appendix E).

**Table 5**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE DULZURA CONDUIT PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-006981 (CA-SDI-6981)	Historic Structure/ District/Element of District	SR 94 - route originally constructed in 1870	Dulzura Conduit crosses under roadway.
P-37-011103 (CA-SDI-11103)	Prehistoric Site	Four bedrock milling features and an artifact scatter	Reidentified; artifacts observed within Dulzura Conduit access road, with milling features observed outside the east and west boundaries of the APE.
P-37-011605 (CA-SDI-11605)	Historic Structure	Dulzura Conduit	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-036508*	Historic Structure	Circuit 157 transmission distribution line, approximately 52 miles long and constructed in 1949	C157 line within the APE was observed to be in the same condition as when it was originally recorded in 2014.
P-37-036516*	Historic structure	Tie Line 6923 transmission line, approximately 13 miles long and constructed in 1957	TL6923 crosses APE along access road, observed to be in the same condition as when it was originally recorded in 2014.
P-37-39910 (CA-SDI-23290)	Prehistoric Site	Bedrock milling feature and artifact scatter	Newly identified, located on the south side of the conduit access and maintenance road.
P-37-39909 (CA-SDI-23289)	Multi-component Site	Prehistoric lithic scatter and historic glass and domestic- use item scatter	Newly identified, located on the south side of the conduit access and maintenance road.

\* Also located within Barrett Dam APE



#### **5.1.5.1 P-37-006981 (CA-SDI-6981)**

This resource consists of portions of SR 94 and a historic stagecoach route built in 1870 as an alternative to the Smith-Groom County Road (Burkenroad 1978; Supernowicz 2011). SR 94 was reconstructed from the stagecoach route in the 1910s through the 1920s, with further improvements and realignments occurring in the succeeding years. Currently, SR 94 is a typical late twentieth-century two-lane rural highway (Supernowicz 2011).

Portions of SR 94 run parallel or extend across the APE throughout much of the Dulzura Conduit project area. The current survey of the project area surrounding the Dulzura Conduit observed the highway to be in the same condition as when it was recorded in 2011.

#### **5.1.5.2 P-37-011103 (CA-SDI-11103)**

P-37-011103 (CA-SDI-11103) was recorded in 1989 as a milling station or small temporary camp consisting of four milling features with 43 elements (Taylor 2019). The site is located south of SR 94, along the Dulzura Conduit. The milling elements included 22 basins, five mortars, and 16 slicks. Artifacts such as debitage, mano fragments, and pottery sherds were also recorded within the site (Taylor 2019).

During the current survey, artifacts were found scattered in the conduit access road and on the slopes east and west of the APE. Also, milling was observed outside the east and west boundaries of the project area. Metavolcanic and quartz debitage, along with Tizon Brown Ware pottery sherds, were observed on the access road in a disturbed context. Modern and or historic human and natural animal activity account for most of the impacts to the site; other disturbances include natural erosion.

#### **5.1.5.3 P-37-011605**

This resource is the Dulzura Conduit, a historic concrete water channel built in the early 1900s that runs approximately eight miles north-south. It extends from the outlet tower at Barret Lake to Dulzura Creek, from which the water in the conduit follows a natural drainage course to the Otay Reservoir (Gunderman 2010).

The Dulzura Conduit is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.1.5.4 P-37-036508**

Circuit 157 (C157) is an approximately 52-mile distribution line with several branches that stretch from Hollenback Canyon to Dulzura, Tecate, Potrero, and Potrero County Park, located north, east, and south of Barrett Lake (Gorman 2014a). According to pole cards, the utility poles in the line were constructed as early as 1949, with some replacement poles constructed as recently as 1986.

Portions of C157 parallel or extend across the APE throughout much of the Barrett Dam and Dulzura Conduit project areas. The current survey of the area observed the line to be in the same condition as when it was recorded in 2014.



#### **5.1.5.5 P-37-036516**

Tie Line 6923 (TL6923) is an approximately 13-mile transmission line that begins approximately 1.5 miles southwest of Barrett Lake and travels east and ends 1.5 miles southeast of Morena Village (Gorman 2010d). A total of 140 poles have been documented within the transmission line, some of which were constructed as early as 1957, with some replacement poles constructed as recently as 1985 (Gorman 2010d).

The transmission line extends across the APE south of Barrett Dam, along the Dulzura Conduit and Barrett Lake Road. The current survey observed the line to be in the same condition as when it was recorded in 2014.

#### **5.1.5.6 P-37-39910 (CA-SDI-23290)**

This newly identified prehistoric archaeological site within the APE south of SR 94, along the Dulzura Conduit, consists of a bedrock milling feature with a single slick milling element, a metate fragment, and a metavolcanic flake. The resource is located on the south side of the conduit access and maintenance road at the top of an east-facing slope.

#### **5.1.5.7 P-37-39909 (CA-SDI-23289)**

This newly identified archaeological site within the APE south of SR 94, along the Dulzura Conduit, consists of a small prehistoric lithic scatter and a highly disturbed historic glass and domestic-use item scatter with numerous concentrations. The lithic artifacts include four metavolcanic flakes, all in a disturbed context. The flakes were observed in front of an opening at the base of a large bedrock boulder along on the edge of the access road. The historic materials include scatters and concentrations of fragmented glass, metal, porcelain and ceramic beverage bottles and domestic use items, nails, building materials, cans mixed with modern fragmented glass bottles, and other items.

## **5.2 BLACK MOUNTAIN DAM**

### **5.2.1 Records Search**

The records search results identified 26 previous cultural resource studies within a half-mile radius of the Black Mountain Dam project area (Table 6, *Previous Studies within a Half-mile of the Black Mountain Dam Project Area*). Fifteen of the studies were cultural resource surveys, studies, or inventories, record searches, or site visits; the remaining studies include four testing reports and seven planning documents.



**Table 6**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE BLACK MOUNTAIN DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00222	Carrico and Cook, 1975	Archaeological Survey of the Peñasquitos Bluff Project
00511	Cupples, 1974	An Archaeological Survey Report of Project: 11-SD-80515 P.M. 28.3-28.9 130.4-36.3
01295	Norwood, 1978	The Cultural Resources of Peñasquitos East
01671	Walker, Cardenas, and Bull, 1981	A Review of Cultural Resources in the La Jolla Valley Region of San Diego, California
02552	Wade, 1992	Cultural Resources Reconnaissance for Three Off-Site Improvement Areas, Montana Mirador PRD Dep #87-0925
02740	Pigniolo et al., 1993	National Archaeological Data Base (NADB) Information Sheet Cultural Resources Constraints Analysis and Survey for the Del Mar Heights Road Alignment, San Diego California
02772	City of San Diego, 1992	Montana Mirador General Plan and Community Plan Amendments, Vesting, Tentative Map Dep No. 87-0925
03396	City of San Diego, 1998	Errata for Draft Tiered EIR For Black Mountain Ranch Subarea I Plan in the North City Future Urbanizing Area
03401	Cheever, 1993	Cultural Survey of 514 Acres of Perimeter Properties Adjacent to the Black Mountain Ranch Specific Plan Area (Subarea I)
03415	City of San Diego, 1998	Draft Tiered EIR For Black Mountain Ranch Subarea Plan in the North City Future Urbanizing Area
03747	Wade, 1992	An Archaeological Evaluation of Twenty Reported Cultural Resource Locations on Black Mountain Ranch, City of San Diego, California
03837	City of San Diego, 2000	Cultural Resource Inventory for Land Acquisition for the Black Mountain Water Treatment Plant, San Diego, California
04126	City of San Diego, 1991	Notice of Preparation of a Draft Environmental Impact Report Black Mountain Ranch North and South
04127	City of San Diego, 1992	Environmental Impact Report for Black Mountain Ranch North and South
04153	Ritz, 1990	An Intensive Prehistoric and Historic Survey of the Black Mountain Ranch North San Diego, California
04717	Forstadt, 1992	Black Mountain Rancher: Cultural Resources Report (Appendix E)
04771	Bull, Cheever, and Collett, 1998	Results of an Archaeological Data Recovery at CA-SDI-4832/4833/4942 and CA-SDI-11982, Black Mountain Ranch, City of San Diego, California
05096	Wahoff, 2000	Cultural Resource Inventory for Land Acquisition for the Black Mountain Water Treatment Plant, San Diego, California
05254	Cheever, 2001	Archaeological Treatment Plan for Data Recovery at CA-SDI-5103 at Black Mountain Ranch San Diego, California
05545	Berryman, 2000	Open Space Boundary Test Determinations AT CA-SDI-5094 and CA-SDI-11981 Black Mountain Ranch, City of San Diego, California
05754	Hix, 1995	Black Mountain Ranch 2 Reserved Vesting Tentative Map, Planned Residential Development Permit, Resource Protection Permit and Development Agreement
06399	City of San Diego, 1995	DEIR for Black Mountain Ranch II



Report Number (SD-)	Author, Year	Report Title
08531	Forstadt, Gonzalez, Forstadt, and Berryman, 1992	Archaeological Testing at Black Mountain Ranch, San Diego, California
11823	Kick, 2007	Cultural Resources Technical Report for The San Diego Vegetation Management Project
15741	Fulton, 2014	Cultural Resource Assessment Class III Inventory, Verizon Wireless Services, Maler Facility, City of San Diego, County of San Diego, California
16006	Scharlotta, 2014	Negative Cultural Survey Report Form (Appendix D) for Black Mountain Access Road Repair Project, San Diego, California

The SCIC has a record of nine previously recorded cultural resources within a half-mile radius of the Black Mountain Dam project area, one of which is partially recorded within the APE (Table 7, *Previously Recorded Resources within a Half-mile of the Black Mountain Dam Project Area*). The resource that has been documented within the Black Mountain Dam APE is P-37-016577, an isolated historic artifact. The remaining cultural resources recorded within the records search limits generally consist of prehistoric resources consisting of a bedrock milling feature, an artifact scatter, and isolated artifacts. Two multi-component sites are recorded—these consist of a historic and prehistoric artifact scatter and a hilltop rock enclosure with a ground stone tool.

**Table 7**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE BLACK MOUNTAIN DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
006672	6672	Prehistoric Site	Small artifact scatter consisting of flaked stone artifacts.	May, 1974
009286	9286	Prehistoric Site	Site consists of a single milling feature	Bull and Hector, 1982
012932	12932/H	Multi-component Site	Hilltop rock enclosure with a single unifacial cobble mano.	Pignuolo, Campbell, and Mealey, 1992; Tift, Lown, Daigh, and Sanchez, 2013
012933	12933/H	Multi-component Site	Small scatter of historic and prehistoric artifacts, consisting of purple glass, a metavolcanic flake, and a fire-affected mano fragment.	Pignuolo, Campbell, and Mealey 1992; Tift, Lown, and Sanchez, 2013
013867	--	Prehistoric Isolate	One metavolcanic core in a heavily disturbed area.	James and Pignuolo, 1994
015218	--	Prehistoric Isolate	One black quartzite cobble-based core.	Pignuolo, Campbell, and Mealey, 1992
016575	--	Historic Isolate	An amethyst glass neck and shoulder fragment of a milk or condiment bottle.	Wahoff, 1998
016576	--	Historic Isolate	Shard of amethyst bottle glass.	Wahoff, 1998
016577*	--	Historic Isolate	Shard of aqua bottle glass.	Wahoff, 1998

\* Within project area/APE



## 5.2.2 Archival Research

Archival sources consulted include historic aerials from 1939, 1947, 1953, 1964, 1967, and 1980, (NETR Online 2021) and several historic USGS topographic maps, including the 1903 and 1930 La Jolla (1:62,500), the 1943 Del Mar (1:62,500), and the 1953, 1967, and 1975 Del Mar (1:24,000) topographic maps. Three GLO plat maps from surveys in 1879, 1880, and 1890 were also reviewed.

The plat maps identify Section 6 of Township 14 South, Range 2 West as “unsurveyable rocky worthless mountains” just to the northwest of a portion of Rancho de Los Peñasquitos, as well as the road between San Diego and Fort Yuma (now the Escondido Freeway). On the topographic maps between 1903 and 1943, the project vicinity is portrayed as an undeveloped mountainous area, with a northeast/southwest running road present approximately 0.2 mile to the west of the project area. This road is visible on all the referenced aerials and is the approximate path followed by the modern Black Mountain Road and Carmel Valley Road (NETR Online 2021). The 1953 topographic map shows a dirt road running through the project area, which is supported by aerial photography between 1953 and 1980. Aerials in the time show several dirt roads crisscrossing the project site (NETR Online 2021). By the time the 1967 topographic map was created, an aqueduct west of the project area and a transmission line intersects the western edge of the project area, both of which are present today. Aerials show the progression of land to the north from undeveloped rural land to agricultural fields between 1980 and 1985, while land to the west of the project area begins to be developed into residential properties beginning in 1980 (NETR Online 2021). The reservoir first appears in aerial photographs in 2002, complete.

## 5.2.3 Survey Methodology

The Black Mountain Dam project area was surveyed by Ms. Roy and Mr. LaChappa on July 14, 2020. The survey area is located between Carmel Valley Road and Maler Road to the north and south, Black Mountain Road to the west, and Black Mountain Open Space to the east. The survey area contains the reservoir, a slope on the west side of the reservoir, an access road, and both sides of a fence line that surrounds the reservoir property. The reservoir is constructed of concrete, with most of the structure below-surface. The structure is on top of a ridgeline with the east side cut into the hill; this west-facing slope is approximately 25-feet tall with a steep slope to the east on the opposite side (Plate 3). Steep slopes are present on all sides of the structure.





Plate 3. Overview of southeast project area along fencing. View to the south.

A reconnaissance survey method (not parallel transects) was employed due to the presence of dense brush, thick dead grass and leaf duff, steep slopes, and man-made earthen berms. Vegetation in the project area consisted of plants of the chaparral, coastal sage scrub, and grassland communities including sumac, scrub oak, buckwheat, and black sage. Soils consisted of light brown sands with fractured angular fieldstone. Gravel and small boulders were observed on the slope to the west side of the structure and within the earthen berms constructed around the reservoir. Visibility throughout much of the non-developed portion of the APE was less than five percent, with only a few pockets displaying visibility of upwards of 20 percent.

## 5.2.4 Survey Results

One isolated find was previously documented within the APE for the Black Mountain Dam (Table 8, *Cultural Resources Identified within the Black Mountain Dam Project Area*). A map of the Black Mountain Dam APE and the cultural resource location are provided on Figure 6, *Cultural Resources Identified within the Black Mountain Dam APE* (Confidential Appendix E).

**Table 8**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE BLACK MOUNTAIN DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-016577	Prehistoric Isolate	Bottle glass fragment	Not reidentified; likely outside of APE.

### 5.2.4.1 P-37-016577

P-37-016577 was documented in 1998 as a shard of aqua bottle glass (Wahoff 1998). During the current survey, the area indicated as the resource location on file at the SCIC was inspected to the extent feasible; however, visibility was poor due to dense vegetation, and the isolate was not reidentified. An examination of the spatial coordinates and location map provided in the site form indicates that the isolate is likely located to the east of the SCIC plotted location, well outside of the APE boundary.



## 5.3 CHOLLAS DAM

### 5.3.1 Records Search

The records search results identified 14 previous cultural resource studies within a half-mile radius of the Chollas Dam project area (Table 9, *Previous Studies within a Half-mile of the Chollas Dam Project Area*). Eleven of the studies were cultural resource inventories, surveys, monitoring reports, and analyses; the remaining studies include a mitigated negative declaration and a draft environmental impact report.

**Table 9**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE CHOLLAS DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00295	Bull, 1977	SDM-W-1323 Archaeology of a Site on Gunpowder Point.
00522	Cupples, 1975	North Chollas Sanitary Landfill Archaeological Survey and Mitigation Report
01269	Pettus, 1979	A Cultural Survey of Portions of the Las Chollas, South Las Chollas, Los Coches Forester, and Loma Alta Stream Basins in San Diego County, California.
02566	Manley and Wade, 1992	Historical Evaluation of Naval Radio Transmitter Facility Chollas Heights, San Diego
02567	Wade, 1992	Cultural Resource Survey Off-Site Access Road Improvement Area, Chollas Heights Naval Housing, San Diego
02820	City of San Diego, 1991	Proposed Mitigated Negative Declaration for Chollas Pump Overhaul Shop for the City of San Diego at The Chollas Operations Center, San Diego, California
04576	McCorkle-Apple, 1997	Cultural Resource Inventory for the Proposed College Grove Drive Widening Project
04855	Manley, Tift, Wade, and Van Wormer, 1991	Cultural Resource Survey of Naval Radio Transmitter Facility, Chollas Heights San Diego, California
08420	Pierson, 2003	Results of Archaeological Monitoring at the North Chollas Community Park Phase IP; K01069CA; CIP No. 29-6670, Specification No. 8295A, Work Order No. 296670; LDR No. 98-0150
10551	Arrington, 2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
11826	Robbins-Wade, 2008	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California
12200	City of San Diego, 2009	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)
12364	Pierson, 2009	Archaeological Resource Report Form: Mitigation Monitoring of Sewer & Water Group 796 Project San Diego, California
16009	Murray, Hosseini, Dorrlor, and Comeau, 2015	Cultural/Historical Resource Technical Report: 69th And Mohawk Pump Station, 5017 69th Street / 6910 Mohawk Street, San Diego, California



The SCIC has a record of six previously recorded cultural resources within a half-mile radius of the Chollas Dam project area, but none have been recorded within the project area (Table 10, *Previously Recorded Resources within a Half-mile of the Chollas Dam Project Area*). However, as discussed below in Section 5.3.4, one previously recorded resource, P-37-016321, was updated during the survey as being within the Chollas Dam APE. In general, the sites recorded within the records search limits consist of a prehistoric artifact scatter and two isolated artifacts; three historic resources, two artifact scatters and a pair of cement foundations, are also documented within the record search limits.

**Table 10**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE CHOLLAS DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
012935	12935H	Historic Site	Trash pile consists of electronic equipment, structural debris, and other unidentifiable pieces of industrial equipment associated with the Chollas Heights Naval Radio Station.	Manley and Wade, 1992
015573	--	Prehistoric Isolate	Isolate consists of granitic ground stone fragment with possible bifacial grinding.	Apple and Zanelli, 1996
015389	--	Prehistoric Isolate	Isolate consists of a quartzite cobble tool and a multidirectional cobble core.	Apple and Rose, 1997
016321	14794H	Historic Site	Two historic cement foundations, one possibly a loading dock topped with asphalt	Wahoff and Lilburn, 1998
034146	--	Prehistoric Site	Artifact scatter consists of marine shell.	Tift and Hennessey, 2013
037590	22444H	Historic Site	Site consists of a historic glass scatter and five diagnostic bottles.	Loveless, 2017

### 5.3.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1967, and 1980, (NETR Online 2021) and several historic USGS topographic maps, including 1904 and 1930 San Diego (1:62,500), 1944 National City (1:62,500), and the 1953, 1967, and 1975 National City (1:24,000) topographic maps.

Located within the boundaries of the former Mission San Diego lands, the 1903 topographic map shows the area as undeveloped hilly land to the east of Lemon Grove, with the reservoir already constructed and a road leading to a structure just to the east of the project area. This structure is likely the residence of the dam supervisor. The development visible on the 1930 topographic map, shows that both San Diego and Lemon Grove have expanded and there is a road, with a small number of structures along it, just to the north of the project area. These represent the Naval Radio Transmitting Station, Chollas Heights (NRTSCH), constructed in 1916, with one of the radio towers overlooking the reservoir.

Expansion from San Diego, Lemon Grove, and Encanto continues and is visible in the 1944 topographic maps, with the NRTSCH still present and in use. By 1953, the area around the project has turned into residential properties, which continue to grow into the present. Historic topographic maps from 1967 show the Carver School and Our Lady of Mercy School to the northwest and southwest respectively, as well as two gravel pits along the road to the reservoir to the west. The gravel pits are visible in aerial photographs beginning in 1964, as well as numerous small pits directly southwest of the reservoir along



Ryan Road, at the current location of the Gloria Mesa parking lot (NETR Online 2021). A 1980 aerial shows the area west of the reservoir as having recently undergone extensive ground disturbance. In 1992, the NRTSCH ceased operational use and was redeveloped in 1996 as the Lincoln Military Housing complex.

### 5.3.3 Survey Methodology

The Chollas Dam project area was surveyed by Ms. Roy, Ms. McCausland, and Mr. LaChappa on July 1, 2020. The project area is located between Fauna Drive and College Grove Road to the north and south, and 54<sup>th</sup> Street and College Grove Way to the west and east. The soils observed in the APE consisted of introduced fill material comprised of decomposing granitic sand, gravel, and cobbles of various sizes. Eucalyptus trees were the main vegetation around the dam and across the base of the northwest-facing slope of the dam (Plate 4). Elsewhere, vegetation consisted of non-native weeds and grass, including mustard grass and foxtail, with native Diegan coastal sage scrub along the road and riparian woodland species at the discharge path.

A combination of transects with three-meter intervals and reconnaissance (non-transect survey) methods were used during the survey, depending on ground-surface accessibility. Native and non-native vegetation was thick along the sides of the access road, west to the entrance of the dam from the North Chollas Park parking lot. Dense tree-leaf debris under the eucalyptus trees covered the ground, keeping visibility low, less than 40 percent, while visibility was 100 percent in the disturbed/cleared areas such as along trails and at the top of the dam itself.



Plate 4. Overview of base of Chollas Dam slope. View to the south.



### 5.3.4 Survey Results

One previously recorded historic resource was documented within the APE for the Chollas Dam (Table 11, *Cultural Resources Identified within the Chollas Dam Project Area*). A map of the Chollas Dam APE and the cultural resource location is provided on Figure 7, *Cultural Resources Identified within the Chollas Dam APE* (Confidential Appendix E).

**Table 11**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE CHOLLAS DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-016321 (CA-SDI-14794)	Historic Site	Cement foundations/loading dock	Cultural materials associated with the previously recorded resource were reidentified within the APE.

#### 5.3.4.1 P-37-016321 (CA-SDI-14794)

Previously recorded resource P-37-0016321 (CA-SDI-14794) was documented in 1998 (Wahoff and Lilburn) as concrete foundations, loading ramps, and associated cultural material consisting of a glass scatter. It is noted on the site form that the “entire area is a former landfill, and is heavily disturbed by grading, and other earth-moving activities” (Wahoff and Lilburn 1998).

During the current survey, the concrete foundations were observed to be adjacent, but outside of the current project APE. Cultural material associated with the resource was reidentified within the APE along the west access road to the dam. The associated cultural material observed included fragments of milk glass, brown, clear, and green beverage glass; porcelain, both medium and fine grade; and a clear crown cap finish fragment. No maker marks were observed on any of the fragments. Some fragments of glass within the scatter lack patina and may be modern. The access road appears well maintained and occasionally graded. The artifacts observed along the road have most likely been scattered and fragmented by previous grading activities.

## 5.4 EL CAPITAN DAM

### 5.4.1 Records Search

The records search results identified six previous cultural resource studies within a half-mile radius of the El Capitan Dam project area (Table 12, *Previous Studies within a Half-mile of the El Capitan Dam Project Area*). Three of the studies were cultural resource surveys; the remaining three consist of a public notice for a draft mitigated negative declaration, a cultural resources inventory, and an environmental impact report.



**Table 12**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE EL CAPITAN DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00546	Cupples, 1975	An Archaeological Survey of the San Diego River Valley
04140	Case, 2000	Phase One Cultural Resources Survey for the 2.5 Mile El Capitan Reservoir Access Road Improvements Project (CIP No. 733190), City of San Diego, California
07309	City of San Diego, 2001	Public Notice of a Draft Mitigated Negative Declaration El Capitan Reservoir Access Road Widening Project
09976	Loughlin, 1973	Environmental Impact Report (Archaeology) for Ram Construction Company, Fallbrook, California
10166	de Barros, 2006	Cultural Resources Inventory and Assessment for the El Capitan Spillway Debris Removal Project on the San Diego River, City of San Diego Water Department, San Diego County, California
16143	Pentney and DeGiovine, 2015	A Historical Survey Report for El Capitan Blow Off Stabilization Project, San Diego, California

The SCIC has a record of 24 previously recorded cultural resources within a half-mile radius of the El Capitan Dam project area, 12 of which are located within the project site (Table 13, *Previously Recorded Resources within a Half-mile of the El Cajon Dam Project Area*). The resources that have been documented within the El Capitan Dam APE include P-37-013616, -013617, -013618, -30217, -031888, -031889, -038878, -038881, -038885, -038886, -038888, and -038889 and are described in further detail in Section 5.4.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of bedrock milling features and an isolated artifact. Nine historic resources are documented within the record search limits; these consist of segments of roads, a bridge, walls, the remains of several structures, and the El Capitan Dam.

**Table 13**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE EL CAPITAN DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
013614	13614	Prehistoric Site	Milling station consists of a single bedrock milling station with two mortars and more than five slicks, and a single mano.	Briggs and Pignuolo, 1993; Cordova and Cox, 2015; Price, Yerka, Sowles, Soto, and Kitchen, 2018
013615	13615	Prehistoric Site	Milling station consists of a single bedrock milling feature with one slick.	Briggs and Pignuolo, 1993; Williams, 2009; Price, Yerka, Sowles, Soto, and Kitchen, 2018
013616*	13616	Prehistoric Site	Milling station consists of a single bedrock milling feature with more than two slicks and one basin.	Pignuolo and Briggs, 1993; Williams, 2009; Price, Yerka, Sowles, Soto, and Kitchen, 2018



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
013617*	13617	Prehistoric Site	Milling station consists of five milling features with multiple slicks.	Briggs and Pignolo, 1993; Williams, 2009; Price, Yerka, Sowles, Soto, and Kitchen, 2018
013618*	13618	Prehistoric Site	Milling station consists of a single bedrock milling feature with one slick/basin.	Pignolo and Briggs, 1993; Price, Yerka, Sowles, Soto, and Kitchen, 2018
019275	--	Historic Road	Segment of a road cut into a slope and built up with dry laid rubble and cobble. Date of construction is unknown.	Case and McGinnis, 2000; Williams, 2009
027147	--	Historic Structure	Bridge over small northern tributary of the San Diego River, just west of the El Capitan Reservoir Spillway. Likely built during the construction of the El Capitan Dam, which was completed in 1934-35. A cement graffiti feature is present west of the bridge on a large boulder.	de Barros, 2006
030217	19249	Prehistoric Site	Milling station consists of a single bedrock milling feature with two slicks.	Piek, 2007
031888*	--	Historic Structure	The El Capitan Dam, completed in 1934, is constructed of hydraulic earthen and rock fill. The dam is approximately 1170 feet long, 237 feet high, and 26 feet thick.	Dalope and Gunderman, 2009
031889*	--	Historic Building	A wood framed utilitarian building with a rectangular ground plan, wooden cladding, and a corrugated metal side gabled roof.	Dalope and Gunderman, 2009
034865	21685	Prehistoric Site	Milling station consists of a single bedrock milling feature with three milling slicks.	Cordova and Cox, 2015
035783	21854	Prehistoric Site	Milling station consists of two features and three milling slicks.	Cordova and Cox, 2015; Price, Yerka, Sowles, Soto, and Kitchen, 2018
038878*	22878	Prehistoric Site	Milling station consists of a single granitic bedrock outcrop with two basins and four slicks.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038879	22879	Prehistoric Site	Milling station consists of a single large granitic boulder milling feature with five milling elements.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038880	22880	Prehistoric Site	Milling station consists of two bedrock outcrops with three milling slicks two on one and one on the other.	Price, Yerka, Kitchen, Sowles, and Soto, 2017



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
038881*	--	Historic Structure	Historic fieldstone lined ditch on the north side of an east-west asphalt road. The ditch is approximately 53 feet long and approximately 46 inches wide, with an interior width of 24-30 inches.	Price, Zepeda, and Linton, 2018
038882	22881	Prehistoric Site	Two milling features: one is a granitic bedrock boulder with two slick elements, while the other consists of seven granitic boulders with one to five milling elements.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038883	22882	Prehistoric Site	Feature consists of a single small granitic boulder with five milling elements.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038884	22883H	Historic Site	Site consists of a concrete slab, a small concrete block building, a cistern, two small-fenced areas, and a larger fence enclosing the other features. The building was constructed between 1953 and 1964 based on historic aerials.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038885*	22884H	Historic Structure	Resource consists of the foundations of two houses and accompanying structures. Both structures appear to have been constructed between 1953 and 1967 based on historic aerials.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038886*	--	Prehistoric Isolate	Isolate consists of a single rim sherd of Tizon Brown Ware in a graded area.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038887	--	Historic Structure	Structure is a northeast-southwest oriented fieldstone wall immediately east of a dirt road. The wall is approximately 2.5-3 feet wide, with a variable height, and is approximately 1,300-1,500 feet in length.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038888*	--	Historic Structure	Structure is a fieldstone wall measuring 3-4 feet wide, with a variable height, and is approximately 958 feet in length.	Price, Yerka, Kitchen, Sowles, and Soto, 2017
038889*	22885	Prehistoric Site	Milling station consists of four granitic boulders that contain one to 22 milling elements. The area around the site may have been disturbed due to grading and construction of a wall and dirt road.	Price, Yerka, Kitchen, Sowles, and Soto, 2017

\* Within project area/APE

## 5.4.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1971, and 1981 (NETR Online 2021) and several historic USGS topographic maps, including the 1893, 1903, 1939, and 1947 El Cajon



(1:62,500), and the 1955 and 1967 El Cajon Mountain (1:24,000) topographic maps. Four GLO plat maps from surveys in 1879, 1881, 1903, and 1911 were also reviewed.

A review of the original survey map of 1879 shows a historic trail that follows the southern bank of the San Diego River with two settlers' homes recorded, one of which is within the project area. Additionally, the area is within the Capitan Grande Indian Reservation, which includes sections 1 through 10, Township 14 South, Range 2 East. Other settlers' homes are identified to the northeast and southeast, several of them named, including Alfrid's house, Perkin's house, and Gibson's House. All are located along a recorded road that runs north from the old road from San Diego to Julian up to the reservation. The 1881 survey map shows nothing within the project area or its vicinity other than the boundaries of the reservation. The 1903 survey map, however, records a road following the southern bank of the San Diego River and the San Diego Flume bisecting the project area. Additionally, the reservation has been decreased in size to only include sections 1 through 4 Township 14 South, Range 2 East, a modification that was recommended by the Special Agent for the Mission Indians on the 1879 map. Furthermore, to the west of the project area, two homes are recorded: Henderson's house with a vineyard, and Head's house with a field and orchard. The 1911 survey map has left the project area and surrounding environs blank; however, it does show the reservation having been modified to once more include Section 10 of Township 14 South, Range 2 East.

The 1893 El Cajon topographic map shows the road along the southern bank of the San Diego River and the San Diego Flume, as does the 1903 map, with the addition of two homes to the west of the project area, that match with the Henderson's house and Head's house recorded on the 1903 plat map. Dam construction was completed in 1934 and the El Capitan Dam is present on the 1939 topographic map. Also present on this map is a prison camp, located within the northwest portion of the project area. The prison camp is not recorded on the 1955 map, but aerials show the same structures from 1953 to the present, with additional structures located in the western portion of the project area visible in 1964 (NETR Online 2021).

### **5.4.3 Survey Methodology**

The El Capitan Dam project area was surveyed by Ms. Roy and Mr. Anthony LaChappa on July 23, 2020. The project area is located on, and between, El Monte Road to the north, south, and west, and El Capitan Reservoir to the east. The dam is constructed of concrete and angular stone. The reservoir is on the east side of the dam, with the spillway on the north side and the river channel to the west (Plate 5). The spillway is constructed of concrete. The water exiting the dam is released into the San Diego River.

The soils in the survey area consisted of disturbed native soils comprised of decomposing granitic sand, gravel, and cobbles of various sizes. Vegetation consisted of oak woodland and riparian species along the riverbed. Sage scrub and chaparral vegetation was observed on the slopes above the river. Poison oak, along with non-native plants and vines, were dense in most areas along the river edges, limiting ground visibility and thorough survey.





Plate 5. Overview of El Capitan Dam spillway, west side. View to the west.

Parallel transect survey was used, where feasible, with transects walked in three-meter intervals. Reconnaissance survey (non-transect) methodology was also used in areas of dense vegetation and slopes. Two roads lead to the dam; the south side is El Monte Road, and the northern road is El Monte Road /El Cajon Mountain Truck Trail. Both roads start as paved roads then become dirt roads, with gravel and occasionally graded. Open areas to the north and south sides of both roads were surveyed with reconnaissance or with transects where possible. Due to dense brush, steep slope cuts, and limited survey area off the road, reconnaissance survey was used more frequently. Off the roads, visibility was generally no more than 10 to 15 percent and occasionally zero percent due to the presence of thick leaf litter. Visibility along the roads was 100 percent.

#### 5.4.4 Survey Results

A total of 11 cultural resources were identified within the El Capitan Dam APE during the record search. These include five prehistoric archaeological sites, one prehistoric isolate, one historic building, and four historic structures. Furthermore, three newly identified archaeological sites were recorded during the field survey of the APE, for a total of 14 cultural resources within the El Capitan Dam APE (Table 14, *Cultural Resources Identified within the El Capitan Project Area*). A map of the El Capitan APE and cultural resource locations is provided on Figure 8, *Cultural Resources Identified within the El Capitan Dam APE* (Confidential Appendix E).



**Table 14**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE EL CAPITAN DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-013616 (CA-SDI-13616)	Prehistoric Site	Bedrock milling feature	Not reidentified.
P-37-013617 (CA-SDI-13617)	Prehistoric Site	Five bedrock milling features	Reidentified (along access road); several bedrock milling features within the APE.
P-37-013618 (CA-SDI-13618)	Prehistoric Site	Bedrock milling feature	Reidentified (along access road); within APE.
P-37-031888	Historic Structure	El Capitan Dam	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-031889	Historic Building	Wood framed utilitarian building	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-038878 (CA-SDI-22878)	Prehistoric Site	Bedrock milling feature	Reidentified; within APE, adjacent to dam.
P-37-038881	Historic Structure	Fieldstone lined ditch	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-038885 (CA-SDI-22884)	Historic Structure	Foundations of two houses and accompanying structures	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-038886	Prehistoric Isolate	Tizon Brown Ware rim sherd	Not reidentified.
P-37-038888	Historic Structure	A wall constructed of dry-laid angular local fieldstones	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-038889 (CA-SDI-22885)	Prehistoric Site	Four bedrock milling features	Reidentified; partially within APE along north side of spillway.
P-37-30217 (CA-SDI-19249)	Prehistoric Site	Three bedrock milling features	Reidentified with two additional milling features recorded; within APE (along access road).
P-37-39906 (CA-SDI-23286)	Indeterminate	One-course-tall rock wall	Newly identified; within APE (along access road).
P-37-39907 (CA-SDI-23287)	Prehistoric Site	Lithic and ground stone tool scatter	Newly identified; within APE (along access road).

#### 5.4.4.1 P-37-013616 (CA-SDI-13616)

This resource was first recorded in 1993 as a bedrock milling feature with two slicks and one basin (Pignoli and Briggs 1993a). Since its original recordation in 1993, however, two subsequent survey updates have failed to reidentify the site in its original plotted position, which is in the current APE along



the south side of a dirt access road (Price et al. 2018a; Williams 2009). During the current survey, this resource was also not reidentified within the APE.

#### **5.4.4.2 P-37-013617 (CA-SDI-13617)**

The site was originally recorded in 1993 as a milling feature with one milling slick element (Briggs and Pigniolo 1993). A subsequent survey in 2017 increased the number to four milling features with a total of four milling elements consisting of three slicks and a basin (Price et al. 2018b).

During the current survey, three of the four milling features were reidentified within (or immediately adjacent) to the APE. Due to dense vegetation and poison oak, RECON's Feature C was not reidentified. However, two additional milling features (MF-E and MF-F) were recorded within or adjacent to the APE. MF-E is a broken bedrock with two basins. MF-F is positioned at the east end of the site under thick brush on a slope above the road. One slick milling element was observed on the feature; however, additional milling elements may be present but obscured by dense vegetation covering much of the rock. The features are in fair to good condition, with exfoliation and erosion noted.

#### **5.4.4.3 P-37-013618 (CA-SDI-13618)**

The site was originally recorded in 1993 as a single milling feature with one slick/basin milling element (Pigniolo and Briggs 1993b). During the current survey, the feature was reidentified along the south side of a dirt access road. The resource essentially appears as it was recorded in the original record and updated in 2017, except that another possible slick element was identified on the feature (Price et al. 2018c). The resource is in fair to poor condition.

#### **5.4.4.4 P-37- 031888**

This resource consists of the El Capitan Dam, which was originally completed in 1934 and first recorded in 2009 (Dalope and Gunderman 2009a). The Dam measures approximately 1170 feet long, 237 feet high, and 26 feet thick. This resource is part of the El Capitan Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.4.4.5 P-37- 031889**

This resource was initially recorded in 2009 as a wood-framed utilitarian building with a rectangular ground plan, wooden cladding, and a corrugated metal side gabled roof (Dalope and Gunderman 2009b). The building is included in the El Capitan Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.4.4.6 P-37-038878 (CA-SDI-22878)**

First recorded in 2017, site P-37-038878 consists of a single bedrock milling feature with six milling elements consisting of four slicks and two basins (Price et al. 2017a). The feature is located adjacent to the rock face of El Capitan Dam. During the current survey, the feature was reidentified and observed to be, essentially, as was it recorded. The feature was observed to be in fair condition, with some weathering and exfoliation apparent.



#### **5.4.4.7 P-37- 038881**

This resource was initially recorded in 2018 as a historic fieldstone lined ditch on the north side of an east-west asphalt road (Price et al. 2018a). The ditch is approximately 53 feet long and approximately 46 inches wide, with an interior width of 24-30 inches. The resource is included in the El Capitan Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.4.4.8 P-37- 038885 (CA-SDI-22884)**

This resource was initially recorded in 2017 as a historic structure consisting of the foundations of two houses and accompanying structures (Price et al. 2017b). The resource is included in the El Capitan Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.4.4.9 P-37-038886**

P-37-03886 is a prehistoric isolate documented in 2017 and consisting of a rim sherd of Tizon Brown Ware located in a graded area of an access road (Price et al. 2018b). During the current survey, this resource was not reidentified within the APE.

#### **5.4.4.10 P-37-038888**

This resource was initially recorded in 2017 as a historic structure consisting of the foundations of two houses and accompanying structures (Price et al. 2017c). The resource is included in the El Capitan Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.4.4.11 P-37-038889 (CA-SDI-22885)**

The site was originally recorded in 2017 as consisting of four bedrock milling features containing 29 milling elements including three conical mortars, 10 basins, and 16 slicks (Price et al. 2017d). During the current survey, all four of the milling features were reidentified within the APE, but, as with the original site recording, no associated artifacts were observed, possibly due to dense vegetation and leaf debris in the survey area. The resource is located north of the spillway and south of the access road.

#### **5.4.4.12 P-37-30217 (CA-SDI-19249)**

This site was originally recorded in 2007 as consisting of one bedrock milling feature containing two milling elements, both consisting of slicks (Piek 2007). During the current survey, the site was reidentified in the APE and updated to include a total of three bedrock milling features and a ground stone artifact. The features contain a total of 15 milling elements consisting of 10 slicks and five basins. Three of the basins are associated with slicks and one of them has heavy pecking and dark staining. Also observed was a three-sided mano, which may have also been used as a pestle. The bedrock features are in fair to good condition, while the elements are in fair to very good condition. The resource is located on the north side of the access road.



#### 5.4.4.13 P-37-39906 (CA-SDI-23286)

This newly identified resource consists of a one-course-tall rock wall constructed out of local large angular fieldstones. Some of the stones are in an apparent natural position, while others, large and small, appear to have been placed between the larger natural stones to construct the wall. The stones in the feature range in size from the size of a football to larger than a meter. No mortar is present. Due to the presence of thick vegetation, an accurate total count of rocks was not possible; however, it appeared that at least 22 rocks were present within the wall alignment. The wall is likely historic and is located along the south side of the access road, north of the spillway.

#### 5.4.4.14 P-37-39907 (CA-SDI-23287)

This newly identified prehistoric site consists of a sparse artifact scatter including a mano fragment and three flake tools. The site was observed adjacent to the access road; the area is highly disturbed, with signs of grading and recently imported gravel.

### 5.5 HODGES DAM

#### 5.5.1 Records Search

The records search results identified 19 previous cultural resource studies within a half-mile radius of the Hodges Dam project area (Table 15, *Previous Studies within a Half-mile of the Hodges Dam Project Area*). Twelve of the studies were cultural resource inventories, record searches, or site visits; the remaining studies include three data recovery or testing reports, two monitoring reports, and four environmental impact reports.

**Table 15**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE HODGES DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00125	Archaeological Associates, 1978	Archaeological Survey Report: The Proposed 320 +/-Acre Garner Anthony Lot Split Near Rancho Santa Fe in San Diego County, California.
00365	Carrico, Lacy, and Herdes, 1979	Archaeological/Historical and Biological Reconnaissance of the Austin-Hansen Property, Del Dios
00672	Gallegos, Kyle, Carrico, and Phillips, 1988	A Cultural Resource Overview for the San Dieguito River Valley San Diego, California.
02168	Mooney-Lettieri and Associates, Inc, 1984	Draft Supplemental Environmental Impact Report for the Rancho Cielo Project
03280	American Pacific Environmental Consultants, 1980	Rancho Cielo: Draft Environmental Impact Report - Volumes I & II
04176	Schaefer and Moslak, 2000	A Cultural Resource Inventory and Evaluation for the San Dieguito Reservoir Rehabilitation and Lake Hodges Flume Replacement Project
04236	American Pacific Environmental Consultants, Inc., 1981	Environmental Impact Report for San Dieguito River Study Draft Conceptual Master Plan



Report Number (SD-)	Author, Year	Report Title
04879	Ogden Environmental and Energy Services, 1995	Santa Fe Valley Specific Plan Draft Environmental Impact Report
08326	Mason, 2002	Cultural Resources Records Search and Field Survey Report for a Verizon Telecommunications Facility: Lake Hodges Dam in the City of San Diego, San Diego County, California
08720	Advance Planning and Research Associates, 1978	Anthony Lot Split Archaeological and Biological Survey TPM 14960, EAD Log # 78-8-203 Rancho Santa Fe, California
10639	Gallegos & Associates, 2002	Cultural Resource Data Recovery Plan for the Shaw Project: Sites CA-SDI-13052 and CA-SDI-13067, San Diego County, California
10640	Glenn, 2004	Existing Conditions Report and Treatment Plan for CA-SDI-13052 and CA-SDI-13067 within the Shaw Santa Fe Project, TM-5081, San Diego County, California
11206	McGinnis, 2007	Cultural Resources Survey Monitoring for the Del Dios/San Diego Coast to Crest Trail Segment and Pedestrian Bridge Project
11623	Hector and Brewster, 2002	San Dieguito River Valley Inventory of Archaeological Resources
11921	Ní Ghabhláin and Shaefer, 2002	Historic American Engineering Record - Lake Hodges Flume
12031	Guerrero, Tift, and Gallegos, 2006	Historical Resources Test Report for the San Dieguito River Park Del Dios Gorge Trail Study San Diego, California
12700	Willoughby, 2010	AT&T Cell-On-Wheels (C.O.W.) Site NS0600 Cow Kreitzer Property 17505 Camino Brisa Del Mar San Diego, San Diego County, California
16141	Pentney and DeGiovine, 2015	A Historical Survey Report for Lake Hodges Water Quality and Quagga Mitigation Measure Project, San Diego, California
18197	Price, 2019	Archaeological and Tribal Cultural Resources Monitoring Program for the Lake Hodges Reservoir Oxygenation System Project San Diego, California

The SCIC has a record of 10 previously recorded cultural resources within a half-mile radius of the Hodges Dam project area, two of which are located within the project area (Table 16, *Previously Recorded Resources within a Half-mile of the Hodges Dam Project Area*). The resources that have been documented within the Hodges Dam APE include P-37-019224 and P-37-023709 and are described in further detail in section 5.5.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources bedrock milling features and artifact scatters and historic resources consisting of a historic mine, three structures, the remains of a residence, and the Hodges Flume.



**Table 16**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE HODGES DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
012687	12687	Prehistoric Site	Site consists of four milling slicks.	Glenn et al., 1992
013063	13063	Prehistoric Site	Lithic scatter consisting of more than 30 flakes.	James, 1992
013067	13067	Prehistoric Site	Lithic scatter consisting of more than 75 flakes.	James, Mealey, Campbell, and Collins, 1992
013068	13068	Prehistoric Site	Dense area of quarried bedrock with a milling feature and a very high number of lithic flakes and debitage.	James and Campbell, 1992
013069	13069	Prehistoric Site	Flaking station with sparse lithic scatter and bedrock milling feature.	James, Mealey, Campbell, and Collins, 1992
013070	13070	Prehistoric Site	Site consists of more than 100 metavolcanic cores, flakes, and debitage.	Glenn, Mealey, and Collins, 1992
013650	13650H	Historic Site	Historic mine consisting of mine itself and rock wall.	Glenn, James, Pignuolo, and Briggs, 1993
015585	14331H	Historic Site	Remains of a residence dating to the early twentieth century. Features include stone walls, ceramic stairs and walkways, and a variety of landscaping plants. "August 6, 1927" is inscribed in cement at the base of a stairway.	York and Mullen, 1996
019224*	--	Historic Structure	Three historic structures: two large semi-subterranean masonry structures, one of which appeared to have been reused, and a concrete pad. Structures likely associated with Hodges Dam.	Moslak, 2000
023709*	--	Historic Structure	The Hodges Flume, built in 1917 to 1919 to transport water from Lake Hodges to the San Dieguito Reservoir. Flume consists of a 4.6-mile-long concrete lined ditch with 22 associated trestles and six siphons.	Shaefer and Moslak, 2000; Gregory and Bowden-Renna, 2007; AECOM, 2011

\* Within project area/APE

## 5.5.2 Archival Research

Archival sources consulted include historic aerials from 1939, 1953, 1966, and 1980 (NETR Online 2021) and several historic USGS topographic maps, including 1876 and 1901 Escondido (1:62,500), and 1948, 1968, and 1983 Rancho Santa Fe (1:24,000) topographic maps. Two GLO plat maps from surveys in 1876 and 1922 were also reviewed.

The original survey map from 1876 identifies the project area and environs as barren and impassable mountains with the San Bernardino River running west through a valley. By the completion of the 1922



plat map, Hodges Dam had already been constructed, and a road ran along the northern edge of the San Bernardino River and Hodges Lake. Historic topographic maps concur with this, with the 1893 and 1901 maps showing only mountainous terrain and the course of the San Bernardo River. Topographic maps from 1948, 1968, and 1983 show little change outside of the presence of the dam and associated flumes and siphons, the flooding of the lake, and the construction of Del Dios Road; but this time the river is labeled the San Dieguito River. Aerials from 1939, 1953, 1966, and 1980 expose no additional changes to the area (NETR Online 2021).

### 5.5.3 Survey Methodology

The Hodges Dam project area was surveyed by Ms. Roy and Mr. LaChappa on July 20, 2020 and April 20, 2021. The project area is located between Del Dios Highway and Camino Del Sur to the north-south, and Del Dios Highway and Interstate 5 freeway to the east-west. The mountainsides on either end of the dam have been blasted for the original dam construction. Dense vegetation and duff, present on the sides of two access roads, and the east and west sides of the dam (Plate 6) obscured much of the ground surface. Visibility was generally zero to 15 percent overall, with up to 70 percent visibility in patches of disturbed ground. Soils composed of decomposing granite and metavolcanic bedrock with chunks of angular rock make up the silty sandy soils. Where feasible, transects were walked in 2-to-3-meter intervals along the access roads/trails. Reconnaissance survey methods (non-interval transect) were used, however, to visually inspect open areas and along the sides of the access roads due to the dense vegetation. The San Dieguito River bed, itself, was thick with wetland species both native and non-native including willow, sycamore, oaks, scrub oak, as well as other riparian, sage scrub, and chaparral plants. Non-native grass, mustard, and foxtail were also observed.



Plate 6. Overview of Hodges Dam and access road to bottom of the dam. View to the northeast.



## 5.5.4 Survey Results

Two cultural resources were identified within the Hodges Dam APE during the record search (Table 17, *Cultural Resources Identified within the Hodges Dam Project Area*). These include masonry and concrete structures and the Hodges flume, both associated with the Lake Hodges Reservoir Complex (McCausland 2022). A map of the Hodges Dam APE and cultural resource locations are provided on Figure 9, *Cultural Resources Identified within the Hodges Dam APE* (Confidential Appendix E).

**Table 17**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE HODGES DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-019224	Historic Structure	Masonry and concrete structures	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-023709	Historic Structure	Hodges Flume	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.

### 5.5.4.1 P-37-019224

This resource, recorded in 2000, consists of three historic structures along a terrace adjacent to a dirt road north of the San Dieguito River (Moslak 2000). Two of the structures are constructed of locally available rock masonry, and the third is a concrete pad poured onto a rock rubble base; all three are likely associated with the construction of the Lake Hodges Dam or irrigation flume. P-37-019224 is part of the Lake Hodges Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

### 5.5.4.2 P-37-023709

The historic Hodges Flume, constructed from 1917 to 1919, transported water from Lake Hodges to the San Dieguito Reservoir. The flume was described as a 4.6-mile-long concrete lined ditch with 22 associated trestles and six siphons (AECOM 2011). This resource is part of the Lake Hodges Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

## 5.6 MIRAMAR DAM

### 5.6.1 Records Search

The records search results identified 16 previous cultural resource studies within a half-mile radius of the Miramar Dam project area (Table 18, *Previous Studies within a Half-mile of the Miramar Dam Project Area*). Fourteen of the studies were cultural resource inventories, surveys, or studies; the remaining studies include environmental impact reports, the results of a monitoring program, and a cultural resource assessment.



**Table 18**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE MIRAMAR DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00380	Carrico, 1978	Archaeological/Historic Survey of the Scripps Mesa Verde Project
01503	Van Wormer, 1987	Historic Architectural Study of the Meanley Residence, Scripps Ranch
02887	City of San Diego, 1994	Draft Environmental Impact Report: Treena Mesa Planned Industrial Development
02917	Connors and Bull, 1979	An Archaeological Reconnaissance Survey of Miramar Ranch North
03381	Glenn, 1993	Historical Assessment of Mission Hills Block 53 & The Buildings Located At: 719 And 727 Fort Stockton Dr, 4020-4024, 4026-4032, & 4046 Eagle St, 702, 724, & 726 Washington St, & 4021, 4021 1/2, & 4029 Falcon St
03720	Schroth, Gallegos, McHenry, and Harris, 1996	Historical/Archaeological Survey Report for the Water Repurification Pipeline and Advanced Water Treatment Facility, City of San Diego, California
05060	City of San Diego, 2001	Draft Environmental Impact Report Miramar Water Treatment Plant Upgrade and Expansion
05064	Cleland, 2000	Historical Resource Inventory for the Miramar Water Treatment Plant Upgrade and Expansion, San Diego, California
05076	Cleland, 2000	Historical Resources Inventory for the Miramar Distribution System Improvements San Diego, California
05746	City of San Diego, 1994	DEIR for Treena Mesa Planned Industrial Development
07866	Carrico, 1978	Archaeological/Historical Survey of the Scripps Mesa Vista Project
10373	Grant, 2006	Cultural Resources Technical Report Scripps Lake Culvert Repair the City of San Diego
11482	Kyle, 2007	Historic Property Survey Report - Mira Mesa / Scripps Ranch Direct Access Ramp Project
12179	Caltrans, 2009	Final Environmental Impact Report/Environmental Assessment with Finding of no Significant Impact of the Mira Mesa/Scripps Ranch Direct Access Ramp Project
13996	Zepeda-Herman, 2012	Draft Results of Historical Resources Survey of the Scripps Ranch Pump Station Project, San Diego, California
15528	Stropes and Smith, 2015	A Class III Historic Resource Study for the Miramar Clearwell Improvements Project, San Diego, California
10551	Arrington, 2006	Cultural Resources Final Report of Monitoring and Findings for the Qwest Network Construction Project, State of California
11826	Robbins-Wade, 2008	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California
12200	City of San Diego, 2009	Draft Environmental Impact Report for the Master Storm Water System Maintenance Program (MSWSMP)
11823	Kick, 2007	Cultural Resources Technical Report for the San Diego Vegetation Management Project

The SCIC has a record of five previously recorded cultural resources within a half-mile radius of the Miramar Dam project area, one of which is located within the project site (Table 19, *Previously Recorded Resources within a Half-mile of the Miramar Dam Project Area*). The resource that has been documented within the Miramar Dam project area includes P-37-008676 and is described in further detail in



section 5.6.4 below. In general, the sites recorded within the records search limits consist of prehistoric artifact scatters and a multi-component site consisting of a homestead and a prehistoric shell scatter.

**Table 19**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE MIRAMAR DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
008675	8675	Prehistoric Site	Site consists of debitage and flaked artifacts.	Rhodes, 1980
008676*	8676	Prehistoric Site	Site consists of a tool manufacturing area, flaked stone debris, and several stone tools.	Rhodes, 1980
011955	11955	Prehistoric Site	Site consists of a lithic scatter and quarry site.	Ritz, Tift, and Schulz, 1990
012203	12203/H	Multi-component Site	Site consists of a historic homestead with a historic debris scatter, and a possible prehistoric shell scatter. Structure likely built by Fred Scripps in 1893.	Gallegos et al., 1995; Van Wormer and Fulmer 1990; Hanna and Whitehouse, 1990
013635	13635	Prehistoric Site	Lithic scatter consisting of debitage and tools.	Glenn, Briggs, and Pignolo, 1993

\* Within project area/APE

## 5.6.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1972, and 1982 (NETR Online 2021) and several historic USGS topographic maps, including 1903 and 1930 La Jolla (1:62,500), 1942 Poway (1:62,500), and 1952, 1967, and 1975 Poway (1:24,000) topographic maps. Three GLO plat maps from surveys in 1879, 1880, and 1890 were also reviewed.

The original plat map from 1879 shows the project area as along the eastern end of Canada de la Mission at the base of bushy unsurveyable mountains and within the project area is a structure labeled Fisher's. Just to the west of the project area is a recorded road, following the approximate route of the modern day I-15. The 1880 plat map shows nothing in the project area but does continue to record the road, while the 1890 map shows nothing.

The 1903 topographic map shows a road following the base of the mountain and intersecting the project area, with several structures along its length, none of which are located within the project area. In addition, two small reservoirs and associated dams are located within the project area, with the first in the center of the project area and the second just south of the first reservoir. These features are still present in the 1930, 1942, and 1952 topographic maps, though by 1942 they are connected by several roads, and a structure is present next to the dam of the southern reservoir. By 1967, seven years after the construction of the Miramar Dam, Miramar Reservoir and its filtration plant are recorded on the map, with the southern reservoir shrinking in size. Both are still recorded on the 1975 and 1996 topographic maps.

Aerial photography from 1953 shows both reservoirs' numerous dirt roads and the building at the southwest corner of the southern reservoir (NETR Online 2021). The 1964 aerial captures the newly



constructed Miramar Reservoir and filtration plant, and the remaining aerials from 1972 and the 1980s show no further changes within the project area but do record the construction of the commercial buildings to the west of the project area (NETR Online 2021).

### 5.6.3 Survey Methodology

The Miramar Dam APE was surveyed by Ms. Roy and Mr. LaChappa on June 23, 2020. The project area is located between Scripps Ranch Boulevard and Scripps Lake Drive to the north and south, and Scripps Ridge Drive and Scripps Ranch Boulevard to the east and west. The dam and a saddle dam in the survey area are constructed of concrete with earthen man-made slopes. The west-facing slope has two access roads on the southern portion. One is located approximately a quarter of the way downslope and the other about halfway down-slope, with both stopping approximately midway across the slope. There are two wooden staircases, one by each access road. Much of the slope was covered with non-native vegetation with some native vegetation, including non-native grassland with sparse occurrence of chaparral and sage scrub plants (Plate 7). The northern corner of the slope was strewn with displaced angular bedrock boulders, some may have been in-situ, with dense native and non-native vegetation.



Plate 7. Overview of north portion of slope, dense vegetation on slope (background). View to the north.

Where feasible, survey transects were walked in two- to three-meter intervals. Much of the Miramar APE, however, consists of the man-made slope consisting of fill material comprised of sand and cobbles of various sizes. Reconnaissance survey (non-transect survey) was also used within areas of dense brush, as in the north portion of the area, and by a weir located beyond the fence at the base of the slope.

Two spillways, one by the weir and the other at the library, were present in the survey area. The spillway by the weir is within an area of dense brush; visibility was low, less than 10 percent, with leaf and branch debris, water, and various sized cobbles covering the ground and within the spillway path. The spillway at the library, and the blow-off valve at the spillway, are within the boundaries of a parking lot,



containing dense landscaped grass and vegetation, and on a steep, vegetated slope. Visibility in this latter area was less than 5 percent.

## 5.6.4 Survey Results

One cultural resource, a prehistoric artifact scatter, was identified within the Miramar Dam APE during the record search (Table 20, *Cultural Resources Identified within the Miramar Dam Project Area*). A map of the Miramar Dam APE and cultural resource locations are provided on Figure 10, *Cultural Resources Identified within the Miramar Dam APE* (Confidential Appendix E).

**Table 20**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE MIRAMAR DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-008676 (CA-SDI-8676)	Prehistoric	Lithic artifact scatter	Not reidentified; likely destroyed.

### 5.6.4.1 P-37-008676 (CA-SDI-8676)

This resource was recorded in 1980 as a prehistoric tool manufacturing area, consisting of stone flaking debris, at least two hammerstones, and several flake scraping tools (Rhodes 1980). The site was documented on a south-facing knoll, west of the reservoir.

During the current field survey, the resource was not reidentified within the mapped boundaries of the APE. However, it is likely the site is slightly mis-mapped at the SCIC and may have been recorded outside of the APE. The boundary, as shown on the SCIC maps, has the southern portion of the site extending south over the dam wall, while the site form indicates the site as being west of the reservoir (Figure 10). Additionally, a review of aerial images from the late 1980s show the larger site area as being graded. It appears that due to that grading and other modern disturbances observed, the site has likely been destroyed since the original 1980 recordation.

## 5.7 MORENA DAM

### 5.7.1 Records Search

The records search results identified one previous cultural resource study within a half-mile radius of the Morena Dam project area (Table 21, *Previous Studies within a Half-mile of the Morena Dam Project Area*).

**Table 21**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE MORENA DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
16794	Murray, Hosseini, Pham, and Giacinto, 2016	Cultural/Historical Resource Technical Report: Morena Reservoir Outlet Tower Replacement Project Lake Morena Village, San Diego County, California



The SCIC has a record of five previously recorded cultural resources within a half-mile radius of the Morena Dam project area, two of which are located within the project APE (Table 22, *Previously Recorded Resources within a Half-mile of the Morena Dam Project Area*). The resources that have been documented within the Morena Dam APE include P-37-036511 and P-37-037080 and are described in further detail in section 5.7.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of bedrock milling features and a temporary campsite. Two historic structures – the Morena Dam and Circuit 449, are documented within the record search limits.

**Table 22**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE MORENA DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
004723	4723	Prehistoric Site	Site consists of an indeterminate number of bedrock milling features, ceramic sherds and debitage.	Polk and Polk, 1972; Pham 2014
034284	--	Prehistoric Site	Site consists of a single milling station on a small granite boulder.	Pham, 2014
034293	--	Prehistoric Site	Site consists of a temporary camp site with three milling stations and a light scatter of ceramics and lithic debitage.	Pham, 2014
036511*	--	Historic Structure	Circuit 449 (C449) is an approximately 14-mile power distribution line.	Gorman, 2014
037080*	--	Historic Structure	The Morena Dam was finished in 1930 and is a 283.5-foot tall, 550-foot wide loose rockfill structure with a concrete masonry water face.	Murray and Hosseini, 2015

\* Within project area/APE

## 5.7.2 Archival Research

Archival sources that were also consulted include historic aerials from 1953, 1963, and 1989 (UCSB Digital Library 2021) and several historic USGS topographic maps, including 1903 Cuyamaca (1:125,000), 1942 Potrero (1:62,500), and 1960 and 1975 Morena Reservoir (1:24,000) topographic maps. Three plat maps from GLO surveys in 1859, 1881, and 1927 were also reviewed.

The early plat maps from 1859 and 1881 show nothing within the project area, recording only a creek and a dry branch of the creek within the project area and various ravines and gulches in the surrounding area. The 1927 plat map records the presence of the Morena Dam and reservoir, built in 1895, as well as showing how the reservoir and surrounding areas had been split into several different tracts and parcels. The 1903 Cuyamaca topographic map shows the location of the Morena Dam, along with several roads and structures at the base of the dam. By the 1942 map, the structures were no longer recorded, though the 1953 aerial seem to indicate that they are were still present (UCSB Digital Library 2021). Both the 1960 and 1975 topographic maps continued to show the road to the dam, as well as the high and low water marks of the lake, supported by the 1963 and 1989 aerial photographs.



### 5.7.3 Survey Methodology

The Morena Dam project area was surveyed by Ms. Roy, accompanied by Ms. McCausland and Mr. LaChappa of Red Tail Environmental, on July 1, 2020. The project area is between north of Morena Reservoir Road, south of Skye Valley Road, west of Morena Reservoir, and east of Cottonwood Creek. Morena Dam is a concrete and earthen man-made dam structure with a spillway on the north side and an underground spillway on the southwest side of the dam. To the east is Morena Reservoir and to the west is the steep southwest facing, man-made earthen slope and Cottonwood Creek.

The spillway on the north side of the dam is up against a cut in the mountainside that appears to have been covered in concrete. However, dirt and stone rubble littered the interior of the spillway, obscuring much of the surface (Plate 8). This side of the mountain appeared to have been blasted to make room for the dam and the spillway. The spillway on the southwest side of the dam runs underground via a hand-dug tunnel that starts under the tower in the lake and stretches approximately 500 feet northwest to a concrete spillway on the northwest facing, southern slope of Cottonwood Creek.



Plate 8. Overview of the Morena Dam spillway and north end of the dam. View to the north.

Due to steep slopes and dense vegetation, transect survey was generally not feasible for the Morena Dam project area, so a non-transect, reconnaissance survey methodology was utilized. Vegetation was thick along the sides of the access road and along the switchback trail to the weir, located southwest of the dam. The soils at the dam consisted of fill material comprised of decomposing granitic sand, gravel, and cobbles of various sizes. The access road to the dam, from the eastern gate, was cut into a steep slope covered with dense vegetation. The steep slopes were not surveyed, but the edges of the road were visually inspected. Visibility outside of the disturbed areas was generally less than 10 percent.



## 5.7.4 Survey Results

Two cultural resources were identified within the Morena Dam APE during the record search. These include two historic structures: a power distribution line and the dam. During the field survey, a new archaeological site was recorded within the APE, for a total of three cultural resources within the Morena Dam project area (Table 23, *Cultural Resources Identified within the Morena Dam Project Area*). A map of the Morena Dam APE and cultural resource locations are provided on Figure 11, *Cultural Resources Identified within the Morena Dam APE* (Confidential Appendix E).

**Table 23**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE MORENA DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-036511	Historic Structure	Circuit 449 distribution line, approximately 14 miles long and constructed in 1951	C449 crosses APE along access road, observed to be in the same condition as when it was originally recorded in 2014.
P-37-037080	Historic Structure	Morena Dam	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-39908 (CA-SDI-23288)	Prehistoric Site	Lithic artifact scatter	Newly identified resource

### 5.7.4.1 P-37-036511

Resource P-37-036511 consists of Circuit 449 (C449), a 14-mile-long distribution line located east of Lake Morena County Park, servicing the south end of the park, Morena Village to the east, and the community of Boulder Oaks to the north. The utility poles in this line were constructed as early as 1951, with some replacement poles constructed as recently as 1983 (Gorman 2014b).

The distribution line extends across the APE at the southern edge of the dam and travels eastward along the access road. The current survey observed the line to be in the same condition as when it was recorded in 2014.

### 5.7.4.2 P-37-037080

The Morena Dam, finished in 1930, is a 283.5-foot tall, 550-foot wide loose rockfill structure with a concrete masonry water face. Construction of the dam occurred in two phases, the first in 1896-1898 and the second in 1909-1912. Alterations to the dam occurred in 1917, 1923, and 1930 (Murray and Hosseini 2015).

The Morena Dam is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

### 5.7.4.3 P-37-39908 (CA-SDI-23288)

This newly discovered site consists of a small flake/tool scatter. The artifacts were observed in a disturbed open area on the north end of the dam and have been redeposited in their current location.



At least four metavolcanic flakes were observed, with three of the artifacts showing signs of usage or modification along lateral edges. More artifacts may be in the area; however, due to disturbances from the construction of the dam and its associated components, it was hard to distinguish between culturally modified and modern mechanically made lithic artifacts.

## 5.8 MURRAY DAM

### 5.8.1 Records Search

The records search results identified 20 previous cultural resource studies within a half-mile radius of the Murray Dam project area (Table 24, *Previous Studies within a Half-mile of the Murray Dam Project Area*). Nine of the studies were cultural resource surveys, seven consist of cultural resource studies or monitoring reports, and four consist of environmental planning documents.

**Table 24**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE MURRAY DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00803	Kelsay, 1987	Negative Archaeological Survey Report: Proposed Additional Project Limits for Westbound Auxiliary Lane on Interstate 8
00994	Hanna, 1978	A Cultural Resource Study of the Murray, Cowles, and Fortuna Mountain Regional Park
01706	Price, 1980	Phase I Archaeological Survey Report for Lane Additions and Sound Barrier on Interstate 8
02275	Berryman, 1988	Cultural Resources Survey for The Vanier Parcel
02773	City of San Diego, 1993	Alvarado Water Filtration Plant Expansion and Rehabilitation No 73-261
03290	Van Wormer, 1994	Alvarado Water Filtration Plant Expansion and Rehabilitation
03291	City of San Diego, 1998	Environmental Impact Report for Alvarado Water Filtration Plant Expansion and Rehabilitation
03324	City of San Diego, 1998	Draft Mitigated Negative Declaration of Lake Murray Trunk Sewer
03325	Case and Carrico, 1998	Archaeological Survey for the Lake Murray Trunk Line Project, San Diego, California
03471	Case and Carrico, 1998	Archaeological Survey for The Lake Murray Trunk Line Project (WWFD Task Order Number 6) San Diego, California
04450	Price, 1980	11-SD-08 P.M.8.5/10.4 11203-189821 Auxiliary Lanes & Sound Barriers
04692	Corum, 1986	First Supplemental Historic Property Survey 11-SD-52 P.M. 7.3/17.2
05171	Manley, 1997	Final Cultural Resources Site Survey for Norman Lane Property, San Diego, California
05187	Case, 1998	Archaeological Survey for the Lake Murray Trunk Line (WWFD Task Order Number 6) San Diego, California
05675	Kelsay, 1987	Negative Area Survey Report District II County of San Diego
10536	Glenn, 1993	Report to the Historical Board for the City of San Diego Water Utilities Department Alvarado Filtration Plant Upgrade and Expansion



Report Number (SD-)	Author, Year	Report Title
15048	Bonner and Crawford, 2014	Direct Ape Historic Architectural Assessment for AT&T Mobility, LLL Candidate SD02464 (New Life Presbyterian), 5333 Lake Murray Boulevard, La Mesa, San Diego County, California
15168	Tennesen, 2013	ETS #22462, Cultural Resources Monitoring for the Wood Pole Inspections, 16 Poles, Murr Subarea Project, San Diego County, California
15642	Bonner and Williams, 2013	Cultural Resources Records Search and Site Visit Results for AT&T Mobility, LLC Candidate SD0264 (New Life Presbyterian), 5333 Lake Murray Boulevard, La Mesa, San Diego County, California
11826	Robbins-Wade, 2008	Archaeological Resources Analysis for the Master Stormwater System Maintenance Program, San Diego, California

The SCIC has a record of five previously recorded cultural resources within a half-mile radius of the Murray Dam project area, but none have been recorded within the project area (Table 25, *Previously Recorded Resources within a Half-mile of the Murray Dam Project Area*). In general, the sites recorded within the records search limits consist of prehistoric resources consisting of artifact scatters, as well as two historic sites, the Lake Murray Dam Keeper’s House and the New Life Presbyterian Church of La Mesa. The record for one resource did not contain any information regarding its contents.

**Table 25**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE MURRAY DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
000208	208	Unknown	No description of resource provided.	Treganza, n.d.
011081	11081	Prehistoric Site	Site consists of flaked stone artifact scatter and four identified cores.	Berryman, 1989
016024	--	Historic Site	Lake Murray Dam Keeper’s House constructed between 1910 and 1928.	Van Wormer, 1998
034147	--	Prehistoric Site	Artifact scatter consists of marine shell.	Tift, 2013
035550	--	Historic Site	The New Life Presbyterian Church of La Mesa is a rectangular, asymmetrical, Modern style former commercial building converted into a religious building built in 1966. The Church moved to this property in 1980.	Crawford, 2013

## 5.8.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, and 1980 (NETR Online 2021) and several historic USGS topographic maps, including 1903 and 1930 La Jolla (1:62,500), and the 1947, 1967, and 1975 La Mesa (1:24,000) topographic maps.

The 1903 La Jolla map shows the La Mesa Reservoir, built in 1895 within the project area, along with several roads to the south and southeast. By the time the 1930 map was created, the reservoir had been renamed Murray Reservoir and there were two buildings present at the southern extent of the project



area along the north side of a road. In the 1947 map, the roads have changed alignment, and there are two additional structures within the southern portion of the project area. The 1967 map records the filtration plant as well as buildings to the northwest, one of which is within the project area, and picnic areas to the north, all of which continue to be present with no change on the 1975 map.

Aerials from 1953 show the filtration plant and a large residential neighborhood south of the project area (NETR Online 2021). The neighborhood expanded and became more extensive by the time the 1964 aerial was taken; the aerial also shows the construction of residences to the northwest (NETR Online 2021). One structure is visible within the project area—this structure still exists in the present with little to no change to its building footprint. The 1980 aerial continues to show the expansion of residential housing in the vicinity of the reservoir consistent with what is there at the present (NETR Online 2021).

### **5.8.3 Survey Methodology**

The Murray Dam project area was surveyed by Ms. Roy and Mr. LaChappa on July 20, 2020. The project area is located between Jackson Drive and Interstate 8 to the north and south, and Kiowa Drive and Del Cerro Boulevard to the east and west. Vegetation in the survey area consisted of non-native and native weeds and grasses as well as palm trees, willow, and wetland grasses/plants and trees in the creek area adjacent to the project area.

Most of the area around the dam has been disturbed and consists of built environment. The slopes on the south side of the dam are highly disturbed or have old cast-iron in-concrete casings and are very steep (Plate 9). Portions of the APE were paved or covered in concrete or were established as fill material or were covered in dense vegetation and duff. Ground visibility in these areas was often nearly zero percent and reconnaissance survey methods were most often used to look for any areas where the ground surface was visible. In other areas, interval-transect survey methods were used consisting of walking parallel transects spaced approximately two meters apart. Visibility was, generally, no more than 20 percent and dropped to zero percent within areas of dense brush, including along the creek bed and around the edges of the reservoir.





Plate 9. Overview of project area on south side of Murray Dam from west side. View to the southeast.

#### 5.8.4 Survey Results

No cultural resources were observed during the survey except for built environment resources associated with the Murray Reservoir Complex, which is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* (McCausland 2022) that has been prepared for the project.

### 5.9 RANCHO BERNARDO DAM

#### 5.9.1 Records Search

The records search results identified 15 previous cultural resource studies within a half-mile radius of the Rancho Bernardo Dam project area (Table 26, *Previous Studies within a Half-mile of the Rancho Bernardo Dam Project Area*). Nine of the studies were surveys, two were monitoring reports, and two were investigations. The remaining two studies include a record search and a draft environmental impact report.



**Table 26**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE RANCHO BERNARDO DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00325	Carrico, 1978	Archaeological Investigation at Sites W-1406 Through W-1409 Rancho Bernardo California
00331	Carrico, 1978	Archaeological Survey of Bernardo Industrial Park West
00478	Corum, 1978	An Archaeological Survey Report for a Proposed Interstate 15 Crossing Rancho Bernardo
00653	Carrico, 1977	Appendix A, Archaeological Survey of High Country West Units 1-4
01069	Franklin and Carrico, 1979	Archaeological Investigations at High Country East, San Diego County, California (sites W-2058 Through W-2061).
03375	Glenn, Collins, Crawford, Jones, and Mitchel, 1994	Cultural Resource Monitoring, Testing, and Evaluation Program for the San Pasqual Aquatic Treatment Facility and Pipeline, San Diego, California
04298	Eckhardt, 1977	Archaeological Survey of High Country East
05051	Corum, 1979	An Addendum to an Archaeological Survey Report for A Portion of Proposed Interstate 15 Crossing Rancho Bernardo
05172	Benn, 1996	Archaeological Resources Survey of the Bernardo Industrial Park Lot 12, 16701 West Bernardo Drive, San Diego, California
07284	Carrico, 1978	Archaeological Survey of Bernardo Industrial Park North
08588	City of Escondido, 1980	Draft Environmental Impact Report for Expansion of Wastewater Treatment Facility
08699	Ferguson and Bull, 1978	Report of a Cultural Resources Survey for the SA-680 Alignment
11421	Bonner and Aislin-Kay, 2007	Cultural Resource Records Search Results for T-Mobile Facility Candidate SD06593a (Ryone Light Pole), Caminito Ryone and Avenida Venusto, San Diego, San Diego County, California
17575	Williams, 2016	Cultural Resource Survey Report for Distribution Systems Modifications on the San Diego Gas & Electric Company and Southern California Gas Company Pipeline Safety & Reliability Project, San Diego County, California
18114	Wolfe and Cooley, 2019	Letter Report: ETS 29869 - Cultural Resources Monitoring Report for the TL633 20SD Transmission Underground Conversion and Reconductor Project, Rancho Bernardo, San Diego County, California

The SCIC has a record of six previously recorded cultural resources within a half-mile radius of the Rancho Bernardo Dam project area, but none have been recorded within the project area (Table 27, *Previously Recorded Resources within a Half-mile of the Rancho Bernardo Dam Project Area*). In general, the sites recorded within the records search limits consist of prehistoric resources consisting of artifact scatters. A multi-component site consisting of a prehistoric and historic artifact scatter was also recorded within the search radius.



**Table 27**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE RANCHO BERNARDO DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
005519	5519	Prehistoric Site	Artifact scatter consisting of metate fragments, manos, cores, and other stone tools	Eckhardt and Carrico, 1978
005520	5520	Prehistoric Site	Artifact scatter consisting of metate fragment, core, and other stone tools	Eckhardt and Carrico 1978
005521	5521	Prehistoric Site	Artifact scatter consisting of metate fragments, mano fragments, and other stone tools	Eckhardt and Carrico, 1978
005522	5522	Prehistoric Site	Artifact scatter consisting of metate fragments, a projectile point, ceramics, and other stone tools.	Eckhardt and Carrico, 1978
005523	5523	Prehistoric Site	Artifact scatter consisting of mano fragments, metate fragments, shell, and other stone tools.	Eckhardt and Carrico, 1978
007119	7119/H	Multi-component Site	Site consists of a sparse lithic and historic scatter consisting of flaked stone artifacts and miscellaneous historic artifacts.	Franklin, 1979

### 5.9.2 Archival Research

Archival sources consulted include historic aerials from 1947, 1953, 1963, and 1980 (NETR Online 2021) and several historic USGS topographic maps, including 1893 and 1901 Escondido (1:62,500), and the 1948, 1968, and 1975 Escondido (1:24,000) topographic maps. Two GLO plat maps from surveys in 1876 and 1922, as well as the original Diseño del Rancho San Bernardo from the 1840s (Bancroft Library 2021), were also reviewed.

The diseño shows the project area within the boundaries of Rancho San Bernardo, along the western side of Canada y Arroyo de la Bernardo (Canyon and Stream of Bernardo), with what is recorded as pools to the east. Both plat maps only show the project area as within Rancho San Bernardo, with no identifiable characteristics recorded. The 1893 and 1901 topographic maps show the project area as mountainous, with no noticeable features or structures anywhere in the surrounding areas. By the time the 1948 map was created, the only change visible is a road that runs to the west of the project area and the 395 Highway present to the east. By the completion of the 1968 topographic map, the Rancho Bernardo reservoir is recorded, and the 395 Highway has expanded. The 1975 topographic map shows the encroachment of commercial buildings to the north along San Bernardo Drive.

The 1947 aerial photograph shows the project area and its environs as undeveloped rural land, with the road to the east and the 395 Highway to the west visible on the 1953 aerial (NETR Online 2021). By the time the 1963 aerial was taken, the reservoir had been constructed and the land to the south of the project area is visible as an agricultural field. By 1980, construction of the residential community had begun with houses to the north and west of the project area already completed (NETR Online 2021).



### 5.9.3 Survey Methodology

The Rancho Bernardo Dam project area was surveyed by Ms. Roy and Mr. LaChappa on June 23, 2020. The survey area is located between Cloudcrest Drive and Big Springs Way to the north and south, and Lofty Trail Drive and Big Springs Way to the east and west. The dam is constructed of concrete with an earthen man-made slope on the east and south sides. Most of the area surveyed was located within fencing that bounds the reservoir. A majority of this area was covered in pavement or black felt paper and mulch; as such, little ground could be observed within the project area overall. The ground outside of the south and east sides of the fencing was accessed via a community park with well-established grass (Plate 10). Overall visibility less than 10 percent; the soils inspected were primarily within rodent extrusion piles and a few open patches. On the north side of the APE, outside the fencing, the slope had been cut to construct the reservoir and is covered in black fabric and mulch. This area was not accessible due to thick vegetation and disturbances. On the west side, outside of the fencing, the ground has been covered in black felt and mulch; visibility was less than five percent. The area outside of the fence along the southwest portion of the project area was thick with vegetation, also resulting in visibility of less than five percent.



Plate 10. Overview of southern portion of APE on south side of fencing in park. View to the west.

### 5.9.4 Survey Results

No cultural resources were observed during the survey except for the Rancho Bernardo Reservoir itself, which is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* (McCausland 2022) that has been prepared for the project.



## 5.10 SAN VICENTE DAM

### 5.10.1 Records Search

The records search results identified 12 previous cultural resource studies within a half-mile radius of the San Vicente Dam project area (Table 28, *Previous Studies within a Half-mile of the San Vicente Dam Project Area*). Eight of the studies were cultural resource inventories, evaluations, monitoring reports, or surveys; the remaining studies include a treatment plan, a data recovery report, an overview, and a historic document.

**Table 28**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE SAN VICENTE DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00546	Cupples, 1975	An Archaeological Survey of the San Diego River Valley
03720	Schroth, Gallegos, McHenry, and Harris, 1996	Historical/Archaeological Survey Report for the Water Repurification Pipeline and Advanced Water Treatment Facility, City of San Diego, California
09117	Eighmey, Dolan, and Wahoff, 2001	Archaeological Evaluation of Sites Along Beeler Stub San Diego County Water Authority Emergency Storage Project
09360	Cooley, 2005	Report of Cultural Resources Inventory for Five Geotechnical Investigation Locations Proposed for The San Diego County Water Authority's Lake San Vicente Dam Raise Project, San Diego County, California
10126	Willey and Dolan, 2004	Emergency Storage Project: Above and Below the Valley: Report on Data Recovery at San Vicente Reservoir San Diego County, California
10500	Gregory, 2006	Archaeological Monitoring Report for the Relocation of Three Boulders From CA-SDI-13847 to Rona Indian Reservation
11270	Various, n.d.	San Vicente Reservoir
11857	Hector and Wolf, 2008	Supplemental Inventory and National Register Evaluation Report for the San Vicente Carryover Storage Project
11945	Dolan, 2004	San Vicente Dam - Photographs, Written Historical, And Descriptive Data
12345	Cleland and McCorkle-Apple, 2001	Historic Properties Treatment Plan for the Emergency Storage Project
12457	Gardner, 2010	Archaeological Monitoring for the San Vicente Dam Raise Project, San Diego County, California
12628	McCown, 1945	An Archaeological Survey of San Vicente Lake Bed, San Diego County, California

The SCIC has a record of 16 previously recorded cultural resources within a half-mile radius of the San Vicente Dam project area, six of which are located within the project site (Table 29, *Previously Recorded Resources within a Half-mile of the San Vicente Dam Project Area*). The resources documented within the San Vicente Dam APE include P-37-013629, -013630, -024354, -024958, -026965, and -026974 and are described in further detail in section 5.10.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of occupation sites, bedrock milling features, a possible yoni fertility feature, and isolated artifacts. One multi-component site is recorded as a prehistoric habitation site with a historic rock wall. Five historic resources, a townsite, a trash scatter,



the San Vicente Dam, a segment of the Old Julian Highway, and a granite procurement site, are documented within the record search limits. One resource record did not contain any information regarding its contents.

**Table 29**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE SAN VICENTE DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
000120	120	Prehistoric Site	Prehistoric occupation site with ceramic sherds and a quartz crystal drill	Fenenga, 1949
000125	125	Unknown	No description of resource provided.	Treganza, n.d.
013629*	13629H	Historic Site	Historic townsite of Foster, which was the eastern terminus for the San Diego and Cuyamaca Eastern Railroad from 1889 to 1916. Site consists of three loci – A and B are small scatters, while C is a dump.	James, Collins, Pignoli, and Briggs, 1993; Case, 1997
013630*	13630/H	Multi-component Site	A prehistoric habitation site consisting of milling, rock art and rock shelters. Historic component includes glass shards and a rock wall.	Briggs and Pignoli, 1993; Schroth and Perry 1996; Eighmey et al., 2000
013845	13845	Prehistoric Site	Site consists of a bedrock milling feature with six slicks.	Briggs, James, Bark, Norris, and Cooley, 1993
013846	13846	Prehistoric Site	Site consists of three bedrock milling features with multiple slicks. One unifacial mano was located at the base of one of the features.	James, Bark, Norris, and Cooley, 1993
013847	13847	Prehistoric Site	Site consists of six bedrock milling features and associated ground stone artifacts. May also contain associated rock art.	James, Bark, Norris, and Cooley, 1993
014120	--	Prehistoric Isolate	One quartzite core.	James and Norris, 1995
015480	--	Prehistoric Isolate	Isolate consists of a quartzite bifacial core with more than ten negative flake scars.	James, Norris, Briggs, Schultze, and Cooley 1993
024354*	--	Historic Structure	San Vicente Dam. Built in 1941-1943, San Vicente Dam is a concrete gravity section dam with a straight axis. The dam is 199 feet tall, 980 feet long, and 14 feet wide.	Gustafson, 2002; Gunderman and Dalope, 2009
024958*	16514	Prehistoric Site	Possible "Yoni" located on the southwest face of a large granitic boulder.	Apple and Lilburn, 2002; Sowles, 2009
026965*	17650	Prehistoric Site	A single oval basin on a large bedrock boulder.	Van Wormer, 2005
026969	17654H	Historic Site	Trash scatter consists of broken bottle glass at the base of a large granitic boulder.	Van Wormer, 2005



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
026973	17655H	Historic Site	Site consists of a number of locations where large granite stone blocks have been blasted out of the bedrock outcrops. Historic glass and metal remain at a few of these locations.	Van Wormer, 2005
026974*	17656H	Historic Highway	Segment of the Old Julian Highway that runs through the former Foster town site.	Van Wormer, 2005; Williams, 2009
036497	22092	Prehistoric Site	Bedrock milling station consists of six milling slicks and a cache of lithic artifacts.	DeCarlo and Herrera, 2016

\* Within project area/APE

### 5.10.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1971, and 1980 (NETR Online 2021) and several historic USGS topographic maps, including 1893, 1903, 1939, and 1947 El Cajon (1:62,500), and the 1955 and 1971 San Vicente Reservoir (1:24,000) topographic maps. Two GLO plat maps from surveys in 1876 and 1883, as well as a historic 1885 map, “El Cajon Rancho and the surrounding region” (UCLA Digital Library 2021), were also reviewed.

The original survey map of 1876 shows the project area in an area surrounded by perpendicular rocks with the road from Cajon to Santa Maria running north/south through the project area, with a second east/west running trail to the south of the project area. It also shows the northern edge of Rancho El Cajon in the southeast, which is the only thing present on the 1883 plat map as well. The 1885 map “El Cajon Rancho and the surrounding region”, made by the El Cajon Valley Company, shows proposed railroad routes to the north and the west of the project area.

The 1893 El Cajon topographic map represents the project area as a mountainous area, with two roads to the north and the west that may intersect the western edge of the project area. Both roads look to follow the proposed railroad routes of the 1885 El Cajon Valley Company map. The settlement of Foster is also identified to the south of the project area, with a rail line that runs south from the settlement. The 1903 topographic map shows no change in the project area; however, it does record two houses to the northeast and one to the northwest, as well as fewer structures in the settlement of Foster. The 1939 map continues to show no change to the project area as well as charting the decline of Foster, while new structures appear to the east and west of the project area, along with several new roads, and the 1947 map shows no changes. By the time the 1955 San Vicente Reservoir topographic map was created, the San Vicente Reservoir was recorded and the structures and roads to the north are no longer present, and the 1971 map shows no observable changes. Aerials between 1953 and 1980 show the San Vicente Reservoir, as well as various dirt roads and trails that intersect the project area and in the surrounding environs, but no other structures or features are visible other than Foster, which shows no changes throughout the period researched (NETR Online 2021).



### 5.10.3 Survey Methodology

The San Vicente Dam project area was surveyed by Ms. Roy, Ms. McCausland, and Mr. LaChappa on July 27, 2020. The survey area is located between Wildcat Canyon Road and State Route 67 to the east and west and Foster Truck Trail and Moreno Avenue to the north and south.

The dam is constructed of concrete and has been reconstructed (raised) in the recent past (Plate 11). San Vicente Reservoir is on the north side of the dam and the south side consists of steeply sloped sides that lead to a rock spillway within San Vicente Creek. Due to steep slopes and dense vegetation, parallel transect survey was not feasible throughout much of the APE; reconnaissance survey was employed in those areas. The spillway, spillway discharge path, and creek bed were surveyed using five-meter-interval transects, despite visibility being hindered due to crushed rock, rip rap, and dense vegetation. The slopes were very steep on either side of the dam and were only surveyed using the reconnaissance method for safety reasons. Overall, visibility was less than 30 percent. The soils in the survey area consisted of both intact native soils and fill material comprised of decomposing granitic sand, gravel, and cobbles of various sizes. A high degree of ground-disturbance was noted around the main dam as well as around a newer saddle dam and constructed roads.



Plate 11. Overview of south side of San Vicente Dam and vicinity. View to the north.

### 5.10.1 Survey Results

Six cultural resources were identified within the San Vicente Dam APE during the record search. These include three prehistoric archaeological sites, two historic sites, and one historic structure (the San Vicente Dam). In addition, two newly identified archaeological sites were recorded during the field survey of the APE, for a total of eight cultural resources within the San Vicente Dam APE (Table 30, *Cultural Resources Identified within the San Vicente Dam Project Area*). A map of the San Vicente Dam APE and cultural resource locations is provided on Figure 12, *Cultural Resources Identified within the San Vicente Dam APE* (Confidential Appendix E).



**Table 30**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE SAN VICENTE DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-13629 (CA-SDI-13629)	Historic Site	Loci associated with the historic townsite of Foster	Reidentified; at edge of APE (primarily outside of APE).
P-37-013630 (CA-SDI-13630)	Prehistoric Site	Habitation site complex with three bedrock milling features, possible rock art, two possible rock rooms, and midden	Reidentified; at edge of APE (primarily outside of APE).
P-37-024354	Historic Structure	San Vicente Dam	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-024958 (CA-SDI-16514)	Prehistoric Site	Bedrock yoni fertility feature	Reidentified; within the APE.
P-37-026965 (CA-SDI-17650)	Prehistoric Site	Bedrock milling feature	Previously recorded resource - not reidentified within the APE
P-37-026974 (CA-SDI-17656)	Historic Site	Segment of Old Julian Highway	See City of San Diego Source Water System Historical Resources Assessment (McCausland 2022) for detailed status information.
P-37-39911 (CA-SDI-23291)	Prehistoric Site	Two bedrock milling features	Newly identified; adjacent to APE.
P-37-39912 (CA-SDI-23292)	Prehistoric Site	Bedrock milling feature	Newly identified; within APE (along access road).

#### 5.10.1.1 P-37-013629 (CA-SDI-13629H)

This resource is the historic townsite of Foster, which includes a historic refuse site with three loci (James et al. 1993). Loci A and B were recorded as containing small artifact scatters, consisting of glass and ceramic fragments, while Locus C was recorded as a main dump containing glass fragments, bottle parts, a complete bottle dating to the 1930s, metal fragments, ceramic fragments, marine shell, and faunal bone. In 1997, the site was resurveyed; it was noted that no diagnostic artifacts were identified within Loci A or B (Case 1997). Subsurface investigations, consisting of six post holes, five shovel test pits (STPs), and two standard units, recovered a large volume and variety of cultural materials. Prehistoric artifacts were recovered, including flake stone and ceramics. It was noted that this was likely the result of erosion and redeposition (Case 1997). Historic artifacts include a variety of glass, metal, and ceramic artifacts, dating to both pre- and post-1916 flood eras (Case 1997).

During the current survey, the resource was reidentified. Remnants of the three loci are located along the west side of the access road, primarily outside of the APE. Remnants of concrete foundations within loci A and B were observed. Within Locus C, concrete foundation remnants and historic artifacts were reidentified.

#### 5.10.1.2 P-37-013630 (CA-SDI-13630)

This previously recorded, multi-component site consisted of a prehistoric habitation site containing three bedrock milling features, possible rock art and rock rooms, artifacts, and midden deposits



(Eighmey et al. 2000; Schroth and Perry 1996). The historic component included glass shards and a possible rock wall.

During the current survey, the site was reidentified at the edge of the APE, with no features being within the APE. Two of the original milling features were observed to be in fair to good condition. A third milling feature, the rock art, and rock rooms, however, could not be reidentified, possibly due to the dense growth of vegetation in the survey area. The possible historic rock wall noted on the site form was also not reidentified, either due to dense weeds or that it is no longer present. No artifacts were observed, also possibly due to dense vegetation. During the survey, two additional previously unrecorded bedrock milling features were observed within the site boundary, outside of the APE. Both of the features contain a single milling slick element.

#### **5.10.1.3 P-37-024354**

The San Vicente Dam and Reservoir, built between 1941 and 1943, is a concrete gravity section dam with a straight axis. The dam is 199 feet tall, 980 feet long, and 14 feet wide (Gustafson 2002). The San Vicente Dam and Reservoir is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.10.1.4 P-37-024958 (CA-SDI-16514)**

This resource consists of a possible bedrock yoni fertility feature on a large boulder. No associated artifacts were recorded (Apple and Lilburn 2002). This feature was reidentified within the APE during the current field survey.

#### **5.10.1.5 P-37-026965 (CA-SDI-17650)**

This previously recorded prehistoric site consisted of a single bedrock milling feature (Van Wormer 2005a). The feature was recorded as a bedrock boulder with a single oval basin, located within the San Vicente Creek bed. The feature resource was not reidentified within the APE during the current field survey. Since recordation in the 2000s, the area of the resource location has undergone numerous grading events; it is likely the site has been destroyed.

#### **5.10.1.6 P-37-026974 (CA-SDI-17656)**

This resource consists of a segment of the Old Julian Highway. Van Wormer (2005b) noted that it is associated with the former community of Foster, which was located nearby in the early twentieth century.

The route of the highway still exists as a dirt road and trail within the APE. The resource is included within the San Vicente Reservoir Complex and is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* prepared for the project (McCausland 2022).

#### **5.10.1.7 P-37-39911 (CA-SDI-23291)**

This newly discovered prehistoric resource in the APE consists of two bedrock milling features. One feature contains five milling elements consisting of four slicks and a basin. The second feature contains one element, a basin. No artifacts were observed.



### 5.10.1.8 P-37-39912 (CA-SDI-23292)

This newly discovered prehistoric resource in the APE consists of a single bedrock milling feature containing two weathered milling elements consisting of a slick and a basin. No artifacts were observed.

## 5.11 SAVAGE DAM

### 5.11.1 Records Search

The records search results identified 26 previous cultural resource studies within a half-mile radius of the Savage Dam project area (Table 31, *Previous Studies within a Half-mile of the Savage Dam Project Area*). Sixteen of the studies were cultural resource surveys, testing programs, assessments, and studies; the remaining studies include seven planning or environmental documents and two monitoring reports.

**Table 31**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE SAVAGE DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00132	Archaeological Planning Collaborative, 1980	An Archaeological Records Search and Field Survey of the Janal Ranch Property, San Diego County
00673	Gallegos, Kyle, Carrico, and Phillips, 1988	Cultural Resource Survey and Testing Program for the East Mesa Detention Facility San Diego, California
00850	Kyle, Gallegos, and Phillips, 1988	Cultural Resource Survey and Testing Program for the East Mesa Detention Facility, San Diego, California
01619	WESTEC Services, Inc., 1979	Proponents Environmental Assessment Miguel to Tijuana Interconnection Project 230 KV Transmission Line
01758	McCorkle Apple, 1981	Archaeological Survey Reports for a Proposed Realignment Project at 11-SD-94 P.M. 29.9-30.3 11359-193361
01793	Schaefer, 1989	The Lower Otay Filtration Plant (CA-SDI-11,355H)- An Historical Survey and Assessment
01861	Hector and Van Wormer, 1982	Results of an Archaeological Test Program Conducted at SDI-10862 Lower Otay County Park County of San Diego
02690	Carrico, Cooley, and Pignolo, 1993	Final Cultural Resources Evaluation of the 23,088 Acre Otay Ranch, San Diego County
02945	Kyle and Gallegos, 1994	Cultural Resource Survey and Test of Five Sites for the Otay Water District Central Area and Otay Mesa Interconnection Pipeline Alignments
03156	Smith, 1996	Results of an Archaeological Survey at the Otay Valley Parcel of the Otay Ranch
03823	Kyle, 2000	Cultural Resource Constraint Study for the Otay Water Treatment Plant Improvements City of San Diego, California
04134	Kyle, 2000	Cultural Resource Survey for the Otay Water Treatment Plant Upgrade, City of San Diego, California
04260	Brian F. Mooney Associates, 1991	Cultural Resource Survey for San Diego County Water Authority Pipeline
04651	Westec, 1987	East Mesa County Detention Facility Draft Environmental Impact Report
04653	Westec, 1988	East Mesa Detention Facility Supplemental Environmental Impact Report Draft



Report Number (SD-)	Author, Year	Report Title
04657	Ogden Environmental and Energy Services Co., Inc., 1992	Draft Program Environmental Impact Report. Otay Ranch
05032	County of San Diego, 1983	Archaeological Assessment of Bureau of Land Management Jamul Site Number 3
05144	Kyle, 2000	Cultural Resource Survey for the Otay Water Treatment Plant Upgrade city of San Diego, California
05408	Raap, 2001	Draft Mitigated Negative Declaration Otay Water Treatment Plant Upgrade
06805	Berry and Berryman, 1987	Archaeological Overview and Planning Document for the Proposed Rancho Otay Project
06980	Dept. of Parks and Recreation and Abeyta, 1998	Brown Field Airport Master Plan, Otay Mesa, San Diego County
08167	City of San Diego, 2003	Notice of Preparation of a Draft Environmental Impact Report Otay Second Pipeline Improvement Program
09658	Kyle, 2005	Cultural Resource Monitoring for the Otay Water Treatment Plant Upgrade Project City of San Diego, California
10251	Bonner and Williams, 2006	Cultural Resource Records Search and Site Visit Results Search and Site Visit Results for Spirit Nextel Telecommunications Facility Candidate CA7456a (Johnson Canyon), 2270 Wueste Road, Chula Vista, San Diego County, California
15229	Tennesen, 2013	ETS #24738.03, Cultural Resources Monitoring for the Intrusive Pole Inspections, Metro District, Sub-Areas BORD, SNYS, IMPE, OTAY, SBAY, HILT, MONT, SSDE, LINC Project, San Diego County, California
18145	O'Connor and Westwood, 2018	Cultural Resources Survey Report for the Otay Pipeline 2 Segment A6 Project, Cities of San Diego and Chula Vista, San Diego County, California

The SCIC has a record of 18 previously recorded cultural resources within a half-mile radius of the Savage Dam project area, one of which has been recorded within the project area (Table 32, *Previously Recorded Resources within a Half-mile of the Savage Dam Project Area*). The resource documented within the Savage Dam APE is P-37-011335; this resource is described in further detail in Section 5.11.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of artifact scatters and isolated artifacts. One multi-component site is recorded as a homestead with prehistoric artifacts. The historic resources within the search limits include a historic homestead site, artifact scatters, the Lower Otay Lakes Filtration Plant, a water tank, and a historic isolate.



**Table 32**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE SAVAGE DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
004737	4737	Prehistoric Site	Artifact scatter consisting of flakes and tools.	Waters, 1973; Kyle, Phillips, Briggs and Tift, 1993
010862	10862H	Historic Site	Homestead site consists of structural pads, a reservoir, and two trash dumps consisting of nails, bottle glass, can fragments, and Chinese brownware.	Hector and Van Wormer, 1982; Chambers Group, 2019
011335*	11335H	Historic Site	Lower Otay Lakes Filtration Plant; built between 1913 and 1915 and operated until 1982. Renovated in 1922, and throughout use as needed.	Schaefer, 1989
011360	11360/H	Multi-component Site	Site is the probable remains of a homestead site. It consists of an "L" shaped rock wall, a fire rock ring, and isolated flaked artifacts. Purple glass fragments are also present.	Ritz et al., 1989
011370	11370H	Historic Site	Trash scatter consists of machinery parts, historic ceramics, glass fragments of various colors, and hand forged iron works.	Collett et al., 1989
011371	11371H	Historic Site	Metal scatter consists of bailing wire and other metal artifacts.	Collett et al., 1989
011382	11382H	Historic Site	Trash scatter possibly associated with Lower Otay Filtration Plant. Metal bands and plats, possibly from water storage tank.	Ritz, 1989
013453	13453	Prehistoric Site	Site consists of large lithic artifact scatter of more than 100 cores, hammerstones, tools and flakes.	Kyle and Tift, 1993; Stropes, 2010
013459	13459	Historic Site	Trash dump consists of purple glass, crockery, metal bands, and corrugated sheet metal.	Kyle, Phillipos, Briggs, and Tift, 1993
015387	--	Prehistoric Isolate	Isolate consists of a metavolcanic flake. Isolate was collected.	Kyle, Phillipos, Briggs, and Tift, 1993
019182	--	Prehistoric Isolate	A metavolcanic biface fragment and a piece of metavolcanic debitage	Kyle, 2000
031741	20163	Prehistoric Site	Artifact scatter consists of 11 metavolcanic lithics, one core, and one hammerstone.	Stropes, 2010
031742	20164	Prehistoric Site	Artifact scatter consists of metavolcanic lithics, hammerstones, and steep-edge tools.	Stropes, 2010
034105	--	Prehistoric Isolate	One volcanic core.	Dalope and Manchen, 2013
038175	22563	Prehistoric Site	Site consists of quarry and lithic debris along a hilltop. Artifacts include angular debris, primary flakes, and cores.	Knabb, 2019



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
038176	--	Historic Site	Trash scatter consists of forged nails, amethyst, aqua, amber, and green glass, barbed wire, cans, and a ceramic water pipe.	Knabb, 2019
038177	--	Historic Structure	A metal water storage tank, approximately 3 meters in diameter and built of welded steel. Tank appears on USGS historical maps beginning in 1955.	Knabb, 2019
038178	--	Historic Isolate	Isolate consists of a circular object approximately 3 meters in diameter.	Knabb, 2019

\* Within project area/APE

### 5.11.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1971, and 1981 (NETR Online 2021) and several historic USGS topographic maps, including 1903 Cuyamaca (1:125,000), 1943 Jamul (1:62,500), and the 1955 and 1971 Otay Mesa (1:24,000) topographic maps. Two GLO plat maps from surveys in 1879 and 1880 for Township 18 South, Range 1 East, as well one plat map from a survey in 1879 of Township 18 South, Range 1 West, were also reviewed.

All three plat maps show the project area as south of the Otay Rancho and east of the Rancho Magdalena Estudillo. Both maps of the Township 18 South, Range 1 East, represent the project area as mountainous with small valleys, and have Otay Creek intersecting with the project area. The 1879 survey of Township 18 South, Range 1 West, concurs with the other two surveys, however, it also records the road from La Nación to Janal intersecting the project area, as well as recording a house owned by Gregory north of the project area along the road.

The 1903 topographic map shows the Lower Otay Reservoir and dam, a road along the base of the dam within the project area, and three structures to the southwest, one of which is within the project area. The 1943 topographic map shows the reservoir and dam, rebuilt in 1918 and renamed Savage Dam, as well as the expansion of the buildings to the southwest to include at least 15 additional structures, as well as numerous roads. The 1955 map shows the buildings to the southwest having been removed and replaced with the Lower Otay Camping area and Lower Otay Filtration Plant, and the 1971 map shows no noticeable changes.

Aerial photographs of the area from 1953 show the filtration plant and several of the buildings to the southwest of the dam still standing (NETR Online 2021). By 1964, the aerials show the Lower Otay Camping area as having been fully developed. No changes are visible in the 1971 or 1981 aerials (NETR Online 2021).

### 5.11.3 Survey Methodology

The Savage Dam project area was surveyed by Ms. Roy and Mr. LaChappa on August 26, 2020 and April 20, 2021. The project area is located between Otay Lakes Road to the north, Wiley Road and the Otay River to the south, the Otay Open Space Preserve to the east, and Wueste Road to the west.



The project area encompasses a west access road to the dam, the dam and its spillway and weir, a discharge path, and a blow-off valve, as well as a discharge path located by the original filtration plant within the current Otay Water Treatment Plant facility property. Savage Dam and the spillway on the northeast side are constructed of concrete and are positioned in a northeast/southwest angle between two natural knolls (Plate 12). The slopes on either end of the dam are steep and show signs of past blasting activities. The slopes down to the lower spillway at the base of the dam were too steep to be surveyed. Furthermore, at the time of the survey, the dam's lower spillway was filled with water, and so it could also not be surveyed.



Plate 12. Overview of Savage Dam and vicinity. View to the northeast.

Almost all of the surface area within the APE was covered, either by the growth of dense dead grass and weeds, or by concrete and asphalt, resulting in less than five to 10 percent survey visibility. As such, reconnaissance survey methods were employed for the majority of the APE. Where soils were visible, they ranged from yellow-brown sands with broken angular metavolcanic bedrock, to light brown silty sand with moderately sorted pebbles, gravel, and angular metavolcanic bedrock chunks. Vegetation types consisted of native riparian and sage scrub plants including buckwheat, sumac, native grass, sages, oak, cottonwood, cattail, and willow. Non-native plants included weeds such as mustard and eucalyptus.

### 5.11.1 Survey Results

One cultural resource, a historic site, was identified within the Savage Dam APE during the record search (Table 33, *Cultural Resources Identified within the Savage Dam Project Area*). A map of the Savage Dam APE and the cultural resource location are provided on Figure 13, *Cultural Resources Identified within the Savage Dam APE* (Confidential Appendix E).



**Table 33**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE SAVAGE DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-011335 (CA-SDI-11335)	Historic Site	Lower Otay Lakes Filtration Plant	Reidentified; mostly destroyed – only remnants remain, outside of APE.

#### 5.11.1.1 P-37-011335 (CA-SDI-11335H)

P-37-011335 consists of the Lower Otay Lakes Filtration Plant, built between 1913 and 1915 and renovated in 1922 (Schaefer 1989). The plant contained several structures built between 1913 and the 1980s, such as effluent pipes, sand bin and brow ditch, the watchman’s residence, fluoride building, and a pump shed. The plant and several facilities were demolished in the late 1980s and early 1990s, and new structures have been built in their place (Schaefer 1989). Two trash scatters (P-37-011371 and P-37-011382) were also recorded within the plant facility; these were documented outside the APE and are also no longer extant.

During the current survey, remnants of the sand bin and brow ditch were observed on the north and northeast sides of the modern plant facility. Both areas of remnants are situated outside of the APE—the resource within the APE has been completely destroyed and no longer exists.

## 5.12 SUTHERLAND DAM

### 5.12.1 Records Search

The records search results identified three previous cultural resource studies within a half-mile radius of the Sutherland Dam project area (Table 34, *Previous Studies within a Half-mile of the Sutherland Dam Project Area*). These studies consist of an environmental impact report, an archaeological overview, and an archaeological inventory.

**Table 34**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE SUTHERLAND DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
04236	American Pacific Environmental Consultants, Inc., 1981	Environmental Impact Report for San Dieguito River Study Draft Conceptual Master Plan
10997	Carrico, Cooley, and Barrie, 2003	Final Archaeological Overview for the Cleveland National Forest California
11623	Hector and Brewster, 2002	San Dieguito River Valley Inventory of Archaeological Resources

The SCIC has a record of no previously recorded cultural resources within a half-mile radius of the Sutherland Dam project area.



### 5.12.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1962, 1971, and 1982 (NETR Online 2021) and several historic USGS topographic maps, including 1903 Ramona (1:125,000), 1923 Ramona (1:62,500), and the 1955, 1971, and 1982 Ramona (1:24,000) topographic maps. Seven GLO plat maps from surveys in 1857, 1873, 1876, 1883, 1886, 1892, and 1910 were also reviewed.

The original survey maps from 1857 and 1873 show nothing in the project area or its environs, as the land was unsurveyed and described as high bushy mountains, though the 1873 map recorded the boundary of the San Ysabel Indian Reservation to the northeast. The 1876 survey map recorded the trail to Mesa Grande as running to the east of the project area, along with a house labeled Kenith's. As of the 1883 map, the only change was the addition of a separate road that led to Kenith's house from the south. In both the 1886 and 1892 survey maps the trail, road, and house are no longer recorded, while the 1910 map recorded the road from Ramona to Mesa Grand to the east of the project area and a meadow within the project area.

The 1903 Ramona topographic map records the road from Ramona to Mesa Grande to the east of the project area, along with at least four structures within the boundaries of the present reservoir. In the 1942 map, the Sutherland Dam is recorded; however, the reservoir is not represented, and there are several dirt roads within the project area and the boundaries of the present reservoir. There is also a mining claim in the northern portion of the project area as well as the Sutherland Dam Road. The 1955 map has the reservoir recorded along with the dam, as well as a group of water tanks in the western portion of the project area and several structures to the northwest. The 1971 topographic map shows no changes from the previous 1955 map, and the only change in the 1982 map is the removal of the water tanks.

The 1953 aerial shows the dam being constructed, as well as the mining activities to the north of the project area and dozens of dirt roads within the flood plain and to the northwest (NETR Online 2021). By the time of the 1964 aerial, the reservoir had been filled and water tanks are visible. The structures to the northwest and the roads outside of the reservoir are still present. No visible changes are observable in the 1971 or 1982 aerials (NETR Online 2021).

### 5.12.3 Survey Methodology

The Sutherland Dam project area was surveyed by Ms. Roy, Ms. McCausland, and Mr. LaChappa on July 13, 2020. The project is between Santa Ysabel Reservation lands and Sutherland Dam Road to the east-west, and the Mesa Grande Reservation to the north and south (Plate 13). The dam is constructed of concrete and the Sutherland Reservoir extends to the south of the dam. On the north side of the dam, there are steep drainage cuts with a concrete and rock spillway on the east side.

Due to dense vegetation north of the dam, a parallel transect survey was not feasible for this survey, so a reconnaissance methodology was used most often. The center road was paved and the other two access roads were dirt. Open areas to both sides of these roads were surveyed; however, steep slopes and thick vegetation hindered visibility, resulting in less than 20 percent off the sides of the access roads with somewhat better visibility in a few disturbed open patches. The access road to the west that leads to the west side of the dam was covered in gravel, and consequently, surface visibility was very limited and dense vegetation kept the visibility to less than 15 percent on either side of the road. The soils in



the survey area consisted of both native soils and fill material, the latter comprised of a mixture of decomposing granitic sand, gravel, and cobbles of various sizes.



Plate 13. Overview of dam and access road off Sutherland Dam Road. View to the south.

#### 5.12.4 Survey Results

No cultural resources were observed during the survey except for the dam and other components associated with the Sutherland Reservoir Complex, which is discussed in further detail in the *City of San Diego Source Water System Historical Resources Assessment* (McCausland 2022) that has been prepared for the project.

### 5.13 UPPER OTAY DAM

#### 5.13.1 Records Search

The records search results identified 10 previous cultural resource studies within a half-mile radius of the Upper Otay Dam project area (Table 35, *Previous Studies within a Half-mile of the Upper Otay Dam Project Area*). Nine of the studies were cultural resource surveys, record searches, mitigation and monitoring reports, and testing and evaluation reports; the final study is a draft environmental impact report.

**Table 35**  
**PREVIOUS STUDIES WITHIN A HALF-MILE OF THE UPPER OTAY DAM PROJECT AREA**

Report Number (SD-)	Author, Year	Report Title
00111	Archaeological Planning Collaborative, 1979	Records Search Janal Ranch San Diego, California.
00132	Cook, 1990	An Archaeological Records Search and Field Survey of the Janal Ranch Property, San Diego County.
01065	Fulmer, 1983	Archaeological Phase I Survey Report for a Steele Canyon Road Widening Project 11-SD-94



Report Number (SD-)	Author, Year	Report Title
05831	Crafts, 1992	Negative Archaeological Survey Report Fourth Addendum: 11-Sd-94 P.M. 16.3/R 17.8
08318	Buyse and Smith, 2003	Archaeological Mitigation of Impacts to Prehistoric Site SDI-7976 for the Eastlake III Woods Project: City of Chula Vista
09131	Gallegos, Phillips, Kyle, and Pignuolo, 1989	Cultural Resource Testing Program for Eastlake III, Chula Vista, California
11501	Smith, Buyse, Pierson, Tuma, and Guerrero, 2005	An Archaeological/Historical Study for the Otay Ranch Village 13 Project
15227	Tennesen, 2013	ETS #24738, Cultural Resources Monitoring for the Intrusive Pole Inspections, Olym, Proc, Tcyn Project, San Diego County, California
02690	Carrico, Cooley, and Pignuolo, 1993	Final Cultural Resources Evaluation of the 23,088-Acre Otay Ranch, San Diego County
04657	Ogden Environmental and Energy Services Co., Inc., 1992	Draft Program Environmental Impact Report. Otay Ranch

The SCIC has a record of 14 previously recorded cultural resources within a half-mile radius of the Upper Otay Dam project area, one of which is located within the APE (Table 36, *Previously Recorded Resources within a Half-mile of the Upper Otay Dam Project Area*). The resource documented within the APE is P-37-011419, described in further detail in section 5.13.4 below. In general, the sites recorded within the records search limits consist of prehistoric resources consisting of artifact scatters and quarries. One multi-component site is recorded as containing a flaked stone and glass scatter. The remaining two sites are historic—one consists of Rancho del Otay, while the other is a series of 37 culverts.

**Table 36**  
**PREVIOUSLY RECORDED RESOURCES WITHIN A HALF-MILE OF THE UPPER OTAY DAM PROJECT AREA**

Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
007976	7976	Prehistoric Site	Site consists of a “light” surface scatter of chipped stone artifacts.	Douglass, 1980; Buyse, 2003
011419*	11419H	Historic Site	Rancho del Otay consists of several structures and outbuildings, some of which are still in use.	Manley, 1989
012362	12362/H	Multi-component Site	Site consists of prehistoric flaked stone and historic glass scatter.	Pignuolo, Mealey, and Caldwell, 1991
012364	12364	Prehistoric Site	Site consists of flaking station and associated lithic scatter near cobble outcrop.	Pignuolo, Mealey, and Caldwell, 1991
012365	12365	Prehistoric Site	Site consists of flaking station and associated lithic scatter near low bedrock outcrops.	Pignuolo, Mealey, and Caldwell, 1991
012366	12366	Prehistoric Site	“Very small” lithic scatter limited to three flakes.	Pignuolo, Mealey, and Caldwell, 1991



Primary Number (P-37-#)	Trinomial (CA-SDI-#)	Age and Resource Type	Description	Recorder, Date
024578	16303	Prehistoric Site	Lithic scatter consists of approximately 500 flakes, and includes lithic production waste, tools, and one archaic point.	Brian F. Smith and Associates, 2002
024579	16304	Prehistoric Site	Lithic scatter consisting of approximately 150 artifacts clustered around outcrops of metavolcanic rock. Tested in 2008; Artifacts included debitage or shatter, flakes, a utilized flake, and a projectile point.	Brian F. Smith and Associates, 2002; Brian F. Smith and Associates, 2008
024580	16305	Prehistoric Site	Quarry site consisting of a scatter of metavolcanic rock artifacts.	Brian F. Smith and Associates, 2002
024581	16306	Prehistoric Site	Small scatter of metavolcanic lithic production waste.	Brian F. Smith and Associates, 2002.
024586	16311	Prehistoric Site	Lithic scatter consisting of approximately 50 flakes and one core. Tested in 2008; artifacts included cores, debitage, and flakes.	Brian F. Smith and Associates, 2002; Brian F. Smith and Associates, 2008
034762	21624	Prehistoric Site	Site consists of a large prehistoric quarry and lithic artifact scatter consisting of debitage, stone tools, and a ceramic sherd.	Hahnlén, 2015
034763	21625	Prehistoric Site	Site consists of a large prehistoric quarry and lithic scatter consisting of debitage and a core.	Hahnlén, 2015
038930	--	Historic Structure	A total of 37 culverts were identified, with 22 identified as historic or potentially historic. Eight culverts were dated to 1940.	Accardy, 2020

\* Within project area/APE

### 5.13.2 Archival Research

Archival sources consulted include historic aerials from 1953, 1964, 1971, and 1981 (NETR Online 2021) and several historic USGS topographic maps, including 1903 Cuyamaca (1:125,000), 1943 Jamul, (1:62,500), and the 1955, 1971, and 1975 Jamul Mountains (1:24,000) topographic maps. One GLO plat map from an 1881 survey of Township 17 South, Range 1 East, as well three plat maps from surveys in 1859, 1876, and 1883 of Township 17 South, Range 1 West, were also reviewed.

The 1859 plat map shows the area as undeveloped with a creek running through the project area, while the remaining three survey maps show the project area was within the boundaries of Ranch Otay. The 1903 Cuyamaca topographic map shows the project area within the Otay Ranch with the southern end of the Upper Otay Reservoir within the northern portion of the project area, a road bisecting the southern portion of the project area, and three structures to the west, one of which is within the project area. The 1943 Jamul topographic map records the construction of two dams within the project area, along with the development of the historic road into Otay Lake Road. It also represents the Lower Otay Reservoir to the south, as well as additional buildings to the west. These buildings are labeled as Rancho del Otay in the 1955 topographic map, which also shows the development of an airstrip and



several water tanks to the west of the project area. No observable changes are visible in the 1971 and 1975 maps.

Aerial photographs from 1953 show a dirt road within the project area connecting the two dams, as well as Rancho del Otay which had an orchard between the buildings and the Upper Otay Reservoir (NETR Online 2021). A few dirt trails running towards the northern dam are also visible on this aerial photograph. No major changes are observable on the 1964 aerial, though several more dirt trails are visible within the western portion of the project area. By 1971 the dirt trails have become dirt roads, and by 1981 several more structures are built at Rancho Del Otay at the edge of the project area (NETR Online 2021). These structures have since been demolished.

### 5.13.3 Survey Methodology

The Upper Otay Dam project area was surveyed by Ms. Roy and Mr. Linton on July 13, 2020. The project area is located between Centennial Trail and Wueste Road to the east-west and Proctor Valley Road and Otay Lakes Road to the north and south. Access roads, both called Wueste Road, are located on the east and west sides of the reservoir and are both included as part of the project area.

The dam is constructed of concrete and is between two slopes in a northeast-southwest position with Proctor Valley Natural Preserve to the north and the Upper Otay Reservoir Trailhead to the southwest. The dam is situated above the water line and is visited frequently by taggers/artists (Plate 14). A concrete spillway is on the northeast side of the dam with steep slopes to the water and the dry side. The project site is heavily disturbed in all aspects by dam construction, paved and graded roads, informal hiking trails, animal and rodent activity, push piles, fencing, tagging of the dam structure, and other modern-day activities.



Plate 14. Overview of Upper Otay Dam and vicinity. View to the north.

Where feasible, the survey was conducted in parallel transects spaced approximately two meters apart. Due, however, to dense bushes/brush and buckwheat, reconnaissance (non-transect) survey was also used where thick vegetation or other obstacles prevent transect survey. The Wueste Road (west) is paved, while Wueste Road (east) is graded dirt and gravel. Open areas on both sides of these roads were surveyed; however, steep slopes and thick vegetation hindered visibility and or accessibility. Visibility in



these areas was generally less than 20 percent off the sides of the access roads, with a few, more visible, disturbed open patches present occasionally. The soils in the project area range from black-brown loamy soils (midden) and disturbed yellow-brown sand with pebbles and cobbles, to fill material comprised of sand with decomposing granite, gravel, and angular rock fragments. Some areas were highly eroded; in these areas, a dense cobble lens was exposed and partially dispersed. Large outcrops of bedrock and boulders are present on the east and northeast facing slopes, both in and adjacent to the APE.

### 5.13.4 Survey Results

One cultural resource, the remnants of Rancho del Otay, was identified within the Upper Otay Dam APE during the record search. In addition, two prehistoric archaeological resources, P-37-39914 (CA-SDI-23293) and P-37-39913, were recorded during the survey (Table 37, *Cultural Resources Identified within the Upper Otay Dam Project Area*). A map of the Upper Otay Dam APE and cultural resource locations are provided on Figure 14, *Cultural Resources Identified within the Upper Otay Dam APE* (Confidential Appendix E).

**Table 37**  
**CULTURAL RESOURCES IDENTIFIED WITHIN THE UPPER OTAY DAM PROJECT AREA**

Resource Number	Age and Resource Type	Description	Status
P-37-011419 (CA-SDI-11419)	Historic Site	Remnants of Rancho del Otay	Reidentified; at edge of APE (primarily outside of APE).
P-37-39914 (CA-SDI-23293)	Multi-component Site	Lithic quarry and artifact scatter and historic artifact scatter	Newly identified resource; within the APE.
P-37-39913	Prehistoric Isolate	Isolated flake	Newly identified resource; within the APE.

#### 5.13.4.1 P-37-011419 CA-SDI-11419H)

This resource consists of Rancho del Otay, which contains a series of adobe structures and wells, one of which was undergoing remodeling at the time of recordation (Manley 1989). The Upper Otay Dam APE lies along the edge of the resource. Although none of the adobe structures were identified within the project APE, possibly associated artifacts including fragments of purple and brown bottle glass, metal fragments consisting of decomposing metal tool pieces and barrel straps, a brick fragment, a decomposing sanitary can base and top, and a church key opened beverage can were identified within the boundaries of newly recorded site P-37-39914 (CA-SDI-23293), discussed below.

#### 5.13.4.2 P-37-39914 (CA-SDI-23293)

Resource P-37-39914 (CA-SDI-23293) is a newly recorded multi-component site consisting of a prehistoric lithic quarry site containing lithic tool manufacturing debris and tools, prehistoric ceramics, and one bedrock milling feature. The historic component includes purple and brown glass fragments, metal fragments, a brick fragment, a decomposing sanitary can base and top, and a church key can; the historic artifacts may be associated with resource P-37-011419, discussed above.

The site was identified along both sides of Wueste Road (west). The site boundaries begin approximately 75 meters south of the dam and extend another 35 meters northwest of the dam. The portion of the



site in the vicinity of the dam contained dark black-brown midden soils and a heavy concentration of lithics. Artifacts consist of debitage including primary, secondary, tertiary, and pressure flakes, modified and utilized flakes, as well as hammerstones, cores, manos, and fire-affected rock. Flaked material consisted of dark blue, black, and green metavolcanic stone; rhyolite; chert; and quartz. Tizon Brown Ware ceramic sherds were also observed. The site boundaries may extend outside further in all directions. Historic and modern human activities have disturbed the site area around the dam to a high degree; however, it is likely that subsurface deposits are present at the site.

#### **5.13.4.3 P-37-39913**

Newly documented isolated resource P-37-39913 was identified along on Wueste Road (east). The isolated artifact is a porphyritic, metavolcanic primary flake.

## **6.0 SUMMARY AND MANAGEMENT CONSIDERATIONS**

A study was undertaken to identify cultural resources that are present in the proposed Dam Maintenance Program APE and to determine the effects of the project on historical resources, per CEQA, and historic properties, per Section 106. The cultural resources survey identified a total of 46 cultural resources within the project APE; of these, 37 were previously recorded, and 9 were newly identified during the field surveys conducted for the Program. Of the 46 resources, 21 are prehistoric and consist of 14 archaeological sites consisting of bedrock milling features, some with associated artifact scatters; a habitation site; a bedrock yoni fertility feature; three lithic scatters; and two isolates. In addition, two multi-component resources were documented, with the prehistoric components consisting of a lithic quarry and artifact scatter and a lithic scatter. The historic components of these two resources consist of historic artifact scatters. The remaining resources include one of unknown age, and 22 historic resources that include 11 that are associated with the City of San Diego Source Water System; four electric transmission or distribution lines; SR 94; the remnants of Rancho del Otay, the townsite of Foster, and the Lower Otay Lakes Filtration Plant; cement foundations; a refuse scatter; and an isolate.

While some of the project areas are located within relatively undeveloped areas of San Diego County, a majority of the APE for all of the locations is generally disturbed by infrastructure related to the initial construction and past maintenance of the dams and associated reservoirs.

### **6.1 IMPACT ANALYSIS AND MANAGEMENT RECOMMENDATIONS**

As noted above, the cultural resources study has identified a total of 46 cultural resources within the APE for the proposed project. Of these, 11 are associated with the City of San Diego Source Water System (CSDSWS), e.g., associated with the dams, reservoirs, and associated infrastructure. The significance status, project impacts, and recommendations for the CSDSWS-associated resources are discussed in the *City of San Diego Source Water System Historical Resources Assessment* (McCausland 2022) that has been prepared for the Program. The historical resources assessment concludes that the project does not include any significant alterations, demolitions, relocations, or replacements of the complexes or individual resources within the CSDSWS considered to be historical resources and that given the limited scale of the maintenance activities compared with the expansive, multi-property resources comprising the CSDSWS discontinuous district and the individual reservoir complex historic



districts, project implementation would not be expected to result in significant adverse impacts, and therefore, material impairment to historical resources. The resources within the CSDSWS are not analyzed further in this report.

In general, the remainder of the 35 cultural resources situated within the APE are unevaluated for listing on the CRHR and NRHP. For the purposes of the Program, the resources are recommended to be treated as significant, unless otherwise noted. Isolates, which by definition do not possess the characteristics necessary to be considered resources eligible for listing on the CRHR or the NRHP, are considered non-significant resources, per the City's HRG.

Potential project effects to these 35 cultural resources identified within the APE and management recommendations are provided in Table 38, *Cultural Resources Summary and Recommendations*. The resource locations in relation to the APE and the proposed project "impact areas" are shown in Figures 4 through 14. The impact areas for the Program include those areas where dredging, vegetation clearing, slope maintenance, and eucalyptus/palm removal activities have been specifically delineated to occur; the remainder of the maintenance activities, as described in Section 1.2.1, would occur within the APE at the various locations shown in Figure 3.

**Table 38**  
**CULTURAL RESOURCES SUMMARY AND RECOMMENDATIONS**

Resource Number	Description	Within Impact Area	Management Recommendation
<b><i>Barrett Dam Area of Potential Effects (APE)</i></b>			
P-37-005756 (CA-SDI-5756)	Four prehistoric bedrock milling features and artifact scatter. Resource was reidentified along access road; one bedrock milling feature is within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-005758 (CA-SDI-5758)	Prehistoric bedrock milling feature. Resource was not identified (documented as being situated along access road); it may be obscured by dense vegetation.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-025926 (CA-SDI-17241)	Historic refuse scatters associated with former location of employees' cottages. Resource was reidentified, though only a few fragments of ceramics remain. Located along access road, within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-036508	Historic Circuit 157 transmission distribution line, approximately 52 miles long and constructed in 1949. C157 line parallels and crosses several portions of the access road. Resource also located in Dulzura Conduit APE.	No. Along existing access road, no new disturbance proposed.	None. No effect to resource.



Resource Number	Description	Within Impact Area	Management Recommendation
P-37-036512	Historic Tie Line 625 transmission line, approximately 22 miles long and constructed in 1947. TL625 crosses APE along access road, observed to be in the same condition as when it was originally recorded in 2014.	No. Along existing access road, no new disturbance proposed.	None. No effect to resource.
P-37-036516	Historic Tie Line 6923 transmission line, approximately 13 miles long and constructed in 1957. TL6923 crosses APE along access road. Resource also located in Dulzura Conduit APE.	No. Along existing access road, no new disturbance proposed.	None. No effect to resource.
P-37-038945 (CA-SDI-22906)	Two prehistoric bedrock milling features and an artifact scatter. Resource was reidentified; the site was determined to be located outside the APE.	No. Determined to be outside of APE.	None. No effect to resource.
<b>Black Mountain Dam APE</b>			
P-37-016577	A historic isolated bottle glass fragment. Resource was not identified and is likely located outside the APE.	No. Likely outside of APE.	None. No effect to resource.
<b>Chollas Dam APE</b>			
P-37-016321 (CA-SDI-14794)	A historic site consisting of a cement foundation or loading dock. Cultural materials associated with the previously recorded resource were reidentified within the APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
<b>El Capitan Dam APE</b>			
P-37-013616 (CA-SDI-13616)	Prehistoric bedrock milling feature. Resource has not been reidentified since its original recordation in 1993.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-013617 (CA-SDI-13617)	Five prehistoric bedrock milling features. Resources were reidentified along access road; several bedrock milling features within the APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-013618 (CA-SDI-13618)	Prehistoric bedrock milling feature. Resource was reidentified along access road within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-038878 (CA-SDI-22878)	A prehistoric bedrock milling feature. Resource was reidentified within APE, adjacent to dam.	Yes. Located adjacent to the rock face of the dam where vegetation removal is proposed.	Avoidance of adverse effects.



Resource Number	Description	Within Impact Area	Management Recommendation
P-37-038886	A prehistoric isolated Tizon Brown Ware rim sherd. Resource was not reidentified.	No. Along existing access road, no new disturbance proposed.	None. No effect.
P-37-038889 (CA-SDI-22885)	Four prehistoric bedrock milling features. Resources were reidentified partially within APE along north side of spillway.	Yes. Located adjacent to spillway where vegetation removal is proposed.	Avoidance of adverse effects.
P-37-30217 (CA-SDI-19249)	Three prehistoric bedrock milling features, located along access road within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-39906 (CA-SDI-23286)	A newly identified one-course-tall rock wall of indeterminate age located along access road within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-39907 (CA-SDI-23287)	A prehistoric lithic and ground stone tool scatter located along access road within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
<b>Miramar Dam APE</b>			
P-37-008676 (CA-SDI-8676)	A prehistoric lithic scatter recorded in 1980 as west of the reservoir. Resource was not reidentified and vegetation has been destroyed.	Yes. However, site likely mis-mapped and destroyed.	None. No effect.
<b>Morena Dam APE</b>			
P-37-036511	The historic Circuit 449 distribution line, approximately 14 miles long and constructed in 1951. C449 crosses APE along access road, observed be in the same condition as when it was originally recorded in 2014.	No. Along existing access road, no new disturbance proposed.	None. No effect to resource.
P-37-39908 (CA-SDI-23288)	A newly identified prehistoric lithic scatter located in a highly disturbed context	Yes. Resource identified on dam, within an area of vegetation clearing proposed.	None. Resource recommended as ineligible for listing in the CRHR or NRHP.
<b>San Vicente Dam APE</b>			
P-37-013629 (CA-SDI-13629)	A historic site consisting of loci associated with the historic townsite of Foster. This resource was reidentified within APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-013630 (CA-SDI-13630)	A prehistoric habitation site complex with three bedrock milling features, possible rock art, two possible rock rooms, and midden. Resource was reidentified at the edge of APE, though it is located primarily outside of APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.



Resource Number	Description	Within Impact Area	Management Recommendation
P-37-024958 (CA-SDI-16514)	A prehistoric bedrock yoni fertility feature. Resource was reidentified within the APE.	No; located at edge of APE, outside of vegetation clearing area surrounding saddle dam.	Avoidance.
P-37-026965 (CA-SDI-17650)	A prehistoric bedrock milling feature. Resource was not reidentified within APE. Resource location has undergone numerous grading events since recordation in 2000; it is likely the resource has been destroyed.	Yes. Adjacent to discharge path, within an area of vegetation clearing proposed. Site likely destroyed.	None. No effect.
P-37-39911 (CA-SDI-23291)	Two newly identified prehistoric bedrock milling features. Resource is located adjacent to the APE, near the discharge path.	No. Outside of APE.	None. No effect to resource.
P-37-39912 (CA-SDI-23292)	A newly identified prehistoric bedrock milling feature. Resource is located within APE along access road.	No. Along existing access road, no new disturbance proposed.	Avoidance.
<b><i>Savage Dam APE</i></b>			
P-37-011335 (CA-SDI-11335)	Historic Lower Otay Lakes Filtration Plant. Resource was reidentified; the filtration plant was destroyed and only remnants remain, located outside the APE.	Yes. However, portion of site in impact area has been destroyed.	None. No effect to resource.
<b><i>Upper Otay Dam APE</i></b>			
P-37-011419 (CA-SDI-11419)	The historic remains of Rancho del Otay. Resource was reidentified at the edge of the APE, though located primarily outside the APE.	No. Along existing access road, no new disturbance proposed.	Avoidance.
P-37-39914 (CA-SDI-23293)	A newly identified multi-component site consisting of a lithic quarry and artifact scatter, with a historic artifact scatter also present. Resource was identified within the APE.	Yes. Located adjacent to dam where vegetation removal is proposed.	Avoidance of adverse effects.
P-37-39913	A newly identified prehistoric isolated flake identified within the APE.	No. Along existing access road, no new disturbance proposed.	None. No effect.
<b><i>Dulzura Conduit APE</i></b>			
P-37-006981 (CA-SDI-6981)	Historic State Route 94 originally constructed in 1870. The Dulzura Conduit crosses underneath highway.	Yes. Dulzura Conduit crosses underneath the road, with vegetation clearing proposed on both side of highway.	None. No adverse effect to resource.



Resource Number	Description	Within Impact Area	Management Recommendation
P-37-011103 (CA-SDI-11103)	Four prehistoric bedrock milling features and artifact scatter. Resource was reidentified; artifacts were observed within Dulzura Conduit access road, with milling features observed outside the east and west boundaries of the APE.	Yes. Resource located along Dulzura Conduit and access road where vegetation removal proposed.	Avoidance of adverse effects.
P-37-036508	Historic Circuit 157 transmission distribution line, approximately 52 miles long and constructed in 1949. C157 line parallels and crosses several portions of the APE along access roads and pedestrian footpaths. Resource also located in Barrett Dam APE.	Yes. Resource crosses over portions of Dulzura Conduit and pedestrian footpaths where vegetation removal proposed.	None. No effect to resource.
P-37-036516	Historic Tie Line 6923 transmission line, approximately 13 miles long and constructed in 1957. TL6923 crosses APE along access road. Resource also located in Barrett Dam APE.	Yes. Resource crosses over portion of Dulzura Conduit where vegetation removal proposed.	None. No effect to resource.
P-37-39910 (CA-SDI-23290)	A newly identified prehistoric bedrock milling feature and artifact scatter. Resource is located on the south side of the conduit access and maintenance road.	No. But immediately adjacent to portion of Dulzura Conduit and access road where vegetation removal proposed.	Avoidance of adverse effects
P-37-39909 (CA-SDI-23289)	A newly identified multi-component site consisting of a prehistoric lithic scatter and historic glass and domestic-use item scatter. Resource is located on the south side of the conduit access and maintenance road.	Yes. Resource located along Dulzura Conduit and access road where vegetation removal proposed.	Avoidance of adverse effects.

### 6.1.1 Barrett Dam

Seven cultural resources have been identified within the Barrett Dam APE, consisting of three historic structures and four prehistoric archaeological sites. The three historic structures consist of P-37-036508, P-37-036512, and P-37-036516, which are all historic-period electric utility lines. These lines cross the APE overhead; no impacts to the resources will occur as a result of the Program, which consists of activities occurring on the ground surface.

One prehistoric archaeological site, P-37-038945 (CA-SDI-22906), was determined to be located outside of the APE during the survey; as such, no impact to the resource will occur as a result of the Program. The three remaining resources, prehistoric archaeological sites P-37-005756 (CA-SDI-5756), P-37-005758 (CA-SDI-5758), and P-37-025926 (CA-SDI-17241), are situated along existing access roads that will continue to be maintained in a useable condition along the current alignments with no widening,



expansion, or relocation of the access roadways occurring. It is recommended these three resources be classified as environmentally sensitive areas (ESAs) identified for avoidance in order to ensure that no inadvertent adverse impacts to the resources occur during the routine maintenance activities. With these recommendations, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Barrett Dam APE.

### **6.1.2 Black Mountain Dam**

One resource was identified within the Black Mountain Dam APE, consisting of P-37-016577, an isolated bottle glass fragment that was not reidentified in the APE during the survey and likely was originally recorded outside of the APE. Furthermore, isolates are not considered eligible for listing in the CRHR or NRHP and are considered non-significant resources, per the City's HRG. As such, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Black Mountain APE.

### **6.1.3 Chollas Dam**

One resource was identified within the Chollas Dam APE. P-37-016321 (CA-SDI-14794) is a historic archaeological site consisting of a cement foundation or loading dock and associated cultural material consisting of a glass scatter. The resource is situated along an existing access road that will continue to be maintained in a useable condition along the current alignment with no widening, expansion, or relocation of the access roadway occurring. It is recommended this resource be identified as an ESA identified for avoidance in order to ensure that no inadvertent adverse impacts to the resource occur during the routine maintenance activities. With these recommendations, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Chollas Dam APE.

### **6.1.4 El Capitan Dam**

Nine cultural resources have been identified within the El Capitan Dam APE, consisting of eight prehistoric archaeological sites and one prehistoric isolate. The isolate, P-37-038886, consists of a Tizon Brown Ware pottery sherd. Isolates are not considered eligible for listing in the CRHR or NRHP; as such, the proposed Program would not constitute a significant impact to the resource.

Of the prehistoric archaeological sites, P-37-013616 (CA-SDI-13616), P-37-013617 (CA-SDI-13617), P-37-013618 (CA-SDI-13618), P-37-30217 (CA-SDI-19249), P-37-39906 (CA-SDI-23286), and P-37-39907 (CA-SDI-23287) are situated along existing access roads that will continue to be maintained in a useable condition along the current alignments with no widening, expansion, or relocation of the access roadways occurring. It is recommended these six resources be identified as ESAs identified for avoidance in order to ensure that no inadvertent adverse impacts to the resources occur during the routine maintenance activities.

Of the two remaining sites, P-37-038878 (CA-SDI-22878) consists of a single bedrock milling feature located adjacent to the rock face of El Capitan Dam, where all vegetation located within 10 feet is proposed for clearing to allow for site access and safety inspections. P-37-038889 (CA-SDI-22885) consists of four bedrock milling features located immediately north of the spillway, where all vegetation and trees located within 10 feet is also proposed for clearing. As the vegetation clearing activities would not include ground disturbance, as described in Section 1.3, the resources would not be adversely



impacted by the proposed Program. However, it is recommended that P-37-038878 (CA-SDI-22878) and P-37-038889 (CA-SDI-22885) be identified as ESAs in order to ensure that no inadvertent adverse impacts to the resources occur during the routine maintenance activities. With these recommendations, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the El Capitan Dam APE.

### **6.1.5 Hodges Dam**

No cultural resources with potential impacts addressed in this report have been identified within the Hodges Dam APE.

### **6.1.6 Miramar Dam**

One prehistoric archaeological site, P-37-008676 (CA-SDI-8676), was identified within the Miramar Dam APE. The resource was recorded in 1980 as a lithic scatter mapped as being located west of the reservoir, which would have placed it outside of the APE. Additionally, a review of aerial imagery from post-1980 shows grading occurring within the site location. As such, the site has likely been destroyed and is not considered a significant historical resource for the purposes of the Program. While vegetation clearing is proposed along the dam infrastructure within the site boundary as mapped at the SCIC, the proposed Program would not constitute a substantial adverse change in the significance of a historical resource.

### **6.1.7 Morena Dam**

Two cultural resources have been identified within the Morena Dam APE and include one prehistoric archaeological site, P-37-39908 (CA-SDI-23288), and P-37-036511, a historic-period electric utility line. The distribution line parallels the access road to the dam; no impact to the line will occur as a result of the Program, which consists of activities occurring on the ground surface, within the existing roadway. P-37-39908 (CA-SDI-23288) consists of a lithic scatter of four flakes; however, the artifacts were identified at the edge of the dam wall in a highly disturbed context among other mechanically broken rocks. Due to the redeposition of the artifacts onto the dam, the resource does not retain any integrity and would not be considered eligible for listing in the CRHR or NRHP. As such, the proposed Program would not be considered an impact to the resource. As such, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Morena Dam APE.

### **6.1.8 Murray Dam**

No cultural resources with potential impacts addressed in this report have been identified within the Murray Dam APE.

### **6.1.9 Rancho Bernardo Dam**

No cultural resources with potential impacts addressed in this report have been identified within the Rancho Bernardo Dam APE.



### **6.1.10 San Vicente Dam**

Seven cultural resources have been identified within the San Vicente Dam APE, consisting of six prehistoric archaeological sites, P-37-013629 (CA-SDI-13629), P-37-013630 (CA-SDI-13630), P-37-024958 (CA-SDI-16514), P-37-026965 (CA-SDI-17650), P-37-39911 (CA-SDI-23291), and P-37-39912 (CA-SDI-23292), and one historic archaeological site, P-37-013629 (CA-SDI-13629).

P-37-013629 (CA-SDI-13629), P-37-013630 (CA-SDI-13630), and P-37-39912 (CA-SDI-23292) are situated along existing access roads that will continue to be maintained in a useable condition along the current alignments with no widening, expansion, or relocation of the access roadways occurring. P-37-024958 (CA-SDI-16514) is situated at the edge of the APE, outside of an area proposed for vegetation clearing. It is recommended these four resources be identified as ESAs identified for avoidance in order to ensure that no inadvertent adverse impacts to the resources occur during the routine maintenance activities.

One newly identified site, P-37-39911 (CA-SDI-23291), was determined to be located outside of the APE; as such, no impact to the resource will occur as a result of the Program.

The sixth resource identified in the San Vicente Dam APE is P-37-026965 (CA-SDI-17650), a single bedrock milling feature recorded in the 2005 survey, is within an area that has since undergone numerous grading events. The resource was not reidentified during the survey and it is likely that it has been destroyed. As such, the proposed Program would not constitute an adverse impact to the site.

With the avoidance recommendations for sites P-37-013629 (CA-SDI-13629), P-37-013630 (CA-SDI-13630), and P-37-39912 (CA-SDI-23292), the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the San Vicente Dam APE.

### **6.1.11 Savage Dam**

One historic archaeological site, P-37-011335 (CA-SDI-11335), was identified within the Savage Dam APE. The resource consists of the remnants of the Lower Otay Lakes Filtration Plant, built between 1913 and 1915. The only remaining components of the resource, which has been replaced by a new facility since recordation in 1989, are remnants of the sand bin and brow ditch, both located well to the north of the APE. As such, the proposed Program would not cause a substantial adverse change in the significance of a historical resource and would not constitute an impact to the site.

### **6.1.12 Sutherland Dam**

No cultural resources with potential impacts addressed in this report have been identified within the Sutherland Dam APE.

### **6.1.13 Upper Otay Dam**

Three cultural resources have been identified within the Upper Otay Dam APE, consisting of a historic archaeological site, P-37-011419 (CA-SDI-11419), a multi-component archaeological site, P-37-39914 (CA-SDI-23293), and a prehistoric isolate, P-37-39913.

P-37-011419 (CA-SDI-11419) consists of the remnants of the Rancho del Otay. Only the edge of the resource boundary is within the APE, along the access that will continue to be maintained in a useable condition along the current alignment with no widening, expansion, or relocation of the access roadway



occurring. It is recommended this resource be identified as an ESA identified for avoidance in order to ensure that no inadvertent adverse impacts to the resource occurs during the routine maintenance activities.

P-37-39913 is a prehistoric isolate consisting of a flake. The isolate is not considered eligible for listing in the CRHR or NRHP; as such, the proposed Program would not constitute a significant impact to the resource.

P-37-39914 (CA-SDI-23293) consists of a prehistoric lithic quarry containing lithic tool manufacturing debris and tools; prehistoric ceramics, and one bedrock milling feature. The historic component includes an artifact scatter that may be associated with resource P-37-011419, discussed above. The site is located along the access road that will continue to be maintained in a useable condition along the current alignment with no widening, expansion, or relocation of the access roadway occurring, and on either side of the dam, where all vegetation located within 10 feet is proposed for clearing to allow for site access and safety inspections. As the vegetation clearing activities would not include ground disturbance, as described in Section 1.3, the resource would not be adversely impacted by the proposed Program. However, it is recommended that P-37-011419 (CA-SDI-11419) be identified as an ESA in order to ensure that all access to dam facility remains within the established access road and footpath and that no inadvertent adverse impacts to the resources occur during the routine maintenance activities. With these recommendations, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Upper Otay Dam APE.

#### **6.1.14 Dulzura Conduit**

Six cultural resources have been identified within the Dulzura Conduit APE, consisting of two prehistoric archaeological sites, P-37-011103 (CA-SDI-11103) and P-37-39910 (CA-SDI-23290), a multi-component archaeological site, P-37-39909 (CA-SDI-23289), two historic structures, P-37-036508 and P-37-036516, and a historic structure that is also considered a District, P-37-006981 (CA-SDI-6981).

P-37-006981 (CA-SDI-6981) consists of portions of SR 94 and a historic stagecoach route built in 1870. The Dulzura Conduit travels underneath the highway, with vegetation clearing along the conduit proposed on both sides of the roadway, beyond the road shoulder. No adverse impact to the highway will occur as a result of the Program.

The remaining two resources consist of P-37-036508 and P-37-036516, which are historic-period electric utility lines. These lines cross the APE overhead; no adverse impact to the lines will occur as a result of the Program, which consists of activities occurring on the ground surface.

Sites P-37-011103 (CA-SDI-11103), P-37-39910 (CA-SDI-23290), and P-37-39909 (CA-SDI-23289) are all located along the Dulzura Conduit in the portion that is located south of SR-94. The resources are located along the access road that parallels and or contains the conduit canal, where vegetation removal is proposed within at least five feet of Dulzura Conduit. The access road is an existing route that will continue to be maintained in a useable condition along the current alignment with no widening, expansion, or relocation of the access roadways occurring. Additionally, the vegetation clearing activities would not include ground disturbance, as described in Section 1.3. As such, the resources would not be adversely impacted by the proposed Program. However, it is recommended that P-37-011103 (CA-SDI-11103), P-37-39910 (CA-SDI-23290), and P-37-39909 (CA-SDI-23289) be identified as ESAs to ensure that no inadvertent adverse impacts to the resources occur during the routine maintenance activities.



With these recommendations, the proposed Program would not cause a substantial adverse change in the significance of a historical resource within the Dulzura Conduit APE.

## 6.2 SUMMARY

As discussed above, the cultural resources situated within the Dam Maintenance Program APE are recommended to be treated as significant for the purposes of the project, except for the resources determined to be destroyed, or those that do not possess the characteristics necessary to be considered resources eligible for listing on the CRHR or the NRHP. While maintenance activities occurring within the known site boundaries would not constitute an adverse effect to the resources, as detailed above, it is recommended that several of the cultural resources be identified as ESAs, to ensure the avoidance of inadvertent adverse impacts to the resources during the routine maintenance activities. If any additional cultural resources are newly identified in the impact areas during Program or other project activities, the site boundaries should also be categorized as ESAs to ensure the avoidance of inadvertent adverse impacts to the resources.

In the event that human remains are discovered, the County Coroner shall be contacted. If the remains are determined to be of Native American origin, the Most Likely Descendant, as identified by the NAHC, shall be contacted in order to determine proper treatment and disposition of the remains. All requirements of Health & Safety Code §7050.5 and PRC §5097.98 shall be followed.

Should the project limits change to incorporate new areas of proposed maintenance activities, cultural resources survey of these areas will be required.



## 7.0 REFERENCES

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2004 *Above and Below the Valley: Report on Data Recovery at San Vicente Reservoir, San Diego County, California*. EDAW, San Diego. Prepared for the San Diego County Water Authority. Report on file at the South Coastal Information Center, San Diego State University.

Williams, Brian

2009 DPR Update Form for CA-SDI-5756 (P-37-005756). Form on file at the South Coastal Information Center, San Diego State University

Yerka, N. and R. Shultz

2018 DPR Form for CA-SDI-22802. Form on file at the South Coastal Information Center, San Diego State University, California.



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# Appendix A

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Resumes



### Summary of Qualifications

Ms. Wilson has been professionally involved in cultural resources management for 18 years and has extensive experience in both archaeology and Geographic Information Systems (GIS). She has served as principal investigator on numerous cultural resources management projects, and regularly coordinates with local, state, and federal agencies and Native American tribal representatives. She is skilled in project management, archaeological inventories and excavation, and report documentation and has broad experience on private, municipal, federal, utility, and renewable energy projects. Her years of experience also encompass an understanding of California Environmental Quality Act (CEQA) and National Environmental Policy Act (NEPA) compliance regulations. Ms. Wilson is a Registered Professional Archaeologist (RPA) and meets the U.S. Secretary of the Interior's Professional Qualifications Standards for prehistoric and historic archaeology.

### Selected Project Experience

**Sweetwater Bike Park.** Project Manager/Principal Investigator for a cultural resources monitoring program for the construction of a bike park within the Sweetwater Regional Park, which is the first bicycle skills course in the County of San Diego's park system. Oversaw archaeological and Native American monitoring, attended groundbreaking ceremony, oversaw cataloguing of recovered historic and prehistoric artifacts, and prepared weekly monitoring reports. Work performed for the County of San Diego Department of Parks and Recreation.

**Mesa Trail and Restoration and Dairy Mart Pond Overlook Projects.** Principal investigator for a cultural resources survey of 61 acres within the Tijuana River Valley Regional Park located less than 1 mile north of the international border with Mexico. In support of a Land and Water Conservation Fund application, compliance with Section 106 of the National Historic Preservation Act (NHPA) of 1966, as amended, was required for the projects. Duties included agency and fieldwork coordination and providing Section 106 consultation support to the County of San Diego Department of Parks and Recreation.

**Buckman Springs Road Bridge Widening Technical Studies.** Principal Investigator for the rehabilitation and widening of the existing Buckman Springs Road Bridge, located in eastern San Diego County. The project proponent was the County of San Diego Department of Public Works (DPW), with local assistance funding from the Federal Highway Administration (FHWA). Conducted a records search and field survey and prepared technical documents consistent with Caltrans format and content requirements for compliance with Section 106 of the NHPA. Work performed for the County of San Diego and completed for Caltrans review and oversight for the completion of the environmental review process.

### Education

Master of Science,  
Applied Geographical  
Information Science,  
Northern Arizona  
University, 2008

Bachelor of Arts,  
Anthropology,  
University of  
California, San Diego,  
2001

Bachelor of Science,  
Biological  
Psychology,  
University of  
California, San Diego,  
2001

### Registrations/ Certifications

Register of  
Professional  
Archaeologists, The  
Register of  
Professional  
Archaeologists  
#16436, 2008

County of Riverside,  
Approved Cultural  
Resources  
Consultant, 2017

County of San Diego,  
Approved CEQA  
Consultant for  
Archaeological  
Resources, 2019



# Stacie Wilson, RPA

## Senior Archaeologist

**County of San Diego Department of Parks and Recreation As-Needed Consulting Services.** Cultural Resources Task Lead and Principal Investigator for as-needed environmental services support. Duties include coordination of archaeological monitors, site assessments, survey, site form documentation, and reporting efforts.

**Beeler Canyon Trail Cultural Resources Assessment.** Project Manager/Principal Investigator for cultural resources survey of the trail realignment for a portion of the Beeler Canyon Trail. Oversaw the cultural resources assessment performed to determine the nature and extent of cultural resources within an area that would be affected by proposed realignment of a trail segment in the West Sycamore area Mission Trails Regional Park. Work performed for the City of San Diego Parks and Recreation Department.

**Padre Dam Municipal Water District East County Advanced Water Purification Program.** Senior Archaeologist for cultural resources inventory and assessment of approximately 10 miles of pipeline. The East County Advanced Water Purification project proposes to increase the region's supply of potable water. Duties included preparation of a cultural resources study, assisting with community outreach with regard to the historic resources, and working with the agencies and interested parties to develop appropriate measures to avoid or minimize impacts. Work performed for Kennedy/Jenks Consultants, Inc., with Padre Dam Municipal Water District as the lead agency and Helix Water District, the County of San Diego, and the City of El Cajon as participating agencies.

**City of San Diego Long-term Mitigation Strategy Development.** Principal Investigator for a cultural resources study of the Kearny Mesa East Mitigation Site, a 7.57-acre City of San Diego owned parcel located in Murphy Canyon. Conducted as part of an as-needed contract with the City of San Diego, Transportation & Storm Water Department, the project evaluated the potential mitigation opportunities for the parcel. Duties included conducting background research, a field survey and recording of cultural resources, Native American outreach and coordination, and report preparation. Work performed for the City of San Diego.

**City of San Diego Sewer Group 806.** Principal Investigator for the Sewer Group Job 806 located in the College Area and Mid City Kensington-Talmadge community planning areas in the City of San Diego. Conducted as part of an as-needed contract with the City of San Diego, Public Works Department, the project proposes both the replacement and rehabilitation of existing sewer mains, including replacing-in-place approximately 2,158 linear feet of existing vitrified clay pipe sewer mains. Duties included conducting background research, reviewing previous cultural resource surveys, conducting a field survey with a Native American monitor, and the preparation of a cultural resources technical report.

**Southeast to Downtown Regional Bikeway-Environmental Technical Studies.** Archaeological Principal Investigator for the development of bikeways within southeastern San Diego along Imperial Avenue between 17th Street and 47th Street. Managed a records search and field survey; prepared an Area of Potential Effects (APE) Map, an Archaeological Survey Report (ASR), and a Historic Property Survey Report (HPSR) consistent with Caltrans format and content requirements for compliance with Section 106 of the NHPA. Work performed as a subconsultant to Kimley-Horn & Associates, Inc., with SANDAG as the CEQA lead agency and Caltrans as a reviewing agency.